Taking It Inter-personal:

A Multilevel Study of The Mediating Role of Team Interpersonal Processes on The Relationships Between Team Functional Leadership and Employee Engagement

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DECLARATION OF ORIGINAL AUTHORSHIP

I confirm that this is my own work and that the use of all material from other sources has been

properly and fully acknowledged.

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ABSTRACT

Employee engagement has attracted research interest as it is linked to improved performance and improved wellbeing. However, although most organisations are structured upon teams, the role of work teams in promoting employee engagement has often been overlooked. Likewise, employee engagement has received little attention in work teams literature. To address this research gap, this study draws on a multilevel perspective and work team literature and examines how team functional leadership and team interpersonal processes influence employee engagement at the team and individual levels.

This multilevel study uses multisource cross-sectional data from 583 employees nested in 72 teams in an Indonesian supermarket chain and analyses the data using multilevel structural equation modelling. The team-level mediation analyses show that team interpersonal processes fully mediate the effect of team functional leadership on team work engagement, and team work engagement fully mediates the effect of team interpersonal processes on team performance. The cross-level mediation analyses demonstrate that team interpersonal processes and team functional leadership indirectly influence personal engagement through the mediational role of team work engagement. However, neither psychological meaningfulness, safety, nor availability is found to mediate the effect of team interpersonal processes on personal engagement.

This study contributes to theory in several ways. First, it draws a further link between employee engagement and work teams literature by emphasising the significance of maintaining a high quality of team interpersonal processes in promoting team and individual engagement. Second, this study contributes to the team leadership literature by demonstrating how team leaders can enhance their team's engagement by executing their

leadership functions. Third, this multilevel study shed further light on the process of how engagement spread across the team members.

The study contributes to practice by highlighting the importance of monitoring team interpersonal processes and team work engagement. It also underlines the benefit of partnering with the unit team leaders in promoting engagement within the organisation. This team-based approach can be particularly useful for job contexts that offer limited intrinsic rewards.

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CHAPTER 1
INTRODUCTION

1.1. RESEARCH BACKGROUND

Humans spend, on average, over 75,000 hours[1] of their life doing work (Feenstra *et al.*, 2015). Although the trend is decreasing over generations, employment still determines a major part of what a human experiences over their lifespan. Unfortunately, according to a recent report from a global HR consultancy, about two-thirds of the global workforce are not eager to engage in their daily work (Harter, 2022).

The COVID-19 pandemic might have augmented the employees' dissatisfaction with their work, which led to the great resignation era (Sull *et al.*, 2022). Two reports revealed that more than 70% of workers in America and the Asia Pacific region are seriously considering quitting their jobs to find new jobs that provide greater wellbeing, mental health and happiness (Joblist, 2021; Thompson, 2022). However, landing new jobs that match the employees' expectations can be challenging, given the competitive nature of the job market, especially for those that provide exceptional benefits and well-being programmes (Bock, 2015; Dalton and Groen, 2020). Although employees would want to have jobs that offer promising careers, a supportive community, and a cause that matters (Goler *et al.*, 2018), many employees would have to work for jobs that might not be their first preference. This thesis aims to contribute to this area by proposing different ways to improve their well-being.

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[1]Based on 1,750 average annual working hours and 65-year-old retirement age

The field of organisational behaviour has identified a few aspects of employee well-being. In their systematic review, Van De Voorde et al. (2012) grouped past studies on employee well-being into three categories, i.e. happiness, relationship and health-related well-being. Happiness well-being emphasises employees' subjective work experiences, relationship well-being refers to the quality of relationships between employees, while health-related well-being relates to the level of stress and strain at work (Grant et al., 2007; Van De Voorde et al., 2012). Among these three types of well-being, happiness and relationship well-being are found to be positively related to organisational performance, while health-related well-being showed conflicting results (Van De Voorde *et al.*, 2012). This finding suggests that improving employees' subjective work wellbeing could be an effective HR strategy for the workforce population that this thesis wants to address because it aligns with the organisational interest to improve performance. Thus, this thesis will narrow its scope to this area.

One helpful indicator of employees' subjective work wellbeing is employee engagement. This term gained popularity in the early 2000s and has been linked to various positive outcomes related to performance and wellbeing (Bailey *et al.*, 2017). For instance, employee engagement has been positively correlated with task performance (Leung *et al.*, 2011; Bakker *et al.*, 2012; Steele *et al.*, 2012; Yeh, 2012), job satisfaction (Biswas and Bhatnagar, 2013; Høigaard *et al.*, 2012), attrition rate (Agarwal *et al.*, 2012), organisational commitment (Hu *et al.*, 2011; Wefald *et al.*, 2011), organisational citizenship behaviour (Rich *et al.*, 2010), innovative behaviour (Alfes *et al.*, 2013), knowledge sharing (Chen *et al.*, 2011) and learning goal orientation (Chughtai and Buckley, 2006; Chughtai and Buckley, 2011). Employee engagement has also been shown to have a positive impact on employees' wellbeing in the form of favourable health outcomes (Freeney and Fellenz, 2013a; Hallberg and Schaufeli, 2006), reduced stress (Buys and Rothmann, 2010; Vera *et al.*, 2010), and life satisfaction (Extremera *et al.*, 2012; Shimazu *et al.*, 2012). Considering its associated benefits, this thesis will use the construct to indicate favourable subjective work well-being and then

investigate possible ways to improve engagement for the workforce population that this thesis wants to address.

Despite there being debates in the early development of the concept (Macey and Schneider, 2008; Newman and Harison, 2008; Newman *et al.*, 2011), the construct seems to keep attracting interest from both practitioners and academicians (Shuck *et al.*, 2017; Bailey *et al.*, 2017). It can infer that the construct has consolidated its place within the organisational behaviour literature, with Kahn's (1990) and Schaufeli *et al.*'s (2002) conceptualisations emerging as the two major engagement strains (Bailey *et al.*, 2017). Kahn (1990) draws from work role theory and defines engagement as "the harnessing of organisation members' selves to their work roles" (p.694). Meanwhile, Schaufeli *et al.* (2002) draw from job burnout literature and define engagement as "a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption" (p. 74). While these two strains view engagement from different angles, they can offer complementary assessments explaining how employee engagement develops within an organisation.

This thesis uses these two perspectives to review the wide array of factors that have been proposed as the antecedents of employee engagement. This investigation will reveal why improving and maintaining employee engagement are still a challenging task for many organsiations. By drawing into an understudied area within the engagement research, the thesis proposes an approach that can potentially improve and sustain the level of engagement. Finally, the thesis tests its propositions by conducting an empirical study.

1.2. THEORETICAL SIGNIFICANCE

Most organisations would want to have employees with a high level of engagement as the term correlates with better performance and enhanced well-being (Bailey *et al.*, 2017). This positive association has attracted organisational researchers to investigate various factors that can lead to improved engagement. Several systematic reviews have identified various aspects that empirical researchers have linked with employee engagement. For instance, Wollard and Shuck (2011) have identified 21 individual and 21 organisational antecedents of employee engagement. Bailey *et al.* (2017) recorded 155 studies of antecedents of employee engagement. Other groups of scholars have examined more specific areas, such as personalities (Young *et al.*, 2018), leadership (Carasco-Saul *et al.*, 2015), and job demand and resources (Crawford *et al.*, 2010; Lesener *et al.*, 2019; Lesener *et al.*, 2020).

However, despite knowing many factors that could potentially drive engagement, improving employee engagement in organisations is still a challenge. For instance, a meta-analysis of twenty interventional studies that aimed to improve engagement has shown a small positive overall effect on work engagement (Knight *et al.*, 2017). Two years later, the same group of scholars conducted a follow-up study on the same topic and found that 46% of the forty intervention studies included in the meta-analysis demonstrated a positive significant effect on overall work engagement. While these findings revealed an encouraging indication that interventions on employee engagement can be effective, they also suggest that about half of the interventions have not been effective.

Further examination of these interventional studies suggests that the effect of the intervention of engagement fades over time. In Knight *et al.'s* (2019) meta-analysis, 18 studies measured the effect of interventions within five months period, 72% of these studies showed positive results. On the contrary, only 28% of the 21 studies that measured the impact of the interventions after six months or more showed positive results. This finding adds further

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support to the notion that employee engagement is a dynamic construct that may fade over time (Kahn, 1990; Sonnentag *et al.*, 2012).

Furthermore, Knight *et al.* (2017, 2019) meta-analysis studies can indicate a promising area that can help to maintain engagement. Knight *et al.* (2017) grouped the type of engagement interventions into four categories (i.e., job resources building, personal resource building, leadership training and health promotion. While they did not find a significant difference in the effect of these four types of interventions on engagement, they did find that interventions directed at groups were more effective than those directed at individuals (Knight *et al.*, 2017). In addition, Knight *et al.*'s (2019) showed that 85% of the studies that exhibited significant positive effects on employee engagement used some sort of group intervention method. These findings hint that group interactions may help maintain the interventions' effect on employee engagement.

In most organisations, a large portion of such group interactions occurs daily within the work teams (Cohen and Bailey, 1997). It indicates that the work teams can potentially contribute to promoting engagement. However, although studies that examine the organisational and individual antecedents of employee engagement are abundant (Crawford *et al.*, 2010; Wollard and Shuck, 2011; Bailey *et al.*, 2017), there has been limited research that exposes the role of the work teams in developing employee engagement. Despite work teams often playing a major role in shaping the experience of the employees (Chen and Kanfer, 2006), there has been little dialogue between work teams and employee engagement literature (Costa *et al.*, 2014). The literature review chapter of this thesis will further expose this research gap and investigate how work teams can influence employee engagement.

There are two foci that emerged from the small literature on team engagement. First, scholars have proposed that employee engagement can accumulate as a collective team-level construct (Tyler and Bladder, 2003; Salanova *et al.*, 2003). This collective team-level construct

has a distinct property from individual-level engagement (Costa *et al.*, 2014). Similar to its

individual-level counterpart, team engagement has been shown to positively correlate with

team performance (Torrente *et al.*, 2012; Costa *et al.*, 2015). In addition, scholars have also

shown that the construct can induce a crossover effect on the individual engagement of the

team members (Bakker *et al.*, 2006; van Mierlo and Bakker, 2018). This positive association

suggests that understanding the process of how work teams develop team-level engagement

is critical in studying engagement in teams.

It led to the second focus of study within the team engagement literature, that is, the

investigation of the process that underpins how team engagement develops within teams.

Scholars have initially used the Job Demand-Resource (JD-R) framework to explain how these

team interactions form a collective engagement (Torrente *et al.*, 2012). This framework is the

dominant theoretical underpinning that previous empirical researchers used to investigate the

predictors of employee engagement (Bailey *et al.*, 2017). The proponent of this approach

maintains that the provision of job resources will enable the employee to handle their job

demands and thus increase their engagement level (Demerouti *et al.*, 2007; Xanthopoulou *et al.*, 2008).

Drawing from this perspective, a few groups of scholars consider social resources, such

as supportive team climate, coordination and teamwork, as job resources that drive employee

engagement at the team level (Hakanen *et al.*, 2006; Schaufeli *et al.*, 2009; Torrente *et al.*,

2012). However, although the use of the JD-R model is useful to provide a broad overview of

how a team converts social resources into a collective form of engagement, it has not

provided the processual details of how a team converts their social resources into team

engagement. In addition, the framework may also overlook the important difference between

the team- and individual-level phenomena (Costa *et al.*, 2014). Addressing this issue, Costa *et al.* (2014) drew on the team processes and team effectiveness literature and propose the term

team work engagement as an emergent state that is formed as a function of dynamic team interactions. This thesis uses this framework to investigate the critical team factors that influence employee engagement.

In Costa *et al.*'s (2014) conceptual model, team interpersonal processes play a central role as a proximal predictor of team work engagement. This proposition aligns with previous studies from both Schaufeli *et al.*'s (2002) and Kahn's (1990) engagement strains that suggest interpersonal relationships among co-workers as one prominent predictor of individual engagement (Kahn and Heaphy, 2014; Crawford *et al.*, 2010). However, empirical studies that examined the link between team interpersonal processes and employee engagement are sparse. Therefore, this study will examine team interpersonal processes as one of the key predictors of team work engagement.

In many organisations, the team leaders typically have the formal authority that they can use to influence the interpersonal processes within their teams and therefore, they may stimulate the emergence of employee engagement. However, previous studies have not examined the link between team leadership and employee engagement. Research that examined the influence of leadership on employee engagement has been limited to investigating the supervisor-subordinate dyadic relationship (Carasco-Saul *et al.*, 2015). In alignment with the trend to decentralise leadership (Meuser *et al.*, 2016), this thesis will draw into the team functional leadership perspective (Kozlowski *et al.*, 1996; McGrath, 1962) and investigate how the team leader can influence the interpersonal interactions within their teams, thus facilitating the emergence of team work engagement.

In addition to investigating the role of team interpersonal processes and team functional leadership in developing team work engagement, this thesis will also examine the consequences of having an engaged team. At the individual level, employee engagement has been linked to better performance (Bailey *et al.*, 2017). Given that team work engagement

shares functional equivalence with individual engagement (Costa *et al.*, 2014), it is likely that team work engagement would positively influence team performance. Although a few researchers have shown positive correlations between team engagement and team performance (Torrente *et al.*, 2012; Mäkikangas *et al.*, 2016), the use of team work engagement in team effectiveness literature is still limited (Mathieu *et al.*, 2019). This thesis intends to add further support to highlight the key role of having an engaged team in improving team effectiveness.

Finally, this study aims to shed further light on the mechanism that governs how employee engagement spreads among team members. Previous scholars have suggested that collective team engagement will induce a crossover effect on individual engagement because of emotional contagion (Bakker *et al.*, 2006; van Mierlo and Bakker, 2018). That is the subconscious transfer of emotion between individuals (Hatfield *et al.*, 1994). Based on this view, the interpersonal processes within the team would not only lead to the emergence of team work engagement but also induce an indirect influence on individual engagement.

Alternatively, Kahn and Heaphy (2014) propose a different mechanism to explain how engagement spread across the team. They propose that positive interpersonal interactions among co-workers can stimulate the individuals' psychological conditions of personal engagement, i.e. psychological meaningfulness, safety and availability, and therefore, enable the individuals to experience personal engagement more frequently (Kahn, 1990, 1992). This study will investigate these two mechanisms by testing the mediational role of team work engagement and the three psychological conditions of personal engagement on the relationship between team interpersonal processes and personal engagement. The understanding of how engagement spreads may inform the more effective ways to maintain the engagement level within the teams.

In summary, the study aims to answer the following research question:

RQ: How do team interpersonal processes and team functional leadership influence employee engagement at both the team and individual levels?

In doing so, this thesis aims to address a few research gaps in the current employee engagement and work teams literature, as summarised in Table 1.1.

TABLE 1.1. KNOWLEDGE GAPS

Category	Description of Knowledge Gaps
Relationship between team effectiveness and employee engagement	• There have been limited studies that examine the role of work teams in promoting employee engagement. These studies have not used a multilevel perspective and integrated the current knowledge of work team literature. • Despite its widespread use at the individual level, there has been limited use of team work engagement in team effectiveness research.
Relationship between team leadership and employee engagement	• The vast majority of studies that examine the link between leadership and employee engagement have focused on the dyadic relationship between the supervisor and the subordinate while the role of the work team has been neglected. • It is unclear what the team leaders can do to promote the engagement of their team.
Level of analysis	• There is generally a lack of multilevel research in the employee engagement literature. • It is unclear how team-level phenomena can influence team members' individual engagement.
Crossover of engagement among team members	• There are two competing proposals that can explain how employee engagement spreads across the team. • Examining the two pathways can illuminate the more effective way to improve engagement within the work teams.

1.3. PRACTICAL SIGNIFICANCE

The thesis' investigation of the role of work teams in influencing employee engagement would offer several relevant applications to the current HR management practice. Despite the popularity of employee engagement and the many attempts to improve the level of engagement, improving and maintaining the level of employee engagement are still a challenge for many organisations (Harter *et al.*, 2020). This PhD thesis aims to demonstrate the benefit of using a team-based approach in promoting employee engagement in organisations.

The literature review chapter of this thesis identifies several reasons why the current approach to improving engagement has not been very effective. First, scholars have suggested that employee engagement is a dynamic construct that can easily fluctuate over time (Kahn, 1990; Sonnentag *et al.*, 2012). This transitory nature of employee engagement may suggest that the impact of organisational interventions designed to improve engagement would fade over time (Knight *et al.*, 2019). It may explain why programmes that organisations designed to improve employee engagement, especially those that use a top-down approach, have not been very effective in maintaining engagement (Knight *et al.*, 2019).

Conversely, scholars revealed that the interventions directed toward the group have a more persistent impact (Knight *et al.*, 2017, 2019). This finding hints that there could be something within the group interaction that helps maintain the level of engagement over a longer period. Therefore, this PhD thesis aims to investigate what are these factors and how they help to sustain engagement.

The second reason that can explain why employee engagement interventions have not been very effective is that employee engagement is tightly linked to job design (Crawford *et al.*, 2010; Bailey *et al.*, 2017). The employees tend to get more engaged in jobs where they

have high levels of autonomy (Crawford *et al.*, 2010) and when they feel that their jobs are meaningful (Kahn, 19990; May *et al.*, 2004; Chen *et al.*, 2011). However, many job roles require employees to do routine and repetitive tasks that offer limited autonomy and intrinsic rewards. It can be particularly the case, for instance, for those who work assembly lines or customer services. It may be more difficult for the employee to find intrinsic rewards and draw personal meaning out of their work roles in this area (Lips-Wiersma *et al.*, 2016). This thesis aims to demonstrate how a team-based approach can play a promising role in jobs where psychological meaningfulness is limited.

Previous scholars identified the interpersonal relationship among co-workers as one key predictor of employee engagement (Bailey *et al.*, 2017; Kahn and Heaphy, 2014; McBain and Parkinson, 2017). By investigating the role of interpersonal interactions within the work teams in fostering employee engagement, this thesis aims to demonstrate how organisations can leverage the level of employee engagement by focusing on the interpersonal processes and team work engagement within the work teams.

Finally, this thesis exposes how team leaders can contribute to improving the engagement level of their team members. In a typical organisation, the team leader typically has the formal authority that they can use to influence the interpersonal dynamics within their teams. By venturing into the team functional leadership literature (Kozwloski *et al.*, 1996; Morgeson *et al.*, 2010), this thesis will propose several functions that team leaders can do to improve the engagement level of their team members. This investigation can help organisations, especially the HR department, to direct the unit manager in performing this function. This approach aligns with Ulrich's (1997) strategic HR initiatives that encourage line managers to take a more prominent role as employee champions. This method may help organisations to improve their effectiveness in conducting their engagement initiatives rather

than using an organisational level top-down intervention that has been shown to have limited impacts (Knight *et al.*, 2019).

1.4. RESEARCH AIM AND OBJECTIVES

The previous two sections have highlighted the research question that this study intends to address and its practical implications. By answering this research question, this PhD thesis aims to illustrate how team interpersonal processes and team functional leadership can contribute to promoting employee engagement in organisations. In doing so, this thesis attempts to accomplish the following objectives:

1. To better understand how employee engagement emerges in organisations.

2. To draw further connections between employee engagement and work team literature.

3. To investigate the role of team interpersonal processes in promoting engagement.

4. To better understand how employee engagement emerges within work teams in an organisation.

5. To investigate what the team leader can do to enhance the engagement level within their work teams.

6. To examine the effect of having an engaged team on team performance.

7. To compare the effect of individual and team-level antecedents of employee engagement.

8. To recommend an alternative approach to improve the level of employee engagement in an organisation using a team-based method.

1.5. STRUCTURE OF THE THESIS

The thesis is divided into eight chapters. This chapter introduced the theme of this study by explaining the research background. It then discussed the theoretical significance of this study and stated the research question that this study aims to answer. The practical significance of this study was then discussed before the chapter outlined the research aim and objectives.

The next two chapters contain a review of several bodies of literature that are relevant to answering this study's research question, i.e. employee engagement, work teams and team leadership. Chapter Two will discuss the concept of employee engagement at the individual level and review its antecedents. The chapter explains the differing concepts of employee engagement in the literature and specifies which engagement concept this study used. It continues to review the antecedents of employee engagement and highlights how the role of the work team has often been overlooked.

Chapter Three adds to the literature review of this thesis by discussing employee engagement at the team level and its antecedents. The chapter starts with a review of the conceptualisation of collective engagement at the team level. It discusses the need to adopt a multilevel perspective in observing engagement at the team level and then narrows its focus to reviewing Costa *et al.*'s (2014) concept of team work engagement. The chapter continues to discuss the mechanism through which team work engagement develops in work teams by venturing into team process and team effectiveness literature (Kozlowski and Klein, 2000; Marks *et al.*, 2001). It identifies the critical role of team interpersonal processes in the

emergent process of team work engagement. The chapter then examines how team leaders can help to improve the engagement level in their teams.

Chapter Four illustrates how the different constructs form the body of this study's conceptual model. It then explains the range of the hypotheses that this study advance. The chapter ends by providing a summary of the list of these hypotheses and displaying a visual illustration that depicts how the different hypotheses fit into the conceptual model.

Chapter Five elaborates on the research methodology and philosophical perspective that this study adopts. The chapter provides justifications for choosing a quantitative approach to answering the research question. The chapter continues to describe the research design of this study, which includes explaining the participants, company context and scale measurements. The chapter then explains this study's approach to maintain its research quality. It includes describing the survey translation process, minimising common method variance, conducting a pilot study, and seeking ethical approval. The chapter ends by reporting the data collection process.

Chapter Six presents the data analysis and research findings of this thesis. The data analysis part explained the different stages of data treatments. The process starts with extracting the data from the survey platform database, cleaning the data, and dealing with missing values and outliers. The chapter continues to explain several statistical checks that were conducted to verify the validity of the statistical assumptions. It then discusses the analytical strategy that this study used. Finally, the chapter summarises the research findings of this thesis.

Chapter Seven discusses the research findings presented in light of the extant theories. It discusses what can be inferred from the statistical analysis that examined each hypothesis. It then compares the research findings with similar previous studies. The chapter

continues to discuss how each research finding relates to the current knowledge within the respective literature bodies and highlights their practical implications.

Chapter Eight concludes the thesis by summarising the contribution of this thesis to the theory and practice. It then highlights a number of limitations associated with the study. The chapter continues to give some suggestions for future research before ending the thesis with a concluding remark and reflections on the PhD research journey.

CHAPTER 2
LITERATURE REVIEW: INDIVIDUAL ENGAGEMENT

2.1. INTRODUCTION

This is the first of the two literature review chapters in this thesis that will focus on examining the literature on employee engagement at the individual level. The chapter starts by examining the literature on employee engagement. It reviews the different conceptual definitions of employee engagement that are suggested in the literature, which often becomes a source of confusion (Alfes *et al.*, 2013; Macey and Schneider, 2008). This clarification is important so that the research can use a precise definition when referring to employee engagement. The chapter then narrows its focus to discuss the two dominant strains within the employee engagement literature, i.e. Kahn's (1990) and Schaufeli *et al.*'s (2002) and then use these two perspectives to understand how to promote engagement.

The second part of the chapter reviews how previous studies investigate the antecedents of employee engagement. It reviews a few theoretical frameworks that have been used to investigate the link between employee engagement and its antecedents. The section continues to examine factors that have been suggested as the antecedents of employee engagement. In doing so, the section classifies the antecedents using a multilevel perspective (Kozlowski and Klein, 2000). This can expose how the role of the work teams in facilitating employee engagement has largely been overlooked.

2.2. EMPLOYEE ENGAGEMENT

This literature review chapter starts with a review of the concept of employee engagement, which is the central construct that this thesis aims to investigate. There are various versions of employee engagement definitions that have been proposed in both academic and practitioner literature. Unfortunately, these definitions interpret employee engagement as a different phenomenon, much to the lamentation of previous scholars (Truss *et al.*, 2013; Shuck *et al.*, 2017). To clarify the understanding of employee engagement that this thesis adopts, this section will start by reviewing the different engagement concepts before narrowing its focus to the two major concepts in employee engagement academic literature, i.e. Kahn (1990) and Schaufeli *et al.* (2002).

Employee engagement gained popularity among academicians and practitioners over the last 20 years as the construct has been linked to various positive outcomes that benefit both employers and employees. Engaged employees have been related to multiple performance-related measures, such as in-role task performance (Leung *et al.*, 2011; Steele *et al.*, 2012; Yeh, 2012), extra-role performance (Alfes *et al.*, 2013; Crawford *et al.*, 2010), reducing turnover (Mendes and Stander, 2011), team performance (van Bogaert *et al.*, 2013) and service climate (Salanova *et al.*, 2005). In addition to benefiting organisations, research evidence has suggested that engagement links to positive outcomes for the employees' well-being. For example, the construct has been positively linked to psychological health (Freeney and Fellenz, 2013b) and reduced stress (Buys and Rothmann, 2010). In addition to mitigating burnout, other evidence has suggested that engagement links to increased life satisfaction (Shimazu *et al.*, 2012). Rook *et al.* (2020) recently proposed to go beyond hedonic and eudaimonic approaches in measuring well-being by accounting for the employees' energy on top of their social and physical aspects. Employee engagement may fit as one proxy for that broader wellbeing index.

The association between employee engagement and various positive outcomes has attracted scholars to examine factors that can improve employee engagement in organisations (e.g., Christian, Garza and Slaughter, 2011; Wollard and Shuck, 2011; Lesener, Gusy and Wolter, 2019). However, this inquiry has been made difficult because of a lack of agreement in defining employee engagement (Macey and Schneider, 2008; Newman *et al.*, 2010; Newman and Harrison, 2008). Keenoy (2013) bemoaned that researchers often drew atheoretical conclusions about the meaning of employee engagement. Others lamented that the concept of employee engagement has often been 'bent' and 'stretched' to meet different agendas (Truss *et al.*, 2013). Despite the widespread use of the construct in both practice and within the academic community, the definition of employee engagement remains muddled (Shuck *et al.*, 2017). Given the inconsistencies in defining what employee engagement is, the next section of this chapter will examine the different concepts of employee engagement.

2.2.1. THE DIFFERENT CONCEPTS OF ENGAGEMENT

There is a range of different definitions of engagement that have been presented within the academic literature repository (Shuck, 2011). Table 2.1 summarised a selection of definitions that conceptualise employee engagement. However, rather than describing the same phenomenon, these definitions point to different phenomena such as engagement. For instance, Saks (2006) assumes engagement as the degree of affective affinity that the employees have toward their job and organisation. Soane *et al.* (2012) refer to engagement as the extent to which the employees are intellectually, affectively, and socially attached to their work. Meanwhile, Newman *et al.* (2010) proposed engagement as a blend of positive work behaviour. Although these various definitions reflect the growing interest in the subject area, unfortunately, they lead to a field of study that is scattered and disconnected, much to the

disappointment of the scholars within the field (Keenoy, 2013; Saks and Gruman, 2014; Shuck, 2011).

To get a better understanding of how employee engagement has diverged into various meanings, this section traces the early definitions of employee engagement. The review of the literature points to three different sources that each proposed a distinct concept of employee engagement, i.e. Kahn (1990), Schaufeli *et al.* (2002) and Harter *et al.* (2002). Kahn (1990) is widely regarded as the first study that coined the term engagement (Bailey *et al.*, 2017; Harter *et al.*, 2002; Schaufeli *et al.*, 2002). Kahn (1990) drew from role theory (Katz and Kahn, 1978) and job design (Hackman and Oldham, 1980) and used the term engagement to represent a fulfilling psychological experience when the employee is fully expressing their preferred self in their work role. On the other hand, Schaufeli *et al.* (2002) drew from job stress literature and refer to employee engagement as the opposite pole of job burnout. These two seminal papers initiated two largely separated employee engagement literature strains (Macey and Schneider, 2008; Shuck *et al.*, 2011; Bailey *et al.*, 2017).

Meanwhile, Harter *et al.* (2002), whose first author was affiliated with the Gallup Organisation, have more influence among the practitioners. Harter *et al.* (2002) define engagement as the "individual's involvement and satisfaction with as well as enthusiasm for work" (p. 269). They use the construct as a more comprehensive employee satisfaction index that not only measures employee attitudes toward the company but also acts as a proxy for how much effort the employees are exerting in their work duties (Harter *et al.*, 2002). This version of engagement became popular among the practitioners partly because of the influence of the leading HR consulting firms that promote the term through their global network.

TABLE 2.1. SELECTED DEFINITIONS OF EMPLOYEE ENGAGEMENT

Terminology	Definition	Source
Personal Engagement	"The harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694)	Kahn (1990)
Employee Engagement	"Individual's involvement and satisfaction with as well as enthusiasm for work" (p.269)	Harter *et al.* (2002)
Work Engagement	"A positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption" (p. 74)	Schaufeli *et al.* (2002)
Self-engagement	"Individuals feeling a sense of responsibility for and commitment to a performance domain so that performance 'matters' to the individual" (p. 1476)	Britt *et al.* (2005)
Job and Organisational Engagement	"It reflects the extent to which an individual is psychologically present in a particular organisational role. The two most dominant roles for most organisational members are their work role and their role as a member of an organisation" (pp. 603-4)	Saks (2006)
Employee Engagement	"An individual employee's cognitive, emotional, and behavioural state directed toward desired organizational outcomes" (p. 103)	Shuck and Wollard (2010)
Job Engagement	"Multi-dimensional motivational concept reflecting the simultaneous investment of an individual's physical, cognitive, and emotional energy in active, full work performance" (p. 619)	Rich *et al.* (2010)
Engagement	"An active psychological state" (p. 61)	Parker and Griffin (2011)
Employee Engagement	"Engagement is being psychologically present when performing an organizational role. Engaged employees are more likely to have a positive orientation toward the organization, feel an emotional connection to it, and be productive" (p. 464)	Reio and Sanders-Reio (2011)
Intellectual-Social-Affective Engagement	"A construct with three facets (physical, cognitive and emotional) that are activated simultaneously to create an engaged state" (p. 531)	Soanne *et al.* (2012)
Engagement	"Engagement can be defined as a positive, fulfilling yet pervasive and persistent cognitive state of mind" (p. 97)	Selmer *et al.* (2013)
Team Work Engagement	"A shared, positive and fulfilling, motivational emergent state of work-related well-being" (p. 5)	Costa *et al.* (2014)
Collective Organisational Engagement	"Shared perceptions of organizational members that members of the organization are, as a whole, physically, cognitively and emotionally invested in their work" (p. 8)	Barrick *et al.* (2015)

As employee engagement became popular in the 2000s, research interest in the subject area surged (Schaufeli, 2013). However, the different interpretations of employee engagement among the practitioners with the conceptual definitions proposed in the academic literature might have led to confusion in defining employee engagement (Shuck *et al.*, 2017). Macey and Schneider (2008) pinpoint that the source of confusion in defining employee engagement lies in whether the construct is operationalised as a dispositional trait, a psychological state, work behaviour, or a combination of those.

Macey and Schneider (2008) note that dispositional concepts such as positive affect, conscientiousness, proactive personality, and autotelic personality have been attributed as facets of trait engagement. They argue such traits indicate the individuals' tendency to experience state affect over time and thus serve as causal factors to state and behavioural engagement (Macey and Schneider, 2008). However, while empirical evidence can suggest that individuals with certain personality traits tend to have more engagement (Young *et al.*, 2018), compiling a selection of personality traits as engagement might further confusion in understanding what engagement refers to. Rather than depicting engagement in itself, this thesis aligns with Young *et al.* (2018) and observes these personality traits as separate constructs.

Perhaps, the more salient source of confusion in defining employee engagement lies in whether scholars position the construct as a psychological state, job attitude, or work behaviour. A brief review of the definitions of psychological state, job attitude and work behaviour in organisational studies may help to highlight these different positionalities of employee engagement. Psychological states refer to the "psychological attributes of the individuals that are relatively changeable, thus representing dimensions of intraindividual variability over time or occasions" (Hong, 1998; p. 53). Judge and Kammeyer-Muller (2012) define job attitude as "evaluations of one's job that express one's feelings toward, beliefs

about, and attachment to one's job" (p. 344). Meanwhile, work behaviour refers to the employees' activities to achieve their work objectives (Newstrom *et al.*, 1993). These definitions suggest that a psychological state relates to the psychological experience that the individual encounter at work, job attitude focuses on employees' appraisal toward their work role while work behaviour describes the manifested actions that the employees conduct at work.

The practitioners' perspective of engagement (e.g., Harter *et al.*, 2002) tends to operationalise employee engagement as a composite of positive job attitude and productive work behaviour (Macey and Schneider, 2008; Newman *et al.*, 2010). Their concept of engagement typically includes three elements, i.e. job satisfaction, organisational commitment, and extra-role behaviour (Schaufeli, 2013). However, scholars have criticised this definition for being redundant and merely representing 'old wine in new bottles' (Macey and Schneider, 2008; Newman and Harrison, 2008; Newman *et al.*, 2010). Newman *et al.* (2010) specifically noted that this approach is similar to the A-factor that Harrison *et al.* (2006) proposed.

On the contrary, the academic perspective of engagement tends to position engagement as either a transitory experience, a psychological state or a job attitude (Shuck *et al.*, 2017). For instance, Schaufeli *et al.* (2002) posit work engagement as a positive and fulfilling psychological state. Kahn (1990) views engagement as a momentary state that individuals experience when they fully invest themselves in their work. Meanwhile, later scholars have also viewed engagement as a job attitude rather than a psychological state. For instance, Saks (2006) assumes engagement as the degree of affective affinity that the employees have toward their job and organisation. Soane *et al.* (2012) refer to engagement as the extent employees are intellectually, affectively, and socially attached to their work. The proposal of positioning employee engagement as a job attitude might have been influenced by

the practitioners' view on engagement which, unfortunately, has impaired the clarity in understanding what employee engagement is (Truss *et al.*, 2013).

Schaufeli (2014) noted that perhaps the most challenging issue in defining engagement is where to draw the line that separates engagement from other constructs. Among other definitions, Kahn (1990) and Schaufeli *et al.* (2002) offer more specific conceptual boundaries of engagement. More importantly, unlike other definitions, Kahn (1990) and Schaufeli *et al.* (2002) provide explanations of how engagement develops within individuals in organisations. These theoretical explanations are critical to answering this thesis' research question such that they can suggest how the interpersonal relationship among the team members may help to facilitate engagement. Therefore, this thesis will narrow its review to these two engagement concepts, which will be discussed in the following subsections. For reference, this thesis will call Kahn's (1990) concept *personal engagement* and Schaufeli *et al.*'s (2002) *work engagement*. Meanwhile, employee engagement will be used as the overarching terminology that accounts for the different engagement definitions within the literature.

2.2.2. PERSONAL ENGAGEMENT

Kahn's (1990) ethnography study was widely cited as the pioneering study that coined the term engagement in the context of organisational studies. Drawing from job design literature (Hackman and Oldham, 1980) and role theory (D. Katz and Kahn, 1978), Kahn (1990) wanted to understand why people are using varying degrees of themselves at work. In Kahn's view, there is a clear separation between the individuals' selves and the work roles they assume. Kahn's (1990) study focuses on observing the distance between the individuals' selves and their work roles. Kahn (1990) argues that self and role exist in a dynamic, negotiable

relationship. The individuals have dimensions of themselves that, given appropriate conditions, they can use and express as role performances (Kahn, 1990).

The ethnography study exposes that when the distance between the individuals and their work roles collapsed, the individuals drive their personal energies into physical, cognitive, and emotional labours. They become physically involved in tasks, cognitively vigilant and emotionally connected to their customers and co-workers. Kahn (1990) refers to this specific condition as personal engagement, defined as "the harnessing of organisation members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694). This simultaneous employment of both the individual and their obligatory roles yields positive behaviours that are often associated with employee engagement, such as when the individuals go beyond themselves and want to cast their best efforts at work.

Perhaps, the distinctive feature of Kahn's (1990) concept of personal engagement in comparison to the other engagement definitions is that Kahn (1990) views engagement as a momentary rather than a pervasive psychological state. While other scholars tend to observe employee engagement as a stable construct (Harter *et al.*, 2002; Schaufeli *et al.*, 2002; Saks, 2006), Kahn (1990) proposes that personal engagement occurs temporarily throughout the day. This conceptualisation is similar to Csikszentmihalyi's (1975) concept of cognitive flow, which denotes a moment when the individual is completely absorbed in full enjoyment of doing a task.

The remainder of Kahn's (1990) study then focuses on unearthing the psychological conditions that individuals need to experience to allow for moments of personal engagement. The study then exposes three specific psychological conditions as building blocks that allow or restrain personal engagement, i.e. psychological meaningfulness, safety and availability. Fulfilling these three psychological conditions would lead the individual to be fully present at

work (Kahn, 1990). Kahn (1992) describes such a condition as psychological presence, defined as "the experiential state enabling organisation members to draw deeply on their personal selves" (p. 321). Kahn (1992) further argues that individuals who experience psychological presence are not simply motivated but are authentic at work. When the individuals are fully present, they will be more attentive, connected, integrated and focused on their role performance, thus creating a fertile condition for the individuals to experience personal engagement more frequently (Kahn, 1992).

Drawing on Kahn's (1990, 1992) arguments, personal engagement depends on whether the individuals have a sufficient level of psychological meaningfulness, safety and availability. Therefore, further examination of these three psychological conditions is critical to understand better how the work environment, including the interpersonal relationship among co-workers, can influence personal engagement. Each of these psychological conditions will be described in the following three subsections.

2.2.2.1. PSYCHOLOGICAL MEANINGFULNESS

The first of the three psychological conditions of personal engagement is psychological meaningfulness, which Kahn (1990) defines as a "sense of return on investments of self in role performance in a currency of physical, cognitive, or emotional energy" (p. 703). Kahn (1990) observed that individuals tend to experience personal engagement when they feel that they can make a difference with what they do at work. They may feel a sense of fulfilment when they see that what they do matters. Kahn (1990) refers to this satisfying fulfilment as a sense of return on investment. Kahn (1990) further observed that these rewarding sensations simultaneously make the individual obtain more physical, cognitive and emotional energy at their disposal. This burst of energy subsequently enables the individuals to experience moments of personal engagement (Kahn, 1992).

Kahn's (1990) concept of psychological meaningfulness closely aligns with what Hackman and Oldham (1980) propose in their job characteristic theory. Hackman and Oldham's (1980) job characteristic theory maintains that the features of the tasks that the employees do may influence their level of motivation. They propose that to enhance employees' motivation; the job characteristics need to make the employees experience three critical psychological states, i.e. meaningfulness of the work, responsibility for outcomes of the work, and knowledge of the actual results of the work activities (Hackman and Oldham, 1980). Kahn's (1990) psychological meaningfulness resonates with the first psychological state. Hackman and Oldham's (1980) job characteristic theory, which is one of the classic motivational theories, posits that the sense of meaningfulness of work would lead individuals to tap into their intrinsic motivation that, in turn, thrust them to improve their performance at work.

The link between psychological meaningfulness and intrinsic motivation may also draw support from other motivational theories, such as Herzberg's (1976) two-factor theory, Maslow's (1964) hierarchy of needs and Ryan and Deci's (2000) self-determination theory. Herzberg's (1959) two-factor theory argues that motivating factors are different from hygiene factors in the way that they relate more to the personal values that the individual perceives toward their jobs. Self-esteem and self-actualisation occupy the top spots in Maslow's (1964) hierarchy of needs. These two motivating factors similarly involve how the individuals' perception of how the job carries significance for their inner self. Meanwhile, Ryan and Deci (2000) highlight features of intrinsic motivation that involve the individual drawing personal meaning on what they do at work. Kahn's (1990) psychological meaningfulness may play a helpful role in explaining how individuals draw into their intrinsic motivation. Specifically, the term gauges whether the individuals ascribe sufficient personal meaning to the work role by asking whether they receive intrinsically rewarding experience from what they do at work.

Among the three psychological conditions of personal engagement, previous research suggests that psychological meaningfulness has the strongest impact on personal engagement (Chen *et al.*, 2011; May *et al.*, 2004; Olivier and Rothmann, 2007). This finding is understandable considering how the individual assigning meaning to their work has been shown as a key factor in unlocking intrinsic motivation (Ryan and Deci, 2000). Previous research has shown a positive correlation between psychological meaningfulness and various individual and organisational-level constructs, such as personalities, callings, task and job characteristics, work role fit, and corporate social responsibility (May, Gilson and Harter, 2004; Tims, Bakker and Xanthopoulou, 2011; Rothmann and Hamukang, 2013; Chaudhary and Panda, 2018). These findings suggest that how employees assert meaning to their work often depends on the work role characteristics and how they fit into the role (Kristof, 1996).

2.2.2.2.PSYCHOLOGICAL SAFETY

The second psychological condition of personal engagement is psychological safety, defined as "feeling able to show and employ one's self without fear of negative consequences to self-image, status, or career" (Kahn, 1990, p. 708). Kahn (1990) argues that engagement can only be achieved if employees feel safe expressing themselves in their workplace social environment. A plausible environment that promotes personal engagement includes a predictable, consistent, clear, and non-threatening workplace climate. On the contrary, personal engagement falters when situations are unclear, inconsistent, unpredictable, or threatening (Kahn, 1990). While psychological meaningfulness focuses on the inner drive that may thrust individuals into the state of personal engagement, Kahn's (1990) psychological safety pinpoints the necessary psychological conditions that individuals must build in relation to their work environment so that they are not afraid to express themselves. Because personal

engagement requires individuals to express their preferred selves at work, the individuals would need to feel that it is safe for them to do so (Kahn, 1992). For example, it would be difficult for new employees, regardless of how motivated they are, to express the best version of themselves if their supervisors treated failures as grave mistakes. The heightened fear of failure would suppress the individuals from using their authentic selves at work, separating the individuals from their work roles and thus limiting moments of personal engagement (Kahn, 1990; 1992).

Considering that psychological safety would inherently involves interpersonal relationships with other people within the organisations, researchers have been investigating psychological safety at the individual, team and organisational levels (Edmondson and Lei, 2014). Newman *et al.* (2017) review has shown that team-level psychological availability has received the most attention. The construct continues to occupy a significant role within team effectiveness research, positioned as either team input, mediator, or outcome (Edmondson and Lei, 2014; Mathieu *et al.*, 2019). However, Kahn's (1990) proposal of psychological safety focuses on the individuals' psychological experience rather than a team-level climate factor.

Edmondson and Lei (2014) have demonstrated that at the individual level, psychological safety has been associated with in-role behaviours, such as knowledge sharing (Siemsen *et al.*, 2009), creativity, proactivity and information exchange (Gong *et al.*, 2013). The construct has also been linked to speaking-up behaviours or voices (Ashford *et al.*, 1998; Detert and Burris, 2007). In addition, empirical research from the field of employee engagement has shown psychological safety as a predictor of personal engagement (May *et al.*, 2004; Chen *et al.*, 2011; Aryee *et al.*, 2012). Meanwhile, the antecedents of individual psychological safety involve the employees' interpersonal relationships with their co-workers, leaders, and their work teams (Kahn, 1990; Edmondson and Lei, 2014) in addition to the organisational context (Edmondson, 1999).

2.2.2.3.PSYCHOLOGICAL AVAILABILITY

The third constituent of personal engagement is psychological availability, defined as "the sense of having the physical, emotional, or psychological resources to personally engage at a particular moment" (Kahn, 1990; p. 714). In this construct, the term 'resource' specifically refers to physical and emotional energy rather than the broader definition within the conservation of resource theory (Hobfoll, 1998; Demerouti *et al.*, 2007). Physical energy involves, for instance, the physical strength and stamina to carry out the job. Emotional energy refers to the energy required to perform intellectual and emotional labour (Hochschild *et al.*, 1983). Individuals need to have enough energy to allow engagement. For instance, when employees have gone through 8-hour over time, they might not be able to engage regardless of how meaningful and safe they feel toward the job. Kahn's (1990) conceptualisation of psychological availability infers that it serves as a gateway to allow or disallow personal engagement.

This construct has slightly different characteristics than the other two psychological conditions of personal engagement. Rather than denoting a specific psychological condition that the individual can experience, psychological availability indicates the amount of psychological and physiological energy that the individuals have at their disposal at a given time (Kahn, 1990; 1992). Kahn (1990) proposes that individuals need to have enough energy to fuel the ecstatic state of personal engagement. In relation to the other two psychological conditions of personal engagement, psychological availability acts as a gatekeeper that limits personal engagement. That is, personal engagement would be halted when the individuals' psychological availability drops below a certain point, irrespective of how much the individuals experience psychological meaningfulness and safety.

Kahn (1990) mentioned that an individual's psychological availability could be influenced by their personality, fit with the organisation, and lives outside work. Individuals

with low self-confidence and heightened self-consciousness were observed to have low availability because they tend to preoccupy themselves with a sense of insecurity. Individual psychological availability was also limited when the individuals felt ambivalent about their fit with the organisation and its purposes. Finally, the individuals' responsibilities outside their work could also influence how available they are when coming to work.

In summary, each of the three psychological conditions of personal engagement that Kahn (1990) proposes, i.e. meaningfulness, safety, and availability, emphasises very different psychological and organisational aspects. These three constituents are building blocks that enable one to be psychologically present, i.e. "the experiential state enabling organisation members to draw deeply on their personal selves in role performance" (Kahn 1992; p.321). This psychological presence further serves as the foundation that can trigger personal engagement in certain moments over the employees' working period.

2.2.3. WORK ENGAGEMENT

The second definition of employee engagement emerged from research on occupational health settings (Maslach and Leiter, 1997; Schaufeli *et al.*, 2002). One focal issue in this work context is the job stress that nurses and medical doctors endure due to the pressing job demands and emotional labour. Drawing from this background, Maslach and Leiter (1997) adopted the lens of positive psychology (Csikszentmihalyi and Seligman, 2000), which was recently emerging at that time, and suggested flipping the perspective in researching burnout. Instead of focusing on burnout, they propose to reverse the perspective and examine the antipode of job burnout. They named the opposite pole of job burnout as employee engagement (Maslach and Leiter, 1997). Maslach and Leiter's (1997) engagement has three facets, each representing the exact opposite of job burnout, i.e. energy,

involvement, and efficacy, that mirror the three aspects of job burnout, i.e. exhaustion, cynicism, and lack of professional efficacy. Maslach and Leiter (1997) propose to measure engagement by using the Maslach Burnout Inventory (MBI), in which engagement is indicated by scores on exhaustion and cynicism and high scores on efficacy.

Schaufeli *et al.* (2002) adopted Maslach and Leiter's (1997) proposition in viewing engagement as the opposite end of burnout. However, they argue that engagement should be measured using a separate instrument rather than using the reverse scores of the MBI. Schaufeli *et al.* (2002; p. 74) define engagement as "a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption". Vigour and dedication are used to denote what Maslach and Leiter (1997) called energy and involvement, respectively. The two constructs represent the opposite continua of exhaustion and cynicism. However, Schaufeli *et al.* (2002) assert that absorption is not the opposite of lack of efficacy but rather a new facet of engagement that emerged from Schaufeli *et al.*'s (2001) qualitative study involving 30 in-depth interviews.

Vigour refers to "high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties" while dedication denotes "a sense of significance, enthusiasm, inspiration, pride, and challenge" (Schaufeli *et al.*, 2002; p. 74). Schaufeli *et al.* (2002) noted that although these two terms share many similarities with Maslach and Leiter's (1997) energy and involvement, they chose to use these different terms to signify a very high degree of energy and involvement. Meanwhile, absorption is characterised by "being fully concentrated and deeply engrossed in one's work, whereby time passes quickly, and one has difficulties with detaching oneself from work" (Schaufeli *et al.*, 2002; p. 75). Schaufeli *et al.* (2002) conceptualise absorption as a more pervasive version of Csikszentmihalyi's (1990; p. 4) cognitive flow, which denotes "a state in which people are so involved in an activity that nothing else seems to matter; the experience

is so enjoyable that people will continue to do it even at great cost, for the sheer sake of doing it".

Schaufeli *et al.* (2002) align with Maslach and Leiter (1997) in viewing work engagement as the opposite end of job burnout. However, their work engagement construct seems to denote a more vibrant state than what Maslach and Leiter (1997) have proposed. To account for that very high level of energy and involvement, Schaufeli *et al.* (2002) used the term vigour and dedication and further added absorption as the facet of engagement. They also provided the Utrecht Work Engagement Scale (UWES) as the instrument to operationalise the construct.

Scholars from the work engagement literature strains commonly used the JD-R framework as their theoretical underpinning in studying employee engagement (Bailey *et al.*, 2017). The JD-R framework itself was originally coined as a framework to explain job burnout in a general setting that is not limited to the occupational health context (Demerouti et al., 2001). The framework assigns factors at work into two broad categories, i.e. job demands and job resources. Job demands refer to physical, social, or organisational aspects of the job that drain physical or mental effort and therefore lead to burnout (Demerouti *et al.*, 2001). Examples of factors that are often considered as job demands include physical workload, time pressure, recipient contact, physical contact and shift work (Demerouti *et al.*, 2001).

Meanwhile, job resources are physical, social, or organisational aspects of the job that reduce job demands (Demerouti *et al.*, 2001). The framework mainly argues that burnout will increase if job demands are stronger than job resources. Conversely, burnout may decrease if job resources are stronger than job demands (Demerouti *et al.*, 2001). Some examples of job resources include feedback, rewards, job control, participation, job security, autonomy, and supervisory support (Demerouti *et al.*, 2001). The broad definition of job resources means that

it can consider any other organisational factors that are useful for the employees to combat their job demands as resources.

Scholars adopted the JD-R model to study the antecedents of work engagement (Crawford *et al.*, 2010; Bailey *et al.*, 2017). Given that work engagement is the inverse of job burnout, the JD-R model can suggest employees will get engaged if they are provided more resources than demands. Conversely, the framework predicts work engagement to deplete should the job demands overwhelm the resources that the employees possess.

In summary, the work engagement literature strain seems to develop more consistently than others. It offers a clear definition and operationalisation of engagement, with the JD-R model serving as the main framework to investigate the model. The consistency of the work engagement literature strain was apparent in Bailey *et al.* (2017), which highlighted the UWES as the dominant scale used to conceptualise employee engagement and the JD-R model as the most used framework in investigating engagement.

2.2.4. COMPARISON BETWEEN WORK AND PERSONAL ENGAGEMENT

There are two main differences between Kahn's (1990) and Schaufeli's *et al.* (2002) engagement concepts. First, Schaufeli *et al.* (2002) assume engagement as a more pervasive psychological state, while Kahn (1990) argues that engagement is momentary and susceptible to the psychological conditions that individuals experience on a daily basis. In Kahn's (1990) view, moments of personal engagement occur on occasions throughout the day, given the three psychological conditions are met at an acceptable level. On the contrary, Schaufeli *et al.* (2002) propose work engagement as a more pervasive psychological state similar to job burnout which can last over a period of time. Although, this psychological state is less permanent than job satisfaction which differentiates Schaufeli *et al.* (2002) work engagement

concept from that of Harter *et al.* (2002). On the temporal dimension of employee

engagement, Sonnentag *et al.*'s (2012) diary study might have provided evidence to support

that employee engagement is malleable over time. Their study measured the participant's

engagement level two times a day, in the morning and after work. The study found that the

level of employee engagement fluctuates on a daily basis, thus suggesting that employee

engagement is a dynamic construct.

Perhaps, the more apparent area where the two groups of scholars propose different

views on employee engagement is how they conceptualise engagement to develop within an

individual. Kahn (1990), who drew from job characteristics theory (Hackman and Oldham,

1980), focuses more on what individual psychological experience individuals need to have to

engage. He identified three critical psychological conditions necessary to get individuals to

experience personal engagement, i.e. psychological meaningfulness, safety and availability. On

the other hand, Schaufeli *et al.* (2002), who drew from job stress literature, emphasise

identifying the organisational factors that can reduce stress and simultaneously improve

engagement. Here, the focus departs from what the individual feels toward the wider

organisational aspects that can influence the individual's engagement. The proponent of the

work engagement approach uses the JD-R framework to identify these organisational factors,

in which job resources indicate factors that have a positive impact on engagement. In contrast,

job demands are factors that deplete engagement (Xanthopolou *et al.*, 2008).

This thesis's primary interest is investigating how work teams can influence employee

engagement. Previous scholars who used the JD-R framework have investigated how team

social resources influence team engagement (Torrente *et al.*, 2012). However, this framework

has not given a detailed clarification of how these social resources interact with the individual

team members, thus improving their engagement. On the contrary, Kahn's (1990) personal

engagement perspective can explain how the team factors influence the team members'

engagement by examining if it affects the individuals' personal conditions of personal engagement. Therefore, this thesis will use Kahn's (1990) personal engagement to represent individual engagement at the individual level and measure the three psychological conditions of personal engagement, i.e. psychological meaningfulness, safety and availability.

This section has reviewed the different definitions of employee engagement and attempted to clarify the concept of employee engagement that this thesis will use. This thesis uses Kahn's (1990) personal engagement construct that indicates the energetic moments that individuals experience when they fully invest themselves in their work role. The next section of this chapter will continue to review the factors that previous studies have suggested as the antecedents of employee engagement.

2.3. ANTECEDENTS OF EMPLOYEE ENGAGEMENT

The main interest of this thesis is to investigate how work teams can influence employee engagement. Before focusing specifically on the team factors that could influence engagement, it is helpful to review the wide array of factors that have been proposed as the antecedents of employee engagement. This review will provide a broad overview of organisational and individual factors that are relevant to employee engagement. It will also show that previous research has largely neglected the role of work teams in studying the antecedents of employee engagement.

Given the popularity of the construct, there have been many systematic reviews and meta-analysis studies on the antecedents of employee engagement. Some scholars have included a broad array of factors in their reviews. For instance, Christian *et al.* (2011) categorised the antecedents of employee engagement into three factors (i.e., individual characteristics, job characteristics and leadership). Wollard and Shuck (2011) have recorded 42 antecedents of employee engagement and grouped them based on either individual or organisational factors. Meanwhile, Bailey *et al.* (2017) have examined 155 empirical studies investigating the antecedents of engagement and categorised them into five headings, i.e. individual psychological states, experienced job-design-related factors, perceived leadership and management, individual perceptions of organisational and team factors, and organisational interventions and activities.

Other groups of scholars focus their review on a more specific area. Most notably, several reviews have identified job resources, personal resources, and job remands that have been associated with engagement (Crawford *et al.*, 2010; Lesener *et al.*, 2019; Lichtenthaler and Fischbach, 2018; Lessener *et al.*, 2020). Young *et al.* (2018) examined how different personality traits correlate with employee engagement. Meanwhile, Carasco-Saul *et al.* (2015)

investigated the different leadership approaches that have been linked to employee engagement.

Given that several reviews have examined various antecedents of employee engagement, this thesis will not conduct another systematic review. Instead, it will use a multilevel approach to map these antecedents of employee engagement. This approach is helpful as it will provide a clear structure on how the different layers in the organisation can influence employee engagement. The proponent of this approach argues that observing an organisation as a multilevel system would grant researchers a clearer logical basis for theorising, measuring, testing, and drawing inferences (Kozlowski and Klein, 2000; Dionne *et al.*, 2014). The classification of the antecedents of employee engagement based on their levels is critical as it can reveal that most of the previous studies have examined antecedents of employee engagement at the individual or organisational level. Meanwhile, the role of the work teams in influencing engagement has received less attention. To illustrate this point, the following three sections will review these antecedents of employee engagement based on the individual, organisational, and team levels.

2.3.1. Individual Antecedents of Employee Engagement

A number of systematic review studies have examined various forms of individual characteristics that have been related to employee engagement (i.e., Wollard and Shuck, 2011; Christian *et al.*, 2011; Bailey *et al.*, 2017; and Young *et al.*, 2018). Wollard and Shuck (2011) identified twenty-one individual factors as antecedents of employee engagement. Some of the examples include higher levels of corporate citizenship, involvement in meaningful work, perceived organisational support, and core self-evaluation. Bailey *et al.* (2017) noted various psychological states that have been positively linked to engagement,

such as self-efficacy, resilience, optimism, psychological ownership, enjoyment of work, proactive personality, and affective commitment. Young *et al.* (2018) examined 114 studies that link individual personality traits and employee engagement. They found that all of the five-factor personality traits, proactivity, positive and negative affect correlate with employee engagement. Among these traits, positive affect has shown the strongest correlation, followed by proactive personality, conscientiousness, and extraversion.

From the perspective of the JD-R framework, all of these individual characteristics can be considered personal resources. However, this thesis will differentiate these individual characteristics into three broad categories, i.e. personality traits, psychological states and job attitudes. This classification would help better understand how the different individual characteristics help the individuals get engaged in their work. Personality traits denote the features of individuals that are relatively stable across occasions, while psychological states refer to the attributes of the individuals that fluctuate over time (Hong, 1998). Personality traits and psychological state focus solely on the individuals' characteristics irrespective of their relation to their work. Meanwhile, job attitudes measure not only the individuals' attributes but also their evaluations of their jobs (Judge and Kammeyer-Muller, 2012).

With regards to the link between personality traits and employee engagement, previous research evidence has suggested that individuals with particular characteristics, i.e. positive affect, proactive personality, conscientiousness and extraversion, tend to have a higher level of engagement (Young *et al.*, 2018). Macey and Schneider (2008) have proposed that employee engagement can be seen as a dispositional trait; that is, some individuals have a greater tendency to engage in their work than others. Young *et al.* (2018) argue that this is because individuals with those traits can manage their energy better so that they have more of it to channel to their work (Hirschfeld and Thomas, 2008).

Several psychological states, such as optimism, resilience, self-efficacy, and core-self-evaluation, have been positively linked to employee engagement (Balducci *et al.*, 2011; Bakker and Xanthopoulou, 2013; Carter *et al.*, 2010; Del Líbano *et al.*, 2012). Previous scholars commonly assumed these psychological states as valuable resources to help individuals handle job demands and, in turn, increase their engagement (Xanthopolou *et al.*, 2008). Yet, scholars from the work engagement strain have further argued that the relationship between these psychological states and employee engagement is reciprocal (Bakker *et al.*, 2007). Drawing from the conservation of resource theory (Hobfoll, 1989), Bakker *et al.* (2007) argue that engaged individuals would make more resources available at their disposal. It eventually creates a positive feedback loop between employee engagement and these psychological states.

In addition to personality traits and psychological states, previous scholars have also linked employee engagement with several job attitudes, such as job satisfaction, organisational citizenship behaviour and affective commitment (Barnes and Collier, 2013; Glavas and Piderit, 2009). However, other studies have also proposed these job attitudes as the consequences of employee engagement rather than antecedents (Anaza and Rutherford, 2012; Barnes and Collier, 2013; Glavas and Piderit, 2009). This contradiction reflects the lack of clarity in the employee engagement conceptual definition within the literature. Scholars who perceived employee engagement as a psychological state proposed that as employees get engaged, they would report more favourable attitudes toward their work (Biswas and Bhatnagar, 2013; Hu *et al.*, 2011; Yalabik *et al.*, 2013). On the contrary, those who perceive engagement as a higher-order work behaviour would argue that these job attitudes are prerequisites for calling an individual engaged (Cole *et al.*, 2012; Glavas and Piderit, 2009; Harter *et al.*, 2002).

In summary, previous studies have revealed a range of personality traits, psychological states and job attitudes that have been associated with employee engagement. Individuals that have certain personality traits can have more propensity to engage. Employee engagement might have a reciprocal relationship with a range of psychological states. Meanwhile, several job attitudes have been proposed as either the antecedents or consequences of employee engagement. This examination suggests that there have been extensive studies that examine how individual characteristics link to employee engagement. Table 2.2 compiles the list of personality traits, psychological states, and job attitudes that have been previously proposed as antecedents of employee engagement.

TABLE 2.2. INDIVIDUAL ANTECEDENTS OF EMPLOYEE ENGAGEMENT

Individual-level Antecedents	Source
Personalities	
Conscientiousness	Saks and Gruman (2014); Young *et al.* (2018)
Extraversion	Saks and Gruman (2014); Young *et al.* (2018)
Proactive personality	Saks and Gruman (2014); Young *et al.* (2018)
Positive affect	Ouweneel *et al.* (2012); Young *et al.* (2018)
Achievement striving	Martinussen *et al.* (2011)
Emotion recognition	Bechtoldt *et al.* (2011)
Psychological States	
Optimism	Balducci *et al.* (2011)
Resilience	Bakker and Xanthopoulou (2013)
Self-efficacy	Carter *et al.* (2010); Del Líbano *et al.* (2012)
Self-tuning	Bakibinga *et al.* (2012)
Core-self-evaluation	Rich *et al.* (2010); Saks and Gruman (2014)
Absorption	Scahufeli *et al.*, (2002); Wollard and Shuck (2011)
Dedication	Scahufeli *et al.*, (2002); Wollard and Shuck (2011)
Vigour	Scahufeli *et al.*, (2002); Wollard and Shuck (2011)
Competence need	Kovjanic *et al.* (2013); Scahufeli *et al.*, (2002);
Mindfulness	Leroy *et al.* (2013)
Situational motivation	Gillet *et al.* (2013)
Psychological meaningfulness	Kahn (1990); May *et al.* (2004); Rich *et al.* (2010)
Psychological safety	Kahn (1990); May *et al.* (2004); Rich *et al.* (2010)
Psychological availability	Kahn (1990); May *et al.* (2004); Rich *et al.* (2010)
Job Attitudes	
Job satisfaction	Anaza and Rutherford (2012)
Job burnout*	Te Brake *et al.* (2007); Van der Colff and Rothmann (2009); Andreassen *et al.* (2007)
Job crafting	Bakker *et al.* (2012); Petrou *et al.* (2012)
Affective commitment	Barnes and Collier (2013)
Emotional labour*	Bechtoldt *et al.* (2011)
Psychological empowerment	Bhatnagar (2012); Mendes and Stander (2011)
Psychological ownership	Alok and Israel (2012)
Enjoyment of work	Andreassen *et al.* (2007)
Work centrality	Bal and Kooij (2011)
Organisational citizenship behaviour	Glavas and Piderit (2009)
Value Congruence	Dylag *et al.* (2013)

*indicates negative correlation

2.3.2. Organisational-level Antecedents of Employee engagement

The previous section reviewed the individual-level factors that have been suggested as antecedents of employee engagement. It covered the different ranges of the employees' individual characteristics that have been correlated with employee engagement. This section will continue to review the factors outside of employees' individual characteristics that have been proposed as predictors of employee engagement.

Several reviews and meta-analyses have examined various areas of organisational antecedents of employee engagement, indicating that there is a vast array of factors that have been proposed as antecedents of employee engagement (Wollard and Shuck, 2011; Crawford *et al.*, 2010; Christian *et al.*, 2011; Lesener *et al.*, 2019; Lesener *et al.*, 2020; Bailey *et al.*, 2017; Knight *et al.*, 2017; Knight *et al.*, 2019). These reviews covered a different range of organisational antecedents of employee engagement. Wollard and Shuck (2011), Christian *et al.* (2011) and Bailey *et al.* (2017) include a broader range of factors as these reviews include any previous studies that examined antecedents of employee engagement. Crawford *et al.* (2010), Lesener *et al.* (2019), and Lesener *et al.* (2020) include only job resources and job demands as antecedents of employee engagement. Meanwhile, Knight *et al.* (2017) and Knight *et al.* (2019) reviewed extant interventional studies designed to improve employee engagement.

Given that many reviews have examined the organisational antecedents of employee engagement, this thesis did not attempt to conduct another systematic review. Instead, it highlights three broad areas that previous scholars have often considered the driver of employee engagement at the organisational level (i.e., job features, organisational climate and rewards). Table 2.3 summarises previous empirical studies that examined the organisational antecedents of employee engagement based on these three headings.

The first theme that appeared in various reviews is the job design-related features. There has been consistent evidence that shows the link between some aspects of job design with employee engagement. For instance, job autonomy (Xanthopoulou *et al.*, 2009), job control (Bakker *et al.,* 2012), structural empowerment (Laschinger *et al.*, 2010), job enrichment, role clarity and flexible working arrangement (Brummelhuis and Bakker, 2012) have strong correlations with employee engagement. These findings demonstrate strong support for Hackman and Oldham's (1980) job design theory, which argues that how jobs are designed would influence employees' motivation.

There are two elements of job characteristics that have been shown to influence employee engagement. First, research evidence suggests that employees tend to get more engaged in jobs that grant them more autonomy and control over their jobs (Bakker *et al.*, 2009; Bakker, Tims and Derks, 2012). These findings align with the job characteristic theory (Hackman and Oldham, 1976). The theory suggests that individuals will be internally motivated to perform well, or in Kahn's (1990) view, to exert more of themselves into the work roles when they perceive their jobs as meaningful, and they feel they have personal responsibility for the work outcomes (Hackman, 1980).

Second, job demands could either diminish or enhance employee engagement depending on whether the employees see the demands as a hindrance or challenge. Cavanaugh *et al.* (2000) identify hindrance demands as stressors at work that are thwarting the employees' personal growth and goal attainment. Examples of hindrance demands are administrative hassles, emotional conflict, organisational politics, resource inadequacies, role conflict and role overload. On the contrary, challenge demands are stressors that the employees see as obstacles to overcome in order to learn and achieve (Cavanaugh *et al.*, 2000). Examples of challenge demands include job responsibility, time urgency, and workloads.

The negative correlation between hindrance demands and employee engagement is apparent (Crawford *et al.*, 2010). This type of demand would deplete the individuals' energy and make them unable to further exert themselves in their work role, thus preventing them from getting engaged (Kahn, 1990). On the contrary, previous research has shown that challenge demand positively influences employee engagement (Crawford *et al.*, 2010). Podsakoff *et al.* (2007) argue that employees see job demands as a challenge when the individuals see the intrinsic reward of getting the task done. This reward can be in the form of intrinsic enjoyment or because the employees see an opportunity for personal growth (McCauley *et al.*, 1994).

In summary, research evidence has demonstrated that giving employees more ownership of their jobs positively influences employee engagement (Crawford *et al.*, 2010; Bakker and Demerouti, 2007). Job demands can positively or negatively impact employee engagement depending on whether the employees perceive the demands as a challenge or hindrance. The findings infer that organisations can enhance employee engagement by granting employees more ownership of their jobs and assigning challenging tasks.

The second type of organisational factor that has been associated with employee engagement is organisational climate. The organisational climate in this section's typology refers to the shared perception of the organisation's characteristics (Schneider, 1975). It appears that some of the organisational factors that have been linked to employee engagement relate to the higher-order collective features of the organisations. For example, Hall *et al.* (2010) have found a link between psychological safety climate and employee engagement. While other researchers have correlated employee engagement with perceived organisational support, organisational identification and service climate (Brown and Leigh, 1996; Shuck and Reio, 2011; Barnes and Collier, 2013; He, Zhu and Zheng, 2014).

Organisational researchers have conceived that the collective organisational-level factors would induce a top-down influence on the individual employee (Kozlowski and Klein, 2000). James and Jones (1974) argue that this collective organisational characteristic would influence how the individual perceives the organisation and hence further influence their attitude and behaviours. Previous reviews have suggested that this contextual influence also applies to employee engagement (Bailey *et al.*, 2017; Lesener *et al.*, 2020).

The third area of the organisational factors that have correlated with employee engagement is rewards. There are broadly two types of rewards that have been linked to employee engagement. The first is various forms of financial rewards (Hyvönen *et al.*, 2010; Inoue *et al.*, 2013; Olafsen *et al.*, 2015) and non-financial rewards such as recognition and opportunities for development, or point systems (Lee *et al.*, 2016; Belgio, 2017). Previous studies have suggested that non-financial rewards can positively influence employee engagement (Lee *et al.*, 2016; Belgio, 2017).

However, the link between financial reward and employee engagement is more complicated. Previous research has suggested that financial rewards have no significant or even negative effect on employee engagement (Belgio, 2017; Olafsen *et al.*, 2015). However, other studies found that effort-reward imbalance (ERI), which is a ratio that expresses perceived unfairness between the efforts spent and rewards received in the workplace (Aust *et al.*, 1997), showed a negative correlation with employee engagement. These findings indicate that while financial reward may not impact the level of engagement, the employees' perception of how fair the financial reward is distributed may affect the level of employee engagement (Olafsen *et al.*, 2015). It can further suggest that non-financial rewards are a more effective way to improve engagement. Organisations should also carefully consider employees' perception of fairness to maintain the level of engagement in their organisation.

In summary, this review has identified three broad areas where organisational factors can influence employee engagement, i.e. job features, organisational climate and rewards. The JD-R model would consider all these three areas as job resources. However, the framework might not have explained how the different types of job resources influence engagement. By categorising the resources into three headings, this section further identifies the key areas of job resources that correlate with employee engagement.

TABLE **2.3.** ORGANISATIONAL ANTECEDENTS OF EMPLOYEE ENGAGEMENT

Antecedents of Engagement	Source
Job Features	
Job autonomy	Xanthopoulou *et al.* (2009); Crawford *et al.* (2010)
Job control	Bakker *et al.* (2012)
Hindrance job demands*	Crawford *et al.* (2010)
Challenge job demands	Crawford *et al.* (2010)
Job characteristics	Saks (2006)
Job design	Barrick *et al.* (2015)
Job fit	Wollard and Shuck (2011)
Job enrichment	Brummelhuis and Bakker (2012)
Variety	Crawford *et al.* (2013)
Structural empowerment	Laschinger *et al.* (2010)
Role clarity	Brummelhuis and Bakker (2012)
Flexible working arrangement	Brummelhuis and Bakker (2012)
Feedback	Bakker and Bal (2010); Hallberg and Schaufeli (2006)
Level of task challenge	Wollard and Shuck (2011)
Orderly work environment	Strom *et al.* (2014)
Clear expectations	Wollard and Shuck (2011)
Resources	Rothmann and Welsh (2013)
Organisational Climates	
Supportive organisational culture	Brown and Leigh (1996); Shuck *et al.* (2011)
Psychological climate	Dollard and Bakker (2010)
Perceived organisational support	Rothmann and Welsh (2013); Rich *et al.* (2010)
Authentic corporate culture	Wollard and Shuck (2011)
Psychological safety climate	Hall *et al.* (2010)
Positive workplace climate	Wollard and Shuck (2011)
Organisation based self-esteem	Mauno *et al.* (2007)
Organisational values	Rich *et al.* (2010)
Procedural justice	Saks (2006); He *et al.* (2014)
Organisational identification	Ötken and Erben (2010); Anaza and Rutherford (2012)
Service climate	Salanova *et al.* (2005)
Employee voice	Jenkins and Delbridge (2013)
Human resources management practice	Barrick *et al.* (2015)
Policies and procedures	Anitha (2014)
Workplace well-being	Anitha (2014)
Rewards	
Financial reward*	Hyvönen *et al.* (2010); Inoue *et al.* (2013)
Recognition	Jenkins and Delbridge (2013); Lee and Ok (2015)
Opportunities for development	Lee *et al.* (2016)
Point systems	Belgio (2017)
Effort reward imbalance*	Hyvönen *et al.* (2010); Inoue *et al.* (2013)

*indicates negative correlation

2.3.3. Team-level Antecedents of Employee Engagement

Another important aspect of the organisation that has been closely associated with the level of employee engagement is the interpersonal relationships among colleagues (Crawford *et al.*, 2010; Wollard and Shuck, 2011; Bailey *et al.*, 2017). Considering that most of the interpersonal interactions between colleagues occur within the work teams, this thesis will consider this aspect as the team-level antecedent of employee engagement. The interpersonal relationships among colleagues can be grouped into two categories, i.e. the vertical relationships between the employees and their superordinates and the horizontal relationships among the colleagues. Table 2.4 summarises previous studies that examined the team-level antecedents of employee engagement.

Previous studies have positively correlated various forms of leadership and employee engagement. For instance, supervisory support (Karatepe, 2012), transformational leadership (Tims *et al.*, 2011), authentic leadership (Wang and Hsieh, 2013), charismatic leadership (Babcock-Roberson and Strickland, 2010), ethical leadership (Den Hartog and Belschak, 2012b), leader-member exchange (Breevaart *et al.*, 2015), supervisory coaching (Xanthopolou *et al.*, 2007), empowering behaviour (Van Schalkwyk *et al.*, 2010), and trust in manager (Rees *et al.*, 2013) have been found to positively correlate with employee engagement.

There is a consensus that the employees who give a higher leadership score toward their direct report would report higher engagement. One exception found in Menguc *et al.* (2013) found no significant result. The positive trends apply across the different leadership styles that the previous researchers had measured (Carasco-Saul *et al.*, 2015). This finding highlights the important role of leaders in defining how an employee perceives the relationship with their work (Cohen and Bailey, 1997; Hackman *et al.*, 1986; Kozlowski *et al.*, 1996).

Similarly, the interpersonal relationship between individuals and their colleagues has been positively linked to employee engagement. For instance, Xanthopoulou *et al.* (2008) have found a positive correlation between engagement and colleague support among flight attendants. Other studies have found a positive correlation between social support and engagement in various sectors (Adriaenssens et al., 2015; Gan & Gan, 2014; Liu et al., 2014; Sawang, 2012; van Beek et al., 2012). Chen *et al.* (2011) have found that two types of conflicts, i.e. task conflict and relationship conflict, demonstrate a contrasting effect on employee engagement. The study shows that task conflict indirectly influences employee engagement through psychological safety and availability. On the contrary, relationship conflict negatively influences psychological meaningfulness, safety, and availability and hence indirectly influences employee engagement. These findings indicate that employee engagement seems to be closely linked to the quality of relationships among the employees and supported Kahn and Heaphy's (2014) proposition that emphasises the critical role of the relational context in maintaining engagement in organisations. They argue that quality relationships among the employee would enhance the individuals' sense of psychological meaningfulness, safety and availability (Kahn and Heaphy, 2014).

In summary, research evidence has suggested that high-quality interpersonal relationships among colleagues relate to a high level of employee engagement. However, most of these previous studies have focused on examining the dyadic relationship between the employees and their colleagues or between the employees and their supervisors but have overlooked how the work teams as a unit can contribute to promoting employee engagement. On this line, previous scholars have noted that the literature on work teams and employee engagement has developed in a largely separate fashion (Costa *et al.*, 2014). The lack of attention to the work team is quite surprising, considering that most modern organisations are structured upon teams (Cohen and Bailey, 1997). Thus, this section will narrow its review to this area.

TABLE 2.4. TEAM-LEVEL ANTECEDENTS OF EMPLOYEE ENGAGEMENT

Antecedents of Engagement	Source
Vertical Relationship	
Supervisory support	Karatepe (2012); Xanthopoulou *et al.* (2009)
Supervisor relations	Rothmann and Welsh (2013)
Transformational leadership	Tims *et al.* (2011)
Authentic leadership	Walumbwa *et al.* (2010); Wang and Hsieh (2013)
Charismatic leadership	Babcock-Roberson and Strickland (2010)
Ethical leadership	Den Hartog and Belschak (2012)
Leader-member exchange	Breevart *et al.* (2015)
Empowering leadership	Van Schalwyk *et al.* (2010)
Trust in manager	Rees *et al.* (2013)
Engaging leadership	Schafueli (2015)
Abusive supervision*	Sulea *et al.* (2012)
Horizontal Relationship	
Colleague support	Karatepe (2012); Crawford *et al.* (2010)
Task conflict	Chen *et al.* (2011)
Relationship conflict*	Chen *et al.* (2011)
Relatedness	Jenkins and Delbridge (2013)
Team member exchange	Liao *et al.* (2013)
Team social resources	Torrente *et al.* (2012)

*indicates negative correlation

Within the smaller research domain that investigates the link between work teams and employee engagement, previous scholars have suggested that employee engagement can accumulate as a team-level construct (Bakker *et al.*, 2006; Costa *et al.*, 2014). This collective team engagement can then induce a crossover effect on the individual members so that it helps the engagement spread across the members (Bakker *et al.*, 2006). Meanwhile, a recent study has demonstrated that a highly engaged individual can help to improve the collective engagement of the team as a unit (van Mierlo and Bakker, 2018). These findings may suggest that team and individual-level engagement could form a virtuous cycle over time.

This virtuous cycle can potentially explain what Knight *et al.* (2017; 2019) found in their meta-analyses. As mentioned in the introduction chapter, Knight *et al.* (2017) examined the impact of interventional studies that aimed to improve the level of employee engagement. They categorised these engagement interventions into four categories, i.e. job resources building, personal resource building, leadership training, and health promotion. Although they did not find a significant difference in the effect of these four types of interventions on engagement, they did find that interventions directed at groups were more effective than those directed at individuals (Knight *et al.*, 2017).

Two years later, Knight *et al.* (2019) reported a similar meta-analysis study, this time including forty interventional studies. The result shows that twenty studies (50%) displayed a positive effect on work engagement. Knight *et al.*'s (2019) research findings also suggest that all but three (85%) intervention studies that exhibited positive results conducted their interventions toward the group as opposed only to the individuals. This finding can further indicate the potential role of group interactions in promoting and preserving interaction.

Relating this back to the discussion on collective team engagement, it is plausible to suspect that this lasting effect could be due to a reciprocal relationship between the team and individual engagement. Considering that the individual engagement level has been shown to fluctuate on a daily basis (Sonnentag *et al.*, 2012), the intervention studies that are directed toward the team might have promoted collective engagement in the team, that in turn, helps to maintain the level of the individual engagement over time. Given the critical role of developing an engaged team, this thesis will narrow its focus on team-level engagement and investigate how the construct develops within the work teams.

2.4. SUMMARY OF CHAPTER 2

This chapter has reviewed the different concepts of employee engagement at the individual level. It then discussed the confusion surrounding its definition in the literature before explaining that the thesis will use Kahn's (1990) personal engagement to measure engagement at the individual level. The chapter then examines the antecedents of employee engagement based on their level of analysis. The investigation revealed that while voluminous studies have investigated organisational and individual antecedents of employee engagement, the role of the work teams as a collective unit in promoting engagement has largely been overlooked. To address this research gap, the next chapter will shift the focus of the review to examine the literature on employee engagement at the team level.

CHAPTER 3
LITERATURE REVIEW: TEAM ENGAGEMENT

3.1. INTRODUCTION

This is the second of the two literature review chapters in this thesis that will focus on examining the literature on employee engagement at the individual level. This chapter starts with a review of how scholars have investigated team-level engagement before narrowing its focus to the construct of team work engagement (Costa *et al.*, 2014). It then ventures into work teams and multilevel literature (Kozlowski and Klein, 2000; Marks *et al.*, 2001) to examine how team work engagement emerges in work teams.

The chapter continues to briefly review the consequences before focusing on reviewing the antecedents of team work engagement. It identifies two key team factors that can be influential in facilitating the emergent process of team work engagement, i.e. team interpersonal processes and team functional leadership. It then reviews the literature on team processes and discusses how team interpersonal processes can influence the emergence of team work engagement.

In many organisations, the team leaders usually have formal authority that they can use to coordinate the tasks and other processes within the teams (Morgeson, 2005). Even self-managing teams usually have leaders who are held accountable for the team outcomes (Zaccaro *et al.*, 2001). However, there have been very few studies that have examined the role of the team leader in promoting engagement. Therefore, the fourth part of this chapter investigates how leadership in teams can help to encourage engagement. In doing so, it reviews the different team leadership approaches and then focuses on team functional

leadership (McGrath, 1962; Morgeson *et al.*, 2010). It discusses critical leadership functions that can help to improve the quality of the interpersonal processes within the team and therefore facilitate the emergence of team work engagement. The chapter ends by providing a summary of how the different team-level constructs relate to one another.

3.2. TEAM WORK ENGAGEMENT

Today, a vast majority of organisations nest their employees within some sort of team arrangement (Cohen and Bailey, 1997). Kozlowski and Bell (2003) define a work team as "two or more individuals, who exist to perform organisationally relevant tasks, share one or more common goals, exhibit task interdependencies (i.e., workflow, goals, knowledge, and outcomes), interact socially (face-to-face or, increasingly, virtually), maintain and manage boundaries, and are embedded in an organisational context that sets boundaries, constrains the team, and influences exchanges with other units in the broader entity" (p.5). As team members interact with one another on a daily basis, they may develop similar affective, cognitive and motivational states (Costa *et al.*, 2014). Given that employee engagement has an affective and cognitive dimension (Kahn, 1990; Schaufeli *et al.*, 2012), it is plausible to suspect that the team members may experience similar experiences of engagement.

A few groups of scholars have proposed the idea that engagement can occur as a collective team construct. For instance, Tyler and Bladder (2003) drew from social identity theory (Tajfel, 1978) and proposed that strong identification with the team will influence the team members to invest their personal energy at work. Salanova *et al.* (2003), who build on Schaufeli *et al.*'s (2002) work engagement, define team work engagement as a "positive aspect of collective well-being in work groups" (p.48). Bakker *et al.* (2006) adopt a similar approach to

Salanova *et al.* (2003) but measure collective engagement using the percentage of engaged team members. Meanwhile, Bakker *et al.* (2011) propose collective engagement as the engagement of the team as perceived by individual employees.

Although these scholars have considered that the team members may share a similar engagement experience, they typically measure collective engagement using a weighted mean average of individual engagement. This approach implies that the collective team engagement is the same as the sum of the individual engagement of the team members. However, this proposition might have undermined the fundamental difference between working alone and working in a team (Costa *et al.*, 2014). In work teams, the team members interact with one another on a daily basis. These cycles of interactions eventually create a shared pattern of behaviour among the team members (Morgeson and Hoffman, 1999). Over time, the team members usually share the same resources, the same team leader and the same events (Costa *et al.*, 2014). According to affective event theory (Weiss and Cropanzano, 1996), people who experience similar events would have similar affective experiences. For instance, previous research showed that people who work together reported converging affective constructs, such as mood linkage (Totterdell *et al.*, 1998), group cohesion (Kozlowski and Chao, 2012), and group affective tone (George, 1996). Costa *et al.* (2014) propose that work engagement may also converge as a collective team-level construct. Based on this argument, they propose the term team work engagement as "a shared, positive and fulfilling, motivational emergent state of work-related well-being" (p. 5).

Costa *et al.*'s (2014) conceptualisation of team work engagement is fundamentally different from other proposals. Previous scholars assume that team engagement is the sum of the individual work engagement of the team members (Tyler and Bladder, 2003; Salanova *et al.*, 2003; Bakker *et al.*, 2006). On the contrary, Costa *et al.* (2014) argue that team work engagement has a different qualitative property than its individual counterpart. Therefore, it is

not the same as the sum of the individual engagement of the team members (Costa *et al.*, 2014).

This different conceptualisation has a significant implication for investigating how the construct develops within a team. When team engagement is viewed as the same as the sum of individual engagement, it implies that the construct develops according to the same principle as its individual counterparts. That is, it is primarily influenced by the function of job demand and resources according to work engagement theory (Schaufeli *et al.*, 2002) or depending on the amount of psychological meaningfulness, safety and availability according to Kahn's (1990) personal engagement proposal. On the contrary, if team engagement is qualitatively different from the sum of its individual constituents, then there should be a different mechanism within the work teams that drive the development of collective team-level engagement.

Costa *et al.* (2014) draw from a multilevel perspective (Kozlowski and Klein, 2000; Kozlowski et al., 2009) and team process literature (Marks et al., 2001) and propose that team work engagement as an emergent state that develops within a work team as a function of the cyclical team processes. Because this proposal has integrated the extant knowledge within the team process and team effectiveness literature, this thesis chooses to use Costa *et al.*'s (2014) concept of team work engagement over the others to represent collective engagement at the team level. Coherently, this thesis will also adopt their perspective to investigate how team work engagement develops within a work team. However, before discussing this mechanism, it is necessary to review the multilevel perspective that underpins Costa *et al.*'s (2014) concept of team work engagement.

3.2.1. MULTILEVEL PERSPECTIVE

Early studies in the field of organisational science commonly centred on two different research areas that Kozlowski and Klein (2000) called micro and macro perspectives. Micro researchers, which stemmed from their psychological origin, focused on studying the individuals in organisations. While macro researchers, which originated from sociology and economics backgrounds, concentrated on the broader organisational-level phenomena. These two camps of micro and micro experts rarely engage with one another in debates or collaboration (Hitt *et al.*, 2007).

As the field of management matures, scholars begin to acknowledge that the use of a single-level perspective, i.e. the macro or micro lens, alone yields an incomplete understanding at either level (Hitt *et al.*, 2007; Riggio and Porter, 1996). Discontent with this bifurcation, a few groups of scholars call to integrate these two perspectives in studying organisations (House *et al.*, 1995; Kozlowski and Klein, 2000; Roberts *et al.*, 1978; Rousseau, 1985). Instead of using a macro or micro perspective, Kozlowski and Klein (2000) propose to view organisations as multilevel systems, in which micro phenomena are embedded in macro-contexts and macrophenomena emerge due to the interactions of their lower-level elements. In other words, multilevel thinking calls researchers to view organisational entities in nested arrangements. Hitt *et al.* (2007) submitted a visual illustration that succinctly expresses a multilevel perspective in studying organisation (Figure 3.1).
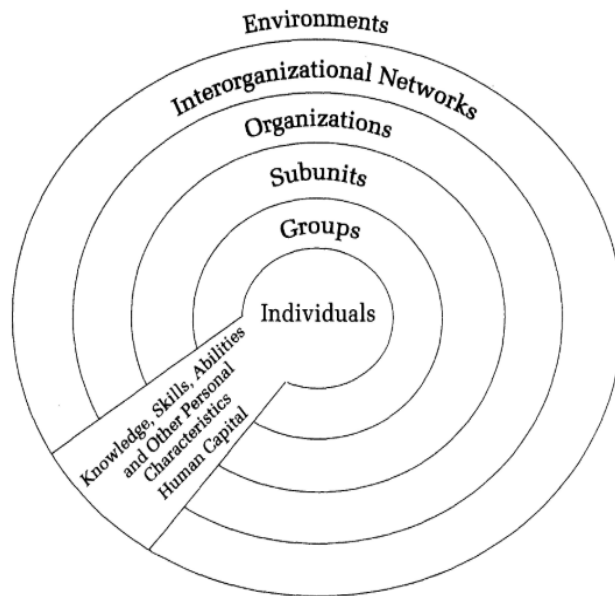
FIGURE 3.1. MULTILEVEL NESTING ARRANGEMENT (SOURCE: HITT *ET AL.*, 2007)

The proponents of multilevel thinking emphasise that scholars should carefully consider how phenomena at different levels are linked (Kozlowski and Klein, 2000). That is, the higher-level constructs may induce a top-down contextual influence on their lower-level entities, and the lower-level constructs may emerge to form collective phenomena through what is often referred to as a bottom-up process (Kozlowski and Klein, 2000). The collective-level phenomena that are formed by this bottom-up process are commonly called emergent states (Kozlowski and Klein, 2000).

Costa *et al.* (2014) adopt this multilevel perspective and propose that team work engagement is a form of emergent state that emerges through a bottom-up process from the interaction and dynamics of the individual team members. Kozlowski *et al.* (2002) proposed that these emergent states can be formed through two different mechanisms of bottom-up processes, i.e. composition and compilation. Composition denotes an emergence process in which each individual constituent contributes the same type and amount of elemental content to the collective phenomena (Kozlowski and Klein, 2000). Meanwhile, compilation refers to an

emergent process in which the individual constituents combine different types and amounts of elemental content following complex nonlinear functions (Kozlowski and Klein, 2000). Costa *et al.* (2014) propose that team work engagement emerged through a composition process in which each member contributes the same perception of their team's level of engagement. This subsequently infers that team work engagement is a shared perception of the team members regarding the collective engagement level of their team.

Based on this argument, Costa *et al.* (2014) develop a framework that explains how team work engagement develops in a work team. The visual representation of Costa *et al.* (2014) model of team work engagement is represented in. The model is based on the input-mediator-output-input (IMOI) framework (Ilgen *et al.*, 2005) that is commonly used to investigate team phenomena. The IMOI framework aims to better represent team phenomena than the classic input-process-output (IPO) heuristic (McGrath, 1964). The IPO model assumes linearity whereby team inputs such as team and task characteristics undergo some sort of process and yield some outputs. The IMOI model reconceptualises this heuristic to better account for the dynamic nature of team processes. Instead of a linear model, the IMOI suggest that team processes are cyclical (Ilgen *et al.*, 2015), whereby the team output will feed into the next iteration of team processes. In the model, this cyclical nature of the IMOI framework is represented by the dotted lines that indicate feedback loops.

On the left side of the model, Costa *et al.* (2014) noted several team inputs that relate to team work engagement, such as individual characteristics, team characteristics, task characteristics and work structure. Nonetheless, Costa *et al.* (2014) acknowledge that contextual organisational factors may also serve as team inputs. The inclusion of inputs from multiple levels aligns with Ilgen *et al.* (2006), who call to incorporate both individual and organisational factors into team studies. The right-hand side of the diagram indicates that team work engagement may contribute to facilitating team effectiveness. In addition, instead

of using the term process, the IMOI model uses the term mediator. This is to signal that team

processes can serve as not only mediators between team inputs and outputs but also

emergent states, such as group cohesion, transactive memory or shared mental models

(Mathieu *et al.*, 2008).

Based on this cyclical IMOI framework, Costa *et al.* (2014) propose that team work

engagement mainly emerges from team interpersonal processes, consisting of motivational

processes, affective processes and conflict management (Marks *et al.*, 2001). The team inputs

represent the individual and contextual variables that may influence the way team members

interact with one another and thus serve as the distal predictor of team work engagement.

Finally, the model suggests that team work engagement reciprocally correlates with other

emergent states such as collective efficacy, cohesion and group affect and may ultimately

contribute to team effectiveness.

Because this model has incorporated the current knowledge of how teams process

inputs into outputs, this thesis chooses to use this framework as its theoretical underpinning

in investigating team-level factors that can lead to the emergence of team work engagement.

Whilst the central focus of this study is to examine the antecedents of team work

engagement, the study will also assess the compounding outcome as a result of having an

engaged team. Thus, before focusing on the two antecedents that this thesis aims to examine,

the next section will first review the outcomes that team work engagement has been

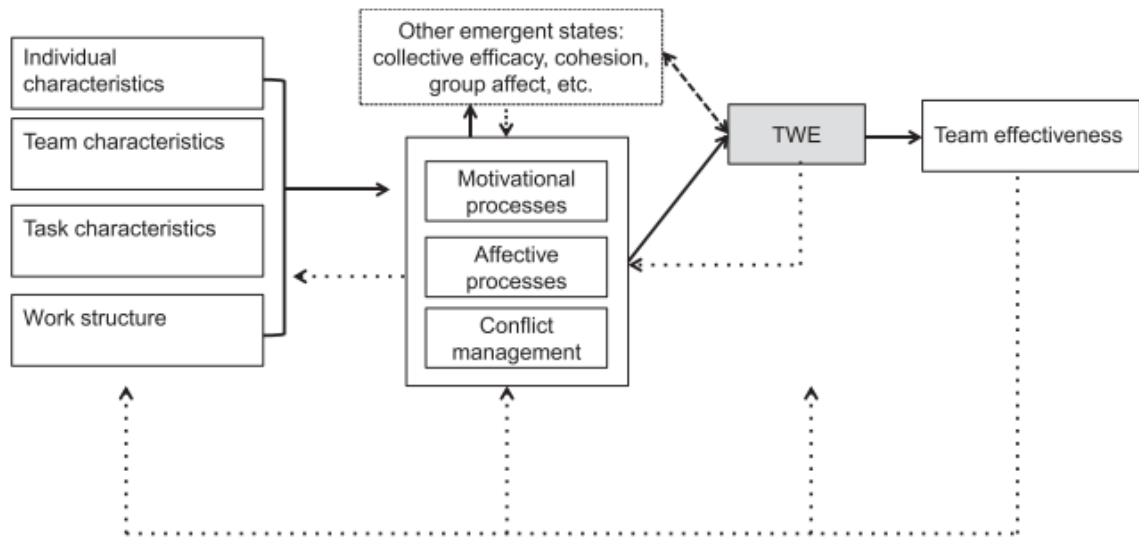associated with and discuss how this study can contribute to this area.

3.2.2. CONSEQUENCES OF TEAM WORK ENGAGEMENT

At the individual level, the literature has suggested that engaged employees tend to have a higher level of performance (Leung *et al.*, 2011; Bakker *et al.*, 2012; Steele *et al.*, 2012; Yeh, 2012) and various indicators of morale and well-being (Bailey et al., 2017). Because team work engagement shares functional equivalence with individual engagement, it is intuitive to infer that teams with high team work engagement would link to a higher level of satiations and performance.

Along with the gradual adoption of a multilevel perspective in studying organisations, there has been growing attention to studying work teams (Kozlowski et al., 2009). One key objective within this research field is to understand how different team-level factors influence team effectiveness (Mathieu et al., 2019). Team effectiveness itself is commonly indicated by

two types of team outcomes, i.e. tangible outputs or products of team interaction and influence on team members (Mathieu and Gilson, 2012).

3.2.2.1. TEAM WORK ENGAGEMENT AND TEAM EFFECTIVENESS

In alignment with Mathieu and Gilson's (2012) taxonomy, previous studies have linked team work engagement with broadly two types of team effectiveness indicators. The first group examines the influence of team work engagement on individual team members and the second links team work engagement with tangible outputs. Within the first group, two studies have proposed that team-level engagement predicts engagement at different levels. Bakker *et al.* (2006) measured team-level engagement using the percentage of engaged individuals within the team. The study analysed the multilevel data using hierarchical linear modelling and showed that team-level engagement predicts individual work engagement. Malik *et al.* (2020) measured team-level engagement using Costa *et al.* (2014) team work engagement scale and found that team work engagement positively correlates with collective organisational engagement, which they measured using Barrick *et al.* (2015) collective engagement scale. These results provide initial indications that team work engagement may facilitate employee engagement not only at the individual but also collectively at the organisational level.

Within the second group, team scholars traditionally measured tangible team-level output using one or a combination of these three indicators, i.e. team satisfaction, team performance and team viability (Tekleab et al., 2009). Several studies have examined the link between team-level engagement and these team-level outputs. Torrente *et al.* (2012) involve participants from 62 teams in 13 different firms and found that team work engagement positively correlates with supervisor-rated in-role and extra-role performance. Gaspar (2016) used a laboratory experiment method involving 51 teams and found that team engagement

positively correlates with team satisfaction, especially when the team's psychological safety is low. Guchait (2016) found positive links between team engagement and team performance in 27 service management teams. Similarly, Mäkikangas *et al.* (2016) examined data from 102 Finnish teams in the educational sector and found a positive link between team engagement and team performance.

Finally, Costa *et al.* (2015) examined 82 research teams and found that team work engagement positively correlates with team performance. The study further showed that team task conflict moderates the relationship between team work engagement and team performance, such that the correlation between team work engagement and team performance is stronger in teams that experience a high amount of task conflict. Costa *et al.* (2015) argue that task conflict may act as a challenge demand that can stimulate the more engaged teams to pour out more effort, thus yielding improved performance.

3.2.2.2. TEAM WORK ENGAGEMENT AND TEAM PERFORMANCE

From the review above, it is obvious that the majority of these empirical studies have linked team work engagement with team performance. This finding is rather unsurprising as improving employees' performance has long been a vocal interest from both organisational scholars and practitioners (Cohen and Bailey, 1997). The results from these previous studies have indicated that, similar to its individual-level counterpart, team work engagement could act as a proximal proxy of team performance.

At the individual level, organisational researchers typically categorise performance measurement into subjective and objective appraisals (Bommer et al., 1993). Objective performance measures include readily quantifiable indices such as productivity rate, sales revenue or customer feedback. Whereas, subjective performance measure usually relies on

supervisor appraisal of the employee. These two types of measurements can complement one another as a proxy of how well an individual performs in a given setting (Bommer et al., 1993; Murphy & Cleveland, 1991). By using these measures, scholars have been able to link various factors to individual task performance (Judge et al., 2001). This empirical evidence may ultimately help companies to predict what type of individuals are likely to perform better in doing a particular job.

Assessing how well an individual performs as a team member, however, might be a more difficult task. Kozlowski and Klein (2000) propose that team performance is an emergent state that is formed by a compilation process. In this emergent process, the individual constituents of a higher-level construct combine and interact in a complex and non-linear equation. This complex interplay results in a higher-order construct that is substantially different from and may not be degraded back to its individual constituents (Kozlowski and Klein, 2000). Assessing to what extent an individual team member contributes to the overall team performance is difficult due to the interdependent nature of teamwork. Each member's contribution was interrelated with how other team members responded to her contribution. These team processes would in the end determine the overall team performance.

Because of this interrelated team dynamic, it can be challenging to predict whether a given work team would perform well in a different task. In addition, measurements of team performance are often not available until the team completed the tasks, at which point, it could be well too late for the team to learn from any feedback. In this particular case, the link between team work engagement and team performance can have a significant contribution. By measuring the level of team work engagement, one can have a good indicator of whether the team members are interacting well with one another (Costa et al., 2014), which as previous research has suggested, can be a good predictor of team performance. More

importantly, one can monitor team work engagement at practically any time in the team

development phase.

Furthermore, measuring team work engagement as a proxy of team performance is

beneficial because it is less prone to bias in comparison to the subjective appraisal of the team

leader. This may happen especially when the teams are not performing well, whose leader

may be incentivised to hide this from the HR department by inflating their performance

appraisal. Considering these advantages, establishing additional empirical evidence between

team work engagement and team performance may bring significant contributions both to the

theory and practice. However, as previously mentioned in this thesis, the literature on work

team and employee engagement appear to develop separately from one another despite the

apparent link in practice (Costa et al., 2014). Therefore, to provide further empirical support,

this thesis will examine the link between team work engagement on team performance.

3.2.3. ANTECEDENTS OF TEAM WORK ENGAGEMENT

The previous section reviewed the outcomes of team work engagement and discussed how the construct would be useful for improving team effectiveness. This section will continue to investigate how the construct developed within the teams and identified the key predictors that can be influential during the emergence process of team work engagement.

There are few studies that have examined the antecedents of team work engagement (Acosta, Salanova and Llorens, 2012; Costa, Passos and Bakker, 2015; Gaspar, 2016; Guchait, 2016; Torrente *et al.*, 2012). Torrente *et al.* (2012) used the JD-R model as their theoretical underpinning and found the link between team work engagement and team social resources consisting of teamwork, coordination and supportive team climate. Costa *et al.* (2015) similarly found a link between team resources and team work engagement in 82 research teams, and that relationship conflicts negatively moderate this relationship. Specifically, the study found a weaker link between team resources and team work engagement in teams that experience a high amount of relational conflicts. Acosta *et al.* (2012) examine the effect of organisational-level constructs such as organisational trust and organisational practice on team work engagement. The study found that organisational trust fully mediates the effect of organisational practice on team work engagement. Using samples of 27 service management teams, Guchait (2016) found that emergent states such as shared mental models and transactive memory positively correlated with team work engagement.

These research findings have examined various factors that can be considered as inputs and mediators within the IMOI framework. Torrente *et al.* (2012) and Costa *et al.* (2015) have examined team resources as team-level inputs. Acosta *et al.* (2012) have investigated the contextual Acosta *et al.* (2012) highlight the influence of the contextual effect of the organisational-level features on team work engagement. Meanwhile, Guchait (2016) assess the link between team work engagement with cognitive emergent states. These findings offer

empirical support to parts of Costa *et al.* (2014) conceptual framework. However, none of this previous research has examined what Costa *et al.* (2014) proposed as the proximal predictors of team work engagement, i.e. team interpersonal processes. Thus, this study will address this research gap and further examine this area.

Within the context of work teams in corporations, the internal team leaders typically have the formal authority to manage the team and assume the responsibility to reach the team objectives (Morgeson, 2005; Zaccaro *et al.*, 2001). Thus, they have a strategic role in shaping and regulating the processes within their team, including team interpersonal processes. Yet, Costa *et al.*'s (2014) model has not emphasised the role of the leadership within the team in facilitating the emergence of team work engagement.

At the individual level, neo-charismatic leadership styles, such as transformational leadership, authentic leadership, and ethical leadership, have been positively associated with individual engagement (Carasco-Saul *et al.*, 2015). At the team level, scholars have demonstrated that team leadership can contribute to team effectiveness (Ensley *et al.* 2006; Stewart and Johnson, 2009, Hoch and Kozlowski 2014, Naidoo *et al.*, 2011). However, very few studies have investigated what the team leader could do to promote their team's engagement. Therefore, in addition to examining the link between team interpersonal processes and team work engagement, this thesis will also investigate how team leadership can promote team engagement. Each of these two key predictors of team work engagement will be discussed in the following two subsections.

3.3. TEAM INTERPERSONAL PROCESSES

Team processes occupy a central role in team studies as it represents the mediating

mechanisms that convert input into output within the traditional IPO framework (Mathieu *et*

al., 2000). The construct represents the mechanisms within the team that transform team

input into outcomes (Mathieu *et al.*, 2000). Some groups of scholars presumed that these

team processes may include not only the behavioural actions of the team members but also

collective and affective constructs, such as shared mental models, team metacognition and

team cohesion (Antoni and Hertel, 2009; Zaccaro *et al.*, 2001). Others differentiate the

mediating mechanisms into team processes and emergent states (Marks *et al.*, 2001). The

distinction between team process and emergent states could be useful for this study as it

helps to explain how emergent states developed within the team. Thus, this section will

review the difference between team process and emergent states according to Marks et al.'s

(2001) proposal and then discuss how a particular type of team process, i.e. team

interpersonal processes, can play a central role in the emergence of team work engagement.

Marks et al. (2001) define team processes as "members' interdependent acts that

convert the input to outcomes through cognitive, verbal, and behavioural activities directed

toward organising taskwork to achieve collective goals" (p.357). Meanwhile, emergent states

are defined as "properties of the team that are typically dynamic in nature and vary as a

function of team context, inputs, processes, and outcomes" (Marks et al., 2001; p. 357). These

definitions clearly differentiate team processes from emergent states such that team process

relates to the team members' physical actions rather than perceptions of collective team

phenomena. Critically, they argue that emergent states are the products of the iterative cycles

of team processes.

Marks et al. (2001) submit that teams operate in two different phases throughout

their team process cycles, i.e. action and transition phases. The action phase indicates the

periods in which the teams directly contribute to accomplishing their goals while the transition phase points to the periods in which the teams pause to evaluate and plan for their accomplishment of a team goal or objective (Marks et al., 2001). They observe that the team engages in different types of processes relating to how they manage their taskworks during the action and transition phases. They refer to the processes that often occur during the action phase as action processes and those that commonly occur during the transition phase as transition processes.

In addition to these two groups of team processes, Marks et al. (2001) observe that there is another type of team process that does not directly relate to how the team manages taskwork but rather revolves around how the team manage the interpersonal relationships among the team members. They refer to these processes as team interpersonal processes that occur throughout the action and transition phases (Marks et al., 2001). Costa et al. (2014) posit that team work engagement emerges as a function of these interpersonal processes within the work teams. Thus, the quality of the interpersonal interactions among the team members would link to the level of collective engagement within a work team.

At the individual level, previous studies have reckoned the importance of interpersonal interactions among co-workers in promoting employee engagement (Brunetto *et al.*, 2013; Kahn and Heaphy, 2014; Liao *et al.*, 2013; Tims, Bakker and Xanthopoulou, 2011; Van Schalkwyk *et al.*, 2010). At the team level, Costa *et al.'s* (2017) qualitative study has identified various affective and motivational processes in teams. The study found that highly engaged teams tend to work physically closer to one another and have more interactions up to the midpoint of their task completion. However, there was not a clear link between certain types of interpersonal processes with highly engaged teams.

This research evidence can support the notion that team interpersonal processes would positively influence the emergence of team work engagement. However, it is still

unclear how the different types of interpersonal interactions can influence the emergence of team work engagement. Therefore, this section will further review the three types of interpersonal processes in Marks *et al*. (2001) taxonomy, i.e. conflict management, motivation building, and affect management. The next three subsections will explain how each of these three facets of interpersonal processes can promote the emergence of team work engagement.

3.3.1. CONFLICT MANAGEMENT

Conflict management relates to handling conflict situations either before or after they have occurred (Marks *et al.*, 2001). Jehn (1997) proposed that there are three different types of conflicts that commonly occur in teams, i.e. task, relational and process conflict. Task conflicts are disagreements among the team members about ideas and opinions about the task that they do. Relationship conflicts are disagreements and incompatibilities among team members that relate to personal issues rather than task-related ones. Process conflicts are disagreements about logistical and delegation issues in accomplishing tasks (Jehn *et al.*, 2008).

There has been a debate in organisational studies over whether conflicts can be useful for team performance. A few studies have suggested that relationship conflicts are detrimental to team performance, but task conflicts can have a positive effect on team performance (Amason, 1996; Amason and Schweiger, 1994; Jehn, 1995, 1997). On the other hand, three meta-analyses studies have suggested that relationship and process conflicts are largely detrimental to team performance, while the effect of task conflicts is negative (De Dreu & Weingart, 2003) or has no significant effect (De Wit et al., 2012; O'Neill et al., 2013) depending on the context of the teams. These findings may suggest that conflicts are typically detrimental to team performance, except for task conflicts that can be advantageous to performance in certain situations. For instance, Johnson *et al.* (2015) have demonstrated that

task conflict increases the relation between task debate and team performance in the early and late team development episodes, but was detrimental to team performance in between the two episodes.

While the studies above have investigated the link between team conflicts and team performance, Jehn *et al.* (2008) examined the link between team conflicts and emergent states. They found that all three types of conflicts reduced positive emergent states in groups and subsequently lowered team viability, that is the ability of a team to retain its member by maintaining satisfaction and willingness to continue working in the future (Balkundi & Harrison, 2006). Costa *et al.* (2015) have found that task conflicts yielded a negative direct effect on team work engagement, while relationship conflict negatively moderates the relationships between team resources and team work engagement. These findings suggest that like the effect on team performance, team conflicts negatively influence team work engagement.

The negative links between conflicts and employee engagement have also been discovered at the individual level (Chen *et al.*, 2011; Cogin and Fish, 2009; Selmer *et al.*, 2013). According to the JD-R framework (Bakker *et al.*, 2008; Crawford *et al.*, 2010), these conflicts are a form of hindrance demand that may overwhelm the individuals' emotional resources. This may lead the individuals to further protect themselves from further emotional exposure and potentially restrain themselves from giving more of their energy at work, thus preventing them from getting more engaged (Kahn and Heaphy, 2014). When one or more individuals within the team retract themselves from devoting themselves to the work role, the team processes that lead to the emergence of team work engagement could be halted.

3.3.2. MOTIVATION / CONFIDENCE-BUILDING

Motivation building, that is sometimes called confidence building, relates to the process in which the team generates and preserves a sense of collective confidence, motivation and task-based cohesion throughout the team journey of accomplishing its mission (Marks *et al.*, 2001). This involves encouraging team members to maintain high levels of performance. On the other hand, Marks *et al.* (2001) have also noted that negative comments about the team's competence can deflate the team's confidence. If such negative presumptions are not appropriately addressed, then it may further spiral into a vicious cycle that drags down both team confidence and performance over time (Lindsley *et al.*, 1995). Additionally, processes such as shirking (Jones, 1984) and social loafing (Latané *et al.*, 1979) may occur more often in teams with low motivation thus further hampering team performance (Marks *et al.*, 2001).

Costa *et al.* (2014) highlight that team can perform motivational processes through two different approaches. One of them is through using the advantage of goal achievement (Costa *et al.*, 2014). At the individual level, the goal-setting theory maintains that specific, challenging and attainable goals have a motivational effect on employees. Wegge and Haslam (2005) have demonstrated that goal-setting theory applies to team-level. The experimental study demonstrated that teams that were assigned specific and difficult goals developed stronger identifications and thus links to higher performance. This identification process triggers the individual's intrinsic motivation as they take ownership of the team goal and make it personally meaningful (Ellemers et al., 2004). Kahn and Heaphy (2014) also acknowledge that the identification process may heighten the meaning and deepen the purpose of the work.

The team can motivate each other by highlighting their past achievement or validating members' competencies (Bandura et al., 1999; Costa et al., 2014). This acknowledgement may enhance the individual team members' self-efficacy. Zaccaro (1996) asserts that team members are more likely to choose to engage with the task at hand when they actively encourage each other and instil the belief that they are capable of achieving their goal. From the perspective of the JD-R framework, self-efficacy counts as a form of personal resource. Previous studies have consistently shown a positive link between self-efficacy and individual engagement (Crawford et al., 2010; Del Líbano Miralles et al., 2012; Heuven et al., 2006). The engaged team members may further influence their teammates through subsequent motivational processes, thus creating a gain spiral of engagement.

However, It is worth noting that whilst empirical evidence has shown a positive association between team efficacy and team performance (X. Chen et al., 2020; Gully et al., 2002; Huang et al., 2019), scholars have argued that the effect of team efficacy on team performance may not always be beneficial (Goncalo et al., 2010; Rapp et al., 2014). Goncalo *et al.* (2010) demonstrated that teams that developed efficacy too early link to lower performance. They argue that this is because highly efficacious teams are less likely to engage in process conflict, a form of conflict that can help team development, especially in the early phase of a group project (Goncalo *et al.*, 2010). Rapp *et al.* (2014) shed further light on the association between team efficacy and team performance by showing an inverted-U-shaped relationship between the two constructs. The study that involves 153 technology sales teams demonstrated that team efficacy positively influences team performance until a certain threshold, after which team efficacy negatively influenced team performance (Rapp *et al.*, 2014). The research evidence above may infer that confidence-building processes within a team can help to improve team performance. However, teams that are overly confident may become complacent and thus limiting their performance.

Nevertheless, the negative effect of confidence-building processes on team work engagement is less likely to occur. Although team performance is conceptualised as a compilational emergent state (Kozlowski and Klein, 2000), team work engagement is assumed as a compositional emergent state. A compilational emergent state follows a complex process involving the variability and configuration of the lower-order elements (Kozlowski and Klein, 2000). In this setting, a nonlinear relationship is likely to occur (Kozlowski *et al.*, 2009). On the other hand, a compositional emergence follows an isomorphic mechanism whereby individuals contribute the same amount and type of lower-order constituents. Because the individuals add the same type and number of lower-order elements, a nonlinear relationship is less likely to occur.

3.3.3. AFFECT MANAGEMENT

Marks *et al.* (2001) refer to affect management as the process of regulating team members' emotional levels which can fluctuate due to task conditions (e.g., failure), personal factors (e.g., conflict among members), or situational factors (e.g., job insecurity). Affect regulation is "the process of initiating, maintaining, modulating, or changing the occurrence, intensity, or duration of internal feeling states" (Eisenberg *et al.*, 2000, p.139). Affect management can involve, for example, calming members down, managing frustration levels, elevating team morale and cohesiveness among members, and showing empathy.

At the individual level, previous scholars have maintained that employee engagement has cognitive, affective, and behavioural dimensions (Kahn, 1990; Rich *et al.*, 2010). Among these three dimensions, the affective dimension appears to play a major role in developing engagement. For instance, interpersonal support from colleagues and supervisors has often

been linked to engagement (Tims *et al.*, 2011; Cheng *et al.*, 2013; Van Schalkwyk *et al.*, 2010; Brunetto *et al.*, 2013; Liao *et al.*, 2013).

Costa *et al.* (2014) have highlighted three interrelated processes through which the team can support each other's engagement. First, team members can use interpersonal affect regulation strategies such as positive engagement and acceptance (Niven et al., 2009). Positive engagement refers to showing empathy toward others in order to improve their affect (Niven *et al.*, 2009). These affect regulation strategies may facilitate what Kahn and Heaphy (2014) refer to as a holding environment. The term was coined by Winnicott (1965, in Kahn and Heaphy, 2014) and described the caregiving relationship between mothers and infants. Kahn (2001) asserts that these caregiving processes may also occur to organisational members, for example through positive engagement and acceptance processes (Niven *et al.*, 2009). Kahn and Heaphy (2014) further argue that holding environments may enhance the individual's sense of psychological safety, one of the three preconditions of personal engagement.

Second, the team can manage their affect by setting up a display rule (Costa *et al.*, 2014). A display rule refers to the set of norms about the attitude that the team is expected to show at work (Rafaeli & Sutton, 1987). As the team members are eager to display their affective states, it will help the team to form a shared perception of their collective affective state and therefore facilitate the emergence of team work engagement (Costa *et al.*, 2014).

Finally, affect management can foster the emergence of team work engagement through the emotional contagion process (Costa *et al.*, 2014; Bakker *et al.*, 2006). A team with good affect management may facilitate the transference of positive emotion among the team members. These processes will eventually make the team members become more similar in terms of affect, thus facilitating the convergent emergence of team work engagement (Costa *et al.*, 2014). In summary, this section has discussed how the different aspects of team interpersonal processes can influence the emergence of team work engagement. Based on

these arguments, this thesis will conduct an empirical study that examines the role of team interpersonal process as the proximal predictor of team work engagement.

Furthermore, in the context of work teams in modern corporations, the team leader occupies a central role in shaping the interpersonal processes within their team. Despite the emerging trend of decentralising leadership, that is the view that leadership should be no longer the sole responsibility of the team leader but shared among the members (Pearce and Congor, 2003), certain leadership tasks cannot be delegated to the team members. For example, the team leader's role is indispensable in setting up rules and expectations within the team. Other examples include monitoring the team in achieving objectives and giving formative feedback especially when things did not go according to expectations. These tasks are often embedded with the formal authority that a team leader has. However, to the author's knowledge, there have not been any studies that investigate the link between leadership and employee engagement at the team level.

At the individual level, the link between leadership and engagement has been well established. Supervisors who are perceived as better leaders tend to have highly engaged subordinates across different contexts (Carasco-saul et al., 2015). However, these previous studies have largely focused on the dyadic relationship between leaders and their subordinates, but overlooked that these leading and following interactions often occur in the context of a work team. Therefore, this thesis aims to shed further light on the interactions between the team leader, team members and the team as a collective unit that leads to higher engagement. To answer this inquiry, the following section will review the current literature on team leadership and propose a mechanism that allows the team leader to influence the engagement of their team.

3.4. TEAM LEADERSHIP

Leadership is one of the most studied phenomena within the field of organisational science (Gardner et al., 2010; Gardner et al., 2020). Over the last three decades, scholars have attempted to define and conceptualise leadership from various angles. For instance, Dinh *et al.*'s (2014) systematic review has coded 23 different leadership theories within the literature repository. Meanwhile, Meuser *et al.*'s (2016) network analysis has identified 49 leadership approaches/theories that they mapped into six broad themes, i.e. charismatic leadership, transformational leadership, strategic leadership, leadership and identity, leadership in teams, and trait leadership.

While acknowledging the diversity and wide array of leadership approaches, this thesis chooses to narrow its scope to the team leadership domain and investigate how the leadership within the teams can influence team work engagement. Kozlowski *et al.* (2016) reckon that there are four major approaches in team-centric leadership literature, i.e. team-focused transformational leadership, leader-member exchange, shared leadership and functional leadership. These four approaches each accentuate different leadership elements within a work team that could be relevant in influencing team work engagement. Thus, this section will briefly review each of these leadership approaches and then state the leadership approaches that this thesis adopts.

The first of the four leadership approaches is transformational leadership. Although most research on transformational leadership rarely specifies how the leadership approach is affecting the team (Van Knippenberg and Sitkin, 2013), Kozlowski *et al.* (2016) argue that transformational leadership may influence both individual and team outcomes. They maintain that transformational leaders also motivate their followers as a team (Sosik *et al.*, 2009). In alignment with this, Kark and Shamir (2002) propose that the two dimensions of transformational leadership i.e. individualised consideration and intellectual stimulation focus

on individual followers' needs whereas idealised influence and inspirational motivation tend to influence the team as a whole. Drawing from this argument, they advance a dual-level transformational leadership model that divides the leadership construct into individual and team levels and influences outcomes at both levels of analyses (Kark and Shamir, 2002).

There are a few studies that have operationalised Kark and Shamir's (2002) dual-level transformational leadership approach (e.g., Wang and Howell, 2010, 2012; Zhang *et al.*, 2015). For instance, Wang and Howell (2010) showed that individual-focused transformational leadership behaviours, such as intellectual stimulation and follower development, correlate to task performance and personal initiative whereas team-focused transformational leadership behaviours such as emphasising team identity and communicating team identity correlate to team performance and helping behaviours. Kozlowski *et al.* (2016) maintain that the conceptualisation of transformational leadership at the team level aligns with its theoretical assumption i.e. transformational leaders motivate followers as a collective unit and therefore consider transformational leadership as a relevant leadership theory at the team level.

The focal point of this team-focused transformational leadership approach revolves around identifying the team leaders' leadership style toward the team members as individuals and toward the team as a unit. At the individual level, empirical evidence has suggested that transformational leadership positively correlates with employee engagement (Aryee *et al.*, 2012; Moss, 2009; Tims *et al.*, 2011; Wefald *et al.*, 2011; Zhu *et al.*, 2009). Furthermore, Aryee and Walumbwa (2012) found that the positive association between transformational leadership and employee engagement was mediated by responsibility for work outcomes and meaningfulness. Meanwhile, Tims *et al.* (2011) demonstrated the mediational role of optimism that links transformational leadership with employee engagement. These research findings infer that transformational leaders directly influence their subordinates' individual engagement levels by improving their personal resources and intrinsic motivation.

Because transformational leadership style has been shown to correlate with employee engagement at the individual level (Aryee *et al.*, 2012; Moss, 2009; Tims *et al.*, 2011; Wefald *et al.*, 2011; Zhu *et al.*, 2009), the team-focused leadership approach may likely influence engagement at the team level as well. However, the central focus of this leadership approach relies on the leadership style of the team leader and therefore it may offer fewer details on how the leaders can nurture the processes and the interpersonal dynamics within the team. Therefore, this study will not use this approach.

The second team leadership approach is leader-member exchange (LMX). LMX originated from the vertical dyadic linkage (VDL) approach (Dansereau *et al.*, 1975). The central premise of VDL is that the leader develops different relationship qualities with subordinates. With some of the team members, known as the in-groups, the leader forms high-quality relationships that go beyond contractual obligations. Meanwhile, for the remaining team members, known as the out-group, the leader develops low-quality relationships which are mainly done to merely fulfil contractual obligations (Liden and Graen, 1980). The difference in this relationship quality is due to the leader's need to trust some team members to do the team task while having limited time and resources to develop all of the team members. As research in VDL progressed, the model evolved to LMX which focuses on exposing the quality of the relationship between leader and subordinate (Schriesheim *et al.*, 1999).

Kozlowski *et al.* (2016) assert that LMX can be considered a team-centric leadership approach as it exposes the different exchange relationships within teams. For instance, the development of dyadic relationships between the leader and follower can yield within-group variability (Graen and Scandura, 1987). This within-group variability can then influence the experiences of the team members as they evaluate their own relationship with the team leader relative to the other team members (Schriesheim *et al.*, 2001). Likewise, the team

leader may have different exchange relationship qualities across different teams (Liden *et al.*, 2006).

There is a recent study that examined how the team member's relationship with their team leader can affect team work engagement (Chen *et al.*, 2020). Although they did not specifically point to using LMX, Chen *et al.* (2020) have shown that the members' affective commitment toward the leader affects the team's work engagement. Furthermore, they found team leaders who exercise self-sacrifice behaviours tend to have members that are more attached to them and thus they have more engaged teams (Chen *et al.*, 2020). This study has suggested that the relationship between the leader and the team can indeed enhance team work engagement. However, this leadership approach to team leadership is centred around the dyadic relationship of the individual team members toward their leaders. This means that the leader still acts as the sole source of leadership within the team. Chen *et al.* (2020) also showed that leaders who engage in self-sacrifice behaviours may risk depleting their own energy, especially when they are not perceived as competent by the team members. In line with the recent interest in distributing leadership (Contractor *et al.*, 2012; Pearce, 2004), this thesis will not observe the team leadership using the LMX approach and look for a leadership approach that is more focused on exposing how the team leader can promote team work engagement by enabling their team members.

The third team leadership approach is shared leadership. Leadership scholars have increasingly conceded that the formal leader may not be the only source of leadership (Morgeson *et al.*, 2010; Seers *et al.*, 2003). Shared leadership has offered an alternative to the traditional vertical leadership perspective as it accentuates the role of the team members as another source of leadership. Pearce and Conger (2003) define shared leadership as "a dynamic interactive influence process among individuals in groups for which the objective is to lead one another the achievement of group or organisational goals or both" (Pearce and

Conger, 2003; p. 1). The focus of the shared leadership approach is, therefore, to distribute the leadership responsibilities from the team leader to the team members with the aim to improve team effectiveness.

Wang *et al.* (2014) conducted a meta-analysis of 42 studies that examined the link between shared leadership and team effectiveness and found an overall positive relationship. The study further exposed that the effect of shared leadership on team attitudinal outcomes, behavioural processes, and emergent team states are stronger than the team (Wang *et al.*, 2014). Drawing on social identity theory (Hogg and Reid, 2001), Wang *et al.*, (2014) argue that this is because teams whose members share the leadership responsibilities would feel that they are the representatives of their group. This may, in turn, enhance team cohesion, team consensus and team performance (Bergman *et al.*, 2012).

The research findings above may suggest that teams that manage to distribute their leadership duties to their team members tend to perform their tasks more effectively. Recently, Klasmeier and Rowold (2022) showed that the level of daily shared leadership within the team may influence the level of team work engagement on that specific day. Through a diary study, Klasmeier and Rowold (2022) observed the day-specific shared leadership, team cohesion, goal attainment and team work engagement in 53 teams for five consecutive days. They found that within teams daily shared leadership positively correlates with all the three other constructs, i.e. team cohesion, goal attainment and team work engagement.

Interestingly, shared leadership and team work engagement exhibited an insignificant relationship between the 53 teams (Klasmeier and Rowold, 2022). They argue that this could be because the period of five days was too short to capture the true between-team amount of shared leadership. However, it is also possible to suspect that sharing the leadership among the team members itself may not be sufficient to influence team work engagement over the long run. Although shared leadership have positively correlated with other performance-

related team outcomes (D'innocenzo *et al.*, 2016; Zhu *et al.*, 2018), promoting team work engagement may require a different approach. Considering that team work engagement is a motivational and affective emergent state, the team may need someone to ignite the motivational process. In many firms, the team leaders typically are still seen as the figure that the team look up to. To get the team engaged, the team may need stronger stimulation from the team leader. This argument leads this thesis not to focus on the shared leadership approach.

The final team leadership approach is functional leadership. The origin of functional leadership can be traced back to the leadership training for the US Civil Service Commission and is generally considered to be the oldest team-centric approach to leadership (S. Kozlowski *et al.*, 1996; McGrath, 1962). Instead of a single theory, functional leadership comprises various taxonomies that identify core team leadership functions concerning each team's developmental sequence and/or cycles of task engagement (Kozlowski *et al.*, 2016). Unlike the traditional vertical leadership theories, the functional leadership perspective does not intend to identify specific leadership behaviours that signify effective leadership. It rather specifies a set of behaviours critical to getting the key team functions accomplished (Hackman and Wageman, 2005). This approach emphasises goal-oriented leadership activities that promote team processes that drive team effectiveness. In other words, the focus switches from "what leaders should do" to "what needs to be done for effective performance" (Hackman *et al.*, 1986, p. 77).

Zaccaro *et al.* (2001) assert that the functional leadership perspective defines leadership as social problem-solving and the leaders are deemed responsible for diagnosing problems that can hinder goal attainment, creating and planning appropriate solutions, and implementing them within the context (Fleishman *et al.*, 1991; Mumford *et al.*, 1993; Zaccaro *et al.*, 1995). They further highlight three distinct characteristics of functional leadership. First,

the team leader is seen as a connector between the team and the environment (Katz and Kahn 1978). Second, it involves discretion and choice in determining what solutions are to be or not to be applied to a particular problem. Third, functional leadership is not restricted by a specific set of behaviour but rather by actions that are directed to respond to problems, regardless of who in the team respond to the problem. These responses will naturally vary by different problem situations. Thus, any behavioural pattern that reflects effective goal attainment can contend as a leadership function.

Previous research has demonstrated how the different functional leadership approaches within teams influence team outcomes. For instance, Marks *et al*. (2000) found team leaders who delivered better sensemaking correlated with a higher level of shared mental models and performance. In alignment with this, Randall *et al*.'s (2011) experimental study also found that teams whose leaders provided more external sensegiving were linked with higher shared mental models. Hirst and Mann (2004) showed that team leaders who exhibited more boundary-spanning activities were linked with better team performance.

Other scholars have also shown that functional leadership may also act as a mediator or moderator to team outcomes rather than as an input. For instance, Graça and Passos (2012) have demonstrated that team functional leadership mediated the relationship between team reflexivity and team performance and satisfaction. Künzle *et al*. (2010) have shown that leadership effectiveness is influenced by contextual factors such as the level of routine and the degree of standardisation. Team leadership tends to be more effective in nonroutine and low-standardised situations (Künzle *et al*., 2010). These studies have demonstrated various ways that team leaders can do to promote their team's effectiveness.

Regarding the research question of this study, the functional leadership approach can provide clear directions for the team leader, yet at the same time shift the leadership focus to developing the team rather than relying solely on the leaders. On the one hand, this approach

aligns with the current trend to decentralise and distribute leadership (Uhl-Bien, 2014; Contractor *et al.*, 2012; Pearce, 2004) that can help the organisation to be more adaptive in responding to the complexity of this post-modern era (Pitelis and Wagner, 2019). However, on the other hand, this approach can also point to specific and pragmatic actions the team leaders can readily execute to improve their teams' engagement. Therefore, this thesis preferred measuring the leadership within the teams using this functional approach rather than the other alternatives.

3.4.1. TEAM FUNCTIONAL LEADERSHIP

Previous scholars have presented some taxonomy that aims to operationalise leadership functions in teams. McGrath (1962) developed a two-by-two matrix that highlights critical leadership functions. One axis denotes the type of activity, i.e. monitoring or taking executive action, while the other axis points to the orientation of the activity, i.e. internal or external to the group. Hackman and Walton (1986) posit five conditions that the team leader should maintain for team effectiveness, i.e. sufficient material resources, a facilitating group structure, a clear direction, a supportive context, and available expert coaching. Fleishman *et al.* (1991) offered four overarching dimensions of functional leadership, i.e. information search and structuring, information use in problem-solving, managing personnel resources, and managing material resources. More recently, Morgeson *et al.* (2010) presented a comprehensive set of 15 leadership functions organised by the phase of the task cycle within which they occur, i.e. transition or action phase (cf. Marks *et al.* 2001). They pinpoint seven leadership functions that take place during the transition phase: compose the team, define the mission, establish goals and expectations, structure and plan, train and develop, promote sense-making, and provide feedback, whereas the other eight functions that occur during the action phases include monitor the team, manage team boundaries, challenge members, perform team task, solve problems, provide resources, encourage team self-management, and support social climate.

Morgeson *et al.* (2010) further asserted that these leadership functions are not exclusively designated for the formally assigned team leader. Rather, they noted that there are four types of leadership sources that can execute these functions in teams. In addition to the formally assigned internal team leader, these leadership functions can be exercised by the informal internal leader, formal external leader and informal external leader. Informal internal leaders can take place in form of team members who formally and casually share leadership

responsibilities. For example, the formal team leader may ask a specific member to take leadership in the administrative aspect. Examples of formal external team leaders are a coach or team advisers that are formally assigned by the organisation while examples of informal external leaders are mentors, employee champions or executive coordinators.

This study will follow Morgeson *et al.*'s (2010) team functional leadership taxonomy. Regarding the leadership sources, this study will focus on the leadership functions that the internal team leader can do to improve the interpersonal processes within the teams. This is because the internal team leaders have a more strategic position to execute these functions as they are both in close contact with their team members and have formal authority to assert their influence. This approach also aligns with the strategic human resource management approach (Ulrich, 1986) that encourages every line manager to become an employee champion.

3.4.2. TEAM FUNCTIONAL LEADERSHIP AND TEAM INTERPERSONAL PROCESSES

Among the many leadership functions (Morgeson *et al.*, 2010), this thesis proposes that five specific leadership functions may influence the interpersonal processes within the team and therefore indirectly influence the team and individual engagement. Three of these five leadership functions occur during the transition phase, i.e. defining mission, establishing expectations and goals and providing feedback. Meanwhile, the remaining two functions happen during the action phase, i.e. performing team tasks and supporting social climate. Although, Graça and Passos (2015) have demonstrated that the supporting social climate function can occur throughout both the action and transition phases.

The first leadership function that may influence the team's interpersonal processes is to define mission. This leadership function relates to determining and communicating the organisation's performance expectations for the team in a tangible and comprehensible manner (Morgeson *et al.*, 2010). It emphasises setting up the team's mission or purpose and ensuring that the mission is clear, compelling, challenging, and shared among team members. This leadership function is especially critical during the formation of the team, or when the team leaders approach new members of the team.

The effective and compelling communication of the collective mission also appears as one of the four facets of transformational leadership, inspirational motivation (Bass and Avolio, 1990). It differentiates the transactional or managerial approach to leadership by inviting the team members to take ownership of the team objectives. Through this goal-adoption process, the team members may assert personal importance on the team goals which resembles the identification process in self-determination theory (Ryan and Deci, 2000). However, while transformational leadership uses a subjective approach and focuses on the leaders' behaviours, the functional leadership approach focuses on the objects of leadership, by pointing to a set of actions that need to be done so that the team mission is transferred to each individual team members (Santos *et al.*, 2015).

Previous scholars have explored the role of establishing a shared mission in a team (e.g., Burke *et al.*, 2007; Galanes, 2003; Pielstick, 2000). Barry (1991) has argued that establishing a common understanding of the team's mission is as important as having a mission itself. Barry (1991) examined an engineering team where two of the engineers were visionary and creative in illustrating product ideas. However, these same engineers did not build sufficient support among other team members, resulting in poor team performance.

When the leadership within the team has successfully instilled a sense of ownership of the team goals for the team members, the team members will be more likely to encourage

one another to achieve the team objectives because these objectives now carry a personal significance (Aryee *et al.*, 2012; Shamir *et al.*, 1993). In other words, it may stimulate confidence-building processes among the team members. As previously mentioned, such confidence-building processes may help the team to form a heightened sense of belonging that facilitates the emergence of team work engagement and foster the individuals' sense of meaningfulness (Kahn and Heaphy, 2014).

The second leadership function within the team transition phase that could improve the team's interpersonal processes within the teams is establishing expectations and goals. This leadership function emphasises that the leadership within the team should establish clear performance expectations and involve the team members in setting the team goals (Morgeson *et al.*, 2010). This function complements and builds from the previous defining mission function. Whilst the define mission function set up the broader team's mission and overall purpose, this second function translates the mission into more specific and pragmatic goals for each team member (Morgeson *et al.*, 2010).

In teams with formally assigned leaders, the team leader may fulfil their function by working with the team members to develop specific goals and expectations for task performance (Morgeson *et al.*, 2010). Morgeson *et al.* (2010) noted that team leaders need to attend to two important points when executing this leadership function. First, drawing from goal-setting theory (Locke and Latham, 1990), team leaders should set up goals that are challenging, yet attainable. Previous research has established that teams that have a clear and challenging yet realistic goal perform their tasks better (Amabile *et al.*, 2004; Einstein and Humphreys, 2001; Knight *et al.*, 2001).

Second, the team leader shall also involve the team members in the process of developing these goals and expectations. In commercial firms, the team leaders usually have the authority and the final words in setting goals and expectations for their team members.

The team leader may adopt a more authoritative approach and give instructions to the members about what they are expected to do. However, previous research has suggested that when team members actively participate in the goal-setting processes, they would be more committed to the team goals (Cohen and Bailey, 1997; Durham *et al.*, 1997; Sagie, 1996).

Although it may sound trivial, simple acts like asking for the members' opinions and suggestions when setting up goals and expectations may make the team members perform differently (Wegge, 2000; Yammarino and Naughton, 1992). By leaving room for negotiation during the goal-setting process, the team leader may facilitate a transfer of goal ownership to the team members. From a humanistic point of view (Maslow and Rogers, 1979), this negotiation process between the leader and the members in establishing expectations and goals may make the members feel acknowledged and appreciated. Subsequently, it may help the team members to express their authentic selves at work (Kahn and Heaphy, 2014). This example highlights the distinct feature of the functional leadership approach, whereby the focus relies not on the characteristics of the leader but points to pragmatic tasks that need to be addressed for the team to function well.

Setting up compelling goals for teams may lead to similar consequences for team interpersonal processes as the previously mentioned define mission function. It stimulates the team members' motivation and encourages confidence-building processes among the team members (Alarcon *et al.*, 2010). In addition, establishing clear expectations may also help the team to better manage potential task and process conflicts. These agreed expectations would set a boundary that guides team members to understand their role and what they are supposed to do during the goal attainment process. This boundary may act as a pre-emptive conflict management tool that prevents team members from shifting responsibilities. For example, team members may disagree on assigning work duties. Yet, by having a clear

understanding of what the team expects from each member, the team may be able to work out solutions that fit their roles.

The third leadership function that occurs in the team transition phase is providing feedback. This leadership function refers to the instance where the leadership within the team assesses its past and current performance, makes adjustments and develops over time (Einstein and Humphreys, 2001; Morgeson *et al.*, 2010). Feedback has been long recognised as a key factor in regulating individual behaviour and facilitating team development (Bandura, 1986; Katz and Kahn, 1978). In the context of work teams, periodic performance management and feedback processes are critical to keeping the team effectively functioning and adapting to different challenges (Kozlowski *et al.*, 1996).

Morgeson *et al.* (2010) highlighted three interrelated functions that the team leader should carefully consider during the feedback-giving process. First, the team leader should give timely, specific, objective and balanced feedback. Providing feedback in a timely and specific manner is essential so that the teams can quickly address areas of improvement. While maintaining objective and balanced feedback is essential in avoiding relationship conflict due to perceptions of favouritism or inequality among the team members that may potentially lead to the creation of faultlines within the group (Tatcher and Patel, 2012).

Second, the team leaders should encourage the team members to give and receive feedback from one another over the course of their work (Morgeson *et al.*, 2010). This leadership function would enable the team to develop a team climate in which giving and receiving feedback are seen as fulfilling rather than a daunting process. Teams with such a climate may have more awareness of their capabilities, strive to improve their work methods and eventually enable them to adapt to dynamic task environments (Kozlowski *et al.*, 1996; Mohrman, Mohrman, and Lawler, 1992).

Third, to build teams that welcome feedback, the team leaders should develop positive relationships and bonds with the team members (Morgeson *et al.*, 2010). One way to enact these relationships is by promoting a sense of psychological safety within the teams (Edmondson, 1999). For example, the team leaders can set up a team norm that embraces, rather than despise failures. When the team can relinquish the negative association related to failures, it will enable them to serenely examine the causes of those failures and learn to alter their methods or behaviours so that they can be more successful in the future (Yamakawa and Cardon, 2015).

A body of empirical evidence has suggested that feedback plays a vital role in improving team outcomes. Taggar (2002) found that feedback giving enhanced interactions among team members and stimulated team processes such as coordination, communication, and motivation. Sivunen (2006) showed that team leaders who engaged in giving systematic feedback correlate with members that have a higher level of identification and commitment. Gabelica *et al.* (2012) reviewed 59 studies that link feedback and team outcomes and found that they all reported positive effects on one or more team outcomes. The review further notes that performance feedback impacted team processes, emergent states and performance while process or interpersonal feedback has more influence on team processes and emergent states. Based on this previous research, it would be likely that effective feedback-giving processes would enhance the quality of the team interpersonal processes and hence promote the emergence of team work engagement.

The fourth leadership function that this study uses is performing team task that occurs during the team action phase. This leadership function refers to instances whereby the team leaders are participating, intervening, or performing some of the team's task work (Morgeson *et al.*, 2010). Morgeson *et al.* (2010) asserted that the perform team task leadership function mainly calls for the external team leaders to get involved in performing the team task when

needed. However, it could be argued that this function largely applies to the internal team leader as well. In a commercial firm, the internal team leaders are often accountable for their team performance. Yet, these leaders may not have to perform the same tasks as the team members. For example, a restaurant manager does not have to wash dishes and serve guests. However, they are accountable for the service level that the restaurant provides for their customers. In this type of context, the team leader has the choice to limit themselves to their coordinating role or to go down the line and help their team members in performing their tasks.

Klein *et al.* (2006) argue that leaders can either delegate responsibilities or choose to intervene in the team's work depending on whether the team leaders see the interventions are necessary for the team to perform effectively. While one important function of the team leader is indeed to coordinate the teams so that they work in harmony, the team leaders may have a chance to develop stronger connections with their team members when they get their hands dirty and work alongside the team members and perform their tasks. Although the team members may be able to execute their tasks well without the interventions of the team leaders, they are likely to see the team leaders performing their tasks as a pleasant gesture. Such acts may reduce the power distance between the leader and the team members (Hofstede, 1994). This may shift the team members' perception from thinking that they work 'for' the team leader to that they work 'with' the team leader. This dispositional shift may enable the team members to build stronger connections with the team leaders as they now think that the team leaders are a part of their tribe (Tajfel, 1978). In a laboratory experiment, Kane *et al.* (2002) found that team leaders who performed task functions linked to higher team productivity.

By performing the team tasks, the team leader may also directly participate in interpersonal processes such as motivating the teams in performing their duties. For instance,

drawing from emotional contagion theory (Hatfield *et al.*, 1994), team leaders who display

positive affect when performing the task and encourage the members to do their best in

executing their duties are likely to transfer their positive emotion to the team members.

Moreover, the impact of the performing task leadership function will be enhanced when the

team leaders display a high level of personal engagement. Von Mierlo and Bakker (2018) have

shown that one highly engaged individual can greatly influence his/her overall team

engagement. By performing the team tasks themselves, the team leaders have the

opportunity to energise their team's engagement by lifting the quality of the interpersonal

processes within the teams.

The final leadership function that may influence team interpersonal processes is

supporting social climate. This leadership function involves maintaining a positive social

environment within the team (Morgeson *et al.*, 2010). Previous scholars have often regarded

the supportive social environment within the team as a critical factor of a well-functioning

team (Marks *et al.*, 2001; Mumford *et al.*, 2006). The team leader can execute this function

especially by engaging in affect regulation initiatives within the team. For instance, the team

leaders may express warmth and show concern for interpersonal issues among the team

members (Schminke *et al.*, 2002). The team leaders can also display that they genuinely care

for their team members' personal needs (Druskat and Wheeler, 2003).

However, the main objective of the team leaders when engaging in those affect

regulation processes should be to establish a supportive team climate rather than becoming

the source of affection within the team. The overreliance on the team leader in regulating the

team affect may lead to heavy emotional labour that risks the team leaders suffering from

emotional burnout (James, 1989). Therefore, the team leaders should not only engage in

affect-regulating activities but also encourage the team members to care for one another.

The focus of the team leaders may then shift to mapping and coordinating the affect management processes in their teams. Rather than regulating team member affect, the team leader could identify with team members who naturally have a high level of emotional capacity (Kahn, 2004) and ask them to play a more prominent role in regulating team member affect. In addition, the team leader may also identify the informal role that each team member assumes. By paying close attention to these 'soft' issues that sometimes are elusive, the team leader may foster the quality of the interpersonal processes within the team.

In conclusion, when internal team leaders carefully execute these five leadership functions, they can likely improve the quality of the interpersonal processes within the teams. Such positive interpersonal processes within the teams may subsequently serve as the engine from which team work engagement emerges (Costa *et al.*, 2014).

3.5. SUMMARY OF CHAPTER 3

This chapter has reviewed employee engagement at the team level. The review focused on explaining Costa *et al.*'s (2014) team work engagement that this study will use to represent collective engagement at the team level. This construct was chosen because it incorporates a multilevel perspective and links employee engagement with the extant knowledge of team effectiveness and team processes (Marks *et al.*, 2001; Kozlowski *et al.*, 2009). The chapter briefly reviewed the consequences of team work engagement before investigating the processes that underpinned the emergence of team work engagement. This investigation pointed to two critical team factors that are important to promoting engagement in work teams, that is team interpersonal processes and team leadership.

The second part of this chapter examined the role of team interpersonal processes in promoting the emergence of team work engagement. It focused the review on Marks *et al.* (2001) proposition that differentiated team processes from emergent states. It then highlighted how the pattern of the team's interpersonal processes could play a critical role in the emergent process of team work engagement. It went on to further explain how the three types of interpersonal processes, i.e. conflict management, confidence building, and affect management can each promote the emergence of team work engagement.

Finally, the chapter identifies team leadership as a factor that can influence the interpersonal processes within the team and thus support both team and individual-level engagement. The review examined four established team leadership approaches and chose to focus on the team functional leadership approach (McGrath, 1962; Morgeson *et al.*, 2010). It continued to discuss the feature of team functional leadership and proposed how the internal team leader may influence team interpersonal processes by enacting their leadership functions. These relationships form the basis of the conceptual model of this study which will be introduced in the following chapter.

CHAPTER 4
CONCEPTUAL MODEL AND HYPOTHESIS DEVELOPMENT

4.1. INTRODUCTION

The two literature review chapters have reviewed the extant literature on employee engagement, team process and team leadership and discussed how the constructs are related to one another. This section continues to illustrate how the different constructs form the body of this study's conceptual model and then explains the range of the hypotheses that this study advance. The conceptual model of this study will be described in the following section while the section following that will discuss the hypotheses that underpin each link within the conceptual model.

4.2. CONCEPTUAL MODEL OF THE STUDY

Figure 4.1 shows a visual representation of the conceptual model that this study advances. This model comprises two major parts that each correspond to the team and individual levels. The upper part of the model represents the team-level constructs while the lower part reflects the individual constructs. At the team level, this study proposes that team functional leadership will influence a team's interpersonal processes. Team interpersonal processes will influence team work engagement. In turn, team work engagement will influence team performance.

At the individual level, this study aims to observe how the individual responds to the contextual influence of their team environment by measuring the individual members' personal engagement. In addition, the three psychological conditions of personal engagement, i.e. psychological meaningfulness, safety and availability, are also measured. This thesis

expects that these three psychological conditions will correlate with personal engagement and further indicate how the team factors induce their contextual influence on the individual team members.

Across the levels, this study expects to observe two groups of top-down contextual influence of the team-level factors on the individual team members. First, this study expects team work engagement to influence personal engagement. Further, the study will also examine if team interpersonal processes and team functional leadership would indirectly affect personal engagement via team work engagement. Second, team interpersonal processes are expected to draw a top-down influence on the individuals' psychological meaningfulness, safety and availability; and thus, indirectly influence the individual team members' personal engagement. The next section of this chapter will discuss each of these proposed relationships in greater detail.
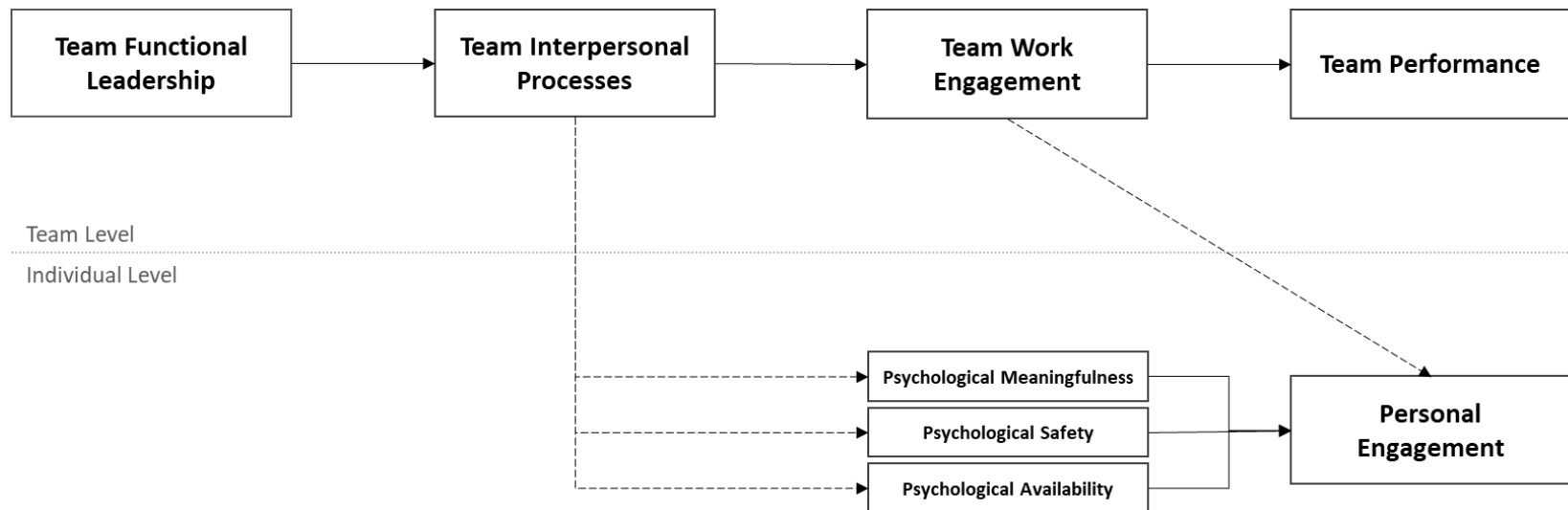
FIGURE 4.1. CONCEPTUAL MODEL

Note: Dashed lines indicate cross-level relationships.

4.3. HYPOTHESES DEVELOPMENT

This section will explain how each of the constructs in the conceptual model relates to one another. The section will be further divided into three areas. The first area will discuss the individual-level correlations between personal engagement and its three psychological conditions, i.e. psychological meaningfulness, safety and availability. The second area will propose the team-level correlation and mediation among the team-level constructs. The third area will elaborate on the proposed between-level correlations and mediations among the variables at the different levels.

4.3.1. INDIVIDUAL-LEVEL CORRELATIONS

At the individual level, this study aims to examine the links between personal engagement and its three psychological conditions, i.e. psychological meaningfulness, safety and availability. According to Kahn (1990,1992), individuals need to have sufficient levels of psychological meaningfulness, safety and availability in order to experience personal engagement. Psychological meaningfulness relates to how the individual asserts personal value and feels that they receive intrinsic satisfaction from what they do at work. Psychological safety denotes a condition in which individuals feel secure in expressing their preferred selves at work. While psychological availability gauges the level of physical and psychological resources that the individuals have at their disposal.

This study aims to investigate how the work team influence these three psychological conditions of personal engagement and therefore enables individuals to experience moments of personal engagement. To do so, the individual-level correlations between personal engagement and its three psychological conditions need to be established as it forms the basis for the other aspects in the conceptual model.

Several researchers examined the relationship between psychological meaningfulness, safety and availability (e.g., Chen *et al.*, 2011; May *et al.*, 2004; Olivier and Rothmann, 2007). The three psychological conditions exhibited positive significant correlations with personal engagement in these three studies. Interestingly, psychological meaningfulness was shown to have the strongest correlation, followed by psychological availability and psychological safety. This thesis aims to conduct a similar investigation of different samples that work in a different work context from a different cultural group country (Hofstede *et al.*, 1994; House *et al.*, 1994). Because personal engagement relates to the individual relationship with their work roles (Kahn, 1990), this study expects that psychological meaningfulness would also exhibit a stronger correlation with personal engagement than the other two despite using samples with different characteristics.

Hypothesis 1a: Individual psychological meaningfulness is positively related to personal engagement.

Hypothesis 1b: Individual psychological safety is positively related to personal engagement.

Hypothesis 1c: Individual psychological availability is positively related to personal engagement.

4.3.2. Team-level Correlations

At the team level, this study aims to examine the mediational relationships between team functional leadership, team interpersonal processes, team work engagement and team performance. In so doing, the study needs first to establish positive correlations between these variables. First, it proposes that team functional leadership will positively influence team

interpersonal processes. Previous research has demonstrated how the different types of team functional leadership can influence various team outcomes. For instance, Marks et al. (2000) and Randall *et al.* (2011) have demonstrated that sensegiving activities helped the teams to form shared mental models that, in turn, enhance their team performance. Hirst and Mann (2004) showed that team leaders who exhibited more boundary-spanning activities were linked with better team performance. Meanwhile, other scholars have demonstrated how team functional leadership can act as either mediator or moderator to team effectiveness (i.e. Graça and Passos, 2012; Künzle *et al.*, 2010).

These findings suggest that teams whose leaders better executed their leadership functions are linked with higher effectiveness. However, as noted by Kozlowski et al (2016), there have been limited studies that examine how functional leadership influences team processes. This study aims to shed further light on this area by examining how the functional leadership of the team leader can influence the team interpersonal processes. This investigation may reveal the intermediary process that can explain how functional leadership approaches enhances various types of team outcomes.

Second, this study aims to draw a link between team interpersonal processes and team work engagement. At the individual level, interpersonal relationships among co-workers have been proposed as an important antecedent of employee engagement (e.g., Adriaenssens et al., 2015; Gan & Gan, 2014; Liu et al., 2014; Sawang, 2012; van Beek et al., 2012). In many organisations, a major fraction of these interpersonal relationships occur within the work teams (Cohen and Bailey, 1997; Chen and Kanfer, 2006). However, there have been few studies that investigate how interpersonal interactions among team members can help the team to develop collective engagement.

According to Costa et al.'s (2014) model of team work engagement, team interpersonal processes are critical in promoting the emergence of team work engagement.

They argue that teams positive interpersonal interactions among team members would help to facilitate the emergence of team work engagement. Through a laboratory experimental setting, Costa et al. (2017) have revealed that highly engaged teams tend to have more frequent interactions and operate physically closer to one another. However, the study did not find a clear pattern that can suggest distinct types of interpersonal processes associated with the more engaged teams.

This study takes a different approach by measuring team interpersonal processes using Mathieu et al.'s (2019) team processes survey measure. Mathieu et al. (2019) validated a scale that operationalised Marks et al.'s (2001) taxonomy of team action, transition and interpersonal processes. Relating to the team interpersonal processes, this measure operationalises team interpersonal processes based on the three constituents, i.e. conflict management, confidence building and affect management. By using this measure, this study proposes that teams that develop better patterns of conflict management, confidence building and affect management would develop higher levels of team work engagement.

Finally, this study aims to show a further link between team work engagement and team performance. At the individual level, many studies have demonstrated the link between employee engagement and individual performance (e.g., Leung *et al.*, 2011; Bakker *et al.*, 2012; Steele *et al.*, 2012; Yeh, 2012). Because team work engagement is proposed as a compositional emergent state, Costa *et al.* (2014) posit that the construct would still maintain functional equivalence with its individual counterparts. That is, it still has a motivational property that activates the team by providing the necessary energy to deal with their daily tasks. Therefore, it is expected that team work engagement will also exhibit a positive correlation with team performance. The link between team work engagement and team performance has also been demonstrated in a few other empirical studies (i.e., Costa *et al.*, 2015; Gaspar, 2016; Guchait, 2016; Mäkikangas *et al.*, 2016; Torrente *et al.*, 2012).

However, despite the promising role that team work engagement can contribute in enhancing team effectiveness, this construct has not been thoroughly incorporated into the literature on work teams. For instance, team work engagement did not appear in Mathieu *et al.* (2019) reviews that examined team effectiveness research in the past decades. Therefore, this study aims to draw a further link between team work engagement and team effectiveness by examining the correlation between team work engagement and team performance.

Hypothesis 1d: Team functional leadership is positively related to team interpersonal processes.

Hypothesis 1e: Team interpersonal processes are positively related to team work engagement.

Hypothesis 1f: Team work engagement is positively related to team performance.

4.3.3. TEAM-LEVEL MEDIATIONS

This thesis aims to investigate the indirect effects of team interpersonal processes on team performance and the indirect effect of team functional leadership on team work engagement and team performance through a series of mediation analyses. The first set of mediation analyses will examine the indirect effect of the team's interpersonal processes on team performance. Marks *et al.* (2001) propose that team interpersonal processes would serve as the foundation and determine the effectiveness of the other team processes within the action and transition phases.

Previous studies have shown mixed results relating to the link between team interpersonal processes and team effectiveness. For instance, Killumets *et al.* (2015) found that team interpersonal processes directly influence team effectiveness while others found

non-significant effects between team interpersonal processes and team performance (J. E. Mathieu and Schulze, 2006; Rapp and Mathieu, 2007). In a quasi-experimental study, Rapp and Mathieu (2007) showed that teams with better teamwork, measured by team action, transition and interpersonal processes, outperform the quasi-control teams. However, when the impact of team interpersonal processes was assessed independently, it showed a non-significant result. Similarly, in a laboratory experiment design involving 29 student teams, Mathieu and Schulze (2006) found a non-significant relationship between team interpersonal processes and team performance while the link between processes and team performance remains significant.

These research findings can suggest that team interpersonal processes serve as a more distal, rather than proximal, predictor of team performance. It also lends support to Marks *et al.* (2001) proposition that views team interpersonal processes as facilitators of team action and transition processes. Teams that have a good pattern of interpersonal processes would provide a strong foundation that maximises positive interactions among the members. According to Costa *et al.* (2014), positive interactions among team members would trigger the emergence of team work engagement. It follows that the team with a high level of engagement would tend to put forth more effort to accomplish their goal and thus link to higher team performance. Based on this argument, this thesis proposes that team work engagement will fully mediate the relationship between team interpersonal processes and team performance.

Hypothesis 2a: Team work engagement mediates the effect of team interpersonal processes on team performance.

The second set of the team-level mediation analysis aims to examine the indirect effect of team functional leadership on team work engagement and team performance. Previous research has suggested that many forms of leadership, such as transformational (Tims *et al.*, 2011), charismatic (Babcock-Roberson and Strickland, 2010), ethical (Hartog and Belschak, 2012) and authentic leadership (Walumbwa *et al.*, 2010), have been positively linked to employee engagement at the individual level. However, the research attention has focused on examining the link between the characteristics and behaviour of the team leaders and the engagement level of their individual subordinates.

Scholars within the leadership domain have argued that the complexity of the present-day era requires leadership advocates to consider the broader elements of leadership rather than limiting the attention to the leader's characteristics (Uhl-Bien, 2014; Contractor *et al.*, 2012; Pearce, 2004). In response to this call, this study uses team functional leadership approaches and identifies five leadership functions that may influence the team's interpersonal processes, i.e. define mission, establish expectations and goals, provide feedback, perform team tasks and support social climate.

Section 3.4.2 contains an explanation of how team leaders who better execute these leadership functions will be able to cultivate a better pattern of interpersonal processes within their teams. Subsequently, teams that develop high-quality interpersonal processes will foster positive interactions among the members and, thus, yield a high level of team work engagement (Costa *et al.*, 2014). Based on this argument, this thesis proposes that team interpersonal processes will fully mediate the relationship between team functional leadership and team work engagement

Hypothesis 2b: Team interpersonal processes fully mediate the effect of team functional leadership on team work engagement.

Finally, the third set of the mediation analysis aims to examine whether team functional leadership may induce an indirect effect on team performance through the mediational role of team interpersonal processes and team work engagement. The previous paragraphs in this section have established that team functional leadership will induce an indirect effect on team work engagement. Yet, previous researchers showed that teams that have a high level of team work engagement would likely to perform better (i.e., Costa *et al.*, 2015; Gaspar, 2016; Guchait, 2016; Mäkikangas *et al.*, 2016; Torrente *et al.*, 2012). Therefore, by executing their leadership functions, the team leaders may have an indirect influence on not only team work engagement but also team performance. Based on this argument, this study proposes that team functional leadership will induce an indirect effect on team performance through the mediational role of team interpersonal processes and team work engagement

Hypothesis 2c: Team interpersonal processes and team work engagement fully mediate the effect of team functional leadership on team performance

4.3.4. CROSS-LEVEL CORRELATIONS

The previous section has discussed how team interpersonal processes and team functional leadership influences engagement at the team level. This section will continue to discuss how team interpersonal processes and team functional leadership individual engagement. The model proposes two areas in which these team-level factors would influence the individual engagement of the team members. Specifically, the model proposes that team work engagement will positively correlate with personal engagement. In addition, team interpersonal processes are expected to influence the three psychological conditions of personal engagement, i.e. psychological meaningfulness, safety and availability. Each of these proposed top-down influences will be explained in a separate subsection.

4.3.4.1.TEAM WORK ENGAGEMENT AND PERSONAL ENGAGEMENT

In addition to improving team performance, previous scholars have also shown that team-level engagement would have a crossover effect on individual work engagement (Bakker *et al.*, 2006; van Mierlo and Bakker, 2018). In a multilevel study involving 2,229 constabulary officers that were nested in 85 work teams, Bakker *et al.* (2006) demonstrated that collective engagement at the team level yields a top-down effect on individual work engagement, after controlling for job resources and job demands. They argue that this crossover effect is due to affective transfer processes such as emotional contagion (Hatfield *et al.*, 1994) and emphatic crossover (Westman, 2001). Emotional contagion refers to "the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally" (Hatfield *et al.*, 1994; p. 5). Drawing from this theory, Bakker *et al.* (2006) suggested that teams whose members are engaged may influence their other team members who are relatively less engaged through this unconscious process. Just as people tend to mimic others' emotions, work engagement that also has an affective dimension may transfer to others through the same mechanism (Schaufeli *et al.*, 2002; Bakker *et al.*, 2006).

This top-down influence between team work engagement on work engagement can be particularly important for the team to maintain their engagement over a long period. Previous scholars have suggested that individual engagement is a transitory, rather than a permanent state (Sonnentag *et al.*, 2012; Kahn, 1990). While this fluctuating nature of engagement means that it can be difficult to maintain a high level of individual engagement, the collective influence of the work team may act as a reservoir that may sustain individuals' engagement over time (Knight *et al.*, 2019). Moreover, Costa *et al.* (2014) argue that the engagement of the individual team members may feed as team input for the next iteration of

the team process. This, in turn, may create a virtuous cycle between the team and individual engagement that could be a key to maintaining engagement in the long run.

This study aims to add further evidence to this area by examining the top-down influence of team work engagement on personal engagement. However, instead of measuring individual engagement using the UWES, this study chooses to use Rich *et al.*'s (2010) Job Engagement Scale (JES) which was developed to operationalise Kahn's (1990) concept of personal engagement. Shuck *et al.* (2017) demonstrated that in comparison to the UWES, JES shares less variance with the three job attitudinal constructs closely linked to engagement, job satisfaction, job involvement and organisational commitment. Thus, measuring individual engagement using JES over UWES would allow this research to draw a narrower conceptual border of engagement. It will be interesting to examine if collective team work engagement can also influence this more specific measurement of individual engagement.

Additionally, similar to Bakker *et al.*'s (2006) approach, this study aims to examine the top-down effect of team work engagement on personal engagement after controlling for the three psychological conditions of personal engagement, i.e. psychological meaningfulness, safety and availability. Adding these controls would allow this study to examine whether personal engagement can be triggered without going through these three variables. A significant result would therefore suggest a new avenue to influence personal engagement that may carry various practical implications.

Hypothesis 3: Team work engagement is positively related to personal engagement after controlling for the effect of individual psychological meaningfulness, safety and availability.

*4.3.4.2.*TEAM INTERPERSONAL PROCESSES AND PSYCHOLOGICAL CONDITIONS OF PERSONAL ENGAGEMENT

The second top-down influence that this study proposes relates to the link between team interpersonal processes and the three psychological conditions of personal engagement, i.e. psychological meaningfulness, safety and availability. The investigation of how team interpersonal processes influence the three psychological conditions of personal engagement would help to shed further light on the mechanism that governs how engagement spread across the team.

*4.3.4.2.1.*TEAM INTERPERSONAL PROCESSES AND PSYCHOLOGICAL MEANINGFULNESS

Previous studies have examined the effect of interpersonal elements of the work on psychological meaningfulness. For instance, a few studies have examined that neo-charismatic leadership styles such as transformational leadership, authentic leadership and empowering leadership positively link with the subordinates' psychological meaningfulness (Chaudhary and Panda, 2018; Frieder *et al.*, 2018; Han and Oh, 2020; Meng *et al.*, 2020). In addition to the dyadic relationship between the leader and their subordinates, previous studies have also found that co-worker relations could also influence psychological meaningfulness (Ariani, 2015; Blanco-Donoso *et al.*, 2017). However, similar to the case with employee engagement, the role of the work teams in promoting psychological meaningfulness has been overlooked.

This study draws into Kahn and Heaphy's (2014) proposition to examine how the work teams, specifically team interpersonal processes, can influence their team members' psychological meaningfulness and hence promote personal engagement. Kahn and Heaphy (2014) argue that interpersonal connectedness among co-workers would enhance the sense of belongingness through the social identification process and interpersonal connectedness

(Bartel, 2001; Rosso *et al.*, 2010). They argue that when co-workers develop high-quality connections among them, they will develop a sense of collective identity (Kahn and Heaphy, 2014). For instance, when co-workers treat one another with positive regard and compassion, they may experience a sense of shared humanity (Rosso *et al.*, 2010). This may subsequently make them feel that they belong to a collective unit. When an employee identifies themselves with their colleagues, they become likely to assert personal meaning in the work role that they are doing (Block, 2008).

In many organisations, the interpersonal interactions of the employees are centred around their work teams (Chen and Kanfer, 2006). Thus, the pattern of the interpersonal relationships within these work teams is likely to influence the interpersonal connectedness among the team members. For instance, a team whose members maintain strict social boundaries between one another may prevent the members to feel authentic connections and therefore limit them from feeling that they belong to a collective unit. On the contrary, the sense of collective identity may flourish in teams whose members treat one another with openness and compassion. The development of interpersonal connectedness among the team members may rely on the daily interpersonal processes that team members engaged in. Thus, this thesis proposes that teams with a higher quality of interpersonal processes may enable their members to form a sense of belongingness that, in turn, improve their psychological meaningfulness and therefore enable them to experience personal engagement more often.

Hypothesis 4a: Team interpersonal processes are positively related to individual psychological meaningfulness.

4.3.4.2.2.TEAM INTERPERSONAL PROCESSES AND PSYCHOLOGICAL SAFETY

Another way in which team interpersonal processes may influence personal engagement is by promoting a sense of psychological safety. The importance of building a psychologically safe environment has been well established at both the individual and the team level (Frazier *et al.*, 2017; A. Newman *et al.*, 2017). Previous research has suggested that team performance suffers when the team members do not feel that it is safe to express their authentic selves at work (Wilkens and London, 2006). Similarly, individuals that restrain themselves from expressing their opinions, emotions and beliefs were linked to lower engagement and commitment (Newman *et al.*, 2017). The detrimental effect of not feeling psychologically safe is accentuated in Kahn's (1990) ethnography study. The study exposes that the lack of psychological safety hinders individuals from expressing their preferred selves. This widens the gap between the individuals and the work roles that they assume and thus prevents the individuals from becoming engaged (Kahn, 1990).

Within the context of a work team, the interpersonal processes that occur as the team progress can be very important in promoting or restraining the psychological safety of the team members. For example, team members in teams with a brittle authoritative management style may develop shallow and spurious relationships. In this situation, the team members may not see the reward of further investing themselves into the work roles and choose to protect themselves by withdrawing their preferred self from the work role. On the contrary, authentic and caregiving relationships within the teams may help the team members to dismantle their anxiety so that they can open up and get themselves more involved (Kahn, 2001). This type of positive interpersonal process may help the team members to openly express their preferred selves through uttering opinions, proposing ideas, articulating their feelings and displaying emotions (Kahn and Heaphy, 2014).

When the teams can maintain the provision of caregiving relationships among the team members, the teams may form what Winnicott *et al.* (1965) referred to as holding environments. The term was initially coined to represent the nature of maternal caregiving relationships between mothers and infants (Winnicott W, 1965 in Kahn and Heaphy, 2014). Shapiro and Carr (1993) adopted the concept to the field of organisational studies and denote a work environment that provides a safe haven nuanced with caregiving relationships among co-workers so that the employee can freely express themselves. Based on this, this thesis hypothesises that team interpersonal processes will positively influence the team members' psychological safety.

Hypothesis 4b: Team interpersonal processes are positively related to individual psychological safety

4.3.4.2.3. TEAM INTERPERSONAL PROCESSES AND PSYCHOLOGICAL AVAILABILITY

Finally, team interpersonal processes may influence the individual team members' personal engagement by helping the individual team members to feel more psychologically available. Kahn and Heaphy (2014) have noted various factors at and outside work that can add or drain the amount of psychological availability that individuals have at their disposal. The individuals' non-work commitments, responsibilities and life events may drain or energise the individuals' psychological availability. At work, various work events, relational contexts, professional responsibilities and job demands can deplete or aid psychological availability. Nevertheless, the positive or negative effect of a given event on the individual psychological availability may depend on how the individuals perceive the event in that instant.

Sonnentag *et al.* (2012) identified the positive correlation between daily work engagement and recovery level at the end of the day after controlling for morning recovery

level. Rather than feeling exhausted, Sonnentag *et al.*'s (2012) participants reported that they recover more energy on days that they got highly engaged. The findings may hint that psychological energy may be more important than its physiological counterpart considering that the experience of engagement has been linked to better psychological health and reduced stress (Buys and Rothmann, 2010; Shimazu *et al.*, 2012).

Crawford *et al.*'s (2010) meta-analysis offers additional evidence to support the importance of psychological energy over physiological energy. Crawford *et al.* (2010) examined the impact of various job resources and job demands on work engagement and found conflicting effects between the different types of demands. Hindrance demands such as administrative hassles, emotional conflict, organisational politics, resource inadequacies, role conflict and role overload exhibited a negative correlation to work engagement. Conversely, challenge demands that include job responsibility, time urgency and workload showed a positive correlation to work engagement. Except for resource inadequacies and role overload, the remaining hindrance demands listed in Crawford *et al.* (2010) meta-analysis represents psychological rather than psychical obstacles. On the contrary, the three types of challenge demands relate more to physical than psychological challenges.

The empirical evidence has further emphasised the importance of maintaining the psychological aspect of individual availability. As Crawford *et al.* (2010) meta-analysis study demonstrates, many of the demands that deplete work engagement, i.e. emotional conflict, organisational politics, and role conflict involve interpersonal relationships among co-workers. This offers empirical support to Kahn and Heaphy (2014) that propose relational context at the workplace as a critical factor that can deplete or increase the individuals' psychological availability. They further ascribe that the relational context at work can add or drain psychological availability through two different processes.

First, Kahn and Heaphy (2014) argue that interpersonal interactions at the workplace can either energise or enervate psychological availability. They observe that whether an interaction can add or diminish psychological energy often depends on the quality of the interpersonal relationships between them. Besides enabling the individuals to feel psychologically safe, Dutton (2003) argues that authentic connections can also help to build and sustain energised workplace.

Other researchers have also proposed how emotional content can be transferred among the team members. For instance, Westman (2001) proposes that team members may tune in to what their colleagues feel through what they call emphatic crossover processes. For example, when a team member complains to their colleagues about the overwhelming job demands, their team members may tune in with the person and appraise their own demands. This type of conversation might make the other members similarly feel that they are being tasked with too many workloads.

The second process through which relational context at the workplace can influence psychological availability is through a transfer of emotions (Kahn and Heaphy, 2014). Kahn (1992) highlights that the extent to which the individual can be more or less available depends on and is limited by their emotional capacity. The term refers to the maximum amount of emotional labour that an individual can contain without experiencing depersonalisation (Kahn, 2004). Kahn and Heaphy (2014) observe that co-workers constantly exchange the emotional material that resides in their emotional capacity through interpersonal interactions. Given that different individuals will have varying degrees of emotional capacity, individuals that naturally have a high emotional capacity may help their work teams or business unit by receiving the emotional materials from their overwhelmed colleagues. Frost (2003) called these people 'toxic handlers', that is, organisational members who specialise in handling emotional pain in the workplace.

The management of the individual emotional capacity would be particularly important in the case of team conflicts. Previous research has shown that team conflict, especially relationship conflict, has a detrimental impact on individual and team engagement (Cavanaugh *et al.*, 2000; Chen *et al.*, 2011; Costa *et al.*, 2015). Conflict among the team members may drain the conflicting members' emotional capacity, hence reducing their psychological availability (Chen *et al.*, 2011).

Drawing on Kahn and Heaphy's (2014) proposition that illustrates how relational context can influence psychological availability, it is plausible to suppose that interpersonal relationships within a work team may also influence the individual team members' psychological availability. However, there have not been any empirical studies that examine how any team-level constructs link to individual psychological safety. This study aims to address this research gap by investigating how the team's interpersonal processes can influence individual psychological availability, thereby promoting personal engagement.

It is plausible to infer that the role of the team interpersonal processes on the team members' psychological availability could be more salient rather than the interpersonal relationships with colleagues from different teams. Because the team members interact daily, developing positive rapport among the team members is critically important. The high-quality personal connections among the team members may serve as a source of energy that can constantly revitalise the team members' psychological availability (Dutton, 2003). Thus, this thesis proposes that team interpersonal processes will influence the individual team members' psychological availability by providing psychological energy through quality interpersonal interactions.

Hypothesis 4c: Team interpersonal processes are positively related to individual psychological availability.

4.3.5. CROSS-LEVEL MEDIATIONS

After the previous sections established the proposed top-down influence, this section continues to explain the proposed cross-level mediations within the conceptual model. Previous studies have demonstrated that relational context at the workplace is one important predictor of individual engagement (Kahn and Heaphy, 2014; Tims *et al.*, 2011; Cheng *et al.*, 2013; Van Schalkwyk *et al.*, 2010; Brunetto *et al.*, 2013; Liao *et al.*, 2013). However, the mechanisms through which interpersonal relationships affect individuals have not been thoroughly explained.

Most of the studies that investigate the link between interpersonal relationships and employee engagement have used the JD-R model as their framework (Bailey *et al.*, 2017). The model proposes that the addition of social resources would alleviate the distress from the job demands. The reduction of distress will therefore lead to an increase in work engagement considering that engagement is assumed as the opposite pole of burnout (Bakker and Demerouti, 2007). However, scholars have criticised the use of the JD-R model in investigating engagement (Antoinette Bargagliotti, 2012; Bailey et al., 2017; Fineman, 2006). For instance, Bargaglioti (2012) argues that the JD-R operates in a transactional fashion that assumes employee motivation will increase as more resources are added. Yet, the model has not specifically explained how the different type of resources triggers the employees' motivation to get engaged. In a similar vein, Bailey *et al.* (2017) assert that the JD-R model might have overlooked the contextual factors, interpersonal interactions and emotional responses that occur in the workplace.

This study aims to shed further light on how the interpersonal relationships among the co-workers can influence their individual engagement by investigating the contextual influence of the work teams on the individuals and examining how the individuals respond to the team's influence. This thesis proposes that the interpersonal relationships within the work teams,

proxied as team interpersonal processes, may influence individual engagement through two mediating mechanisms.

First, team interpersonal processes may influence individual engagement through a top-down influence of team work engagement on individual engagement. This proposed relationship is referred to as the upper-level mediation in this study because the mediator is a team-level construct (Bakker *et al.*, 2006). Second, team interpersonal processes may also influence individual engagement by influencing the three psychological conditions of personal engagement, i.e. psychological meaningfulness, safety and availability (Kahn and Heaphy, 2014). This mediational relationship is referred to as the lower-level mediation analysis in this study. The following two subsections will discuss these proposed relationships in greater detail.

4.3.5.1. UPPER-LEVEL MEDIATION

Bakker *et al.* (2006) found that team-level engagement induces a unique effect on the individual engagement of the team members, even after controlling for their work environment. They argue that an engaged team will aid the other members to get engaged due to affective transfer processes, such as emotional contagion (Hatfield *et al.*, 1994). The proponents of emotional contagion theory proposed that the affective content of organisational members may transfer to their colleagues in a subconscious way (Hatfield *et al.*, 2014). Given that team work engagement is also an affective emergent state, it is quite likely that the teams with a high level of team work engagement will influence their members to get engaged.

The crossover effect of team engagement on individual engagement was demonstrated in van Mierlo and Bakker's (2018) laboratory experiment study. The study

assigned 43 student groups to do a 30-minutes task. The researchers measured the individual

engagement of each team member before and after conducting the task. The study found that

the team members reported a more similar engagement score after the study compared to

their initial scores. Van Mierlo and Bakker's (2018) study infers that the group activities have

affected the individual engagement level such that it converges to the team's mean

engagement score. The study suggested that group activities, albeit done in a short period,

could facilitate the transference of engagement within the team.

Drawing on this finding, it is reasonable to assume that the team processes, especially

the team interpersonal processes (Costa *et al.*, 2014), could not only influence the collective

team level engagement but also individual engagement. Teams with high-quality interpersonal

processes would enhance the emergence of team work engagement, which in turn, induces a

crossover effect on individual engagement (Bakker *et al.*, 2006). Therefore, this thesis

proposes that team work engagement may act as a team-level mediator that transmits the

indirect effect of team interpersonal processes on personal engagement.

Hypothesis 5: Team work engagement mediates the effect of team interpersonal processes on

personal engagement.

In addition to examining the indirect effect of team interpersonal processes on

personal engagement, this study will further investigate if the team leaders can foster this

cross level mediation by executing the leadership function. Section 4.3.3 in this chapter has

previously explained that team functional leadership may induce an indirect influence on team

work engagement. This section aims to further investigate if teams whose leaders execute

their leadership functions better will correlate with members that have more personal

engagement.

The team leaders that execute their leadership functions effectively may correlate with teams with better interpersonal processes (Section 3.4.2) and, in turn, facilitate the emergence of team work engagement (Section 4.3.3). Teams that develop a higher level of collective engagement would further promote the emotional contagion mechanism (Hatfield et al., 1994) that allows their individual members to experience personal engagement. Based on these arguments, this thesis proposes that team functional leadership will induce an indirect effect on personal engagement through the mediational role of team interpersonal processes and team work engagement.

Hypothesis 6: Team interpersonal processes and team work engagement mediate the effect of team functional leadership on personal engagement.

4.3.5.2.LOWER-LEVEL MEDIATION

Besides the upper-level mediation of team work engagement, team interpersonal processes may also influence individual engagement by directly affecting how the individual responds to their work environment. Bakker et al. (2006) assert that other than through emotional contagion, work engagement can spread across co-workers through the empathic crossover mechanism, which is transference through a conscious cognitive process by "tuning in" to the emotions of others (Westman, 2001). They propose that during work interactions an employee imagines how she would feel in the position of others and therefore experiences the same feelings.

In relation to personal engagement, Kahn and Heaphy (2014) proposed similar transference processes. They argue that employees would tune in to the work environment. In

different ways, a supportive workplace would make the employees deepen the meaning of work, feel safer to express themselves and encounter energizing interaction.

In team-based organisations, the daily interactions between team members and the team leaders are a salient factor that shaped the employees' work experience and thus their relationship with their work (Chen and Kanfer, 2006). Previous scholars from both Schaufeli *et al.* (2002) work engagement and Kahn's (1990) personal engagement strains agree that among the other types of interactions, the team interpersonal processes have a more salient influence on the team members' engagement (Costa *et al.*, 2014; Kahn and Heaphy, 2014).

Costa *et al.* (2014) propose that these interpersonal processes facilitate the emergence of team work engagement. Meanwhile, Kahn and Heaphy (2014) focus on explaining how interpersonal relationships at the workplace can affect individual engagement. Their conceptual paper illustrates the psychological processes through which the work environment influences individual engagement. By focusing on the psychological experiences that individuals experience when exposed to their work environment, Kahn and Heaphy's (2014) proposition examines an area that the JD-R model might have overlooked. It is to be noted that rather than proposing an opposing view, Kahn's (1990) perspective could complement the model by going into more detail about how the individuals respond to the stimuli from their work environment and convert it into personal engagement, which may not always be transactional (Bargaglioti, 2012; Bailey *et al.*, 2017). Thus, this study aims to contribute to this area by examining how individual team members respond to team interpersonal processes and convert them into personal engagement.

In doing so, this thesis integrates team processes literature (Marks *et al.*, 2001) with Kahn and Heaphy's (2014) proposition on how interpersonal relationships may affect personal engagement by affecting the three critical psychological conditions to trigger personal engagement, i.e. psychological meaningfulness, safety, and availability. To the author's

knowledge, there have not been any empirical studies that link any team-level factors with how the individual's perception of psychological meaningfulness, safety, and availability. The investigation of the mechanisms through which the teams could influence their members' personal engagement is critical as this exploration can suggest specific ways to accelerate the dissemination of engagement within a work team. This multilevel study aims to address this research gap by examining the individual-level mediating effects of psychological meaningfulness, safety and availability on the relationships between team interpersonal processes and personal engagement.

Hypothesis 7a: Individual psychological meaningfulness mediates the effect of team interpersonal processes on personal engagement.

Hypothesis 7b: Individual psychological safety mediates the effect of team interpersonal processes on personal engagement.

Hypothesis 7c: Individual psychological availability mediates the effect of team interpersonal processes on personal engagement.

4.4. SUMMARY OF CHAPTER 4

This chapter has illustrated how the different constructs form the body of this study's conceptual model and explained the range of the hypotheses that this study advance. Table 4.1 displays the list of hypotheses that this study proposes. Meanwhile, Figure 4.2 illustrates how the different hypotheses are linked to this study's conceptual model. The next chapter of this thesis will continue to discuss the methodology that this thesis used to examine the proposed relationships within the conceptual model.

TABLE **4.1.** SUMMARY OF RESEARCH HYPOTHESES

No.	Hypothesis Description
Individual-level correlations	
1a	Individual psychological meaningfulness is positively related to personal engagement.
1b	Individual psychological safety is positively related to personal engagement.
1c	Individual psychological availability is positively related to personal engagement.
Team-level correlations	
1d	Team functional leadership is positively related to team interpersonal processes.
1e	Team interpersonal processes are positively related to team work engagement.
1f	Team work engagement is positively related to team performance.
Team-level mediations	
2a	Team work engagement fully mediates the effect of team interpersonal processes on team performance.
2b	Team interpersonal processes fully mediate the effect of team functional leadership on team work engagement.
2c	Team interpersonal processes and team work engagement fully mediate the effect of team functional leadership on team performance.
Cross-level correlations	
3	Team work engagement is positively related to personal engagement after controlling for the effect of individual psychological meaningfulness, safety and availability.
4a	Team interpersonal processes are positively correlated with psychological meaningfulness.
4b	Team interpersonal processes are positively correlated with individual psychological safety.
4c	Team interpersonal processes are positively correlated with individual psychological availability.
Cross-level mediations (upper-level)	
5	Team work engagement mediates the effect of team interpersonal processes on personal engagement.
6	Team interpersonal processes and team work engagement mediate the effect of team functional leadership on personal engagement.
Cross-level mediations (lower-level)	
7a	Individual psychological meaningfulness mediates the effect of team interpersonal processes on personal engagement.
7b	Individual psychological safety mediates the effect of team interpersonal processes on personal engagement.
7c	Individual psychological availability mediates the effect of team interpersonal processes on personal engagement.
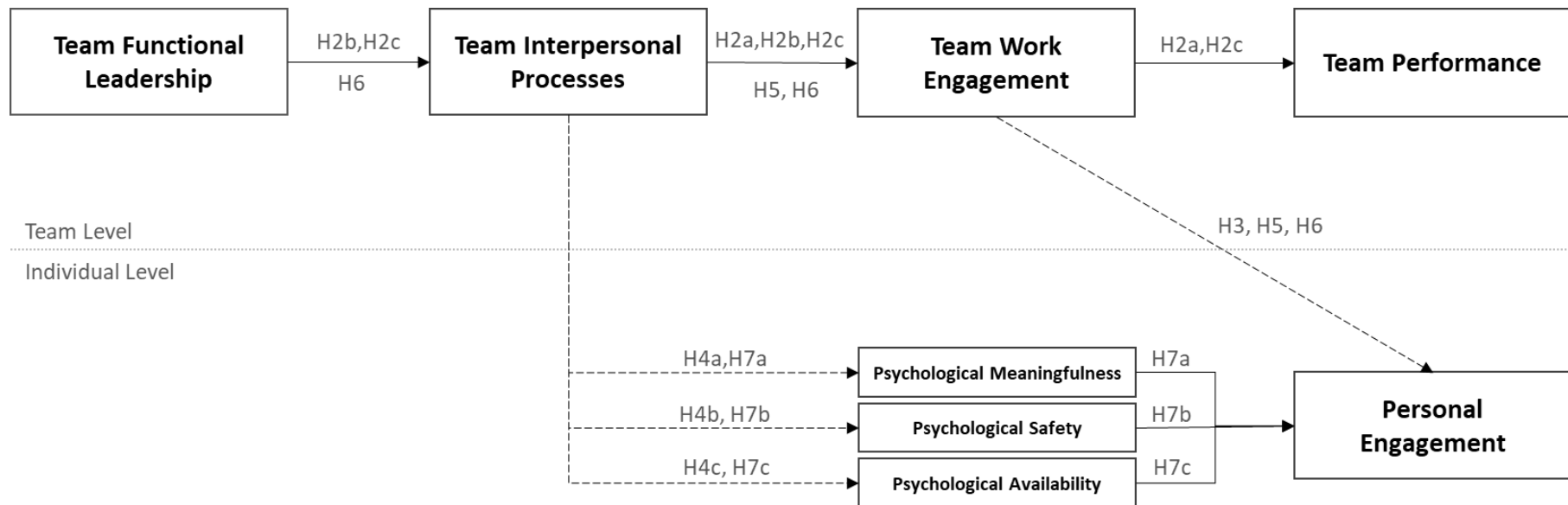
FIGURE 4.2. CONCEPTUAL MODEL AND HYPOTHESES OF THIS STUDY

Note: Dashed lines indicate cross-level relationships. Hypotheses relating to single-level correlations (Hypotheses 1a to 1f) are not shown in the model.

CHAPTER 5
METHODOLOGY

5.1. INTRODUCTION

This chapter will discuss the methodology this study used to answer the research question, i.e. how do team functional leadership and team interpersonal processes influence employee engagement at the team and individual levels? The chapter starts with a discussion of the research philosophy and research paradigm that this study adopts. It then continues to describe the research design and explains the research strategy and methodological procedures that this study used. The chapter contains an explanation of how the study maintains rigour by minimising common method variance, conducting a pilot study and getting ethics approval. Finally, the chapter concludes by describing the data collection process. Figure 5.1 illustrates the methodological approach that this study employed in aim to answer its research question.

Reserach Philosophy	
Ontology: Positivism	Epistemology: Deductive

Research Design		
Method: Quantiative	Strategy: Online Questionnaire	Time Horizon: Cross-Sectional

Questionnaire Design			
Minimising CMV	Translation	Pilot Study	Ethics Approval

Data Collection	
Participants: 583 employees in 72 teams	Company Context: Indonesian Supermarket Chain
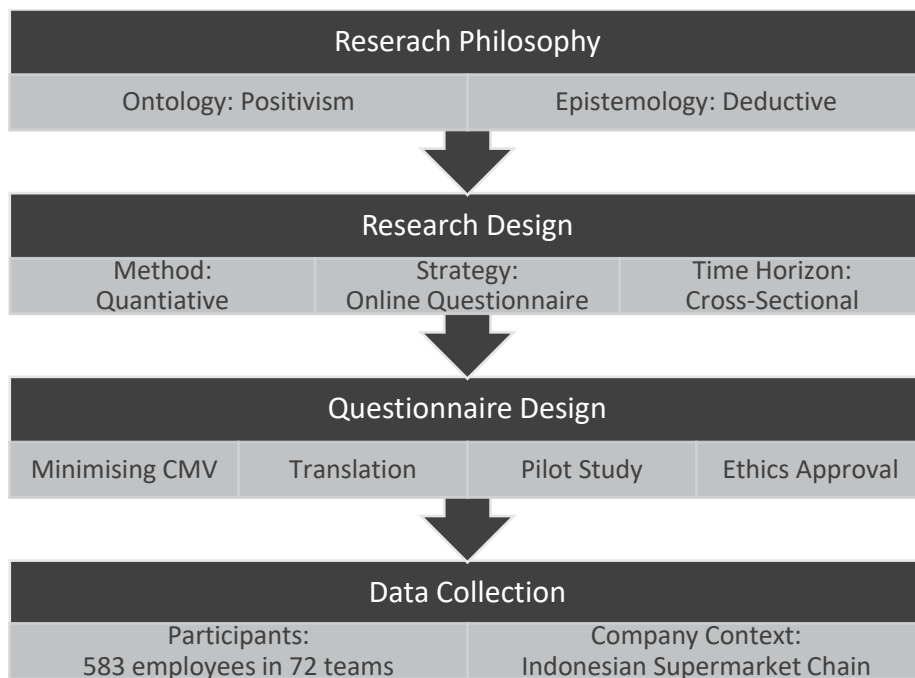
FIGURE 5.1. SUMMARY OF THE METHODOLOGICAL APPROACH THAT THIS STUDY USED (SOURCE: AUTHOR)

In the field of social science, the choice of research method is determined by the research philosophy that a researcher adopts in seeing social phenomena (Saunders *et al.*, 2016). This philosophical lens defines how one perceives reality (ontology) and assesses what can be considered knowledge (epistemology). Thus, it is critical to clearly state the philosophical stance that this research adopts before explaining the research methods that this study used.

5.2. RESEARCH PHILOSOPHY

Bryman (2008) asserts that clarifying the research philosophy early in the research process ensures that methodology, methods and data interpretation are consistent and congruent with the research question and phenomena being explored. This thesis follows Bryman's (2008) advice by delineating the major philosophical paradigms that are commonly used in social science studies and stating the philosophical stance that this thesis adopts.

There are three major philosophical paradigms that social scientists commonly adopt (i.e., positivism, interpretivism and critical realism) (Saunders *et al.*, 2016). A paradigm is a fundamental set of beliefs, principles, or worldviews that establishes an underpinning perspective from which the research question and phenomena are explored (Denzin and Lincoln, 2005). These philosophical paradigms offer different perspectives in the way they see reality, i.e. ontology and how they assess legitimate knowledge, i.e. epistemology. Concerning its ontological view, positivism maintains that reality is singular, objective, and independent of human interpretation (Bryman, 2008). Consequently, a positivist view requires objective assessment and testing in curating what can constitute knowledge (Denzin and Lincoln, 2005). Thus, the golden standard of the positivistic view in social science research is to gain information from data that is free from the influence of human interpretation (Saunders *et al.*, 2016).

On the contrary, the interpretivist view proposes that reality is subjective for individuals because different people embed different meanings in their own version of reality (Saunders *et al.*, 2016). Concerning its epistemological view, interpretivism maintains that knowledge can be constituted from the consensus of human interpretations (Raskin, 2002).

Thus, the understanding of the worldview of the subject and finding the pattern that emerges from individuals' interpretation is a key element in generating knowledge from social phenomena. Meanwhile, critical realism occupies the middle ground between positivism and interpretivism (Reed, 2009). Critical realists see reality as an objective construct that is independent of who perceives it. However, they also acknowledge that different people process social phenomena differently. The focus of the critical realist view is to understand the mechanisms that take place behind the individual's mental processing (Fleetwood, 2005).

For example, a positivist may argue that the team's interpersonal relationship is an objective phenomenon free from the researchers' interpretation. The construct can then be captured and quantified in an objective way. On the contrary, an interpretivist would challenge that each team member would experience these interpersonal relationships in their own unique way, and therefore, it cannot be agreed upon and quantified. A critical realist would argue that although the experience of interpersonal relationships differs among the team members, these different experiences are driven by a common underlying mechanism.

Although previous scholars have often debated which philosophical paradigm is most suitable for studying organisational phenomena (Saunders *et al.*, 2016), the emerging consensus that emerged in the last decades suggests that the choice of a suitable research paradigm will depend on the research questions of the studies. For instance, when the research questions inquire exploration of a relatively new area, interpretivist and critical realist approaches may be useful because they allow the researchers to understand the phenomena from the worldview of the respondents. On the contrary, the positivistic approach is useful in areas where there are a few established theories that can be borrowed to explain the relationship between the phenomena of interest.

The research question of this study focused on investigating the influence of team functional leadership and team interpersonal processes on employee engagement at the team and individual levels. The previous literature review chapter has demonstrated a few theories that can explain how team interpersonal processes can promote employee engagement (Costa *et al.*, 2014; Kozlowski and Klein, 2000; Kahn and Heaphy, 2014) and team functional leadership can influence the process (Marks *et al.*, 2001; Morgeson *et al.*, 2010). Because there have been a few theories that are relevant to this study's research question, the author chooses to use a positivistic-deductive approach to investigate the links between these three conceptual areas followed by a quantitative research method. This approach would enable the researcher to investigate whether the theory applies to the sample population of this study.

5.3. RESEARCH DESIGN

In alignment with the increasing calls from previous organisational scholars to adopt multilevel thinking in investigating organisational phenomena (Kozlowski and Klein, 2000; Dionne *et al.*, 2014), this study employs multilevel thinking in administering quantitative research. Dionne *et al.* (2014) assert that the adoption of multilevel thinking in studying organisations can provide a clearer logical basis for theorising, measuring, testing, and drawing inferences about the phenomenon of interest and allows for building a science of organisation that is theoretically rich and application relevant.

Rousseau (1985) and Mathieu and Chen (2011) have asserted that there are three fundamental aspects of multilevel research that must align to avoid level-related confusion or errors, i.e. the level of theory, the level of measurement, and the level of analysis. Concerning

the alignment of theory, the previous literature review chapter has explained the theory that underpins this research according to its level. Specifically, employee engagement is conceptualised at the individual level using Kahn's (1990) concept and at the team level using Costa *et al.'s* (2014) construct of team work engagement. Team interpersonal processes are conceptualised at the team level using Mark *et al.'s* (2001) concept. Meanwhile, team functional leadership is also conceptualised at the team level and will be operationalised using Morgeson *et al.*'s (2010) taxonomy.

The level of measurement refers to the sources from which the data are obtained (Costa *et al.*, 2013). Costa *et al.* (2013) have also cautioned that researchers should align the level of theory and the level of measurement to avoid misunderstandings and erroneous conclusions. This study follows this advice by taking the measurements at the corresponding level. However, team-level data in team functional leadership, team work engagement and team interpersonal can only be generated using an aggregation from the individual data. Nevertheless, careful precautions were taken during this aggregation process.

Finally, the level of theory and the level of measurement should align with the level of analysis (Rousseau, 1985; Mathieu and Chen, 2011). This relates to a few statistical guidelines to ensure that the analysis takes into account how the lower-level data is nested into the higher-order constructs. Costa *et al.* (2013) have noted two critical steps that a multilevel study should adhere to. First, in the case where higher-order data was obtained from the lower level sources, researchers should justify data aggregation to the higher level by examining whether the aggregate data reflect within-group agreements. Some statistical techniques that can be used to assess this within-group agreement are the within-group agreement index (Rwg; James *et al.*, 1993), the intraclass correlation coefficient (ICC; Bliese,

2000), and the average dispersion index (Burke and Dunlap, 2002). Second, the statistical

analysis that is used to analyse the correlation or the degree of fit should also consider the

nature of the multilevel data. A few techniques that previous researchers have used to analyse

multilevel data include ANCOVA (Mossholder and Bedeian, 1983); contextual analysis

(Firebaugh, 1979); within and between analysis (Dansereau *et al.*, 1984); cross-level operator

(James *et al.*, 1980); random coefficient modelling (RCM) with hierarchical linear modelling

(HLM; Burstein *et al.*, 1978).

This study carefully follows the precaution mentioned above throughout the research

process. Cross-sectional multilevel, multisource data were then collected using an online

questionnaire sent to selected participants. The following section will provide a further

description of the participants of this study.

5.3.1. PARTICIPANTS

The participants of this study were 583 employees from an Indonesian supermarket

chain company. The company was selected using a convenience sampling method. This

method has its limitation as it is more prone to selection bias and inclusion of outliers

(Farrokhi *et al.*, 2012). However, Saunders (2012) points out that this method allows

researchers to find sample selection criteria relevant to the research aim. This research

requires access to multiple work teams that work under one organisation, which can be

difficult to negotiate. Therefore, the convenience sampling method is chosen. To minimise the

selection bias, the researcher identified ten Indonesian companies with multiple teams that

operated with similar job designs and sent an email inviting these ten companies to participate

in this research. Two of these ten companies expressed their interest in participating in the

study. After the researcher explained the research requirements, one of the companies

withdrew its participation. Nevertheless, this study initially aimed to only use one company to

host the research to eliminate the effect of having different organisational cultures. In

addition, the workers in this supermarket chain company are doing roughly similar tasks;

therefore, it can control for the impact of the job characteristics on the results of the study.

After initial contact with the people development manager of the company, the

researcher explained the criteria of the teams that fit into this study. The manager then

distributed the online questionnaire to 84 teams from eight different supermarkets that

operate in the city of Bandung, Indonesia. Among these 84 teams, 72 responded to the

questionnaire. The study used non-probabilistic sampling in selecting the participants. These

participants were selected because these teams came from a single company and thus

experienced the same organisational culture. They are also doing a relatively similar task. Their

main duties revolve around replenishing stocks, managing inventories and helping customers

to find products. This participant selection allows this research to control the job-design-

related and organisational-level influence on the samples. Thus, the variance of the

engagement score across the team will be more likely due to team-level predictors.

The team size varies between 4 and 25 team members. The team members' response

rate was 69.6%. In other words, about two of the three members of the team responded to

the questionnaire. The average team size is 10.21 members, the median team size is 10, and

the standard deviation is 5.59. About half of the respondents are male (54%), indicating that

the sample has an even balance between males and females. The average age of the

respondents is 26.64 years (SD = 6.67). The average job tenure is 3.14 years (SD = .49), while

the average team tenure is 1.52 years (SD = .50).

The shop assistants work in two different shifts, i.e. morning and afternoon. They

typically rotate between the two shifts every other week so that each team member would

have similar interaction times with each other. Among the 72 teams, 15 had a junior

supervisor who worked in opposing shift time with the senior supervisor. To avoid confusion,

the team members were asked to rate the leadership of the senior supervisors because these

senior supervisors typically have more authority in the team. This decision was taken after

considering the company culture and Indonesia's national culture, which has a high power

distance index (Hofstede *et al.*, 1994). The role of the supervisors is to oversee the day-to-day

operations of the store. They are also responsible for arranging for scheduling the work time

of the shop assistants. The supervisors and the shop assistants interacts on a daily basis. The

average age of the supervisor is 30.6 years (SD = 7.7) and 54.2% of them are male. The average

job tenure of the supervisor is 4.06 years (SD = .88) and the average team tenure is 2.02 years

(SD = .55).

The host company of this research is chosen because they have many work teams that

are doing relatively similar tasks under one organisation. This choice is aimed to control the

impact of the different job designs and organisational cultures that may contribute to the

emergence of team work engagement. Previous research has demonstrated that engagement

positively correlates with job design and characteristics that have more autonomy and

challenging tasks (Bakker and Demerouti, 2007; Idris and Dollard, 2011). In addition, previous

studies have also shown that organisations' culture and their respective HRM practice may

also influence employee engagement (Alfes *et al.*, 2013). Therefore, by researching teams that

are doing relatively similar tasks and who experience a similar organisational culture, this research expects to attribute the variation across the different team members to the team characteristics rather than the external organisational factors.

5.3.2. COMPANY CONTEXT

This research chooses an Indonesian company as the host of this study. One of the reasons that led to this choice is that the country that the company operates in has a relatively high score on collectivism (Hofstede, 1994; House *et al.*, 2004). Within this collectivistic culture, the individuals within an organisation may develop a stronger relationship with each other; therefore, this study expects a stronger correlation by using this sample.

The host company of this research is a family-owned Indonesian company that receives minimal western influence. The company started as a 100-square-metre shop that sold batik–traditional Indonesian clothing- that employed eight employees. In 1972, the shop extended its business line to sell groceries goods in addition to its fashion line. The business grew rapidly over the last three decades, and it now has 48 branches spread across Java Island. Their primary business line remains focused on two lines, i.e. supermarket and department store. The participants of this study are the shop assistants and their supervisors in eight different stores. The shop assistants report to the supervisors, the supervisors report to the department managers that, in turn, report to the general manager who oversee one store branch.

Despite its growth, the company maintains its status as a privately-owned family business. At the time of writing, the founder is still actively serving as the chairman of the company which oversees the strategic decisions of the company. Previous scholars have noted

that family firms are more likely to exhibit a transformational leadership style such as they convey the company vision more vividly to the employees (Conger and Kanungo, 1994; Vallejo, 2009). Others have found that family businesses tend to exhibit more idiosyncratic leadership behaviours, such as paternalistic leadership behaviour (Mussolino and Calabrò, 2014). The researcher observed these leadership characteristics were indeed heavily felt in the organisation.

For instance, the company has a very clear vision that distinguishes them from its competitors. That is, the company aims to build a friendly atmosphere with their customers and among the employees which is known as *akrab* in Indonesian. *Akrab* is an Indonesian word that does not have a direct translation in English. The word refers to a casual and friendly feeling that people share with their closest friends and families. The researcher observed that the company was able to transmit this vision effectively throughout the organisation. In practice, the company expects its employees to radiate a sense of friendliness to their customers. To achieve this goal, the HR strategy focuses heavily on building a friendly ambience among the employees. The company's Human Resources department executes this strategy by advancing three interrelated values that form the company culture, i.e. honesty, *kekeluargaan*, and loyalty.

According to the company's People Development Manager, these three values emerged and were inherited when the company was just a small shop (personal communication). These values were kept alive and vivid in their day-to-day operation today. This highly resembles a typical family-owned firm within the family business literature (Vallejo, 2009; Conger and Kanungo, 1994). The first value is honesty, which refers to the primacy of a truthful attitude. This value emerged from the company's background as a small shop where

most of the transactions were carried out using cash. In these old days, it was vital for the company to create strict rules to protect the company's petty cash. The company enacted this value by giving harsh punishments to people who were caught corrupting the company's valuables until today.

The second value is loyalty, which refers to a sense of having strong allegiance to the company. Different from the previous value, the company may not be able to advance this value by setting up some hard measurements. Rather, it developed over time through the third value that the company advance, i.e. *kekeluargaan*. *Kekeluargaan* is another Indonesian word with no direct translation in English. The word refers to treating other people as if they are members of your family.

By deploying this value as its guiding principle, the company could extend a sense of friendliness and familiarity to its customers. The company uses several media to help these three values permeate across the organisation, such as installing artefacts, rules and weekly routines (Schein, 1985). Some informal interviews that the researcher had with a few shop supervisors suggested that these employees feel that they live these values in their daily work. This drops a hint that these three values might have penetrated the espoused belief or the basic assumption of the company. This culture of the company and the fact that it is a mid-size family-owned firm can indicate that the employees might have built strong interpersonal relationships among themselves. Thus, the researcher views the host company as a suitable sample to investigate how team interpersonal processes support the emergence of team work engagement.

In addition to a strong collectivistic culture, Indonesia scored fairly high in terms of power distance and low on the individualism index (Hofstede et al., 1994; House et al., 2004). Although these two studies have sometimes been criticised for neglecting the diversity within a cluster of national cultures (Kirkman et al., 2006; Peterson & Castro, 2006). More recently, Ronen et al. (2013) conducted a meta-analysis that used previous researchers' past explanations of present reality to build a more robust cultural classification system. The study allocates Indonesia to the Far East group that, similar to the Confucian culture, shows a high level of power distance and low power distance.

From the perspective of power and leadership, the combination of low individualism and high power distance index implies that the team leaders have more influence on their team members. Concurrently, the followers in this type of culture tend to adhere to their leaders' instructions and to some extent more reluctant to argue with their team leaders (Heuer et al., 1999). In several visits to the host company, the researcher could observe that the company closely represents this national culture. For instance, the back office staff appears to show respect to the People Development Manager who was also a senior figure in the company. The researcher observed similar interactions between the supervisors and the shop assistants. The researcher chose to conduct this study in this cultural context so with the aim to observe a more salient influence of the team leaders on the team members. This approach was chosen because one of the main aims of this study is to demonstrate that team-level constructs such as team functional leadership and team interpersonal processes can influence employee engagement, both at the team and individual levels when everything else were constant.

5.3.3. MEASUREMENTS

This study used existing scales from the literature for each of the variables of interest. The multisource questionnaire was first distributed to the team leaders. The team leaders then sent a separate questionnaire to their respective team members. This section will describe the scales used to measure each construct, explain the translation process of these measures, and delineate the precautions that were taken to minimise common method variance.

The following constructs were taken from the team member and were aggregated to the team level, i.e. team work engagement, team interpersonal processes, and team functional leadership. For the individual level, the following measures were taken from the team members, i.e. personal engagement, psychological meaningfulness, psychological safety, and psychological availability. Meanwhile, the team performance measure was taken by the team leaders. Each of these measures will be further explained in the following subsections. The reliability and validity analyses of each measurement scale will be further discussed in sections 6.3.3 and 6.3.4 in the next chapter of this thesis.

5.3.3.1. TEAM WORK ENGAGEMENT

Team Work engagement was measured using the 9-item team work engagement scale (TWES) that was developed by Costa *et al.* (2014). The scale was developed based on the UWES (Schafueli *et al.*, 2002) that was transformed to assess the team instead of the individual by using the referent-shift method. Costa *et al.* (2014) noted that three techniques

could be used to obtain collective data, i.e. consensus model, referent shift model (Chan, 1998; Chen *et al.*, 2005), and using a holistic measure through group discussion (Goddard et al., 2004). The consensus model uses the average of the individual's assessment of themselves. Costa *et al.* (2014) argue that computing the mean scores of the individual-level work engagement using a consensus model would not be appropriate because the respondents still refer to their perception of themselves and not about the team.

Considering that team work engagement is conceptualised as a shared construct, Costa *et al.* (2014) argue that it is best to assess team members' perception of this shared team-level phenomenon. One way to obtain this measure is by using group discussion and letting the team members decide together on the best answer for each item on a scale. This method will result in a single score as opposed to aggregated one (e.g., Gibson *et al.*, 2000). However, this method requires group discussion, which may not be practical as it takes extensive time. Chan (1998) proposes another method to obtain the collective agreement of a team-level construct which is by using the referent-shift techniques. This can be done by substituting the subject from the existing scale that assesses the individual's perception from I to We. For example, the first item in the TWES is "at our work, we feel bursting with energy", which is adapted from the UWES scale of "at my work, I feel that I am bursting with energy". Costa *et al.* (2014) posited that the referent-shift method and the holistic measure through group discussion equally offer an effective measure of collective phenomena. Therefore, this study followed Costa *et al.*'s approach and used the 9-item TWES to measure team-level employee engagement. Respondents answered using a 7-point Likert-type scale ranging from 1 (never) to 7 (always). A tau-equivalent reliability test was conducted to assess the scale reliability. The internal consistency of the scale was satisfactory (α=.87).

5.3.3.2. TEAM INTERPERSONAL PROCESSES

Team interpersonal processes were assessed using Mathieu *et al.*'s (2019) Team Process Survey Measure. The scale contains 15 items, with each five of them assessing the three types of team interpersonal processes, i.e. conflict management, confidence building, and Affect management. A sample item for conflict management is "My team deal with personal conflicts in fair and equitable ways". A sample item for confidence-building is "My team encourage each other to perform our very best". While a sample of affect management is "My team keep a good emotional balance". Respondents answered using a 7-point Likert-type scale ranging from 1(never) to 7(always). The internal consistency of the scale was satisfactory (α=.91).

5.3.3.3. TEAM FUNCTIONAL LEADERSHIP

Team Functional leadership was assessed using Morgeson *et al.*'s (2010) Team Leadership Questionnaire. This study uses five leadership functions, i.e. define mission, establish expectations and goals, provide feedback, perform team tasks and support social climate. Define mission function consists of 5 items. One sample item is "my team leader ensures the team has a clear direction." Establish expectations and goals consisting of 10 items. One sample item is "My team leader communicates what is expected of the team". Provide feedback function consists of 5 items. One sample item is "my team leader rewards the performance of team members according to performance standards". Perform team task function consisting of 5 items. One sample item is "my team leader works with team members

to help do work". Support social climate consists of 5 items. One sample item is "my team leader does things to make it pleasant to be a team member". Respondents answered using a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). The internal consistency of the scale was satisfactory (α=.93)

5.3.3.4. PERSONAL ENGAGEMENT

Although Kahn (1990) is widely regarded as the pioneering scholar that coined the term engagement (Schaufeli *et al.*, 2002; Harter *et al.*, 2002), the study did not come with a measurement scale to operationalise the construct. Nevertheless, Shuck *et al.* (2017) and Bailey *et al.* (2017) noted that there are a few studies that had designed measurement scales to operationalise Kahn's (1990) personal engagement, that is May *et al.* (2004), Rich *et al.* (2010), Reio and Sanders-Reio (2011) and Soanne *et al.* (2012). Among these empirical studies, May *et al.* (2004) and Rich *et al.* (2010) measure personal engagement using three facets (i.e., cognitive, affective and physical components). Reio and Sanders-Reio (2010) measured personal engagement as a composite of meaningfulness, safety, and availability. Meanwhile, Soane *et al.* (2012) measure the different facets of engagement, namely intellectual, social and affective. This thesis chooses to use Rich *et al.*'s (2010) JES because similar to May *et al.* (2004), the scale captures the cognitive, affective and physical dimensions of personal engagement that Kahn (1990) proposed. Yet, Rich *et al.* (2010) reported consistent factor loadings for each of the three facets of personal engagement. Shuck *et al.* (2017) conducted a comparative analysis between UWES and JES and found that JES shares less variance with job satisfaction, job involvement and organisational commitment, indicating that the scale

measure a more unique element of engagement. Thus, this study used Rich *et al.*'s (2010) JES to measure personal engagement. A sample of the physical dimension item is "I exert my full effort to my job". A sample of the emotional dimension item is "I am enthusiastic in my job". Meanwhile, a sample of the cognitive dimension item is "at work, I devote a lot of attention to my job". Respondents answered using a 7-point Likert-type scale ranging from 1 (never) to 7 (always). The internal consistency of the scale was satisfactory (α=.89).

5.3.3.5. PSYCHOLOGICAL MEANINGFULNESS, SAFETY, AND AVAILABILITY

In addition to assessing individual personal engagement, this study also measured the three psychological conditions of employee engagement, i.e. psychological meaningfulness, safety, and availability (Kahn, 1990, 1992). These three constructs were measured using 14 items in May *et al.*'s (2004) scale. A sample item for psychological meaningfulness is "my job activities are personally meaningful to me". A sample item for psychological safety is "I'm not afraid to be myself at work". Meanwhile, a sample item for psychological availability is "I am able to handle competing demands at work". Respondents answered using a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). The internal consistency of the psychological meaningfulness, safety and availability are α=.78, α=.40 and α=.62, respectively.

5.3.3.6. PERCEIVED TEAM PERFORMANCE

The ideal proxies of tangible outcomes would involve objective measures, such as sales logged, productivity index, or customer satisfaction index. Unfortunately, the company that hosts this PhD research does not have any of those data. The closest that they have on their record is the customer satisfaction index. However, these data were associated with the departmental level, instead of team-level, performance. For instance, the customer satisfaction index records how well the grocery department is keeping their customer satisfied. This data could not be used because multiple teams within one grocery department participated in this research.

Because the host company does not keep a record of team-specific objective performance, this study asked the team leader to appraise their satisfaction toward the performance of their team as a proxy of subjective performance. This leader-rated team performance was assessed using Schaubroeck *et al.*'s (2007) three-item scale. A sample item is "my team has performed its job well". The internal consistency of the scale was satisfactory (α=.71). The complete description of the list of items used in the online questionnaire is available in Appendix 1.

5.3.3.7. CONTROL VARIABLES

Finally, the questionnaires include several control variables. Control variables were included to verify if the relationship between the variables is going to be still significant after

subtracting the effect of the variables that are not the main interest of the studies. The tenure data were taken from both the team leader and team members, each recorded for their job tenure (i.e., how long they had been working for the company) and team tenure (i.e., how long they were assigned to the current team). The size of the team was included as a control variable because the team size of the samples varies quite widely, ranging from 4 members to 25 members. Previous studies have suggested that team size may influence the effectiveness of work teams (Marrone *et al.*, 2007; Salas *et al.*, 2008; Stewart, 2006). Adding team size as a control variable would examine whether the correlations among the variables apply to the smaller and larger teams. This approach aligns with previous studies that involve teams that vary in size (Cavazotte *et al.*, 2012; Gardner *et al.*, 2012).

Team tenure was included as a control variable to examine if the correlational effect depends on how long the team has spent time working together. Team tenure refers to the length of time team members interact with one another (Katz, 1982); that in this study was represented by how long the participants has been a member of their current work teams. Although some scholars have found that team tenure positively impacts team outcomes (e.g., Kozlowski *et al.*, 1999), meta-analytical studies have shown inconclusive results (Bell *et al.*, 2011). This mixed finding could be because the effect of tenure on team outcomes would only be significant for the newly-formed teams who need time to craft their teamwork (Abrantes *et al.*, 2020). However, the effect of team tenure on team performance dissipates for tenured teams who would have fully developed their communication mechanisms (Harrison et al., 2003; Pelled et al., 1999). The work teams that participated in this were relatively mature, with a team tenure average of 1.54 years (SD= .50) across the 72 teams. Therefore, it is expected that the team tenure will not significantly influence the variable of interests as these

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teams have settled their way of communicating and working with others. Nevertheless, this study intends to verify that this is the case by adding team tenure as a control variable.

In addition to the two team-level control variables above, demographic data of the employees were added as control variables. Previous studies have shown that burnout and engagement may be related to demographic variables such as job tenure, age and gender (Friedman, 1991; Greenglass and Burke, 1990; Ramos *et al.*, 2016). Therefore, this thesis added these three demographic variables as control variables in alignment with other similar empirical studies (e.g., Bakker *et al.*, 2012a; Bernerth and Aguinis, 2016; Sonnentag, 2003).

5.3.4. DEALING WITH COMMON METHOD BIAS

One prominent issue that is often associated with collecting primary data through a questionnaire is the systematic measurement error caused by common method bias or also known as common method variance (Podsakoff *et al.*, 2003). This section will discuss this type of error, among others, and highlight the precaution that this study has taken to minimise common method variance.

Scholars noted two types of measurement errors that may cause problems to the research findings, i.e. random and systematic errors (Bagozzi *et al.*, 1991; Nunnally and Bernstein, 1978; Spector, 1987). Random measurement error is the difference between the true value and the observed value caused by any factors that randomly affect the measurement (Trochim, 1999). This type of error can be minimised by taking the observation from more samples and taking multiple measurements to denote a single variable (Bagozzzi

and Yi, 1991). Researchers could then examine the construct validity of these measures by examining their convergence and discriminant validity using Campbell and Fiske's (1959) procedure. Convergent validity is the degree to which multiple measurement items that denote the same construct are in agreement (Bagozzi and Yi, 1991). If the multiple measures are valid measures of the construct, then they should strongly correlate. On the other hand, discriminant validity is the degree to which measurement items of different constructs are distinct. The measures of each construct should not correlate too highly if they denote different things. This thesis will discuss further the convergent and discriminant validity check toward each construct in Section 6.3.4.

Although random measurement error is a problem that needs to be addressed, Podsakoff *et al.* (2003) argued that systematic measurement error is a particularly serious problem as it may provide an alternative explanation for the observed relationships among the variables of interest. Systematic error is a distortion in measuring construct caused by factors that systematically affect the measurements of the samples (Trochim, 1999). One systematic error that typically arises in social science research, especially those that use self-report questionnaires, is the common method variance (Richardson *et al.*, 2009). Common Method Variance (CMV) refers to the variance attributed to the measurement method rather than to the constructs that the measures are intended to represent (Campbell and Fiske, 1959; Podsakoff *et al.*, 2003). Bagozzi and Yi (1991) noted that the term method here may refer to the technical settings of the questionnaire deployment, such as the content of specific items, scale type, response format and the general context (Fiske, 1982) or response biases such as halo effects, social desirability, acquiescence, leniency effects, or yea- and nay-saying. Meanwhile, Podsakoff *et al.* (2003) noted four categories from which common method biases

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may originate, i.e. common rater effects, item characteristic effects, item context effects, and measurement context effects

Although common method bias cannot be completely eliminated from questionnaire-based research and therefore becomes an intrinsic limitation of this type of study, just as there are other inherent limitations related to other types of studies, this bias could be minimised to the level that the research can withhold its academic rigour. This study follows several approaches suggested by Podsakoff *et al.* (2003) to reduce CMV. First, to account for the common rater bias, this study employs a multisource measurement from the team members and the team leader. Second, to account for the item ambiguity and item wording issue, this study only used scales that had been previously validated in the literature. In addition, a strict translation procedure was carried on to minimise the shift of meaning and ambiguity. Furthermore, the questionnaire went through two rounds of pilot studies to further control for item ambiguity. Further information regarding the survey translation can be seen in Section 5.3.5 while the explanation of the pilot study is provided in Section 5.4. Third, this study runs two statistical checks to test whether the CMV is acceptable (i.e., Harmann's single-factor test and correlation matrix procedure). The results of these two tests can be seen in Section 6.3.2. The next section will discuss the survey translation, followed by the pilot study that the questionnaire underwent.

5.3.5. SURVEY TRANSLATION

Because the participants of this study were Indonesian, the questionnaire was translated from English to Indonesian. Following Brislin's (1986) advice, the questionnaire was

translated into Indonesian and back-translated to English. Although this back-translation

method is commonly used in social science research, the method has recently been criticised

as the interpretation of whether the back-translated version matches the original version's

meaning is open to interpretation (Behr, 2017). To add further control for the shift of meaning

during the translation process, this study included additional translation procedures.

Specifically, this study involved four different translators instead of the usual two translators

commonly used in the back-translation process. The first two translators worked separately to

translate the questionnaires from English to Indonesian. These two translation versions were

then sent to the third translator, who adjudicated the two versions into a new version. Last,

the fourth translator back-translated the adjudicated version to English. The researcher, who

speaks Indonesian and English, then compared the back-translated version with the original

questionnaire that is written in English and made adjustments when necessary. This four-

translator method was also used in a recent research project that examines leadership

characteristics in over 150 countries (GLOBE, 2020).

Meanwhile, the cover page that contains the information sheet and the consent

followed a simpler procedure. The cover page was initially written in English and translated to

Indonesian. The researcher tested this translated version in the first round of the pilot study.

Further adjustments to the translation were made based on the feedback of the pilot study

respondent. The following section will explain the pilot study in more detail.

5.4. PILOT STUDY

The researcher conducted two rounds of pilot studies prior to administering the

questionnaire to the respondents from the host companies. The aim of the pilot is to identify

issues that respondents may face when completing the survey so that the researcher can make necessary adjustments. The questionnaire was created on the Qualtrics survey platform. The first round of the pilot study tested two versions of the questionnaire, one version in English and another version in Indonesian. The English version was administered to five PhD students at the University of Reading while the Indonesian version of the questionnaire was sent to five respondents who worked in different companies in Indonesia. One aim of testing the questionnaire in both Indonesian and English versions is to inquire if there is a shift of meaning in the translated version of the questionnaire. The researcher gathered some feedback from these two groups of respondents and developed the second pilot questionnaire based on the feedback gathered in this first round. There are three areas of concern that emerge from the respondents' feedback, i.e. translation, signposting, and fatigue.

First, the Indonesian respondents noted that some questionnaire items were repetitive. It happened because some items in the questionnaire contained two different words in English that were translated into the same word in Indonesian. For example, two items in the English version of psychological meaningfulness are "the work I do on this job is very important to me" and "my job activities are significant to me" (May *et al.*, 2004). These two sentences translate into sentences that have a very similar meanings in Indonesian. To resolve this issue, the researcher modified the translation of the item to a longer sentence that provides more clarity.

Another example of some translation issues in the questionnaires occurred in the team functional leadership items. The scale asked the respondents to assess whether the team leader "will 'pitch in' and help the team with its work" and "will 'roll up his/her sleeve' and help the team to do its work" (Morgeson *et al.*, 2010, p.32). These two idioms, i.e. 'roll up

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his/her sleeve' and 'pitch in', translate into the same word 'turun tangan', which is also an idiom. To resolve this issue, the researcher changed the translation so that it does not contain an Idiom. Nevertheless, besides this issue of repetition, both Indonesian and English respondents appear to have a similar understanding of the questionnaire.

The second area of concern is the wording used to signpost the different sections of the questionnaires. Some respondents found that the direction given by the texts that precede the questionnaire items were not very clear. For instance, not every respondent was aware that they were supposed to assess three different actors in the questionnaire (i.e., their individual self, their team leader and their work team). The researcher introduced a cover page that separates each questionnaire section to make this distinction clearer. This cover page specifically mentioned that the following section of the questionnaire asks the respondent to give an appraisal on either their individual self, their team leader, or their work team.

Third, some of the respondents commented that the questionnaire page was rather long as there were too many questions listed on one page. This was particularly the case in the team functional team leadership section which has 30 items. Nevertheless, the respondents felt that the questionnaire did not take too much of their time. The researcher divided the team functional leadership and team processes sections into several pages to resolve this issue.

The second round of the pilot study sent the Indonesian version of the questionnaire to 10 respondents who work in different Indonesian companies. Five of them were the same people who took part in the first pilot study. The researcher circulated the revised version of

the questionnaires and obtained feedback from the respondents. The modification of the questionnaire after the first pilot study appeared to improve the respondents' impression. The five respondents who participated in the first pilot study told the researcher that this revised version is clearer and easier to understand. However, one of the respondents still thought that some of the question items had similar meanings despite the wording being changed.

The other five people who saw the questionnaire for the first time gave positive feedback to the questionnaire. They said that the questionnaire was clear and easy to understand. Some of them also said that the user interface was comfortable. However, these respondents have also thought that some questions were repetitive. The researcher decided against further revising the questionnaire items because this modification might risk the change of meaning from the original English version of the scale.

Another issue that emerged in this second round of the pilot questionnaire relies on the cover page. The researcher set up a 15-second timer on the cover page to separate the different questionnaire segments. The questionnaire will automatically move to the next questionnaire segment when the time is up. The idea behind this is to minimise the respondent's effort so that they would not have to click the button themselves. However, this approach seemed to backfire as the respondents, especially those who saw the questionnaires for the first time, said they had not finished reading the sentences on the cover page before the page automatically moved to the next questionnaire section. Thus, the researcher removed the timer so that the respondents could spend the time they needed and click the next button themselves.

5.5. RESEARCH ETHICS

This study follows the University of Reading Code of Good Practice in Research in collecting the data. The researcher sent the research project summary to Henley Business School Research Ethics Committee and attained the necessary approval (Appendix 2). There are several ethical concerns that this study has considered. The researcher approached the host company's human resource department and explained that this study was a partial requirement for the researcher's doctoral study completion. The researcher then thoroughly explained how the host company could participate in the study and specifically described how much commitment and time the company would need to allocate to host the study. The researcher then attained a written agreement from the company that they were willing to host the research in exchange for presenting the result of the study when it is completed. It is also agreed that the result will only include aggregate data without mentioning a specific team.

The researcher provided the necessary information on the front page of the questionnaire (Appendix 3). The first cover page of the questionnaire provided a brief overview of the study. It tells that participation in this questionnaire is voluntary, and the respondents can withdraw at any time for any reason. The cover page also guarantees that any of the responses will be kept anonymous, and the answer response will only be used for the sole purpose of this study. The last part of the cover page embeds a link that directs the respondents to a one-page information sheet about the study (Appendix 4). The cover page ends by listing the researcher's email addresses that the respondents can contact if they have further inquiries about the study. The cover page was followed by a consent form that

specifically asked for the respondents' consent to participate in this study. The respondents can only proceed to fill in the questionnaire once they have given their consent. The data will be kept confidential and stored in a password-secured computer. The primary data will be archived in Henley Business School Research Ethics Committee repository by the end of the study.

This research acknowledges that these ethical procedures should be strictly followed to provide a secure environment for the respondents in answering the questionnaires so that they may give more truthful answers. One of the most important ethical considerations is to ensure that the response is anonymous. This assurance is critical so that the participants could feel more comfortable in giving their answers honestly. For instance, if the respondents know that their response can be identified, they may be reluctant to give poor ratings to their team leaders as they might be afraid the team leaders would see their response. To mitigate this potential issue, the researcher has told the People Development Manager early in advance that any reports will only be presented to her or her team in an aggregate format and no individuals will be identifiable. However, the host company can ask how their team functional leadership, team interpersonal processes and team work engagement vary across the eight different stores.

Another important ethical issue to consider in this study is striking the right balance between asking the team members to complete the questionnaires without them feeling that they are obliged to fill in the survey. While It is common that organisational researchers to receive low response returns from their questionnaires (Baruch and Holtom, 2008), forcing the respondent to fill in the questionnaire risks increasing biases as the respondents may fill in the questionnaire with little interest (Luong & Rogelberg, 1998). To navigate this issue, this study

uses some of the approaches suggested in Rogelberdg and Stanton's (2007) paper. First, the researcher carefully considered the survey length and followed the AI-based survey length recommendation provided by the Qualtrics survey. The researcher then monitored the response rate on a weekly basis and asked the HR department to send pre-agreed periodic reminders to the listed team leaders. This approach has helped this study to obtain a reasonable response rate (Baruch and Holtom, 2008).

5.6. DATA COLLECTION

The researcher sent a research proposal to the people development manager of the host company on the 6th of September, 2019. The researcher then managed to arrange a virtual meeting with the people development manager of the host company and explained the research and the insight that this research may give to the company. The researcher had also mentioned the time and commitment the company would need to allocate to taking part in this research. The people development manager replied that the company is willing to participate on the 26th of September, 2019.

The researcher sent a copy of the final version of the questionnaire on the 21st of October, 2019. The researcher and the company manager developed a list of team codes that denotes the different teams from eight different stores that participated in this study. To protect respondents' confidentiality, the questionnaire did not assign a code to the different team members within a particular team. In other words, the team members will remain anonymous when answering the questionnaire. The company manager was the one who selected these eight stores based on practicality. These eight stores were the largest stores in town concerning the number of employees. This selection allows the company manager to liaise with the minimum number of branch managers in distributing the questionnaires.

The people development manager then notified the eight store managers about the research and distributed the online questionnaire to several store supervisors in these eight different stores. These store supervisors who received the message from the people development manager were told to fill in the online questionnaire using the Qualtrics platform and then distributed the questionnaire to their team members. To minimise errors, the

researcher set up the link to the questionnaire so that the supervisors and the team members

can access the questionnaire using the same link. The questionnaire asks whether the

respondents rank as shopkeepers or supervisors. The questionnaire then automatically

redirected the respondents to different sets of questionnaires depending on whether they

assigned themselves as a supervisor or team member. The researcher accompanied this

process with a written guide explaining how to distribute the questionnaire and fill in the team

code. The supervisors did not have access to the responses to the questionnaires as they went

directly to the Qualtrics repository, to which only the researcher has access. In addition, the

supervisors cannot see who has and has not responded to the questionnaires.

The data collection started from the 5th of November until the 5th of December, 2019.

The response rate was very low during the first two weeks of the data collection period. The

researcher then contacted the people development manager of the company and asked her to

further encourage the store supervisors to fill in the questionnaires and distribute them to

their team members. The response rate went significantly higher after this point as the people

development manager met the eight store managers at a physical meeting and asked them to

tell their supervisors to fill in the questionnaire. The link to the online questionnaire was

closed on 12th December 2019.[2]

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[2] The data collection took place a few weeks before the start of the global COVID pandemic

5.7. SUMMARY OF CHAPTER 5

This chapter has explained the methodology that this study adopted to answer its research question (i.e., how do team functional leadership and team interpersonal processes influence employee engagement at the team and individual levels). The chapter started by discussing this study's choice of using a quantitative method to answer the research question. It then explained the research philosophy that the study used to investigate the constructs of interest. The chapter continued to describe the research design of this empirical research and discussed how the study attempts to maintain academic rigour. Chapter 4 will continue to explain how this study treated the raw data. It then will discuss the strategy that this study has used to analyse the multilevel data and show the results obtained from the analyses.

CHAPTER 6
DATA ANALYSIS AND RESULTS

6.1.INTRODUCTION

This chapter will describe the procedures and the analytical strategy that the researcher uses to analyse the data collected from the online questionnaire. The chapter starts by outlining three overarching stages of the data analysis process, i.e. data preparation, statistical assumption verification, and data analysis. Each of these stages is explained in detail in a separate section. The results of the analysis are presented at the end of the data analysis section.

The raw data that was obtained through the procedure described in Chapter Three was extracted from the Qualtrics database into an excel file and stored in the university cloud storage server. All files were stored on a password-protected computer in a locked room that had controlled access. The raw data went through a few data preparation procedures and verifications procedures of a few statistical assumptions. After passing through the preparatory and verification procedures, the multilevel data were analysed using two different statistical techniques to test the different hypotheses that the study proposed. The mediational effect at the team level was analysed using Hayes's (2012) PROCESS in SPSS software while the multilevel analysis was conducted using multilevel structural equational modelling (MSEM; Preacher *et al.*, 2010). Figure 6.1 summarises the processes of the data analysis of this study. The following three sections will describe each of these steps.
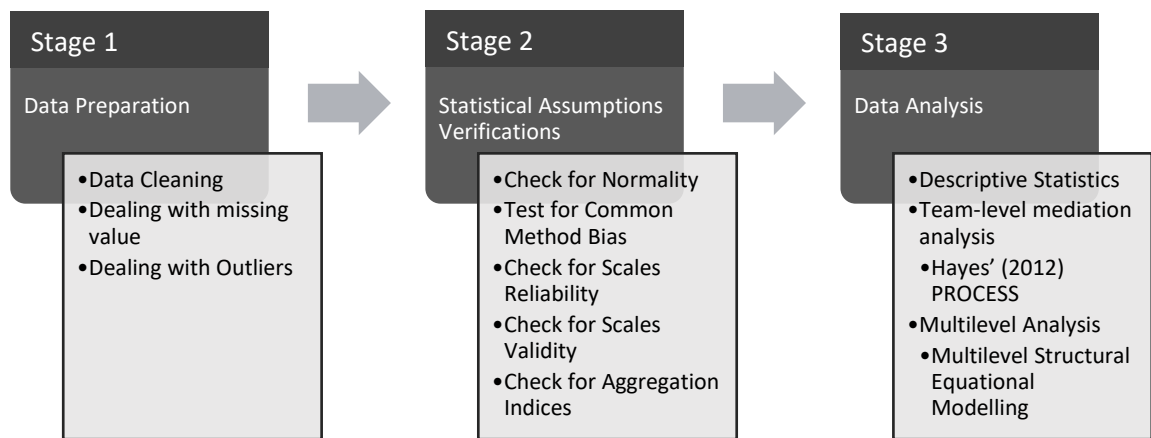
FIGURE 6.1. THREE STAGES OF THE DATA ANALYSIS PROCESS

6.2.DATA PREPARATION

The data then went through data preparation and statistical assumptions verification

procedures before it underwent multilevel analysis. The preparatory stage consists of seven

different procedures. First, the data was cleaned from imputation errors. Missing values and

outliers were identified and treated accordingly. Each of the variables was then checked for its

normality assumption, CMV, reliability and validity. The final step of the data preparation

stage checked for the aggregation indices to fulfil the statistical requirement to aggregate

team-level data from individual responses. Each of these procedures will be explained in the

following sections.

6.2.1. DATA CLEANING

The first step of the data-cleaning procedure is to group the responses according to their respective teams. The questionnaire was initially administered to 87 teams. However, only 84 of them responded to the questionnaire. Among these 84 teams, nine of them have only one or fewer responses from either the team leader or team member. Thus, these nine teams were dropped. In addition to these nine teams, two other teams were dropped from the study because the team recorded more team member responses than the actual number of team members. The researcher visited these two teams in person and found that these two supervisors circulated the response to the external contract workers and their permanent team members. Therefore, these two teams were omitted too.

The cleaning procedure leaves the study with 73 teams with a minimum of one response from the team leader and one response from the team members. The inclusion of teams with responses from one team leader and one team member follows Guenter *et al.*'s (2016) approach. Drawing from the previous statistical analysis (Hirschfeld *et al.*, 2013; Maloney *et al.*, 2010), they maintain that the benefit of retaining low-response teams outweigh its drawback. These 73 teams proceeded to the next stage of the analysis.

6.2.2. DEALING WITH MISSING VALUES

The next stage of the data preparation procedure is to examine the missing values. All the supervisors from these 73 teams answered all the questions in the survey. Meanwhile, there were 567 responses collected from the team members. Following De Jong's (2014)

suggestion, individual responses that had more than 50% missing values were dropped. This left the study with 514 usable responses from the team members.

The researcher conducted Little's missing completely at random test on the remaining 514 responses and found the X^2 value to be insignificant (p = 1.000), suggesting the missing data are missing completely at random. Therefore, no imputation for missing values was attempted, and each case with missing values was retained for further analysis.

6.2.3. DEALING WITH OUTLIERS

Outliers are data points that are extremely different compared to the rest of the data (Freedman, Pisani and Purves, 1998). In some cases, these extreme values may mask the underlying correlation between the variables and thereby distort the conclusions drawn from the data (Aguinis *et al.*, 2013; Tabachnick *et al.*, 2007). Thus, researchers should carefully examine the outliers in the datasets and make a justifiable decision on whether to include or exclude them in the data analysis.

Previous scholars have suggested various definitions and identification techniques to detect outliers that may be originated from incorrect data entry, misspecification of missing data codes, sampling issues and a non-normal distribution (Tabachnick and Fidell, 2007). This study followed Tabachnick and Fidell's (2007) recommendation and screened for both univariate and multivariate outliers. The identification of potential univariate outliers in this study followed Aguinis *et al.*'s (2013) approach and searched for potential error because of sampling or data entry.

There are two common ways to identify univariate outliers in previous research (i.e., using visual inspection of the box plot and analysing the standard scores) (Emerson and Strenio, 1983; Tabachnick and Fidell, 2007). This study first examined the standard score values (z-scores) and then visually inspected the box plot for extreme z-scores values. Tabachnick and Fidell (2007) suggested that a case can be considered an outlier if the z-scores are greater than 3.29. They, however, noted that some cases with z-scores above the 3.29 threshold are expected in datasets with large samples. An analysis of the z-scores in this study's dataset showed 16 cases with z-scores greater than 3.29. Among these 16 cases, only 10 of them were identified as extreme outliers by the SPSS box plot extreme values. Further investigation of these 10 cases suggested that their responses are somewhat reversed in comparison to the general trend. On the one hand, this could hint that these respondents had misinterpreted the scale anchor. However, on the other hand, it is also possible that these respondents deliberately chose to rate the statements differently. Because these outliers do not meet the criteria for error outliers, as discussed in Auginis *et al.* (2013), these outliers were kept for further analysis. A few constructs from these individual-level data will be aggregated into team-level data in the later phase. Examination of the aggregation indices (Section 6.3.5) will further indicate if the inclusion of these outliers significantly disrupts the data. Thus, until future examination, these cases were kept.

To examine multivariate outliers, this study calculated the Mahalanobis distance at the team level. Tabachnick and Fidell (2007) suggested that the relevant cut-off for the dataset of four variables at $p < .001$ is 18.47. There was one team identified as a multivariate outlier with a Mahalanobis distance of 26.41. Further inspection suggests that this data came from a team with two respondents who reported inconsistent scores for the team-level measures. The fact

that these two respondents did not have converging assessments toward their team and therefore, their scores may not reflect the true situation on their team. Therefore, this team was dropped from the dataset. This leaves the dataset with 511 employees nested in 72 teams.

6.3. STATISTICAL ASSUMPTIONS VERIFICATION

After the preparation stage, the researcher conducted several statistical checks to verify whether the assumptions to conduct linear regression analysis were met. First, the researcher checked if the data points in each construct followed a normal distribution. Second, the data were checked for CMV registered in the dataset. Third, the scales' reliability and validity were checked. Last, the aggregation indices for the team-level variables that were obtained from individual responses were examined to justify data aggregation. The following five subsections will explain each of these statistical checks in greater detail.

6.3.1. CHECK FOR NORMALITY ASSUMPTIONS

The next stage of the data preparation procedure is examining whether the data is normally distributed, one basic assumption for regression analysis (Tabachnick *et al.*, 2007). As expected, the normality analysis showed some skewness and kurtosis for all variables (Field, 2009). All of the variables are found to be negatively skewed (TWE: S= -.650;   TIP: -.465; TFL= -1.256; TP= -.638 ; IPM = -.688; IPS = -.663; IPA = -650), except for personal engagement (PE: K = .021). This negatively skewed distribution indicates there are more responses toward the

higher end of the scale (Tabachnick et al., 2007). Regarding kurtosis, the analysis shows

positive kurtosis values for all the variables (TWE: S= .859; TFL= 4.69; TP= .224 ; IPM = .970;

IPS = -2.119; IPA = 2.987), except for team interpersonal processes (K=.-358). This analysis

indicates that most of the variables except team interpersonal processes have a sharper peak

distribution.

The occurrence of negatively skewed value and positive kurtosis may be because there

was some social desirability bias in the data (Podsakoff *et al.*, 2003). Some of the respondents

might have given more socially acceptable answers rather than expressing their true feelings.

The skew to the right-hand side of the scale commonly occurs in organisational research,

especially in those that use positive variables. Podsakoff *et al.* (2003) suggest that this bias can

be reduced by rewording the items in the questionnaire. This approach, however, risks shifting

the meaning of the existing scale. Thus, this study chose to use the original score despite

knowing that there will be a degree of social desirability bias occurred.

The Sapiro–Wilk test was conducted on all variables to check if the normality has been

compromised. The analysis shows significant values (p<.05) for all variables except team work

engagement, team interpersonal processes, and personal engagement. Therefore, a visual

inspection of the histograms and Q-Q plots was necessary. Visual inspection of the histogram

showed some degree of deviation from normal distributions. This is mainly because there are

more responses toward the higher end of the scale. The other method of visual inspection is

by using the Q-Q plots. This approach plotted the actual values against the expected data if it

was normally distributed. The visual inspection of the Q-Q values suggested that the data is

roughly normally distributed (Appendix 5). Therefore, no transformation of the data was

attempted.

6.3.2. CHECK FOR COMMON METHOD VARIANCE

Section 5.3.4 in the previous chapter has underlined the potential bias that may be derived from CMV. To test whether the data have an acceptable amount of CMV, this study used two techniques proposed by Tehseen *et al.* (2017) (i.e., Harman's single-factor test and covariance matrix procedure). Harman's single-factor test is often regarded as the most commonly used test to examine CMV in a study (Tehseen *et al.*, 2017). This technique is a post-hoc procedure conducted after data collection to check if a single factor is accountable for variance in the data (Chang *et al.*, 2010). To run this test, all items in every construct were loaded into a factor analysis. CMV is not a pervasive issue in the study if there is no single factor that can account for most of the covariance (Chang *et al.*, 2010). The test is done using principal component analysis that is available in SPSS software. Table 6.1 shows the first twenty rows of the Principal Component Analysis. The analysis extracts 17 factors from all the items that this study uses. These 17 factors account for 63.76% of the total variance. The first unrotated factor accounts for only 27% of the variance. Thus, it can be inferred that CMV is not an issue in this study (Podsakoff *et al.*, 2003).

TABLE 6.1 TOTAL VARIANCE EXPLAINED FOR HARMAN'S SINGLE-FACTOR TEST

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	25.69	27.05	27.05	25.69	27.05	27.05
2	9.12	9.60	36.65	9.12	9.60	36.65
3	3.80	3.99	40.64	3.80	3.99	40.64
4	2.55	2.68	43.32	2.55	2.68	43.32
5	2.20	2.31	45.63	2.20	2.31	45.63
6	2.15	2.26	47.89	2.15	2.26	47.89
7	1.72	1.81	49.70	1.72	1.81	49.70
8	1.67	1.76	51.46	1.67	1.76	51.46
9	1.57	1.65	53.12	1.57	1.65	53.12
10	1.56	1.64	54.76	1.56	1.64	54.76
11	1.38	1.45	56.21	1.38	1.45	56.21
12	1.36	1.43	57.63	1.36	1.43	57.63
13	1.28	1.35	58.98	1.28	1.35	58.98
14	1.23	1.29	60.28	1.23	1.29	60.28
15	1.18	1.24	61.52	1.18	1.24	61.52
16	1.09	1.15	62.66	1.09	1.15	62.66
17	1.04	1.09	63.76	1.04	1.09	63.76
18	1.00	1.05	64.80			
19	.96	1.01	65.81			
20	.94	.99	66.81			

Extraction Method: Principal Component Analysis.

The second test that Tehseen *et al.* (2017) suggest testing for the CMV is using the correlation matrix procedure. Bagozzi *et al.* (1991) posited that common method bias is apparent when substantially large correlations are found among the constructs (r >.9). On the contrary, common method bias should not be an issue when the correlation among the constructs is less than .9. Table 6.6 in Section 6.4.1 displays the correlation matrix of the

variable that this study used. It could be seen from the table that none of the correlations among the variables is above .9. Thus, according to Bagozzi *et al.* (1991), common method bias can be considered acceptable.

6.3.3. RELIABILITY ANALYSIS

The reliability and validity tests were conducted to assess the accuracy and precision of the measurement scale. For the reliability analysis, the Tau-equivalent reliability test and composite reliability test were conducted on all the different scales. Table 6.2 contains a summary of the Cronbach alpha and composite reliability scores for each of the scales. The Cronbach alpha for the team functional leadership, team interpersonal processes, team process, team work engagement, individual psychological meaningfulness, and individual engagement are all above .7, which is considered acceptable (Kline, 1999). The Cronbach alpha value for individual psychological availability is .623, which is less than .7. However, other scholars have mentioned that the Cronbach alpha value of .6 can be acceptable in social science (Taber, 2018; van Griethuijsen *et al.*, 2015). A more serious case happened to the Cronbach alpha value of the individual psychological safety scale. It is likely that the use of reverse items on the scale has negatively impacted the scale's reliability. However, reliability examination using the composite reliability method still provides a score of .70, which can still be considered acceptable (Netemeyer *et al.*, 2003). Thus, the researcher decided to keep the measure as it is.

TABLE 6.2 RELIABILITY ANALYSIS OF THE VARIABLES

Variables	Cronbach Alpha	Composite Reliability
Psychological Meaningfulness	.78	.86
Psychological Safety	.40	.70
Psychological Availability	.62	.78
Personal Engagement	.89	.85
Team Functional Leadership	.93	.95
Team Interpersonal Processes	.91	.93
Team Work Engagement	.87	.90
Team Performance	.71	.85

6.3.4. VALIDITY ANALYSIS

There are three types of validity that need to be checked prior to conducting statistical analysis, i.e. face validity, content validity, and construct validity. Because this study uses scales that have been previously validated in the literature (Costa *et al.*, 2014; Rich *et al.*, 2010; Morgeson *et al.*, 2010; May *et al.*, 2004), it assumes that the measure has a sufficient level of face and content validity. There are two categories of construct validity that require examination, i.e. convergent validity and discriminant validity. The convergent validity test examines whether the items within a measurement scale are closely related, hence indicating that items measure a common phenomenon. Meanwhile, the discriminant validity test examines whether the different constructs are measuring different things (Saunders *et al.* 2016).

The convergent validity was checked by examining the correlation matrix within each scale. Except for two items in the individual psychological safety scale, every item in their respective scale shows significant correlations with each other. This lack of convergence is likely due to the use of reverse items in the individual psychological safety scale. The decision to keep the reverse items was taken because the study wanted to use the original scale that was used in May *et al.*'s (2004) study. Thus, the researcher decided to keep the measure for further analysis.

Ronkko and Cho (2020) have reviewed the different methods for assessing discriminant validity. After comparing eleven different techniques using Monte Carlo simulation, they proposed two techniques called CI_{CFA}(sys) and χ^2(sys) that could provide a more robust estimate of discriminant validity. This study chose to use the CI_{CFA}(sys) technique because it offers clearer cut-off values than the χ^2(sys) approach. The technique analyses the covariance matrix of the confirmatory factor analysis of all constructs, with the variances of factors set to unity. The confidence interval upper limit of each scale was then compared to a range of cut-off values. The technical explanation of this technique is available in Ronkko and Cho (2020). Ronkko and Cho (2020) further suggest that the construct has moderate to severe problems if the upper limit of the confidence interval is above .9. The constructs suffer from marginal discriminant validity issues if the upper limit of the confidence interval falls between .8 and .9. Meanwhile, the constructs can be considered to have no problem relating to the discriminant validity of the upper limit value below .8. The CI_{CFA}(sys) values of the constructs used in this study are listed in Table 6.3. The rightmost column in Table 6.3

Table 6.3 indicates that all except one value of the confidence interval upper limit is below .8. This indicates that there is no issue with discriminant validity.

TABLE 6.3. COVARIANCE MATRIX OF THE VARIABLES INCLUDED IN THE CONCEPTUAL MODEL

Covariance Matrix	Estimate	Std. Error	z-value	P(>|z|)	Confidence Interval LL	UL
IJE						
IPM	.53	.04	13.49	.00	.45	.61
IPS	.20	.07	2.94	.00	.07	.33
IPA	.51	.05	10.75	.00	.42	.60
TWE	.28	.05	6.06	.00	.19	.37
TIP	.20	.05	4.29	.00	.11	.30
TFL	.07	.05	1.33	.18	-.03	.16
TP	.06	.06	1.08	.28	-.05	.17
IPM						
IPS	.28	.07	4.07	.00	.15	.42
IPA	.62	.04	14.08	.00	.54	.71
TWE	.21	.05	4.29	.00	.12	.31
TIP	.07	.05	1.32	.19	-.03	.17
TFL	.08	.05	1.59	.11	-.02	.18
TP	.10	.06	1.70	.09	-.02	.21
IPS						
IPA	.15	.08	1.82	.07	-.01	.30
TWE	.31	.07	4.74	.00	.18	.44
TIP	.23	.07	3.54	.00	.10	.36
TFL	.13	.07	1.92	.06	.00	.26
TP	.24	.08	3.23	.00	.10	.39
IPA						
TWE	.29	.05	5.27	.00	.18	.39
TIP	.23	.06	4.26	.00	.13	.34
TFL	.18	.06	3.24	.00	.07	.29
TP	.16	.07	2.52	.01	.04	.29
TWE						
TIP	.73	.03	29.53	.00	.68	.78
TFL	.25	.05	5.37	.00	.16	.34
TP	.39	.05	7.94	.00	.29	.49
TIP						
TFL	.28	.05	6.19	.00	.19	.36
TP	.32	.05	6.20	.00	.22	.41
TFL						
TP	.22	.05	4.15	.00	.12	.33

Note: TWE = Team Work Engagement; TIP = Team Interpersonal Processes; TFL = Team Functional Leadership; TP= Team Performance; PE = Personal Engagement; IPM = Individual Psychological Meaningfulness; IPS = Individual Psychological Safety; IPA = Individual Psychological Availability.

To provide further assurance of the discriminant validity, this study performed the more traditional Heterotrait-Monotrait (HTMT) test (Henseler *et al.*, 2015). Henseler *et al.* (2015) argue that the HTMT method offers more sensitivity in detecting the lack of discriminant validity. Table 6.4 provides the HTMT value between the variables measured by the team members. The HTMT value of each variable is smaller than .85, suggesting that they are distinct from each other (Henseler et al., 2015; Kline, 2011).

TABLE 6.4 HETEROTRAIT-MONOTRAIT RATIOS AMONG THE VARIABLES

Variables	1	2	3	4	5	6	7
1 Psychological Meaningfulness	-						
2 Psychological Safety	.46	-					
3 Psychological Availability	.68	.28	-				
4 Personal Engagement	.58	.26	.49	-			
5 Team Functional Leadership	.58	.26	.49	.37	-		
6 Team Interpersonal Processes	.43	.46	.47	.62	.43	-	
7 Team Work Engagement	.63	.52	.54	.81	.76	.51	-

6.3.5. DATA AGGREGATION INDICES

In alignment with previous research, this study assumes that team-level variables can be obtained by aggregating individual constructs (Chan, 1998). When aggregating such team-level constructs, it is necessary to ensure sufficient theoretical and statistical support (Kozlowski and Klein, 2000). Although the theoretical argument was discussed in the

measurement section above, it is still necessary to establish that team members gave sufficient within-group agreement that could justify that the team members measured a common phenomenon.

There are two statistical tests that are commonly used to assess the common variance within nested data. The within-group agreement (Rwg; James *et al.*, 1984;1993) assesses the interchangeability of team members' ratings while Bliese (2000) suggests examining this common variance using the ICC. ICC1 examines the amount of variance explained by the aggregated team-level construct using a one-way random effect model while ICC2 calculates the reliability of the aggregated team-level constructs using a two-way random effect model (Shrout and Fleiss, 1979). These two different analyses were then conducted on the dataset. Table 6.5 shows the Rwg, ICC1, and ICC2 values for the four aggregated team-level variables. The table indicates that the Rwg value for all variables is above 0.7, indicating strong agreement (LeBreton and Senter, 2008). Likewise, all variables show ICC1 values above 0.05, which indicates adequate interrater reliability (Bliese, 2000). The ICC2 value of all the variables fell below 0.7. Nevertheless, scholars have pointed out that the ICC2 value is unsuitable for cases in which there is an uneven number of raters across the groups (Landers, 2015; McGraw and Wong, 1996). The size of the work teams in this study ranges from 4 to 25 members. Due to the uneven members, this study did not use the ICC2 value to assess the intraclass correlations.

Meanwhile, the Rwg and the ICC1 scores displayed in Table 6.5 provide sufficient justification for aggregating the variables. Because the data satisfied the within-group agreement and interrater reliability test, the team-level data were then aggregated by taking its mean value. This aggregation process produced the complete multilevel dataset and

marked the end of the data preparation procedure. The completed multilevel dataset was then processed for further correlational analysis explained in the next section.

TABLE 6.5 WITHIN-GROUP AGREEMENT AND INTERRATER RELIABILITY

	Code	Measures	Scales	Rwg	ICC(1)	ICC(2)
Team-level	TFL	Team Functional Leadership	Morgeson *et al.* (2010)	.90	.12	.47
	TIP	Team Interpersonal Processes	Mathieu *et al.* (2019)	.80	.15	.53
	TWE	Team Work Engagement	Costa *et al.* (2014)	.79	.06	.30
	TP	Team Performance	Schaubroeck *et al.* (2007)	n.a. (leader-rated)		
Individual level	IPM	Psychological Meaningfulness	May *et al.* (2004)	.91	.04	.21
	IPS	Psychological Safety		.78	.01	.08
	IPA	Psychological Availability		.91	.10	.43
	PE	Personal Engagement	Rich *et al.* (2010)	.87	.01	.04

6.4. DATA ANALYSIS: STRATEGY AND RESULTS

The previous section has described the data preparation procedures that this study employed. These procedures generated a multilevel dataset consisting of four team-level variables, i.e. team functional leadership, team interpersonal processes, team work engagement, and team performance and four individual-level variables, i.e. psychological meaningfulness, psychological safety, psychological availability, and personal engagement. In addition to these variables, the study also recorded a number of control variables, i.e. gender, age, team tenure, job tenure, and team size.

This multilevel dataset was further processed through multi-stages of data analysis to examine the correlations among the different constructs. First, the descriptive statistics of the focal control variables were examined. The examination verifies that the four team-level variables are correlated to satisfy the requirement of the team-level mediation analysis. Second, single-level mediation effects at the team level were examined using Hayes' (2012) PROCESS software in SPSS. These analyses tested hypothesis 2. Third, the multilevel relationships among the focal variables were examined using three-stage multilevel structural equational modelling techniques (MSEM; Preacher *et al.*, 2010). The first stage of the MSEM conducted a multilevel confirmatory factor analysis (CFA) to confirm the construct and discriminant validity of the focal variables. Next, the multilevel dataset was compared to the hypothetical conceptual model that this study proposes (Figure 4.1) and examined whether the data demonstrated a good fit with the conceptual model. The path analysis from the MSEM was used to examine the correlations between the focal variables (hypotheses 2, 3, and 4). Finally, the cross-level mediation effect was examined using multilevel mediation analysis

(Preacher *et al.*, 2010) to test hypotheses 5, 6 and 7. The following subsections will describe each step of the analysis.

6.4.1. DESCRIPTIVE STATISTICS

Descriptive statistics for all variables included in the conceptual model and control variables used in the analysis were calculated. Table 6.6 summarises these descriptive statistics that include the means, standard deviation, and Pearson's correlations. All the variables at the individual level were positively correlated. Specifically, personal engagement positively correlated with psychological meaningfulness ($r = .49$, $p < .01$), psychological safety ($r = .14$, $p < .01$), and psychological availability ($r = .35$, $p < .01$). Psychological meaningfulness positively correlated with psychological safety ($r = .23$, $p < .01$) and psychological availability ($r = .35$, $p < .01$). Meanwhile, psychological safety positively correlated with psychological availability ($r = .09$, $p < .05$).

Regarding the control variables at the individual level, personal engagement positively correlated with team member's age ($r = .12$, $p < .01$) and marginally correlated with team member's job tenure ($r = .09$, $p < .10$). The other control variables were not correlated with any of the individual level constructs. This infers that the older employees and employees who work longer for the company tend to be more engaged. This finding may also indicate that the company is better suited for older employees' engagement. However, further investigations may be needed to better understand the specific reasons that make older employees report an increased level of personal engagement.

The marginal positive correlation between job tenure and personal engagement may indicate that the company has been able to develop positive relationships with the more senior employees so that they got more engaged as they spent time working for the company. However, it could also be the case that the employees who find the job engaging decide to stay longer working for the company. Further investigations are needed to suggest the specific reasons that underpin the marginal positive correlation between job tenure and personal engagement.

At the team level, team work engagement positively correlated with team interpersonal processes ($r = 0.63$, $p < 0.01$), team performance ($r = 0.31$, $p < 0.01$), and marginally correlated with team functional leadership ($r = 0.22$, $p < 0.10$). Team interpersonal processes positively correlated with team performance ($r = 0.24$, $p < 0.05$) and team functional leadership ($r = 0.25$, $p < 0.05$). Meanwhile, team functional leadership was marginally correlated with team performance ($r = 0.22$, $p < 0.10$).

Regarding the control variables, team work engagement positively correlated with the supervisor's team tenure ($r = .23$, $p < .05$), which indicates that teams whose leaders have been assigned to the team longer tend to have more collective engagement. In other words, the longer time that the team leaders spend with their current team, the higher the team work engagement level would be. This could be because the team leader might have a longer time to develop stronger connections with their team members and thus facilitating their team work engagement.

Team functional leadership negatively correlated with team size ($r = -.24$, $p < .05$), which indicates that team members in smaller teams tend to rate their supervisors' leadership

higher. This finding may indicate that leading a larger team is more challenging than a smaller team. It aligns with previous studies that found the impact of team leadership on team performance was more salient in smaller than larger teams (O'Connell *et al.*, 2002). Mehra *et al.* (2017) argued that as the team size increases interpersonal coordination becomes more difficult and thus may limit the team leader to implement their leadership functions. However, Nicolaides *et al.* (2014) meta-analysis found that team size has an insignificant effect on the relationship between shared leadership and team performance. This may infer that the distributive leadership approach may be less affected by the large team size than other leadership approaches because the members share leadership responsibilities.

Meanwhile, the link between team work engagement and the average team tenure indicates that teams whose members spend more time tend to develop more engagement. Previous research has shown mixed findings relating to the link between team tenure and team outcomes (Bell *et al.*, 2011). Abrantes *et al.* (2020) argued that this is because the effect of team tenure on team outcome would dissipate as the team matures and reach equilibrium. This study observed that team tenure only positively correlated with team work engagement but not with team performance or team interpersonal processes. This may suggest that the longer the team interacts with one another, the more chances that the emergent process of team work engagement can occur. However, this emergent process could also be related to other factors. Further investigations are needed to investigate how team work engagement develops and evolves over time.

Similar to the occurrence with the individual-level constructs, team member's age appeared to positively correlated with team work engagement (r = .36, p < .01), team interpersonal processes (r = .31, p < .01), and team functional leadership (r = .25, p < .05). This

shows that teams with a high level of team work engagement, team interpersonal processes and team functional leadership tend to have older members. Team work engagement was also shown to positively correlate with team members' average job tenure, which indicates that teams whose members had been working longer for the company tend to report more collective engagement. These findings suggest that older and more senior employees tend to report a more positive appraisal of their team. Further investigations are needed to better understand the specific reasons that make the older and more senior employees tend to have a more engaged team.

Team functional leadership positively correlated with team members' gender ($r = .24$, $p < .05$), which indicates that female team member tends to give higher scores on their supervisors' functional leadership. This may either indicate that the functional leadership of the team leaders work more effectively on female employees or that female employees tend to better appreciate the leadership of their team leaders. Further investigations are needed to better understand why female employees in the sample tend to report a higher team functional leadership.

Finally, the team-level variables positively correlated with many of the individual-level constructs. For instance, team work engagement positively correlated with personal engagement ($r = .74$, $p < .01$), psychological meaningfulness ($r = .56$, $p < .01$), safety ($r = .53$, $p < .01$), and availability ($r = .44$, $p < .01$). Team interpersonal processes positively correlated with personal engagement ($r = .57$, $p < .01$), psychological safety ($r = .41$, $p < .01$), and availability ($r = .31$, $p < .01$). Team functional leadership positively correlated with job engagement ($r = .24$, $p < .05$), psychological meaningfulness ($r = .26$, $p < .05$), and availability ($r = .29$, $p < .05$). Team performance positively correlated with psychological safety ($r = .37$, $p < $

.01). However, it is to be noted that these correlation juxtaposed team-level measures with the team's average of the individual-level constructs. This may consequently conflate the regression estimate (Preacher *et al.*, 2010). To account for this conflation bias, this thesis used MSEM in analysing the cross-level correlation (Section 6.4.3.1).

TABLE 6.6 CORRELATION MATRIX AND DESCRIPTIVE STATISTICS

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Individual Level																	
1 Personal Engagement	-																
2 Psychological Meaningfulness	.49**	-															
3 Psychological Safety	.14**	.23**	-														
4 Psychological Availability	.35**	.48**	.09*	-													
Control Variables																	
5 Gender [a]	-.04	.03	-.02	.06	-					-							
6 Age	.12**	.07	.06	.07	-.08	-											
7 Team Tenure	.02	.03	.03	.02	-.03	.26**	-										
8 Job Tenure	0.09†	.05	.08	.08	.12**	.70**	.52**	-									
Team Level [b]																	
9 Team Work Engagement	.74**	.56**	.53**	.44**	.11	.36**	.09	.24*	-								
10 Team Interpersonal Processes	.57**	.18	.41**	.31**	.01	.31**	-.08	.23	.63**	-							
11 Team Functional Leadership	.24*	.26*	.23	.29*	.23*	.25*	.09	.19	0.22†	.24*	-						
12 Team Performance	.18	.15	.37**	.21	.13	.10	-.08	.07	.31**	.25*	0.22†	-					
Control Variables [c]																	
13 Gender [a]	.13	.22	.09	.18	.40**	-.02	-.04	-.11	.17	.00	.06	-.06	-				
14 Age	.28*	.15	.17	.07	.05	.35**	.01	.2	.2	.02	-.17	-.02	-.14	-			
15 Team Tenure	.19	.02	.11	-.12	.03	.15	.28*	.17	.23*	.09	.08	.09	-.18	.13	-		
16 Job Tenure	.12	.03	.2	.02	-.01	.18	.12	.23	.23	.07	-.05	.09	-.16	.56**	.23	-	
17 Team Size	-.07	.09	-.02	-.04	-.05	-.16	.05	-.05	.02	-.14	-.24*	-.10	-.11	.09	.05	.11	-
Mean	6.07	5.98	5.2	5.58	1.54	26.64	1.52	3.24	5.9	5.97	5.98	5.71	1.54	30.6	2.02	4.06	10.21
SD	.79	.66	1.05	.70	.50	6.67	0.27	0.49	.40	.46	.42	.72	.50	7.74	.55	.88	5.59

Notes:
** $p < 0.01$ [a] Coded: women = 1, men = 2
* $p < 0.05$ [b] Team-level variables were correlated to aggregated individual scores; significance level should be interpreted cautiously.
† $p < 0.10$ [c] Control variables at the team level refer to the gender, age, team tenure, and job tenure of the team leader.

6.4.2. TEAM-LEVEL MEDIATION ANALYSIS

The second stage of the data analysis examined the mediational effect among the team-level constructs. Building on the works of Baron and Kenny (1986), James *et al.*, (2006) and others, Mathieu and Taylor (2006) refer to mediation as "instances where the significant total relationship that exists between an antecedent and a criterion is accounted for in part (partial mediation) or completely (full mediation) by a mediator variable" (p. 1039). James *et al.* (2006) provided further delineation between partial and full mediation. Accordingly, full mediation occurs when a significant relationship between the criterion (Y) and the predictor (X) is completely accounted for by the mediator (M). Subsequently, there are four conditions that need to be met to satisfy the requirement of full mediation. (1) There is a significant relationship between X → Y; (2) the predictor relates significantly with the mediation (X → M); (3) the mediator relates significantly with the criterion (M →Y); and (4) the predictor no longer relates significantly to the criterion when the mediator is accounted for. More recently, scholars have posited that the relationship between X and Y variables does not have to be significant in mediation analysis (MacKinnon *et al.*, 2007; Preacher and Hayes, 2008). James *et al.* (2006) denote that the first three conditions above need to be met to infer partial mediation, that is (1) there is a significant relationship between X → Y; (2) the predictor relates significantly with the mediation (X → M); (3) the mediator relates significantly with the criterion (M →Y). In the case of partial mediation, the relationship between X → Y is still significant.

Team-level mediation analysis was performed using Hayes (2012) PROCESS 3.5 in SPSS to test hypotheses 2a, 2b and 2c. Team size, average team tenure, average job tenure, average

team members' age and team gender ratio were added as control variables in each of the

mediation analyses. Table 6.7 contains a summary of the results of the mediation analyses.

The indirect effect of team interpersonal processes on team performance was found to be

statistically significant (β = .238, SE = .128, CI 95% .007 to .501), while the direct effect was no

longer significant (β = .173, SE=.219, CI 95% -.264 to .610). Thus, the full-mediation model of

hypothesis 2a was supported. The indirect effect of team functional leadership on team work

engagement was found to be statistically significant (β = .139, SE = .075, CI 95% .005 to .299),

while the direct effect was no longer significant (β = .079, SE=.093, CI 95% -.107 to .264). Thus,

the full-mediation model of hypothesis 2b was supported. The indirect effect of team

functional leadership on team performance was found to be marginally significant in the serial

multiple moderation model (β =.063, SE=.047, CI 90% .002 to .152). Thus, hypothesis 2c was

also supported, albeit with marginal evidence.

TABLE 6.7 SUMMARY OF TEAM-LEVEL MEDIATION ANALYSES

Hypothesis	Mediation Model	Indirect effect (β)	SE	Confidence Interval		Confidence Level
				LL	UL	
2a	TIP → TWE → TP	.238	.128	.007	.501	95%
2b	TFL → TIP → TWE	.139	.075	.005	.299	95%
2c	TFL → TIP → TWE → TP	.063	.047	.002	.152	90%

N=72, Number of bootstrap 5,000, TFL = Team Functional Leadership, TIP= Team Interpersonal Processes, TWE
= Team Work Engagement; TP = Team Performance

6.4.3. MULTILEVEL ANALYSIS

The next stage of the data analysis examined the multilevel relationships between the team-level variables and the individual-level variables. Because these research hypotheses involve two-level of analysis, i.e. team-level variables and individual-level variables, they cannot be appropriately estimated using simple linear regression analysis. This is due to the characteristic of the nested data that violates the assumption of independence. A nested data or multilevel dataset is an arrangement of data that contains at least two levels of population, in which the sub-populations are nested upon clusters of the population (Snijders and Bosker, 2011). In this type of data, the observations are dependent upon which population clusters they belong to. This dependency violates the independence assumption for linear regression (Bliese and Hanges, 2004; Kenny and Judd, 1986). If this type of data is analysed using ordinary linear regression, then the resulting regression coefficient would denote the mix of the within and between effect, which is difficult to interpret (Snijders and Bosker, 2011). Thus, this study takes into account the multilevel structure of the dataset and hence analyses the data using statistical techniques that can account for the cluster effect.

Preacher *et al.* (2010) noted that there are two main statistical techniques that previous researchers have often used to analyse multilevel data. The first technique is by using a linear regression-based approach. This technique appears under a variety of names in different literature, such as linear mixed models, linear mixed-effects models, HLM, multilevel linear modelling, random-effects models, or RCM (Raudenbush and Bryk, 2002). For reference, these techniques will be referred to as HLM in this thesis. The second method is by using MSEM.

The different features of the two approaches above can be better observed by reviewing the mechanism of how the two techniques operate in a simpler single-level analysis. At its tenet, a linear regression examines the covariance of the independent and dependent variables and estimates the regression coefficient using the ordinary least square method, i.e. minimising the sum of the squared residuals (Freedman, 2009). In multilevel data, the linear mixed model technique estimates two regression coefficients, i.e. fixed effect that corresponds to the between-group covariance and random effect that corresponds to the within-group variance (Hox *et al.*, 2010). The linear mixed model technique is more commonly used in the organisational research domain partly because it works based on the more familiar regression-based approach (Bliese and Polyhart, 2002). However, this method may have some limitations when assessing the indirect effect of a mediation effect, which is a central interest of this study. Specifically, linear mixed modelling may use the slopes that combine between and within effect to estimate the indirect effect (Preacher *et al.*, 2010). Nonetheless, this bias can be resolved by using two-step analyses (Griffin, 1997). This two-stage method uses the intercept residuals from the lower-level equation as estimated by linear mixed modelling as the predictors in the higher-level equation, estimated by ordinary least square regression (Griffin, 1997, Preacher *et al.*, 2010).

Meanwhile, structural equation modelling (SEM) takes a very different approach. The regression-based approach starts by analysing the pattern that emerged from the observed data. On the contrary, SEM analysis started the other way around. This technique allows researchers to start by illustrating a hypothetical model and then assess the likelihood of the specified hypothetical model to match with the actual data (Hoyle, 1995). Since the 1990s, this technique had gained popularity in social and behavioural science studies because of its ability

to accommodate more complex models, such as models with multiple dependent variables (Hoyle, 1995). However, this technique had received little attention in multilevel studies because the then-available software programs had not been able to test an integrated model fit containing within and between effects (Preacher *et al.*, 2010). Yet, this hindrance has been overcome by several SEM-based analytical software that is available to date, such as MPlus and lavaan in R.

Both regression-based and SEM-based methods can either be used to assess mediation in a multilevel dataset. However, this study chose to use MSEM to analyse the data because of its ability to accommodate a more complex model and simultaneously assess the parameters of the indirect effect (Preacher *et al.*, 2010). Thus, the following five subsections will explain this technique in more detail and explain the three-stage MSEM analyses that this study employed.

6.4.3.1.MULTILEVEL STRUCTURAL EQUATION MODELLING

Before discussing the multilevel part of the MSEM, it might be useful to briefly review some fundamental features of the technique. As previously mentioned, SEM analysis starts with the researcher illustrating a hypothetical model and then assessing the likelihood of the specified hypothetical model to match with the actual data (Hoyle, 1995). This analysis can be done through three main steps. First, the researcher needs to specify a hypothetical model or sometimes called an empty model that consists of latent variables and path analysis. Latent variables are "hypothetical constructs, or explanatory entities presumed to reflect a continuum that is not directly observable" that are obtained by factoring in multiple observed

variables and error terms (Kline, 2006). The researcher would then specify a path diagram that

connects the different latent variables so that it reflects the proposed conceptual model.

Second, the method then examines the variance-covariance matrix of all the observed

variables that are included in the model. Finally, the SEM algorithm would generate an implied

variance-covariance matrix based on the hypothetical model and then use maximum

likelihood estimation to compare whether the implied variance-covariance matrix is similar to

the observed variance-covariance matrix (Hoyle, 1995). The hypothetical model, often called

the structural model, is deemed to fit the observed data if the maximum likelihood function

suggests that there is a high chance for the implied variance-covariance matrix to be similar to

the actual variance-covariance matrix after a certain number of iterations (Hoyle, 1995).

Muthén and Asparouhov (2008) expanded the single-level SEM equations by

permitting elements of some coefficient matrices to vary at the cluster level. This modification

allows for the integration of the random effects into the SEM equations by separating the

within and between elements in the structural model estimate (Preacher *et al.*, 2010). This

information will then feed into the SEM maximum likelihood function hence optimising an

estimate that accommodates the multilevel structure in the model (Kaplan, 2009). This

multilevel maximum likelihood estimation also accommodates multilevel path analysis and can

correct the effect of unbalanced cluster size by adjusting for sampling weight (Kaplan, 2009).

This thesis adopts this analytical approach and follows D'innocenzo *et al.*'s (2016) approach to

conducting a three-stage MSEM analysis. The first stage of the analysis ran the multilevel CFA.

The second stage tests for the model fit, and the final step of the analysis examines the cross-

level mediations among the variables of interest. These three stages will be further described

in the following subsections. However, prior to discussing these three stages, the next subsection will briefly discuss issues surrounding centring in MSEM analysis.

6.4.3.2. CENTRING

Construct measurements in organisational research are often expressed on arbitrary metrics that lack a meaningful zero point (Blanton and Jaccard, 2006). For instance, a construct assessed by a 7-point Likert scale commonly uses an anchor of 1 to represent strong disagreement and 7 to represent strong agreement. In this type of scale, the value of zero may not have an interpretable meaning.

Centring is one approach that can help researchers to establish a more meaningful zero value by subtracting the predictors from their mean (Enders and Tofighi, 2007). Thus, the zero value in the measure equals the average score in the observation. It is to be noted that centring is commonly applied toward the independent variables and moderators but not toward the dependent variables (Enders and Tofighi, 2007). The use of centring in a single-level linear regression analysis is fairly straightforward because it only shifts the predictor axis without changing the correlation coefficient. However, the use of centring in regression-based multilevel studies is more complex, especially when it relates to the lower-level variables.

In multilevel data, the variables can be centred at the grand mean (CGM), that is the mean value of the entire dataset, or they can be centred around the mean of the cluster upon which the observation belongs (centring within-cluster; CWC). For level-2 variables, the decision upon centring is more straightforward as they can only be CGM. The implication of

this centring is similar to a single-level centring; that is, it shifts the predictor axis without changing the correlation coefficient.

For level -1 variables, the variables can either be CGM or around the mean of the clusters; these two options imply different consequences. When a level-1 predictor is CGM, the regression coefficient remains unchanged. However, this CGM slope compounds the effect of both within- and between-cluster variations. This subsequently made the hierarchical estimator under the CGM uninterpretable, and therefore centring level-1 predictors at the grand mean may not be an appropriate approach in the linear mixed model (Raudenbush and Bryk, 2002).

When level-1 variables are centred around the mean of the cluster (CWC), it will cause a more profound implication for the regression analysis. CWC centres each cluster around its means. This implies that each cluster will take a different referent centre value, provided that each cluster has a different mean value. CWC would then convert the different mean values in each cluster to point zero. This treatment effectively takes out the between variations in the regression, leaving only the within variance in the system. Consequently, CWC will change both the regression coefficient and the intercept of the multilevel regression. This would make the interpretation of the regression coefficients and the intercept interpretable as it now singled out the effect of the within variations and therefore yield a more accurate prediction (Raudenbush and Bryk, 2002).

The two paragraphs above have indicated that the centring decision would substantially impact regression-based multilevel modelling. Therefore, researchers should carefully consider which type of centring to be used. Nevertheless, Preacher *et al.* (2010)

asserted that MSEM does not require an explicit centring because, in MSEM, all level-1

variables are subjected to the implicit model-based group mean centring by default unless

constraints are applied to the model. Therefore, the researcher did not attempt to centre the

level-1 variables manually because the MSEM software automatically centred the variables.

Although this study did not involve any centring, the discussion in this section could be

still relevant as it provides justification for why the study did not perform centring; that would

have been a critical step in a linear mixed model. After discussing the centring issue, the next

subsection will describe each of the three-stage MSEM analyses, i.e. multilevel CFA, fitting the

conceptual model, and examining the cross-level mediation.

6.4.3.3. MULTILEVEL CONFIRMATORY FACTOR ANALYSIS

The first of the three-stage MSEM analysis conducted a multilevel CFA that

simultaneously fit both lower- and upper-level CFA models to a multilevel dataset (Dyer *et al.*,

2005; Lüdtke *et al.*, 2008). Along with the increasing adoption of multilevel studies in

organisational research, scholars have called for a more suitable technique for assessing

construct validity in multilevel research (Chan, 1998; Mumford, 1998).

Dyer *et al.* (2005) highlighted potential biases that may arise when researchers ignore

the hierarchical structure of the data or use aggregated data in conducting factor analysis. The

former approach may lead to a bias as the factor loading estimates represent a mixture of

between- and within-group factor structure while they are supposed to reflect within-group

structure only (Dyer *et al.*, 2005). The latter approach was problematic because the between-

group matrix is a function of the between-group covariance matrix and the group-size-weighted within-group covariance matrix (Muthén, 1994). In this approach, the within-group covariance would underestimate the fit of the group-level factor structure and produce conservatively biased factor loadings (Dyer *et al.*, 2005).

Drawing on previous works (Bentler *et al.*, 2005; Muthén, 1990; Muthén, 1994), Dyer *et al.* (2005) introduced a multilevel CFA protocol to assess the factor structure of constructs that reflect group-level phenomena obtained from lower-level units. The method dissects the between and within components of the observed variables and generates between and within latent factors. The method then separately examines the covariance matrix of the between and within latent factors in the hypothesised model. By separating the covariance matrices, the approach can minimise the biases mentioned in the previous paragraph.

Therefore, this study followed the protocol outlined in Dyer *et al.* (2005) for conducting multilevel CFA and used the lavaan package in R as the statistical tool. Team functional leadership, team interpersonal processes, team work engagement and team performance, were listed as the team-level factors while individual psychological meaningfulness, safety, availability and personal engagement were listed as the individual-level factors. The multilevel CFA showed a good fit [$\chi2(295)= 721.602$, $p<.05$, CFI = .903; RMSEA= .055, SRMRw = .061, SRMRb =.079] that evidenced the construct validity of the multilevel variables in this study.

This model was compared to alternative three-factor models in which two of the three member-rated team-level constructs were merged into a single factor. In addition, the hypothesised model was compared to a two-factor model that combines the three member-

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rated team-level constructs, i.e. team functional leadership, team interpersonal processes and team work engagement into a single factor. To further verify that the hypothesised model was parsimonious, the hypothesised model was compared to an alternative model in which the individual psychological meaningfulness, safety and availability were combined into a single factor. Finally, the hypothesised model was also compared to another alternative model in which all four individual-level variables were combined into a single factor. As shown in Table 6.8, the hypothesised model still showed a better fit than these alternative models.

TABLE 6.8. RESULTS OF CONFIRMATORY FACTOR ANALYSIS

Models	χ2	df	Δχ2 (Δdf)	CFI	TLI	RMSEA
Hypothesised eight-factor model (four team-level and four individual level factors)	721.60	295	-	.903	.887	.055
Team-level model modifications						
Three-factor model (combining team interpersonal processes and team work engagement into a single factor)	778.62	298	57.02 (3)	.891	.874	.058
Three-factor model (combining team functional leadership and team interpersonal processes into a single factor)	915.62	298	194.02 (3)	.860	.838	.065
Three-factor model (combining team functional leadership and team work engagement into a single factor)	1,007.91	298	286.31 (3)	.839	.814	.070
Two-factor model (combining team functional leadership, team interpersonal processes and team interpersonal processes into a single factor)	1,026.52	300	304.92 (5)	.835	.811	.071
Individual-level model modifications						
Three-factor model (combining individual psychological meaningfulness and safety into a single factor)	738.69	298	17.09 (3)	.900	.885	.055
Three-factor model (combining individual psychological safety and availability into a single factor)	742.27	298	20.67 (3)	.899	.884	.055
Three-factor model (combining individual psychological meaningfulness and availability into a single factor)	841.96	298	120.36 (3)	.877	.858	.061
Two-factor model (combining individual psychological meaningfulness, safety and availability into a single factor)	853.77	300	132.17 (5)	.875	.856	.062

6.4.3.4.MODEL FIT

Second, this study followed D'innocenzo *et al.*'s (2016) approach to index multi-item measures as scale scores and fit a multilevel SEM model that tested linear relationships included in the hypothesised model (Figure 6.2). For clarity, the error term was omitted from the figure. The multilevel SEM result with the error terms included is accessible in Appendix 6. The model yielded a good fit [χ^2(54)=59.77, n.s, CFI = .98, RMSEA= .015, SRMR$_w$ = .012, SRMR$_b$ =.121], after controlling for team size, average team tenure, average job tenure, average team members' age and team gender ratio.

However, the standardised root means square value for the between variance fell above the cutting-off threshold of 0.08. This suggests that the distance between the mean square error of observed and estimated correlations, standardised means, and variance is farther than what Hu and Bentler (1999) recommended. Asparouhov and Muthén (2018) noted that this type of situation is not uncommon. They assert that a model should be considered fit if it passes the exact fit test, i.e. the Chi-square, albeit one or more approximate fit indices, such as the SRMR indices, are above the cut-off values. Asparouhov and Muthén (2018) further note that the larger SRMR values often occur when the sample size is 200 or less. In this study, the sample size of the SRMR values for the between variance equals the number of teams, that is 72. Thus, the large SRMR$_b$ value in this study does not mean that the model did not fit (Asparouhov and Muthén, 2018). Because the model can be considered a good fit, the analysis will continue to evaluate the correlations between the variables in the multilevel model.
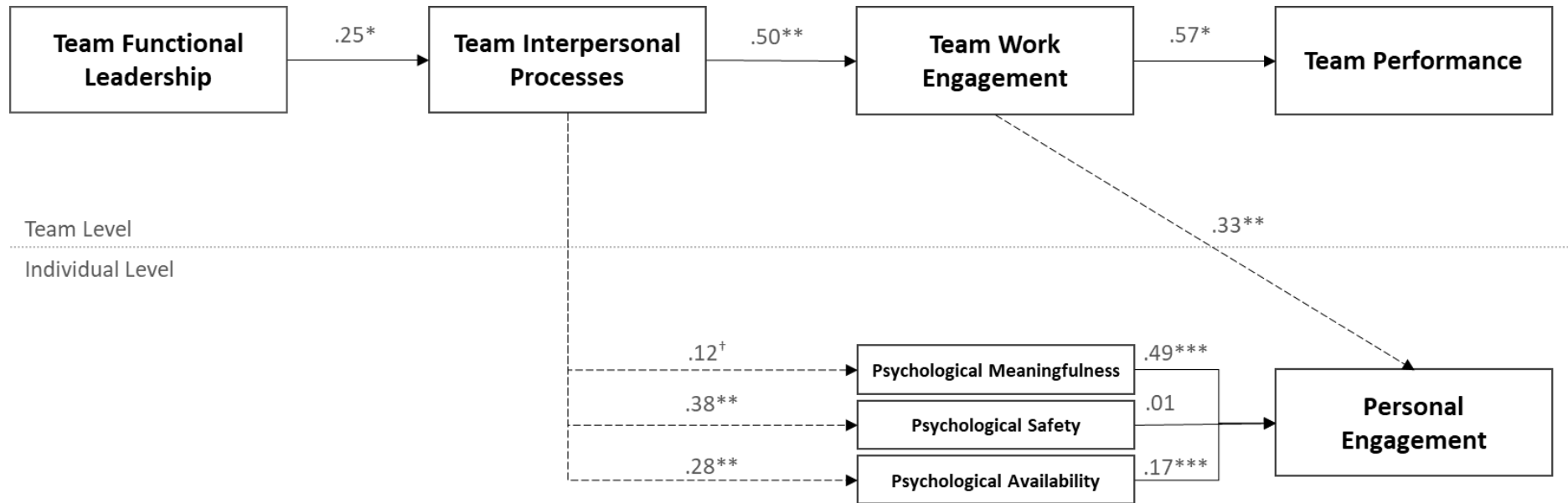
FIGURE 6.2. RESULT OF MULTILEVEL STRUCTURAL EQUATION MODELLING

Note: Dotted line signifies cross-level relationship.
† $p<.10$; * $p <.05$; ** $p<.01$; *** $p<.001$. $N= 583$ individuals in 72 teams.

At the individual level, personal engagement exhibited a positive relationship with psychological meaningfulness (β = .49, SE = .06, p<.01) and psychological availability (β = .17, SE = .05, p<.01). Thus, hypotheses 1a and 1c were supported. However, the correlation between psychological safety and personal engagement was insignificant (β = .01, SE = .03, n.s.). Thus, hypothesis 1c was not supported. One potential reason that may cause this non-significant result is the low reliability of the psychological safety measure as this is the only construct in the study that uses reverse items. This issue will be further explained in Section 7.2.

At the team level, team functional leadership exhibited a significant positive relationship with team interpersonal processes (β = .25, SE = .13, p<.05). Team work engagement exhibited a positive relationship with team performance (β = .57, SE = .28, p<.05). Meanwhile, team interpersonal processes exhibited a significant positive relationship with team work engagement (β = .50, SE = .08, p<.01). Therefore, hypotheses 1d, 1e, and 1f were supported. Across the levels, team work engagement exhibited a significant positive relationship with individual personal engagement (γ = .33, SE = .11, p<.01) after controlling for individual psychological meaningfulness, safety, and availability. Thus, hypothesis 3 was supported. Team interpersonal processes exhibited a significant positive relationship with individual psychological safety (γ = .38, SE = .10, p<0.01), and availability (γ = .28, SE = .07, p<0.01), providing support for hypotheses 4b and hypothesis 4c. However, team interpersonal processes only exhibited a marginal positive relationship with individual psychological meaningfulness (γ = .12, SE = .07, p<0.10). Thus, hypothesis 4a was supported with marginal evidence. Having examined the correlation among the variables within the MSEM model, the

next subsection will continue to report the third stage of this study's multilevel analysis, which is the cross-level mediational effect among the variables.

6.4.3.5. CROSS-LEVEL MEDIATION

The final stage of the multilevel analysis investigates the cross-level mediations using the MSEM method based on Preacher *et al.* (2010) multilevel mediation analysis. There were two types of cross-level mediations that this study examined. Hypotheses 5 tested the upper-level mediational (2-2-1) role of team work engagement on the relationship between team work engagement and personal engagement. Hypotheses 6 tested the mediational role of team interpersonal processes and team work engagement on the relationship between team functional leadership and personal engagement. Meanwhile, hypothesis 7 tested lower-level mediation (2-1-1) that examined the mediational role of individual psychological meaningfulness (Hypothesis 7a), safety (Hypothesis 7b) and availability (hypothesis 7c) on the relationship between team interpersonal processes and personal engagement. Team size, average team tenure, average job tenure, average team members' age and team gender ratio were added as control variables in each of the mediation analyses. Table 6.9 contains a summary of the results of the cross-level mediation analysis.

The upper-level mediation results showed that the link between team and the indirect effects of team interpersonal processes on personal engagement via team work engagement were significant [γ=.282, SE=.071, p<.01], while the relationship between team interpersonal processes and personal engagement was no longer significant [γ=.070, SE=.088, n.s.]. Thus, hypothesis 5 was supported. Further, the indirect effect of team functional leadership on

personal engagement through the mediational role of team interpersonal processes and team work engagement is found to be significant [γ=.071, SE=.039, p<.10], while the relationship between team functional leadership and personal engagement was no longer significant [γ=-.039, SE=.092, n.s.]. Thus, Hypotheses 6 was supported at the 90% confidence level.

In relation to the cross-level influence among the variables, it is to be noted only individual psychological availability that showed a significant intraclass correlation (ICC1 <.05), while the intraclass correlations of individual psychological meaningfulness, safety and personal engagement were not significant (ICC1 <.05). This infers that the upper-level mediation explained substantial variance of individual psychological availability, but not of individual psychological meaningfulness, safety, and personal engagement. The implication of these findings will be further discussed in Section 7.4.2.

Finally, the lower-level mediation results, unfortunately, showed non-significant results for all three hypotheses. Neither individual psychological meaningfulness [γ=-.187, SE=.566, n.s.], safety [γ=.20, SE=.375, n.s.], or availability [γ=-.108, SE=.161, n.s.] were found to mediate team interpersonal processes and personal engagement. Thus, hypotheses 7a, 7b, and 7c were unfortunately not supported. The implications of these findings will be further discussed in Section 7.4.3.2 in the discussion chapter.

TABLE 6.9. SUMMARY OF CROSS-LEVEL MEDIATION ANALYSIS

Hypothesis	Mediation Models	Indirect Effect (γ)	SE	p-value
Upper-level mediation (2-2-1)				
5	TIP → TWE → PE	.282	.071	<.01
6	TFL → TIP → TWE → PE	.071	.039	<.10
Lower-level mediation (2-1-1)				
7a	TIP → IPM → PE	-.187	.566	n.s.
7b	TIP → IPS → PE	.200	.375	n.s.
7c	TIP → IPA → PE	-.108	.161	n.s.

TFL = Team Functional Leadership; TIP= Team Interpersonal Processes, TWE = Team Work Engagement; IPM = Individual Psychological Meaningfulness; IPS = Individual Psychological Safety; IPA = Individual Psychological Availability; PE = Personal Engagement

6.5. SUMMARY OF CHAPTER 6

This chapter has explained how the study treated the multilevel data. It discussed the analytical strategy that this study uses to examine the correlation among the variables and then showed the results obtained from each analysis. The research findings showed support for the mediational relationship at the team level between team functional leadership, team interpersonal processes, team work engagement and team performance. The analysis also showed support for the upper-level mediation between team interpersonal processes, team work engagement and personal engagement. It also showed support for the mediational relationship between team functional leadership, team interpersonal processes and two of the three psychological conditions of personal engagement, i.e. individual psychological safety and availability.

However, the results did not find evidence for lower-level mediational relationships between team interpersonal processes, the three individual-level predictors of engagement (psychological meaningfulness, safety, and availability), and personal engagement. The summary of the supported hypotheses was presented in Table 6.10. The next chapter will discuss these findings and how the findings can contribute to the research gaps in employee engagement work teams, and team leadership literature.

TABLE 6.10. SUMMARY OF THE RESEARCH FINDINGS

No.	Hypothesis Description	Results	CL
Individual-level correlations			
1a	Individual psychological meaningfulness is positively correlated with personal engagement.	Supported	99%
1b	Individual psychological safety is positively correlated with personal engagement.	Not Supported	n.s.
1c	Individual psychological availability is positively correlated with personal engagement.	Supported	99%
Team-level correlations			
1d	Team functional leadership is positively correlated with team interpersonal processes.	Supported	95%
1e	Team interpersonal processes are positively correlated with team work engagement.	Supported	99%
1f	Team work engagement is positively correlated with team performance.	Supported	95%
Team-level mediations			
2a	Team work engagement fully mediates the effect of team interpersonal processes on team performance.	Supported	95%
2b	Team interpersonal processes fully mediate the effect of team functional leadership on team work engagement.	Supported	95%
2c	Team interpersonal processes and team work engagement fully mediate the effect of team functional leadership on team performance.	Supported	90%
Cross-level correlations			
3	Team work engagement is positively correlated with personal engagement after controlling for the effect of individual psychological meaningfulness, safety and availability.	Supported	99%
4a	Team interpersonal processes is positively correlated with psychological meaningfulness.	Supported	90%
4b	Team interpersonal processes are positively correlated with individual psychological safety.	Supported	95%
4c	Team interpersonal processes is positively correlated with individual psychological availability.	Supported	95%
Cross-level mediations (upper-level)			
5	Team work engagement mediates the effect of team interpersonal processes on personal engagement.	Supported	99%
6	Team interpersonal processes and team work engagement mediate the effect of team functional leadership on personal engagement.	Supported	90%

Note: CL = Confidence Level. The table continues on the next page.

TABLE 6.110. SUMMARY OF THE RESEARCH FINDINGS (CONTINUED)

No.	Hypothesis Description	Results	CL
Cross-level mediations (lower-level)			
7a	Individual psychological meaningfulness mediates the effect of team interpersonal processes on personal engagement.	Not Supported	n.s.
7b	Individual psychological safety mediates the effect of team interpersonal processes on personal engagement.	Not Supported	n.s.
7c	Individual psychological availability mediates the effect of team interpersonal processes on personal engagement.	Not Supported	n.s.

Note: CL = Confidence Level

CHAPTER 7

DISCUSSION

7.1. INTRODUCTION

This study aimed to investigate the role of team interpersonal processes and team functional leadership on employee engagement at the team and individual levels. This chapter will discuss the extent to which the results of the research findings provide answers to the proposed research question. The chapter starts by discussing the findings at the individual level between personal engagement and the three psychological conditions of personal engagement, i.e. psychological meaningfulness, safety and availability. The following section will discuss the team-level analysis that investigates the role of team interpersonal processes and team functional leadership on team work engagement and perceived team performance. It then discusses the results of the top-down effect of the team-level variables on the individual team members. The chapter ends by drawing a summary of the overall finding that this study revealed.

7.2. DISCUSSION OF THE INDIVIDUAL-LEVEL FINDINGS

PSYCHOLOGICAL MEANINGFULNESS, SAFETY, AVAILABILITY AND PERSONAL
ENGAGEMENT

At the individual level, the descriptive statistics showed that psychological meaningfulness showed the strongest correlation among the three psychological conditions of personal engagement, followed by psychological availability and safety. This result is similar to what previous studies have found, i.e. May *et al.* (2004), Olivier and Rothmann (2007) and Chen *et al.* (2011). The coherent finding between the studies can infer the following four points. First, it shows that the order of importance between psychological meaningfulness, safety, and availability in influencing personal engagement is consistent across participants across different countries and different industries. May *et al.* (2004) surveyed participants from a large insurance firm in the United States. Olivier and Rothmann (2007) used samples from a multinational oil company in South Africa. Chen *et al.*'s (2011) participants were from several knowledge-intensive companies in China. Meanwhile, this study found a similar result using samples from a supermarket chain in Indonesia. The participants of these four studies seem to have different tasks and work roles while the four countries represent different societal clusters based on either Hofstede's (1994) or GLOBE (2004) classifications. The fact that these four studies similarly found psychological meaningfulness as the strongest factor of personal engagement, followed by psychological availability and then safety, suggests that this order of importance applies across different industries and countries.

Second, the coherent results may suggest that personal engagement depends, first and foremost, on how the person ascribes meaning to what they do at work. When employees

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find their work meaningful, they receive a rewarding experience from what they do at work, which Kahn (1990) refers to as the "return on investments of one's self" (p. 703). Kahn (1990) further asserts that this intrinsic reward gives the employees physical, cognitive and emotional energies; that fuel the individuals to experience moments of personal engagement. The empirical evidence suggests that this intrinsic reward that the employees get from their work role could be the primary driver to getting individuals to engage in their work.

The emphasis on the intrinsic reward that individuals receive from their job may explain why organisational factors such as job design and organisational identification have often been linked to employee engagement (Crawford *et al.*, 2010; Bailey *et al.*, 2017). Hackman and Oldham's (1980) job characteristics theory suggests that jobs that give the employees more control over the arrangement of how they do their work would make the employee feel more sense of ownership toward their job and subsequently assert personal meaning. Meanwhile, organisational initiatives that promote a sense of collective identity and mission may also make the employee assert personal value to the job and therefore feel their jobs are more meaningful.

The role of psychological meaningfulness in promoting engagement has been highlighted in previous research. Steger *et al.* (2013) demonstrated that psychological meaningfulness moderates the relationship between positive affect and personal engagement. The study found that the level of engagement depends on the employees' positive affect if the employees perceived little meaning in their work. However, if the employees perceived their work as meaningful, they scored the same level of engagement regardless of how much positive affect they have. Meanwhile, Lee *et al.* (2016) found that psychological meaningness fully mediated the influence of empowering leadership on

engagement. Team leaders who are better at empowering their members are found to have members that think that their job is meaningful and thus tend to be more engaged. These studies have highlighted the prominent role of psychological meaningfulness such that it magnifies the effect of the other antecedents of employee engagement.

Third, it follows that psychological availability and psychological safety appear to assume auxiliary roles in promoting personal engagement. Psychological availability points to the amount of physical and emotional energy that individuals possess (Kahn, 1990). From the lens of the JD-R model (Bakker and Demerouti, 2007), this denotes the amount of remaining energy that the individuals have after overcoming their hindrance job demands. Whilst the finding suggests that having sufficient energy is important for personal engagement, it also shows that this may be less influential than having meaningful work. One possible explanation could be when individuals draw meaning out of their work, the return on investment that they receive from their work may re-energise them in competing with the job demands (Podsakoff *et al.*, 2007).

Finally, psychological safety was shown to have the weakest correlation with personal engagement among the three psychological conditions. However, the correlation between psychological safety and personal engagement was no longer significant when psychological meaningfulness and psychological availability were added into the equation. It indicates that the strength of the correlation between psychological safety and personal engagement was significantly weaker relative to those of psychological meaningfulness and availability. Thus, when the three determinants of personal engagement were put together in an SEM, the link between psychological safety and personal engagement became insignificant (Muthén and Asparouv, 2008).

This result was unexpected because it contradicts Kahn's (1990) argument that the three psychological conditions are needed for an individual to experience personal engagement. Further investigation suggests that the weak correlation between psychological safety and personal engagement could be because of a methodological issue. Specifically, this study used reverse-coded items from May *et al.*'s (2004) psychological safety scale. These reverse-coded items have unfortunately lowered the reliability of the scale.

This issue was akin to that encountered in Olivier and Rothmann's (2007) finding. Their study examined the link between personal engagement and its three constituent psychological conditions. They similarly found that the influence of psychological safety on personal engagement was no longer significant when psychological meaningfulness and availability were added into the regression and pointed to the low-reliability index of the psychological safety scale because of the usage of May *et al.*'s (2004) reverse-coded items. Podsakoff *et al.* (2003) warned that the use of reverse-coded items in scales might risk decreasing the reliability as some respondents might not be aware of the reverse statements. However, this study decided to use the reverse-coded scale to maintain comparability with previous research. Unfortunately, this decision might have impaired the correlational strength between the two constructs.

7.3. DISCUSSION ON TEAM-LEVEL MEDIATION

TEAM FUNCTIONAL LEADERSHIP, TEAM INTERPERSONAL PROCESSES, TEAM WORK ENGAGEMENT AND TEAM PERFORMANCE

Although employees are commonly nested within work teams (Cohen and Bailey, 1997), the role of work teams in influencing employee engagement has been largely overlooked. As noted by previous researchers, the work teams and employee engagement literature have developed separately from one another (Costa *et al.*, 2014). The few studies that examined team-level antecedents of employee engagement have used the JD-R framework as their theoretical underpinning (Bakker *et al.*, 2006; Torrente *et al.*, 2012). However, the transposition of the JD-R framework to the team level had not incorporated the current knowledge about team processes and team effectiveness and potentially neglected the important difference between levels (Costa *et al.*, 2014). Subsequently, it might have overlooked the process through which the work teams convert team inputs into team work engagement. This study went further by drawing into team process literature to shed more light on the process through which the work teams form a collective form of engagement.

The team-level mediation analysis of this study demonstrated that the relationships between team functional leadership, team interpersonal processes, team work engagement and team performance follow the IPO model. Specifically, team functional leadership serves as team input and team interpersonal processes represent the mediating process. The team outcomes were represented by team work engagement and team performance, with team work engagement acting as a more proximal team outcome and team performance as a more distal outcome.

This finding advances the current understanding of work engagement at the team level in several ways. First, the significant mediation result between team functional leadership, team interpersonal processes and team work engagement infer that the internal team leaders can indeed influence the level of their team's engagement through executing their leadership functions. Previous studies have studied different aspects of the work team that can influence team work engagement such as teamwork, coordination, supportive team climate, team resource, team conflicts and organisational practices (Acosta, Salanova and Llorens, 2012; Costa, Passos and Bakker, 2015; Gaspar, 2016; Guchait, 2016; Torrente et al., 2012). However, none of the previous studies examined the role of leadership within the team despite work teams in corporations often having a designated team leader, whose formal authority may influence the team process significantly.

The team level mediation analysis of this study demonstrated that the internal team leader of the work team can indeed influence the level of their team work engagement. Furthermore, it has also highlighted the mechanism through which the leader exerts their influence. The full mediation model infers that the team leader can improve their team work engagement by influencing the interpersonal processes between the team members. This finding aligns with the IPO model that is often used work team studies (McGrath, 1964) whereby team functional leadership act as team input that feeds into the team interpersonal processes and that stimulates the emergence of team work engagement.

Previous research on team functional leadership typically correlated the construct with various team outputs (Kozlowski *et al.*, 2016). This study went further by exposing the role of team interpersonal processes as the mediator to the two team outputs, i.e. team work engagement and team performance. Instead of directly influencing team work engagement,

the result showed how the team leaders' functional leadership first influence the quality of the interpersonal processes within the team. The positive interpersonal interactions among the team members, in turn, promote the emergence of team work engagement that subsequently enables the team to perform better.

This result highlights two key advantages of using functional leadership in comparison to the traditional leader-centric approaches. Instead of suggesting desirable leadership styles, the functional leadership approach inquires the team leader to identify the needs of their teams (Kozlowski *et al.*, 1996). The team leader can then tailor their approach specifically to satisfy the needs (Kozlowski *et al.*, 1996; Morgeson *et al.*, 2010). This study has provided additional empirical evidence showing that team leaders can facilitate the emergence of team work engagement in their team by fulfilling the needs of the teams, that is to have better interpersonal processes. The team leaders were able to do so by executing five specific functions in Morgeson *et al.*'s (2010) taxonomy, i.e. define mission, establish expectations and goals, provide feedback, perform team tasks, and support social climate.

In addition, the team-centric leadership approach can help the team to stay engaged despite personnel changes. The previous leadership approach aimed to improve engagement has focused on examining how the dyadic relationship between the leader and the followers can positively influence the follower's individual engagement (Carasco-Saul *et al.*, 2015). This may mean that the level of engagement of the subordinates may depend very much on the leadership characteristics of the leader. This approach could be problematic in instances where the team must change their leaders, for instance, due to rotations, succession planning, or resignations. The dependency on the team leader may risk the engagement level of the team dropping after the leader left the post. The emphasis on developing the team instead of

the dyadic relationship between the leader and follower could contribute to helping the team to stay engaged despite changing their leaders because they might have developed a strong pattern of interpersonal interaction among them. Furthermore, if the team has developed high quality interpersonal processes, then the team member may help the new leader to settle into the team.

Second, the finding has also provided empirical support to Marks *et al.*'s (2001) proposition that differentiates team process and emergent state. They assert that an emergent state is accumulated from repetitions of team processes (Marks *et al.*, 2001). The result demonstrated that a high quality of interpersonal processes within the team is linked to a high level of team work engagement. Teams whose members regularly convey positive interpersonal relationships with each other, such as expressing care and empathy toward one another, may develop what Kahn and Heaphy (2014) refer to as a holding environment. That is a safe space in which team members feel secure to express themselves (Kahn and Heaphy, 2014). The high-quality interpersonal interactions within this haven may give energy to the team members (Dutton, 2003; Heaphy and Dutton, 2008). Subsequently, these energetic interactions facilitate the emergence of team work engagement (Costa *et al.*, 2014).

Third, the research finding of this study has shown that teams with a higher quality of interpersonal processes and team functional leadership are seen to perform better according to their supervisor. However, the correlation between both team functional leadership and team interpersonal processes with team performance was weaker than those of team work engagement. It infers that the effect of team functional leadership and team interpersonal processes are more salient on team work engagement rather than team performance. Considering that team performance is a compilational emergent state formed through

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complex interactions of various lower-level factors (Kozlowski and Klein, 2000), it is likely that its emergence depends on many other factors beyond the scope of this study.

Fourth, the link between team work engagement and leader-rated team performance that this study showed may further indicate that team work engagement could serve as a useful construct in team effectiveness research. At the individual level, numerous studies have established the link between employee engagement and both in-role and extra-role performance (Bailey *et al.*, 2017). Given that team work engagement shares functional equivalence with individual engagement, it is likely that it would as well induce a positive effect on team effectiveness as it points to the level of motivation and activated energy within a work team (Costa *et al.*, 2014). The correlation between team work engagement and team performance in this study adds to the evidence that team work engagement can be used as a proximal predictor of team performance.

It is conceivable that the level of motivation within a team is critical to improving team effectiveness (Zaccaro *et al.*, 2001). However, team motivation has not been coherently defined within the team effectiveness literature. There are two main approaches to gauging the level of motivation in a team. One approach proposes team motivation as a mediating process within a team that is composed of team cohesion, team potency and performance norms (Zaccaro *et al.*, 2001). Meanwhile, the other views team motivation as a behavioural process indicated by the extent to which team members encourage each other to perform better (Marks *et al.*, 2001). Although both of these approaches can indicate the level of motivation within the team, they may not directly measure the amount of collective motivational level of the team. Zaccaro *et al.*'s (2001) approach gauges team motivation using three emergent states as proxies while Marks *et al.*'s (2001) approach measures team

motivation as a behavioural process that may later lead to the formation of the team

collective motivation rather than pointing directly to the construct. Team work engagement,

which is a motivational emergent state (Costa *et al.*, 2014), offers a more direct approach to

indicating the level of team motivation. Measuring team motivation using team work

engagement as a single emergent state can therefore serve as a more proximal predictor of

team performance and, to a greater extent, team effectiveness.

Finally, the indirect effect of team interpersonal processes on team performance

further suggests that the quality of interpersonal processes within the team can affect their

performance because they tend to have a high level of team work engagement. This result

indicates the importance of maintaining the quality of interpersonal processes in supporting

team effectiveness. Multiple researchers showed how having supportive colleagues are useful

in promoting individual engagement (Xanthopoulou *et al.*, 2008; Sawang, 2012; Gan and Gan,

2014). In many organisations, these social interactions are occurring within the work teams

(Chen and Kanfer, 2006). However, previous research has focused on exposing the link

between the two constructs at the individual level and, therefore, neglecting the role of the

work teams in which the individuals are nested. This study goes further by examining how the

pattern of interpersonal processes within a team contributes to establishing a conducive

environment that fosters their members' engagement.

The focus on the team-level interpersonal process within the team rather than the

dyadic relationships between colleagues may offer an alternative approach to improving the

level of engagement. Although the body of evidence has shown that having supportive

colleagues is beneficial in promoting engagement (Xanthopoulou *et al.*, 2008; Sawang, 2012;

Gan and Gan, 2014), it could be practically difficult to maintain a high quality of social support

across the organisation. The team-based approach would enable the organisation to identify specific teams with poor interpersonal processes to be further addressed.

In summary, the team-level mediation analysis has shown work teams whose leaders are perceived better in executing their leadership functions tend to have a better quality of interpersonal processes and a high level of team work engagement and are perceived to perform better by their team leader. It suggests that the internal team leader can play a key role in developing the work engagement of their team and thereby improving their team performance. They can do so by influencing the quality of the interpersonal processes within their team by executing the five leadership functions i.e. defining a clear mission, establishing expectations and goals, providing feedback, performing team tasks, and supporting social climate. This finding has shown pragmatic actions that team leaders can do to develop their team using a team-centric leadership approach.

7.4. DISCUSSION ON THE CROSS-LEVEL FINDINGS

The previous two sections of this chapter have discussed this study's findings at the individual and team levels of analysis. This section will continue to discuss the relationships between the two levels. The section starts by discussing the top-down effect of team work engagement on personal engagement and of team interpersonal processes on the psychological conditions of personal engagement. It then examines the two proposed mechanisms through which team interpersonal processes and team functional leadership influence personal engagement. The first path is through the emotional contagion process

(Harfield et al., 1994). This thesis examines this mechanism by assessing the upper-level mediational role of team work engagement. The second path is through emphatic crossover (Westman, 2001) which is examined by assessing the lower-level mediational role of the three psychological conditions of personal engagement, i.e. psychological meaningfulness, safety and availability. The examination of these two pathways will be discussed in Section 7.4.3.

7.4.1. TOP-DOWN EFFECT OF TEAM WORK ENGAGEMENT ON PERSONAL ENGAGEMENT

The result from the multilevel SEM analysis showed that team work engagement positively correlated with personal engagement after controlling for psychological meaningfulness, safety and availability. This finding is consistent with results from previous studies, i.e. Bakker *et al.* (2006) and Van Mierlo and Bakker (2018). Bakker *et al.* (2006) suggested that the top-down influence of team-level engagement on individual engagement is due to the emotional contagion process (Hatfield, 1994) respectively. This result adds further evidence that these affective transfer processes occur within teams.

Despite showing a similar result, there are a few differences between this study and Bakker *et al.* (2006) and van Mierlo and Bakker (2018). These two previous studies conceptualised employee engagement using Schaufeli *et al.*'s (2002) work engagement concept, measured using the UWES and controlled for job resources and job demands. This study measured individual engagement using Kahn's (1990) personal engagement concept, operationalised using Rich *et al.*'s (2010) JES and controlled for psychological meaningfulness, safety and availability. This similar result suggests that nesting individuals in an engaged team may enhance individual engagement as measured by both Kahn's (1990) and Schaufeli *et al.*

(2002) measurement scales. This is likely due to the presence of emotional contagion among the team members that enables the individual team member to experience moments of personal engagement more frequently (Bakker *et al.*, 2006).

The positive correlation between team work engagement and personal engagement due to the emotional contagion mechanism may lay out an alternative way to promoting the individual to encounter moments of personal engagement. According to Kahn's (1990) proposition, individuals need to have a sufficient amount of psychological meaningfulness, safety and availability to experience personal engagement. Yet, this study suggests that individuals who are nested in teams with a high level of team work engagement could get personally engaged irrespective of the level of their psychological meaningfulness, safety and availability. Whilst previous research in this domain has focused on uncovering how aspects of the job can influence the individual to feel more meaningful, safe and available (May *et al.*, 2004; Rich *et al.*, 2010; Bailey *et al.*, 2017), this study suggests that the individual can be engaged without feeling meaningful, safe and available. That is, by working in a highly engaged team whose members transfer their engagement through a subconscious emotional contagion mechanism. This finding can further infer that developing team work engagement would be particularly useful in work contexts that provide little intrinsic rewards for the employees, such as those involving mundane and repetitive tasks. Given that not all jobs can provide employees with a sense of meaning, cultivating engaged teams could have significant practical implications in certain areas which will be further discussed in the practical implication section of this thesis (Section 8.3).

7.4.2. TOP-DOWN EFFECT OF TEAM INTERPERSONAL PROCESSES ON PSYCHOLOGICAL MEANINGFULNESS, SAFETY AND AVAILABILITY

There have been multiple pieces of evidence that highlight the importance of having supportive colleagues in developing individual engagement (Xanthopoulou *et al.*, 2008; Sawang, 2012, Gan and Gan, 2014). Previous studies have used the JD-R framework as their theoretical underpinning that considers colleague support as a form of job resource (Crawford *et al.*, 2010). However, the JD-R framework has not clearly explained why this type of job resource can promote engagement. This study went further by drawing on Kahn and Heaphy (2014) and examined how interpersonal relationships among the team members influence the three psychological conditions of personal engagement (i.e., psychological meaningfulness, safety and availability).

The multilevel SEM model has demonstrated the positive top-down effects of team interpersonal processes on psychological meaningfulness, safety and availability. It shows that individual members who are nested in teams with a higher quality of interpersonal processes tend to have high levels of psychological meaningfulness, safety and availability. This finding has exposed the underlying process that drives the relationship between interpersonal relationships and engagement and provides empirical evidence to Kahn and Heaphy's (2014) proposition. It appears that the positive interpersonal interactions among the team members have to some extent deepened how the individuals assign purpose to their job and heightened their sense of belongingness. In addition, it has also provided a safe haven for the team members so that they feel free to express themselves and trigger energising interactions.

Furthermore, this study has revealed the difference in the magnitude of the effect of team interpersonal processes relative to each of the three psychological conditions of personal engagement. Specifically, the link between team interpersonal processes and individual psychological meaningfulness was found to be the weakest, with the correlation only significant at a 90% confidence level. Meanwhile, the top-down influence of team interpersonal processes on individual psychological safety was found to be the strongest, followed by psychological availability, both were significant at a 99% confidence level. This finding infers that high-quality interpersonal processes may influence the individual team member to feel psychologically safe and have more psychological availability at their disposal. However, good interpersonal relationships among the team members have not influenced the individuals to feel that their job is more meaningful to the same extent as the previous two.

There are several possible explanations for this finding. Kahn and Heaphy (2014) argue that the sense of belonging among team members would make individuals feel that their jobs are more meaningful. However, it could be the case that the team members have not developed sufficient bonds among themselves. The participants have on average spent two years working in their current teams. Although two years might leave enough time for the member to form a cohesive bond (Abrantes et al., 2022), the fact that they are working different shifts may have slowed this process and thus showed a marginal relationship. However, how the cohesiveness of work teams evolves over time is beyond the scope of this thesis and would be an interesting area to investigate in future studies.

Another possible explanation for this finding is that psychological meaningfulness may be driven more by the nature of the job tasks rather than the interactions with the team members. Previous scholars have shown that psychological meaningfulness is closely related

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to job characteristics (Pierce et al., 2009; Crawford et al., 2010). Specifically, jobs with higher skill variety, task identity and task significance would help the employees to experience more meaningfulness (Pierce et al., 2009). The tasks of a shop assistant may lack these three characteristics. Although positive interpersonal relationships among the team members can help the employees to find meaning in their work, the marginal effect indicates that its influence is limited.

Finally, it is also possible that the job design and organisational-level approaches would be more effective to enhance psychological meaningfulness. For instance, previous studies have shown that the nature of the work, how the organisations designed the jobs and how the organisations communicate meaningful values are salient predictors of psychological meaningfulness (Hansen *et al.*, 2014). Given that among the three psychological conditions, meaningfulness is the most salient determinant of personal engagement, it may need more than a supportive team environment to get the individual member to engage. Considering these findings, organisations may want to complement team-level with other organisational- or individual-level interventions to improve their employees' individual engagement.

7.4.3. CROSS-LEVEL MEDIATIONS

The team-level mediation analysis (Section 6.4.2) has revealed that team interpersonal processes and team functional leadership respectively yield direct and indirect effects on team work engagement. The cross-level mediation analysis examined how these two team-level constructs could influence the engagement of the team members at the individual level. The

cross-level mediation analysis examined two possible pathways through which team interpersonal processes may influence individual engagement. The first pathway is via the mediation of team work engagement as a level-2 or upper-level mediator (Bakker *et al.*, 2006). The second pathway is through the level-1 or lower-level mediation of the three psychological conditions of personal engagement, i.e. psychological meaningfulness, safety and availability. Each of these mechanisms will be discussed in separate sections below.

7.4.3.1.THE UPPER-LEVEL MEDIATIONAL ROLE OF TEAM WORK ENGAGEMENT

The upper-level mediation analysis is aimed to examine the presence of emotional contagion among the team members. The result showed a significant indirect effect of team interpersonal processes on personal engagement. This finding offers further support to the existence of an emotional contagion process among the team members (Hatfield et al., 1994). According to this theory, an engaged team member may subconsciously transfer her positive affect to her peers through daily interactions. The positive relationship between team interpersonal processes and personal engagement in this study adds support to this theory.

The company's culture that encourages friendly and familial relationships among employees might have also played a role in promoting this contagion process. For instance, the team leaders sometimes arrange informal team activities outside office hours with the team members. The company also regularly conducts training events for the employees in which the HR department attempted to make the employees feel welcome in the organisation. These rituals might have enhanced the quality of interpersonal relationships among the team members in their day-to-day work. Kahn and Heaphy (2014) reckon these

processes as energising interactions that enhance the employees' psychological availability. The iteration of these energising interactions would make each team member experience a shared feeling of their collective team energy, which Costa et al. (2014) noted as team work engagement. Teams that successfully accumulate a high level of team work engagement may influence each individual member to experience moments of personal engagement more frequently due to similar emotional contagion processes (Hatfield et al., 1994; Bakker 2006).

Finally, as more of the team members experience moments of personal engagement, they may bring further energy to the team in the following team process cycle (Costa et al., 2014). Van Mierlo and Bakker's (2018) study demonstrated that teams that have an individual member who is highly engaged tend to have higher collective team work engagement. This is likely because these engaged individuals initiate more energising interactions with their team members over the course of the team processes (Kahn and Heaphy, 2014; Costa *et al.*, 2014). The repetition of these processes may eventually lead to the formation of a virtuous cycle between team and individual engagement.

The significant result from the upper-level mediation analysis shows that maintaining a high level of interpersonal processes could be the key to triggering the virtuous cycle between team and individual engagement. On the contrary, interpersonal problems among the team members may bring the team into a vicious cycle that can erode both team and individual engagement. The presence of the virtuous cycle between the team and individual engagement may explain what Knight *et al.* (2017) found in their study of interventional studies on employee engagement. Knight *et al.* (2017) found no significant difference between the type of interventions aimed to improve employee engagement, that is whether the interventions aimed to improve job resources, personal resources, leadership, or health

promotion. Yet, they found that interventions delivered toward the team were significantly more effective than those conducted toward individuals.

Sonnentag et al.'s (2012) study has demonstrated that individual engagement fluctuates on a daily basis (Sonnentag *et al.*, 2012). The malleability of individual engagement may explain why the effect of engagement interventions that were directed to individuals without involving their team is less pervasive. On the contrary, this study's findings may explain why engagement interventions directed toward work teams have a more lasting effect, because of the virtuous engagement cycle.

Considering the vital role of team interpersonal processes in improving employee engagement, organisations may want to consider approaches that promote high-quality interpersonal processes in their work teams. In alignment with Ulrich's (1986) approach to strategic HR, this thesis maintains that the role of internal team leaders is vital in nurturing the interpersonal processes within their teams. Using the functional leadership approach (McGrath, 1964; Morgeson et al., 2010), this study has shown that the internal team leader can influence the quality of their team's interpersonal processes by executing five leadership functions, i.e. defining mission, establishing expectations and goals, providing feedback, performing team tasks and supporting social climate.

In conclusion, this upper-level mediation analysis has supported further evidence for the existence of emotional contagion within work teams. In alignment with previous scholars (Bakker et al., 2006; Costa et al., 2014; Bakker and van Mierlo, 2018), this thesis found that like other affective constructs, engagement can spread across the team members through a subconscious emotional contagion mechanism. This study has further emphasised the

importance of developing quality interpersonal processes within a work team. Whilst previous studies have indicated that social supports are essential to maintaining individual engagement (Xanthopoulou *et al.*, 2008; Sawang, 2012, Gan and Gan, 2014; Crawford *et al.*, 2010), they have examined this link with little attention to how the work team upon which the employees were nested. This study went further by demonstrating how the interpersonal relationships that form among the team members may empower the team as a collective unit and the individual team members to engage more in their work. Nurturing the quality of the interpersonal processes within a team can be a promising approach to improving and sustaining employee engagement over time. However, further studies that use longitudinal or experimental designs are needed to support this claim.

7.4.3.2. THE LOWER-LEVEL MEDIATIONAL ROLE OF THE THREE PSYCHOLOGICAL CONDITIONS OF PERSONAL ENGAGEMENT

Bakker et al. (2006) assert that other than through emotional contagion, work engagement can spread across co-workers through the empathic crossover mechanism, which is transference through a conscious cognitive process by "tuning in" to the emotions of others. (Westman, 2001). They propose that during work interactions an employee imagines how she would feel in the position of others and therefore experiences the same feelings. In the context of personal engagement, Kahn and Heaphy (2014) proposed similar transference processes. They argue that employees would tune in to the work environment. In different ways, a supportive workplace would make the employees deepen the meaning of work, feel safer to express themselves and encounter energizing interaction.

The lower-level mediation analysis is aimed to examine the presence of the empathic crossover mechanism among the team members. This analysis examined the mediational role of psychological meaningfulness, safety and availability on the relationship between team interpersonal processes and personal engagement. Unfortunately, all these three mediations evidenced non-significant results. Although team interpersonal processes were positively related to psychological meaningfulness, safety and availability (Section 6.4.3.4); they did not further influence personal engagement. Thus, this study did not find sufficient evidence that engagement spread across the team members through the emphatic crossover mechanism.

These non-significant results could be due to two interrelating factors. As indicated in the individual-level analysis (Section 6.4.1), personal engagement is strongly linked to psychological meaningfulness. However, the top-down analysis of this study (Section 6.4.3.4) showed that team interpersonal processes were only weakly correlated with psychological meaningfulness. By combining these two factors, it can be inferred that the interpersonal processes within the team have not afforded the individual employees a sufficient level of psychological meaningfulness to push them to experience more personal engagement. Similarly, although the team interpersonal processes could influence the individual team members to have more psychological safety and availability, these were not sufficient to bring them to moments of personal engagement because psychological meaningfulness is lacking.

As previously mentioned in Section 7.4.2, the job characteristics of the participants of these studies that are relatively low on skill variety, task identity and task significance might have also contributed to this non-significant finding. Although the company adopted a collegial culture that emphasises a sense of belonging and it operates in Indonesia which has collectivistic culture, these have not helped the participants to experience personal

engagement more frequently. This result further emphasises the importance of having psychological meaningfulness in promoting personal engagement, which aligns with the research findings from previous research (Steger *et al.*, 2013; Lee *et al.*, 2016).

The other factor that might explain this non-significant finding is the use of Kahn's (1990) personal engagement, which was operationalised using Rich *et al.*'s (2010) JES, rather than using Schaufeli *et al.*'s (2002) UWES. Shuck *et al.* (2017) have demonstrated that JES shares less variance with job satisfaction, job involvement and organisational commitment than UWES. This reflects the conceptualisation of Kahn's (1990) personal engagement which focuses on how individuals extend or withdraw themselves from their work roles. This negotiation between themselves and their roles appears to be driven to a large extent by psychological meaningfulness (May *et al.*, 2004; Chen *et al.*, 2011; Olivier and Rothmann, 2007).

In conclusion, the cross-level mediation analyses suggest that engagement spread across the team members through unconscious emotional contagion process rather than conscious evaluation through emphatic crossover mechanism. Although a supportive work environment may improve employees' psychological meaningfulness, safety, and availability, it does not necessarily introduce the experience of personal engagement. This study's result suggests that engagement can spread across the team from another member who has been highly engaged. Transference of engagement may also occur in teams with a high level of team work engagement. Further, this finding can infer that a team needs to develop a sufficient level of team work engagement before it can influence its members to experience more personal engagement. Conversely, a team would not be able to engage the individual team members if it has not formed enough team work engagement.

One factor that can potentially influence the emergence of team work engagement is the frequency of interpersonal interactions among the team members. In their study involving 62 employee dyads, Bakker and Xanthopoulou (2009) found that the frequency of daily communication moderates the crossover of daily work engagement between the two employees. Although this study examined the dyadic relationships between two employees, it is reasonable to assume that a similar pattern will apply to team members as the relationships among the team members can be considered multiple dyads. Therefore, it is plausible to suggest that in addition to the quality of the interpersonal processes, the frequency of these interactions could also significantly contribute to the emergence of team work engagement.

For example, teams with high-quality interpersonal processes, in which each team members are supportive and care for one another may develop little team work engagement if they rarely interact with one another. This could be the case with jobs that requires the employee to do lone tasks, such as those who work in call centres. In this case, the team members may have excellent interpersonal relationships, but do not develop a collective engagement among themselves because of the limited interactions. Another work setting that may afford the team members little interaction is that of virtual teams (Bell and Kozlowski, 2002). For instance, scholars have noted that the amount of interpersonal communication in virtual teams is limited as they use communication media that are lower in richness and synchronicity (Lebie *et al.*, 1995; Martins *et al.*, 2004). Saphiere (1996) found that virtual teams with more frequent informal communication tend to be more productive. Other scholars have shown that virtual teams tend to have a lower level of group cohesiveness than face-to-face teams (Warkentin *et al.*, 1997). Based on these findings, developing team work

engagement, which shares a similar affective attribute with group cohesiveness, could be a challenge in virtual teams.

In a work context in which team interaction is infrequent, the team leaders could adopt a functional leadership approach (Kozlowski *et al.*, 2009). This approach calls on the leader to fulfil what the team needs that, in this case, points to more frequent interpersonal interactions. For instance, the team leader can create social events outside of working hours. In a virtual team setting, the team leaders could, for instance, initiate an informal group chat and ask the team members to share their life experiences which would allow for more informal conversations among the members. Although this type of initiative was not listed in Morgeson *et al.*'s (2010) taxonomy of team leadership functions, the advantage of adopting a functional approach to leadership relies upon the flexibility to initiate fitting actions to serve the needs of the team.

7.5. SUMMARY OF CHAPTER 7

This chapter has discussed the research findings of this study and discussed how they have advanced the current understanding of different research areas. The individual-level analysis showed results that are consistent with previous studies (May *et al.*, 2004; Chen *et al.*, 2011), whereby psychological meaningfulness was found to be the strongest factor of personal engagement followed by psychological availability and psychological safety respectively. The team-level analysis demonstrated that team functional leadership influenced team interpersonal processes and indirectly influenced team work engagement, that in turn, affected perceived team performance. The cross-level mediation analysis results suggest that

team interpersonal processes influenced the individual members' personal engagement via team work engagement, rather than through influencing the individuals' sense of psychological meaningfulness, safety and availability. The team leader may influence the emergence of team work engagement by executing their leadership functions.

However, it is to be noted that the contextual factors, namely the organisational culture and the national culture of Indonesia might have also played a role in these positive significant findings. While teams with a higher level of functional leadership and interpersonal processes may lead to more engaged teams and better-performing teams in the context of this organisation, it may not necessarily imply that this applies to other work contexts. On the one hand, the homogeneous nature of the participants has allowed this study to control for endogeneity. On the other hand, the researcher was aware that this approach would to some extent reduce the generalisability of the study as the findings of this study may only apply to other organisations that share similar contexts (Javidan et al., 2006). For instance, the finding of the study may be generalisable to mid-size family-owned firms in other Confucian or far east countries in Ronen et al.'s (2013) taxonomy. But, future studies need to further examine whether this effect would be present in organisations in different cultural groups and different industries.

These findings have extended the current understanding of how work teams influence employee engagement and have several implications for practice. The next chapter of this thesis will discuss these in greater detail. Thereafter, the limitations associated with this research will be disclosed. It will then convey a few suggestions for future research before ending the thesis with a concluding remark.

CHAPTER 8
RESEARCH CONTRIBUTIONS, LIMITATIONS AND CONCLUSION

8.1. INTRODUCTION

The previous chapter has discussed the research findings that this study found. This last chapter of the thesis will conclude the thesis by first highlighting this thesis' contribution to the theory and its implication for the practitioners. The chapter continues to note a number of limitations associated with this study and proposes some recommendations for future research. Finally, the chapter ends with a concluding remark that links the study back to the research aim followed by the author's reflection on the research journey.

8.2. CONTRIBUTIONS TO THEORY

This thesis contributes to three different bodies of literature, that is employee engagement, team effectiveness and team leadership literature in a few different ways. This section will discuss how this study contributes to each of these three subject areas. The thesis contributes to the literature on employee engagement in three different ways. First, it shows that team interpersonal processes can play an important role in fostering employee engagement. Previous research has shown that collegial support is a key predictor of employee engagement (Crawford *et al.*, 2010; Bailey *et al.*, 2017). However, despite a large

portion of interpersonal interactions among the co-workers occurring within their work teams (Chen and Kanfer, 2006), the role of the work team in shaping this supportive working environment has been overlooked. In alignment with the team processes theory (Marks *et al.*, 2001), this study has shown that the quality of team interpersonal processes affects the emergence of team work engagement and subsequently enhances team performance and individual engagement.

Along with previous scholars (Torrente et el., 2012; Gaspar, 2016; Guchait, 2016, Mäkikangas *et al.*, 2016), this thesis has further emphasised the importance of involving the work teams in promoting employee engagement. While Torrente *et al.* (2012) showed that team social resources as key predictors of team engagement, this study went further by showing the mediating process that may explain why social resources are needed in promoting team engagement. Supportive teams create a safe haven for their members so that they can express themselves to each other with more ease (Kahn and Heaphy, 2014). In this supportive environment, the team members help to regulate each other's affect, creating energising interactions that boost motivation and handle conflict more effectively (Costa *et al.*, 2014; 2015). These positive interpersonal processes among the team members, in turn, facilitate the emergence of team work engagement (Costa *et al.*, 2014).

The second contribution that this thesis adds to the employee engagement literature is that it further explains how employee engagement spreads across the team members. Previous research has suggested that team engagement induces a crossover effect on the team members (Bakker *et al.*, 2006; van Mierlo and Bakker, 2018). This study gives additional evidence that this process occurs through a subconscious emotional contagion mechanism (Hatfield *et al.*, 1994). Furthermore, this thesis has revealed that the emotional contagion may

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only occur if the team develop a sufficient amount team work engagement. In other words, the team would need to pass a certain tipping point before engagement starts spreading across the members. This finding relates to van Mierlo and Bakker's (2018) study that found engaged teams tend to have one individual member who is highly engaged. This study can further suggest that as this highly engaged member interacts with the other members, this person helps the team to pass through the engagement threshold. As the team tips over that threshold, team work engagement starts to form and subsequently lifts the other members' engagement level. This may further indicate that there is a reciprocal relationship between the team and individual engagement that forms a virtuous engagement cycle over the lifespan of the work team (Costa *et al.*, 2014).

The presence of this virtuous cycle adds to the importance of involving the work teams in engagement-building initiatives within an organisation. Previous studies have shown that interventions aimed at improving engagement are more effective and have a more pervasive effect if they are administered to the teams as opposed to individuals (Knight *et al.*, 2017; 2019). This study can point to an early indication that this prolonged effect is due to the presence of a virtuous engagement cycle within the work team. The engagement interventions might have improved the individual engagement of some team members. As these individuals interact with their team members, they help the team to develop more team work engagement and start the virtuous cycle. This cycle might help the individual member to sustain their engagement level over time, which was apparent in Knight *et al.*'s (2019) meta-analysis results.

Third, this multilevel study has highlighted the different roles of having psychological meaningfulness, safety and availability in promoting engagement. This study found the same

pattern as those discovered in previous research (May *et al.*, 2004; Olivier and Rothmann, 2007; Chen *et al.*, 2011), in which psychological meaningfulness has the strongest correlation with personal engagement, followed by psychological availability and psychological safety. This pattern holds despite the four studies using samples from different countries who worked in different industries and were taken at different times. This coherent finding suggests that experiencing engagement may to a large extent depend on whether the individuals perceived their work as meaningful.

However, while team interpersonal processes were found to be strongly correlated with individual psychological safety and availability, this study has only found a weak link between team interpersonal processes and individual psychological meaningfulness. This finding suggests that while a supportive team can help its members to feel more safe and more available, it may not improve the feeling of meaningfulness to the same extent. This may further imply that how employees draw meaning out of their work is more strongly driven by other organisational factors rather than the interpersonal relationship among the team members. For example, the job design with more autonomy and how the employee fits with the job and organisation may be more salient predictors of psychological meaningfulness rather than the team environment (May *et al.*, 2004; Crawford *et al.*, 2010).

Nevertheless, this study has shown that individual employees can still get engaged if they are nested in teams with a high level of team work engagement, irrespective of their score on individual psychological meaningfulness. Although having a meaningful job would be the ideal scenario for most employees, a large proportion of the workforce may have to work in jobs that they are not too passionate about (Jachimowic, 2019). This study can suggest a

different approach for this workforce population, that is by promoting focusing on fostering team engagement rather than on the individuals.

This study contributes to the team leadership literature by showing how team leaders could influence the engagement of their team members by using a team-centric leadership approach. In a work team, the team leader usually has the formal authority to manage how things work within the team. However, there is not much known about what team leaders should do to improve the level of engagement within their teams. Studies that examined the link between leadership and employee engagement have mainly focused on observing how the leadership styles of the team leader and how the dyadic supervisor-subordinate relationship influences the subordinate's engagement (Carasco-Saul *et al.*, 2015). On the other hand, studies that investigated leadership in teams have not considered how team leadership can promote engagement either at the collective team level or at the individual level (Kozlowski *et al.*, 2016).

This thesis has addressed this research gap by showing the mediational relationship between the team leaders' functional leadership, team interpersonal processes and team work engagement. This finding suggests that team leaders can influence their team engagement by executing the five leadership functions, i.e. defining mission, establishing expectations and goals, providing feedback, performing team tasks and supporting social climate (Morgeson *et al.*, 2010). By doing these leadership functions, the team leader could influence the quality of the interpersonal processes within the team and thereby facilitating the emergence of team work engagement.

This team-centric leadership approach has a distinct advantage in promoting engagement over the traditional leader-centric approaches. By focusing on nurturing the team process, the team leaders would be able to distribute their leadership duties so that the team members can become additional sources of leadership (Kozlowski *et al.*, 2016). When applied successfully, this approach can turn a work team into a powerhouse in which each member becomes a source of motivation and energy for the other (Kahn and Heaphy, 2014). At this stage, the team leaders would be able to shift their focus to other issues that need their attention while monitoring the level of their team work engagement.

Finally, this study contributes to the team effectiveness literature by adding additional evidence to support the positive association between team work engagement and team performance. At the individual-level employee engagement has received strong attention from both the practitioner and academicians partly because the construct is associated with both in-role and extra-role performance (Bailey *et al.*, 2017). Given that team work engagement shares functional equivalence with individual engagement, it is likely that it would as well induce a positive effect on team effectiveness as it points to the level of motivation and activated energy within a work team (Costa *et al.*, 2014). Yet, team work engagement has only been sparsely used in the field of team effectiveness research (Mathieu *et al.*, 2019). In alignment with previous scholars (Torrente *et al.*, 2012; Guchait, 2016; Mäkikangas *et al.*, 2016; Costa *et al.*, 2015), this study has also discovered that team work engagement positively correlates with leader-rated team performance.

8.3. CONTRIBUTIONS TO PRACTICE

This study offers practical contributions to a range of different audiences. This study proposes a few insights that are relevant to not only the HR managers but also team leaders and external HR professionals who provide training and consultancy services. The first contribution that is primarily relevant to HR managers is that this study highlights the important role of nurturing the interpersonal processes within work teams in developing engagement. Approaches and initiatives to improve employee engagement in organisations have commonly focused on the organisational-level approach, with the HR department as the leading actor. For instance, HR consulting firms have commonly proposed various employer branding strategies to help improve engagement (Acuna and O'Keefe, 2020; Young, 2019). While academic scholars have recently proposed employee engagement as one indicator to track the effectiveness of their HR strategies (Jenkins and Delbridge, 2013; Shuck *et al.*, 2017). However, Knight *et al.*'s (2019) meta-analysis studies suggest that only half of the interventional studies aimed to improve engagement showed significant positive results.

This thesis offered an alternative approach to improving employee engagement in organisations by focusing on the team level. For instance, this study can suggest firms keep track of team-level constructs, such as the quality of interpersonal processes, team work engagement, and team performance. While it is quite common for firms to measure team performance for their sales teams, team-based indicators for work teams that operate in other business functions are often neglected. For example, measurements of team performance, team work engagement and team interpersonal processes would be useful for work teams that share similar characteristics with this study's participants. By having these measures, the

HR managers would be able to detect earlier symptoms when the teams are not functioning well before their customers can notice the difference.

There is an uprising trend that corporations measure employees' engagement regularly and frequently through what is often called pulse surveys (Brown, 2022). The key benefit of this approach is that it allows the HR management team to see how their employees' engagement fluctuates over time (Jolton et al., 2020). This, in turn, enables HR management teams to link the raising or declining level of engagement with specific events happening within the company and act more quickly when they see a drop in their employees' engagement level.

However, administering an engagement pulse survey at the individual level, which is the typical setup used in practice (Brown, 2022), might come with two inherent shortcomings. First, this approach would show only the aggregate index of employee engagement at the organisational or departmental level. Consequently, the HR managers would only be alerted if there is a significant increase, or more importantly, decrease in the overall engagement level of the company. By this point, some forms of organisational performance have likely been compromised before the HR managers can take any action. Second, this aggregate index could not directly inform the specific sectors of the organisations that reported significant drops in engagement levels. This will make the investigation of the issues that erode the engagement more difficult.

In contrast, by administering a pulse engagement survey at the team level, HR managers would be able to identify the specific work units that experience significant drops in engagement. They can then work with the respective team leaders to identify any problem

and act more quickly to resolve the issues. In this era where agility and speed are paramount for the survival of an organisation (Franco et al., 2022), this preventive strategy would allow the organisation to act faster. Furthermore, by measuring the quality of the team interpersonal processes in addition to team work engagement, an organisation may have an earlier detection system that can alert the HR department of the potential issues that may impede the employees to engage with their work. The interpersonal processes among employees are often overlooked in organisations. This thesis has demonstrated that these subtle processes could be pivotal in cultivating highly engaged work teams and individuals.

Second, the findings of this study suggest that the internal team leader may influence the quality of the interpersonal processes in their team by executing their leadership functions. This study finding may offer a recommendation for relevant organisational leaders to assign a more central role to the team leaders in developing the engagement of their team members. Rather than centralising the engagement initiatives at the organisational or departmental level, this study suggests involving the team leader to actively participate in nurturing the engagement level of their teams. This approach is in line with Ulrich's (1986) approach to strategic HR which encourages the line managers to take a more prominent role as employee champions so that the HR department can focus on their role as strategic partners for the company. As an example, the HR managers could share the scores of the interpersonal processes of their respective teams. The two parties could then discuss further ways to improve these processes by examining the leadership functions that have not been properly addressed (Morgeson *et al.*, 2010). Furthermore, the HR managers could decide whether additional leadership approaches from external parties are needed to help the teams.

For the team leaders, this study has highlighted how a team-centric leadership approach could be beneficial in developing employee engagement. Previous research has shown a positive association between employee engagement and several leadership styles such as transformational leadership, authentic leadership, charismatic leadership and ethical leadership (Carasco-Saul *et al.*, 2015). However, these leader-centric approaches mean that the team leader would have to always assume the role of the sole leadership source for their team while the demand for agility in the context of the current dynamic era may require additional sources of leadership (Richardson *et al.*, 2010; Morgeson *et al.*, 2010). The functional leadership approach calls for the team leaders to empower their team so that they encourage one in the process of achieving the team goal (Kozlowski *et al.*, 1996).

For HR managers, this team-centric leadership approach can give further advantages in succession planning strategy. In organisational life, it is often observed that some individuals are naturally better leaders than others. A focus on leader-centric leadership approaches may mean that the team's performance might be more dependent on the capability of the leader. For example, a team may engage and perform well when a particular leader led the team, but their engagement and performance drop as soon as that leader was promoted or assigned to another team. On the contrary, the focus on cultivating effective team processes, especially the team interpersonal processes, may mean that the engagement and the performance of the team would be less dependent on one specific person. This may enable the team to better sustain their engagement over the long term whereby changes in team personnel are inevitable.

Third, this study can suggest a useful approach to improve engagement for jobs that offer little intrinsic rewards. This study has found that psychological meaningfulness is a critical

factor in developing personal engagement. Unfortunately, not all jobs can offer meaningful value for the employees. However, it can be difficult for individuals to draw meaning out of some jobs that involve repetitive and routine tasks, such as those in manufacturing assembly lines or cleaning services. In these types of blue-collar jobs that often elude research attention, the monetary reward that the job offer may be the sole reason that motivates the employees. In this context, high quality of interpersonal relationships among co-workers can offer an additional motivational source for the employees. Although the finding of this study suggests that a high quality of the team interpersonal processes might not always make the employees perceive the jobs as more meaningful, it could at least make the employees feel more energetic and comfortable expressing themselves at work, which could be useful for their wellbeing.

Finally, the findings of this study can point to the significance of the loss of team interpersonal processes in the post-covid workplace that becomes increasingly virtual. As virtual meetings replace physical ones and employees work from home instead of meeting in the office, the employees have lost a significant number of physical interactions with their colleagues. Even in the post-COVID era, teams are increasingly becoming permanently virtual due to the advancement of information technology. This reduces the frequency of interpersonal processes and thus risks depleting their engagement. This finding echoes the concern that team virtuality can lead to performance losses as it impedes critical team processes such as coordination and both formal and non-formal communication (Cramton and Orvis, 2003; Powell *et al.* 2004).

The findings of this study may suggest that it would be necessary for organisations to find a substitute for these interpersonal processes in the virtual world. Handke *et al.*'s (2019)

systematic review on the field of virtual teams has suggested that setting up a collective

output or also known as outcome interdependence and provision of resources such as

autonomy, feedback and social support may help virtual teams to function better. Among

these predictors, the provision of social support seems to be the closest that can replace the

physical interactions within the team. One possible way could stimulate social resources

virtual setting is by using an informal computer-mediated communication channel. For

example, some online work instant messaging platforms allow the team to create multiple

channels, each for a specific purpose. The team may create an informal lounge where they can

share their thoughts. In this instance, the team leader may want to initiate the conversation

and attempt to involve others. In the future, the metaverse may enable virtual teams to have

a more similar experience to physical interpersonal interactions.

8.4. RESEARCH LIMITATIONS

Despite its contribution to theory and practice, this study is bounded to several limitations. First, although this study derived its conceptual model from established theories that can suggest directional relationships, the cross-sectional research design that this study used means that it cannot infer causality. This limitation is down to the inability of a cross-sectional research design to control for endogeneity, that is the possibility that the dependent variable is correlated with the error terms of the independent variable (Annotakis *et al.*, 2010). When this endogeneity issue is not controlled, the research model cannot claim that independent variables cause the dependent variable. Rather, the design can only infer that the two variables are associated and leave the possibility that other unknown variables associated with the error term are what causes the variance in the dependent variable.

Scholars proposed a few methods to account for this endogeneity issue (Antonakis *et al.*, 2010). One of the methods that are commonly adopted in management studies is by adding instrument variables as covariates and using 2-stage least square regression (Antonakis *et al.*, 2010). An instrument variable is a construct that is correlated to an independent variable but not to the error term (Wooldridge, 2003). However, selecting appropriate instrument variables is difficult especially in the field of organisational psychology as one cannot be certain that the variables do not link with the error term. This is particularly the case with the independent variables of this study (i.e., team functional leadership and team interpersonal processes). Thus, this study did not use this approach.

Another avenue to minimise endogeneity in social science is by using repeated time measures data, such as longitudinal studies, time series, or panel data (Antonakis *et al.*, 2010).

By using time-lagged data, the researcher may be able to reduce endogeneity by eliminating the individual fixed effect. In this case, the researcher can have more certainty that independent variables do not include error term that correlates with the dependent variables (Antonakis *et al.*, 2010). Although, Spector (2019) argues that separating measurements in time may not give a conclusive causal-effect inference if it fails to choose time points so that causes are assessed before effects. For instance, inference of causality will be limited in a longitudinal study that chooses arbitrary points in time whereby the underlying causal process has been completed may and the system has achieved the equilibration point (Mitchell and James, 2001) or the steady-state (Spector, 2019). Unfortunately, the researcher did not find access to organisations that had enough numbers of newly-formed teams that are willing to participate as the respondents of this study. Thus, this thesis opted to use a cross-sectional design.

Nevertheless, this does not mean that the results that this study revealed are meaningless. Although the use of a cross-sectional design implies that the effect detected in this study cannot be claimed as causal effects, it can still infer a valid conclusion about the relationships between the variables. The study then drew on the established theoretical underpinning to interpret these positive relationships.

The second limitation associated with the cross-sectional design that this study used is the potential issue with CMV. This study collected the data for all the variables from the team members, except for perceived team performance data which was collected from the team leader. This means that CMV might inflate the strength of the relationships among the variables that were obtained from the team members (Spector, 2006). To minimise this common method bias, this study followed Podsakoff *et al.*'s (2003) suggestions in designing

the data collection strategy, such as randomising the order of the items for each respondent and clearly separating each section in the questionnaires. However, this study was not able to collect the questionnaire at different times because of difficulties in negotiating access with the host company.

Nonetheless, the study ran a statistical procedure as outlined in Tehseen *et al.* (2017) to test the severity of the CMV in the data. The correlation matrix and Harman's single test factor have suggested that the amount of CMV in the dataset was acceptable. Thus, it can be inferred that the data was not significantly skewed by the bias from using a common method in collecting the data.

The third limitation of this study is that it only measured the quality but not the frequency of interpersonal interactions among the team members. Previous research has shown mixed results relating to the effects of frequent interpersonal interactions on team performance (Bell *et al.*, 2011). Some found that frequent interpersonal interactions link to better performance (Kozlowski *et al.*, 1999) while others suggested that this effect will only apply to newly-formed teams (Abrantes *et al.*, 2020). This study has contributed to this discussion by showing that the quality of interpersonal processes can positively influence team performance through the mediating role of team work engagement. However, it did not measure whether the frequency of these interpersonal interactions can promote team work engagement. Future research can investigate this link to shed further light on how interpersonal interactions influence team performance.

The fourth limitation of this study is that it only investigated one leadership approach, i.e. team functional leadership. Although this approach has demonstrated how team leaders

can promote the emergence of team work engagement through enhancing the team's interpersonal processes, the use of a single leadership approach could not assess how effective this approach is relative to other leadership measurements. For instance, future research could compare the effectiveness of team-centric leadership approaches with the traditional leader-centric leadership styles that have been positively linked to individual engagement, such as transformational leadership, authentic leadership, and charismatic leadership (Avolio and Walumbwa, 2009; Carasco-Saul *et al.*, 2015).

In addition to the four limitations above, there are two other limitations that this study has relating to the individual-level variables that the study used. Among the four individual-level variables (i.e., psychological meaningfulness, safety, availability and personal engagement) only psychological availability exhibited an intrateam correlation (ICC1) above the 0.05 threshold (Bliese, 2000). This indicates that there was not a significant difference between the teams regarding the average scores of the psychological meaningfulness, safety and personal engagement of the team members. The low intraclass correlation scores mean that despite their significant correlations, the effect of the team-level variables only explains a small variance of these three individual-level variables.

The low ICC1 scores for personal engagement, psychological meaningfulness and psychological safety could be due to the sampling selection that this study used. The participants of this study include teams of shop assistants that work within one organisation. They were doing relatively similar tasks across the teams and did their jobs according to a pre-set standard operating procedure. In addition, the organisation trained all its employees in a central facility and maintained a similar working culture across its shops. This similar work context across the team may reduce the variability within the teams and thus limit the

influence of the team environment on the three individual-level variables, i.e. psychological meaningfulness, safety, and personal engagement. The use of similar work tasks and organisational culture was intended so that it controls the effect of the work context so that the study has more confidence in associating the observed effect with the team-level predictors. However, this restriction may unintentionally reduce the effect of the team-level factors on the three individual-level variables.

8.5. SUGGESTIONS FOR FUTURE RESEARCH

Reflecting upon the research journey and the limitations of this research, this thesis proposes a few recommendations for future research. First, this study has shown that team interpersonal processes indirectly influence personal engagement through team work engagement. This result has hinted that team interpersonal processes could be useful in maintaining employee engagement over time. However, due to its cross-sectional design, this study could not examine whether these team-level variables provide a lasting effect. Future studies could use a longitudinal method to examine how pervasive the effect of team interpersonal processes is on employee engagement.

Second, this study has found that cultivating effective interpersonal processes within the team alone may not be sufficient to influence the team members' personal engagement (Section 7.4.3.2). The team may need to develop a sufficient level of team work engagement before they can influence their members to experience personal engagement more frequently (Section 7.4.3.2). It is interesting to examine what are the other factors that can facilitate or moderate the relationship between team interpersonal processes and team work

engagement. For instance, future studies can examine whether the frequency of interaction among the team members may be a moderator to this relationship. Alternatively, future studies could examine if the team leader could influence this relationship by using their leadership or by committing more frequent interactions with each of the team members.

Third, this study found that team interpersonal processes may trigger a virtuous cycle between team and individual engagement. This virtuous cycle could be a plausible explanation for what Knight *et al.* (2017) found in their meta-analysis of interventional studies directed to improve employee engagement. Knight *et al.* (2017) discovered that interventions directed to the group have a more positive impact on employee engagement. It is plausible to suspect that this significant positive effect is due to the presence of the virtuous cycle between team and individual engagement. However, this has not been tested. Therefore, future researchers could conduct experimental studies that intervene with the quality of interpersonal processes within the teams. The studies could then measure the level of team interpersonal processes, team work engagement and individual engagement of the participants at a few different time points to observe two things: first, whether the interventions can lead to a high level of team work engagement and, second, whether a high level of team work engagement can prolong the intervention effect of team interpersonal processes on individual engagement.

Fourth, along with other studies (e.g., Torrente *et al.*, 2012; Costa *et al.*, 2015), this study has shown the link between team work engagement and perceived team performance. However, the cross-sectional designs of these studies have limited the understanding of how this relationship changes as the teams progress. It would be interesting to examine how the relationship between team work engagement and team performance unfolds throughout the different team development stages. Previous scholars have highlighted that teams typically go

through different development stages. For instance, Tuckman's (1965) classic group development model submits that teams typically go through four development stages, i.e. forming, norming, storming, and performing. More recently, Kozlowski *et al.* (2009) proposed four different stages in developing an adaptive team, i.e. team formation, task and role development, team development and team improvement. Future studies could measure the two constructs at the different team development stages and observe the dynamic relationship between team work engagement and team performance, as well as whether teams with high levels of team work engagement could sail through the different development phases at a faster rate.

Fifth, this research has examined how a team-centric leadership approach (i.e., team functional leadership) has influenced employee engagement. Yet, the research finding suggested that team functional leadership has a limited influence on individual psychological meaningfulness. In alignment with Dinh *et al.*'s (2014) suggestion to examine multiple leadership approaches in one study, future studies could compare how the different leadership approaches to influence the three psychological conditions of personal engagement. This comparison could potentially highlight a combination of leadership approaches that are effective in promoting engagement.

Finally, as virtual teams become more common partly due to the impact of the pandemic, it would be interesting to investigate if team interpersonal processes could influence team work engagement of virtual teams. Previous scholars on virtual teams domains have suggested that certain characteristics of team processes, such as teams that have more informal interactions link with better outcomes (Gilson *et al.*, 2015; Martins *et al.*, 2004;

Saphiere, 1996). Future studies could examine whether these informal interactions can help the team improve their collective work engagement.

8.6. CONCLUDING REMARK

Most organisations would want to have employees that are highly engaged in performing their work roles. However, despite the literature having identified numerous factors as predictors of employee engagement, promoting employee engagement in the workplace is still a challenge. The COVID-19 pandemic may have worsened how the employees feel about their work and led to the era of the Great Resignation. This study aims to help organisations combat this issue by reviewing the literature on employee engagement and investigating different ways to promote the level of employee engagement. The investigation reveals that most of these approaches have focused on organisational and individual factors. However, the role of the work teams has often been overlooked. Therefore, this study places its focus on examining the link between employee engagement.

The examination suggests that developing employee engagement in teams may have two distinct advantages rather than focusing on the individuals. First, positive interactions among the team members can potentially help the team to maintain their level of engagement over a longer period. Second, the team-based approach can be particularly useful to be applied to job positions that offer limited intrinsic rewards. Considering these potential benefits, this study investigates how engagement developed within work teams. In doing so, the study used a multilevel perspective and drew from team process literature. It then reveals the important role of team interpersonal processes during the emergence process of team work

engagement. The study then examines what the team leaders can do to help facilitate this emergence process. Finally, the study assesses how team work engagement can influence team performance and the individual engagement of their members. In doing so, this study addresses several identified research gaps and a few key insights that can be relevant for practitioners. Table 8.1 provides an overview of how each research gap is addressed.

First, this study has drawn a further link between team effectiveness and employee engagement literature by integrating the current knowledge of team processes in explaining how engagement develops in work teams. It contributes to these two bodies of literature by showing how team interpersonal processes can indirectly influence team performance by influencing the level of team work engagement. This finding has provided insights that engagement interventions in organisations can focus on improving the quality of interpersonal processes among the team members.

Second, by drawing on the team functional leadership approach, this study has highlighted the critical role that team leaders can do to promote the level of engagement in their teams. Rather than focusing on leadership behaviours, this study has pointed to several pragmatic actions that team leaders can do to nurture the quality of the interpersonal processes within their teams. This finding may be of interest to HR practitioners by suggesting that involving the line managers can be key in delivering successful employee engagement initiatives.

Third, by using a multilevel research design, this study has demonstrated the differences between team and individual-level engagement. It shows that although the individuals' experience of personal engagement is largely driven by their perception of how

meaningful they feel toward their work roles, this study shows that nesting the individuals within an engaged team can push the individual to experience personal engagement more often regardless of the level of their psychological meaningfulness, safety and availability. This finding can inform the practitioners that a team-based approach to promoting engagement in organisations would be particularly useful to be applied in work roles that offer limited autonomy and intrinsic rewards.

Finally, the study shed further light on the process through which employee engagement spread among the team members. It shows that the interpersonal interactions within the team help the transference of employee engagement among team members through the direct effect of team work engagement rather than by influencing the members to feel more meaningful, safe and available. This finding supports further evidence that employee engagement is transferred in a subconscious manner through the emotional contagion process. This may mean that the team would need to start with one or more highly engaged individuals that can initiate the transference processes.

These four areas of contribution that this study submit have attempted to address the issue of lack of engagement at the workplace by highlighting the critical role of maintaining effective interpersonal processes within the teams. This thesis has shown that this construct, which seems trivial and often overlooked in practice, can enable the organisation to bring activation and energy back to the workplace.

TABLE 8.1. ADDRESSING THE KNOWLEDGE GAPS IN THIS STUDY

Category	Description of Knowledge Gaps	How has This Been Addressed in the Study?
Relationship between team effectiveness and employee engagement	• There have been limited studies that examine the role of work teams in promoting employee engagement. These studies have not used a multilevel perspective and integrated the current knowledge of work team literature. • Despite its widespread use at the individual level, there has been limited use of team work engagement in team effectiveness research.	• This study draws from team process literature to conceptualise how team work engagement developed within teams • This study demonstrates that team interpersonal processes indirectly influence team performance via team work engagement.
Relationship between team leadership and employee engagement	• The vast majority of studies that examine the link between leadership and employee engagement have focused on the dyadic relationship between the supervisor and the subordinate while the role of the work team has been neglected. • • It is unclear what the team leaders can do to promote the engagement of their team.	• This study used a team-centric leadership approach to investigate how the team leader can influence employee engagement by developing the interpersonal processes within the team • This study shows that the team leader can influence team interpersonal processes by executing their leadership function. By doing so, they may indirectly facilitate the emergence of team work engagement.

TABLE 8.1. ADDRESSING THE KNOWLEDGE GAPS IN THIS STUDY (CONTINUED)

Category	Description of Knowledge Gaps	How has This Been Addressed in the Study?
Level of analysis	• There is generally a lack of multilevel research in the employee engagement literature. • It is unclear how team-level phenomena can influence the team members' individual engagement.	• The study shows that team interpersonal processes can promote team work engagement that, in turn, induces a crossover effect on individual engagement. • This study used team referent in the survey questions • This study used data aggregation to measure team-level construct
Crossover of engagement among team members	• There are two competing proposals that can explain how employee engagement spreads across the team. • Examining the two pathways can illuminate the more effective way to improve engagement within the work teams.	• The study shows support for the occurrence of emotional contagion, in which engagement is transferred through a subconscious affect transfer process.

8.7.REFLECTIONS ON PHD RESEARCH JOURNEY

The author conducted this study as a partial requirement for pursuing his PhD degree. In addition to contributing to the development of theory and offering practical recommendations, this PhD research has also impacted the author's personal development. The author would like to share a few areas in which this study has helped him grow as a person.

Over the course of my study, I often heard how a PhD journey could have a transformational impact on a person's life. I am another testament to this transformative phenomenon.

This PhD is one of the most difficult challenges that I have encountered. Prior to doing a PhD, I worked in a marketing department for a brand consulting company while pursuing an MBA degree in Indonesia. I used to lead complex projects involving many stakeholders with a relatively short completion time. In this context, the ability to collaborate with my team members, make rapid decisions and respond to changes are critical for success.

A few months after enrolling on my PhD, I realised that the UK academic setting was very different from anything that I had experienced. I began to slowly understand that the expectations of a PhD student were remarkably different than my previous role.

This research journey compels me to understand the previous scholars' worldviews and use their perspectives to explain social phenomena and ask further questions. In doing so, the ability to systematically explain and defend an argument is paramount. I found that developing this critical and systematic thinking was an immense, yet rewarding challenge.

Rather than solving visible problems, this PhD research journey inquires me to reconstruct the way I think. The discussion I had with my supervisors, the academic conferences I attended, and the late-night conversations with fellow PhD students have made me think about how I think. I started to see that I had been using a thinking method that was not very effective. I was also made aware that my thinking system is susceptible to many biases. This realisation has propelled me to deconstruct my thinking pattern and rebuild a new one.

But, this was far from a linear process. At times, it took me weeks or months going in cycles to shed my old pattern of thinking before I could craft a new one. This process often involved staying overnight in the PhD deck or throwing yet another manuscript into the bin. It sometimes meant walking through the dark feeling of despair before finding that light at the end of the tunnel.

These experiences have not only reshaped my mindset but also my response to facing challenges. I used to feel very uncomfortable if I could not see any way out of a given problem. The PhD journey has taught me to stay calm and composed in dealing with uncertainty and ambiguity.

In hindsight, I can now see that these lessons have changed the way I process my thinking. I now take time to analyse a case before jumping to a conclusion. I question the validity and reliability of the information that I access and whether any preconceptions distorted my own view. In solving problems, I hold myself from sporadically identifying the cause of the issue to ponder for alternative explanations. In writing proposals, I attempt to use

the sentences efficiently and then adopt my readers' perspectives to critically examine for logical fallacies.

Ultimately, this PhD journey has afforded me a new pair of eyes to see the world. Through this lens, I begin to assign a different meaning to life. In these complex arrangements of social networks, I find a way to slow down and reconsider how I want to spend my remaining lifespan.

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APPENDICES

APPENDIX 1. QUESTIONAIRE MEASUREMENT ITEMS

Team Engagement (TWES, Costa *et al.*, 2014)

To what extent that my team relates to the following statements…

At our work, we feel bursting with energy

At our job, we feel strong and vigorous

We are enthusiastic about our job

Our job inspires us

When we arrive at work in the morning, we feel like starting to work

We feel happy when we are working intensely

We are proud of the work that we do

We are immersed in our work

We get carried away when we are working

Team Interpersonal Processes (Mathieu *et al.*, 2019)

To what extent does your team actively work to…

Conflict Management

Deal with personal conflicts in fair and equitable ways

Show respect for one another

Maintain group harmony

Work hard to minimize dysfunctional conflict among members

Encourage healthy debate and exchange of ideas

Motivating and Confidence Building

Take pride in our accomplishments

Develop confidence in our team's ability to perform well

Encourage each other to perform our very best

Stay motivated, even when things are difficult

Reward performance achievement among team members

Affect Management

Share a sense of togetherness and cohesion

Manage stress

Keep a good emotional balance in the team

Keep each other from getting overly emotional or frustrated

Maintain positive work attitudes

Perceived Team Performance (Schaubroeck *et al.*, 2007)

To what extent do your agree with the following statements…

My team is very competent

My team gets its work done very effectively

My team has performed its job well

Functional Team Leadership (Morgeson *et al.*, 2010)

To what extent does your team leader…

Define Mission

Ensures the team has a clear direction

Emphasizes how important it is to have a collective sense of mission

Develops and articulates a clear team mission

Ensures that the team has a clear understanding of its purpose

Helps provide a clear vision of where the team is going

Establish Expectations and Goals

Defines and emphasizes team expectations

Asks team members to follow standard rules and regulations

Communicates what is expected of your team

Communicates expectations for high team performance

Maintains clear standards of performance

Sets or helps set challenging and realistic goals

Establishes or helps establish goals for your team's work

Ensures that your team has clear performance goals

Works with your team and individuals in your team to develop performance goals

Reviews team goals for realism, challenge, and business necessity

Provide Feedback

Rewards the performance of team members according to performance standards

Reviews relevant performance results with your team

Communicates business issues, operating results, and team performance results

Provides positive feedback when your team performs well

Provides corrective feedback

Perform Team Task
   Will "pitch in" and help the team with its work
   Will "roll up his/her sleeves" and help the team do its work
   Works with team members to help do work
   Will work along with the team to get its work done
   Intervenes to help team members get the work done
Support Social Climate
   Responds promptly to team member needs or concerns
   Engages in actions that demonstrate respect and concern for team members
   Goes beyond own interests for the good of the team
   Does things to make it pleasant to be a team member
   Looks out for the personal well-being of team members

Personal Engagement (JES-9, Rich *et al.*, 2010)
To what extent do your agree with the following statements…
   I work with intensity on my job
   I exert my full effort to my job
   I try my hardest to perform well on my job
   I am enthusiastic in my job
   I feel energetic at my job
   I am proud of my job
   At work, my mind is focused on my job
   At work, I devote a lot of attention to my job
   At work, I am absorbed by my job

Psychological Meaningfulness, Safety, and Availability (May *et al.*, 2004)
To what extent do your agree with the following statements…
   Meaningfulness
   The work I do on this job is very important to me
   My job activities are personally meaningful to me
   The work I do on this job is worthwhile
   My job activities are significant to me
   The work I do on this job is meaningful to me
   I feel that the work I do on my job is valuable

Safety

I'm not afraid to be myself at work

I am afraid to express my opinions at work (r)

There is a threatening environment at work (r)

Availability

I am able to handle competing demands at work

I am able to deal with problems that come up at work

I am able to think clearly at work

I am able to display the appropriate emotions at work

I am able to handle the physical demands at work

APPENDIX 2. ETHICS APPROVAL FORM

Henley
Business School
UNIVERSITY OF READING

Henley Business School
Research Ethics Committee

Application for Research Project Approval

Introduction

The University Research Ethics Committee allows Schools to operate their own ethical procedures within guidelines laid down by the Committee. The University Research Ethics Committee policies are explained in their Notes for Guidance (http://www.reading.ac.uk/internal/res/ResearchEthics/reas-REethicshomepage.aspx) . Henley Business School (HBS) has its own Research Ethics Committee and can approve project proposals under the exceptions procedure outlined in the Notes for Guidance. Also note that various professional codes of conduct offer guidance even where investigations do not fall within the definition of research (eg Chartered Institute of Marketing, Market Research Society etc). A diagram of the Research Ethics process is appended to this form.

Guidelines for Completion

- If you believe that your project is suitable for approval by the Research Ethics Committee you should complete this form and return it to the Chair of the Committee. Note that ethical issues may arise even if the data is in the public domain and/or it refers to deceased persons.

- Committee approval must be obtained before the research project commences.

- There is an obligation on all students and academic staff to observe ethical procedures and practice and actively bring to the attention of the Research Ethics Committee any concerns or questions of clarification they may have.

- Records will be maintained and progress monitored as required by the University Research Ethics Committee, overseen by the School Ethics Committee

- This form should be completed by the student/member of academic staff as appropriate. All **forms must be signed by a member of the academic staff before submission.**

- This form is designed to conform to the University's requirements with respect to research ethics. Approval under this procedure does not necessarily confirm the academic validity of the proposed project.

- All **five** parts of the form and **all** questions must be completed. Incomplete forms will be returned. Students should submit forms to their supervisor, who together with staff should pass these to the REC.

- **Student research projects** - initial approval may be given by the academic supervisor. **At the completion of the project students should submit a further copy of the form** to confirm that the research was conducted in the approved manner. **The project will not be marked until this form is received.** If in the course of work the nature of the project changes advice should be sought from the academic supervisor.

1. Project details

Date of submission: Student No.

Title of Proposed Project: The Influence of Team Leadership on Team Members' engagement: A Multilevel Study.

Responsible Persons

Name & email address of principal researcher/student/programme member *(delete as appropriate)*
Wendy Suganda - w.c.suganda@pgr.reading.ac.uk / PhD in Management – Leadership, Organisation and Behaviour

Name and email address of supervisor *(if applicable)*

Dr. Ana Graca – ana.graca@henley.ac.uk
Dr. Ann Parkinson – ann.parkinson@henley.ac.uk
Dr. Caroline Rook – c.rook@henley.ac.uk

Nature of Project (mark with a 'x' as appropriate)

Staff research	☐	Masters	☐
Undergraduate	☐	Doctoral	☒
MBA	☐	Other	☐

(Student research projects should be signed off in **section 2. 3** below by the supervisor)
(Staff research projects should be signed off in **section 2. 4** below by the Research Ethics Committee)

Brief Summary of Proposed Project and Research Methods

Project Summary

Within the last 20 years, studies on employee engagement have been continuously looking for ways for leaders to improve employee engagement levels. However, most of the previous researches have explored ways to enhance engagement from either individual level (e.g. May, Gilson and Harter, 2004; Rich, Lepine and Crawford, 2010) or organisational level (e.g. Schaufeli, Taris and Van Rhenen, 2008; Shuck and Reio, 2011). Despite employees in most modern organisations being nested within teams, the influence of a team as a meso-level membrane that connects the organisational strategy to the individual has often been neglected.

Previous researchers have shown that engagement is fluctuating over time (Sonnentag et al., 2012). This finding has supported the notion that engagement is a transitory psychological state rather than a latent construct (cf. Kahn, 1990, 1992). It goes on and off depending on the situations and contexts that the individual experience throughout the day. The challenge for the leadership is therefore not only to facilitate moments of engagement but also to understand how to sustain engagement over time. In doing so, focusing solely on the leadership style of the leader may not suffice. Therefore, to illustrate how leadership can

sustain employee engagement, this research aims to investigate how team leadership approaches influence team members' engagement over time.

Evidence from a few interventional studies has suggested that leadership training that focuses on managers' skills and knowledge have not efficiently improved followers' engagement at a later time (Knight, Patterson and Dawson, 2017). In contrary, interventions that focus on the group and contextual influence are more effective (Biggs, Brough and Barbour, 2014; Knight, Patterson and Dawson, 2017). Hence, in alignment with other leadership scholars (e.g. Day and Antonakis, 2012; Kozlowski, Mak and Chao, 2016), we echo that consideration of the team as the place in which the team members are nested should be the focal point that deserves leaders' attention. Rather than honing for one-fit-for-all leadership style, a good leader should tailor his/her approach to address team needs. We argue that engagement could be better maintained if the employees are surrounded by other sources of leadership than only from the formal team leader.

We use Kahn's (1990) personal engagement theory in conceptualising employee engagement and observe the construct at both individual and team level. Kahn and Heaphy (2014) assert that the relational context between individuals plays a significant role in nurturing engagement. Viewing this from a multilevel perspective, we suspect that these relational interactions within a team would moderate the compositional emergence of engagement at the team level. This repository of engagement at the team level would then influence individuals' engagement via emotional contagion (Torrente, Salanova and Llorens, 2013). The key for the leaders is therefore to build this team-level property of employee engagement through team interpersonal processes.

Marks et al. (2001) note such interpersonal processes as one of the facets of team processes, defined as the interdependent acts among team member that converts inputs into outcomes through activities directed toward achieving collective goals. Drawing on this theoretical ground, we argue that team leaders can influence these processes by performing leadership functions such as establishing expectations and goals, supporting social climate, and performing team task. The iterations of these processes over time might then emerge into team engagement (Costa, Passos and Bakker, 2014).

Research Method

To test this conceptual model, we employ a quantitative multilevel research design using a sample of 50 teams from a grocery company chain in Indonesia. Aligning with the call from previous scholars to study leadership in broader cultural contexts (Turnbull et al., 2012), this sample company is chosen as it offers nuance of a typical Southern Asian company where in-group collectivism and humane orientation become profound elements at work (House et al., 2004). In this company, employees typically see their acquaintances as their extended families and often spend time outside work with them. There are many instances where employees seem happy to stay overtime without getting any financial compensation.

The respondents, which are based on teams, will be asked to answer an online questionnaire that will take 10-15 minutes to complete. There are two sets of questionnaires. One set for the team leader, and another one for each individual team member. The team members will be asked to express their opinion about their team functioning, the leadership behaviour of their team leader, and how engage they are in their current job. Meanwhile, the team leaders will be asked to appraise their team with respect to its engagement, effectiveness, viability, and the processes within the team. Additionally, the team leader will be asked to express how engaged they are with their current job.

The Information sheet and consent form is available in the first page of the questionnaire. The questionnaire will protect right and confidentiality of the respondents according to the University of Reading Research Ethic Procedure.

☒ I confirm that where appropriate a consent form has been prepared and will be made available to all participants. This contains details of the project, contact details for the principal researcher and advises subjects that their privacy will be protected and that their participation is voluntary and that they may withdraw at any time without reason.

☒ I confirm that research instruments (questionnaires, interview guides, etc) have been reviewed against the policies and criteria noted in The University Research Ethics Committee Notes for Guidance. Information obtained will be safeguarded and personal privacy and commercial confidentiality will be strictly observed.

☒ I confirm that where appropriate a copy of the **Consent Form** and details of the **Research Instruments/Protocols** are attached and submitted with this application.

---

2. Research Ethics Committee Decision (*delete as appropriate*)

2.1 I have reviewed this application as **APPROVED** and confirm that it is consistent with the requirements of the University Research Ethics Committee procedures

2.2 This proposal is **NOT APPROVED** and is returned to the applicant for further consideration and/or submission to the University Research Ethics Committee

2. 3. For student and programme member projects
SUPERVISOR – AT START OF PROJECT   *STUDENT – ON COMPLETION*
OF PROJECT

Ana Margarida Graça

ı

Signed (Supervisor)   Signed (programme member or student)
& Print Name   & Print Name
(*before start of project*)   (*on completion of project*)
                                         ...ofessor Andrew Godley
2. 4. For staff research projects   Head of Leadership, Organisations and Behaviour

Signed: 22/10/2019

(Research Ethics Committee Chair or member)

COMMENTS (where application has been refused)

3. Please reply to **all** of the following questions concerning your proposed research project and whether it involves:-

		Yes	No
1.	Are the participants and subjects of the study patients and clients of the NHS or social services to the best of your knowledge?	☐	☒
2.	Are the participants and subjects of the study subject to the Mental Capacity Act 2005 to the best of your knowledge (and therefore unable to give free and informed consent)?	☐	☒
3.	Are you asking questions that are likely to be considered impertinent or to cause distress to any of the participants?	☐	☒
4.	Are any of the subjects in a special relationship with the researcher?	☐	☒
5.	Is your project funded by a Research Council or other external source (excluding research conducted by postgraduate students)?	☐	☒

If you have answered **YES** to **any** of these questions, refer to the University's Research Ethics Committee. If you are unsure about whether any of these conditions apply, please contact the secretary of the University Research Ethics Committee, Nathan Helsby (n.e.helsby@reading.ac.uk) for further advice.

---

4. Please respond to **all** the following questions concerning your proposed research project

		Yes	No
1.	The research involves archival research, access of company documents/records, access of publicly available data, questionnaires, surveys, focus groups and/or other interview techniques.	☒	☐
2.	Arrangements for expenses and other payments to participants, if any, have been considered.	☒	☐
3.	Participants will be/have been advised that they may withdraw at any stage if they so wish.	☒	☐
4.	Issues of confidentiality and arrangements for the storage and security of material during and after the project and for the disposal of material have been considered.	☒	☐
5.	Arrangements for providing subjects with research results if they wish to have them have been considered.	☒	☐
6.	The arrangements for publishing the research results and, if confidentiality might be affected, for obtaining written consent of this have been considered.	☒	☐
7.	Information Sheets and Consent Forms had been prepared in line with University guidelines for distribution to participants.	☒	☐
8.	Arrangements for the completed consent forms to be retained upon completion of the project have been made.	☒	☐

If you have answered **NO** to **any** of these questions, contact your supervisor if applicable, staff members should refer to the Research Ethics Committee.

If the research is to be conducted outside of an office environment or normal place of work and/or outside normal working hours please note the details below and comment on how the personal safety and security of the researcher(s) has been safeguarded.

If these questions cannot be confirmed please contact your supervisor.

Please confirm that at the conclusion of the project primary data will be :-

Destroyed ☐   Submitted to the Research Ethics Committee ☒

Comments

APPENDIX 3A. QUESTIONNAIRE FOR TEAM MEMBERS (ENGLISH)

Thank you for participating in this survey!

This survey is conducted as part of a class exercise in the Quantitative Research Techniques Workshop in the Henley Doctor of Business Administration programme. In the exercise, we aim to investigate the influence of individual factors in performance. By participating in this study you would have the opportunity to reflect on yourself as well as contributing to advance our knowledge on leadership.

In this questionnaire, we will ask some questions relating to conditions in your work team. This question will take about 10-15 minutes to complete. We do hope that you could answer all of the questions with equal effort. There is no correct answer to the question. Rather, we encourage you to give your honest appraisal to the questions being asked.

Please be assured that your responses will be kept completely confidential and will be treated according to the University of University of Reading Research Committee procedure. Your participation in this research is voluntary. You have the right to withdraw at any point during the study, for any reason, and without any prejudice.

More information about this study can be found on the Information Sheet here. If you would like to contact the main investigator in the study to discuss this research, please e-mail Wendy Suganda (w.c.suganda@pgr.reading.ac.uk)

Consent Form:

By continuing with this questionnaire, you indicate that you agree with the following statement:

"I have had access to an Information Sheet relating to this project. I understand the purpose of the project and what is required of me, and any questions I had have been answered to my satisfaction. I agree to the arrangements described in the Information Sheet in so far as they relate to my participation. I understand that participation is entirely voluntary and that I have the right to withdraw from this project at any time."

>>

Please insert your team code*

The code is available on the email that has been sent to you from your HR department along with the link to this online questionnaire.

[▾]

Please state your current job level

Supervisor (Team Leader)

Shopkeeper (Team Member)

[>>]

In the following sets of questions, you will be asked to share your view about **your team leader**

Please take time to reflect on your team leader and press the button below to continue...

[>>]

To what extent does your team leader…

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. Communicates business issues, operating results, and team performance results	O	O	O	O	O	O	O
2. Emphasizes how important it is to have a collective sense of mission	O	O	O	O	O	O	O
3. Reviews relevant performance results with your team	O	O	O	O	O	O	O
4. Provides positive feedback when your team performs well	O	O	O	O	O	O	O
5. Rewards the performance of team members according to performance standards	O	O	O	O	O	O	O
6. Provides corrective feedback	O	O	O	O	O	O	O
7. Ensures that the team has a clear understanding of its purpose	O	O	O	O	O	O	O
8. Develops and articulates a clear team mission	O	O	O	O	O	O	O
9. Helps provide a clear vision of where the team is going	O	O	O	O	O	O	O
10. Ensures the team has a clear direction	O	O	O	O	O	O	O

>>

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To what extent does your team leader…

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. Communicates expectations for high team performance	O	O	O	O	O	O	O
2. Communicates what is expected of your team	O	O	O	O	O	O	O
3. Sets or helps set challenging and realistic goals	O	O	O	O	O	O	O
4. Establishes or helps establish goals for your team's work	O	O	O	O	O	O	O
5. Reviews team goals for realism, challenge, and business necessity	O	O	O	O	O	O	O
6. Works with your team and individuals in your team to develop performance goals	O	O	O	O	O	O	O
7. Asks team members to follow standard rules and regulations	O	O	O	O	O	O	O
8. Defines and emphasizes team expectations	O	O	O	O	O	O	O
9. Maintains clear standards of performance	O	O	O	O	O	O	O
10. Ensures that your team has clear performance goals	O	O	O	O	O	O	O

>>

To what extent does your team leader…

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. Engages in actions that demonstrate respect and concern for team members	O	O	O	O	O	O	O
2. Works with team members to help do work	O	O	O	O	O	O	O
3. Looks out for the personal well-being of team members	O	O	O	O	O	O	O
4. Will "roll up his/her sleeves" and help the team do its work	O	O	O	O	O	O	O
5. Will work along with the team to get its work done	O	O	O	O	O	O	O
6. Goes beyond own interests for the good of the team	O	O	O	O	O	O	O
7. Intervenes to help team members get the work done	O	O	O	O	O	O	O
8. Responds promptly to team member needs or concerns	O	O	O	O	O	O	O
9. Does things to make it pleasant to be a team member	O	O	O	O	O	O	O
10. Will "pitch-in" and help the team with its work	O	O	O	O	O	O	O

>>

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In the following set of questions, you will be asked about **your team.**

Please take time to reflect on the condition of your team and press the button below to continue...

>>

To what extent does my team relate to these following statements

	Never	Almost never	Sometimes	About half of the time	Often	Most of the time	Always
1. Our job inspires us	O	O	O	O	O	O	O
2. At our work, we feel bursting with energy	O	O	O	O	O	O	O
3. We are proud of the work that we do	O	O	O	O	O	O	O
4. We feel happy when we are working intensively	O	O	O	O	O	O	O
5. We are immersed in our work	O	O	O	O	O	O	O
6. At our job, we feel strong and vigorous	O	O	O	O	O	O	O
7. We are enthusiastic about our job	O	O	O	O	O	O	O
8. When we arrive at work, we feel like starting to work	O	O	O	O	O	O	O
9. We get carried away when we are working	O	O	O	O	O	O	O

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>>

To what extent does my team actively work to...

	Never	Rarely	Sometimes	About half of the time	Often	Most of the time	Always
1. Coordinate our activities with one another	O	O	O	O	O	O	O
2. Assist each other when help is needed	O	O	O	O	O	O	O
3. Ensure that everyone on our team clearly understands our goals	O	O	O	O	O	O	O
4. Develop an overall strategy to guide our team activities	O	O	O	O	O	O	O
5. Identify the key challenges that we expect to face	O	O	O	O	O	O	O
6. Seek timely feedback from stakeholders (e.g., customers, top management, other organizational units) about how well we are meeting our goals	O	O	O	O	O	O	O
7. Monitor important aspects of our work environment (e.g., inventories, equipment and process operations, information flows)	O	O	O	O	O	O	O

>>

To what extent does my team actively work to...

	Never	Rarely	Sometimes	About half of the time	Often	Most of the time	Always
1. Maintain group harmony	○	○	○	○	○	○	○
2. Keep a good emotional balance in the team	○	○	○	○	○	○	○
3. Share a sense of togetherness and cohesion	○	○	○	○	○	○	○
4. Keep each other from getting overly emotional or frustrated	○	○	○	○	○	○	○
5. Encourage each other to perform our very best	○	○	○	○	○	○	○
6. Develop confidence in our team's ability to perform well	○	○	○	○	○	○	○
7. Work hard to minimize dysfunctional conflict among members	○	○	○	○	○	○	○
8. Stay motivated, even when things are difficult	○	○	○	○	○	○	○
9. Manage stress	○	○	○	○	○	○	○
10. Deal with personal conflicts in fair and equitable ways	○	○	○	○	○	○	○

11. Reward performance achievement among team members	○	○	○	○	○	○	○
12. Encourage healthy debate and exchange of ideas	○	○	○	○	○	○	○
13. Maintain positive work attitudes	○	○	○	○	○	○	○
14. Show respect for one another	○	○	○	○	○	○	○
15. Take pride in our accomplishments	○	○	○	○	○	○	○

>>

The following sets of questions will ask about **you as an individual.**

Please press the button below to continue...

>>

Please tell us to what extent do you agree with the following statements

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. The work I do on this job is meaningful to me	○	○	○	○	○	○	○
2. I am able to handle competing demands at work	○	○	○	○	○	○	○
3. My job activities are personally meaningful to me	○	○	○	○	○	○	○
4. My job activities are significant to me	○	○	○	○	○	○	○
5. There is a threatening environment at work	○	○	○	○	○	○	○
6. The work I do on this job is very important to me	○	○	○	○	○	○	○
7. I am able to handle the physical demands at work	○	○	○	○	○	○	○
8. The work I do on this job is worthwhile	○	○	○	○	○	○	○
9. I'm not afraid to be myself at work	○	○	○	○	○	○	○
10. I feel that the work I do on my job is valuable	○	○	○	○	○	○	○

>>

Please tell us to what extent do you agree with the following statements

	Never	Almost never	Sometimes	About half of the time	Often	Most of the time	Always
1. I exert my full effort to my job	○	○	○	○	○	○	○
2. I try my hardest to perform well on my job	○	○	○	○	○	○	○
3. I am proud of my job	○	○	○	○	○	○	○
4. I work with intensity on my job	○	○	○	○	○	○	○
5. I feel energetic at my job	○	○	○	○	○	○	○
6. I am enthusiastic in my job	○	○	○	○	○	○	○
7. At work, I devote a lot of attention to my job	○	○	○	○	○	○	○
8. At work, my mind is focused on my job	○	○	○	○	○	○	○
9. At work, I am absorbed by my job	○	○	○	○	○	○	○

>>

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How long have you been working with your current work team?

Less than 1 month

1-3 months

3-6 months

6-12 months

1-2 years

2 years or more

How long have you been working for your current company?

6 months or less

6 months - 1 year

1 - 2 years

2 - 4 years

4 - 8 years

8 years or more

Please tell us which of these age group that you belong to

18 - 24

25 - 34

35 - 44

45 - 54

55 - 64

64 or more

Please tell us your gender

Female

Male

Prefer not to say

>>

We thank you for your time spent taking this survey.
Your response has been recorded.

APPENDIX 3B. QUESTIONNAIRE FOR TEAM LEADERS (ENGLISH)

Thank you for participating in this survey!

This survey is conducted as part of a class exercise in the Quantitative Research Techniques Workshop in the Henley Doctor of Business Administration programme. In the exercise, we aim to investigate the influence of individual factors in performance. By participating in this study you would have the opportunity to reflect on yourself as well as contributing to advance our knowledge on leadership.

In this questionnaire, we will ask some questions relating to conditions in your work team. This question will take about 10-15 minutes to complete. We do hope that you could answer all of the questions with equal effort. There is no correct answer to the question. Rather, we encourage you to give your honest appraisal to the questions being asked.

Please be assured that your responses will be kept completely confidential and will be treated according to the University of University of Reading Research Committee procedure. Your participation in this research is voluntary. You have the right to withdraw at any point during the study, for any reason, and without any prejudice.

More information about this study can be found on the Information Sheet here. If you would like to contact the main investigator in the study to discuss this research, please e-mail Wendy Suganda (w.c.suganda@pgr.reading.ac.uk)

Consent Form:

By continuing with this questionnaire, you indicate that you agree with the following statement:

"I have had access to an Information Sheet relating to this project. I understand the purpose of the project and what is required of me, and any questions I had have been answered to my satisfaction. I agree to the arrangements described in the Information Sheet in so far as they relate to my participation. I understand that participation is entirely voluntary and that I have the right to withdraw from this project at any time."

>>

Please insert your team code*

The code is available on the email that has been sent to you from your HR department along with the link to this online questionnaire.

[▼]

Please state your current job level

Supervisor (Team Leader)

Shopkeeper (Team Member)

>>

In the following set of questions, you will be asked about **the team you lead**.

Please take time to reflect on the team that you lead and press the button below to continue...

>>

To what extent does your team actively work to...

	Never	Almost never	Sometimes	About half of the time	Often	Most of the time	Always
1. Identify the key challenges that they expect to face	O	O	O	O	O	O	O
2. Ensure that everyone within the team clearly understands their goals	O	O	O	O	O	O	O
3. Develop an overall strategy to guide their team activities	O	O	O	O	O	O	O
4. Seek timely feedback from stakeholders (e.g., customers, top management, other organizational units) about how well they are meeting their goals	O	O	O	O	O	O	O
5. Monitor important aspects of their work environment (e.g., inventories, equipment and process operations, information flows)	O	O	O	O	O	O	O
6. Assist each other when help is needed	O	O	O	O	O	O	O
7. Coordinate their activities with one another	O	O	O	O	O	O	O

>>

To what extent does your team relate to these following statements

	Never	Almost never	Sometimes	About half of the time	Often	Most of the time	Always
1. Deal with personal conflicts in fair and equitable ways	O	O	O	O	O	O	O
2. Show respect for one another	O	O	O	O	O	O	O
3. Maintain group harmony	O	O	O	O	O	O	O
4. Work hard to minimize dysfunctional conflict among members	O	O	O	O	O	O	O
5. Encourage healthy debate and exchange of ideas	O	O	O	O	O	O	O
6. Take pride in their accomplishments	O	O	O	O	O	O	O
7. Develop confidence in their ability to perform well	O	O	O	O	O	O	O
8. Encourage each other to perform their very best	O	O	O	O	O	O	O
9. Stay motivated, even when things are difficult	O	O	O	O	O	O	O
10. Reward performance achievement among team members	O	O	O	O	O	O	O

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>>

11. Share a sense of togetherness and cohesion	○	○	○	○	○	○	○
12. Manage stress	○	○	○	○	○	○	○
13. Keep a good emotional balance in the team	○	○	○	○	○	○	○
14. Keep each other from getting overly emotional or frustrated	○	○	○	○	○	○	○
15. Maintain positive work attitudes	○	○	○	○	○	○	○

To what extent do you agree with these following statements

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. My team should continue working together as a unit in the future	○	○	○	○	○	○	○
2. My team is capable of working together as a unit	○	○	○	○	○	○	○
3. This team would work well together in the future	○	○	○	○	○	○	○
4. As a work unit, my team shows signs of falling apart	○	○	○	○	○	○	○
5. My team is very competent	○	○	○	○	○	○	○
6. My team gets its work done very effectively	○	○	○	○	○	○	○
7. My team has performed its job well	○	○	○	○	○	○	○

>>

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To what extent does your team actively work to...

	Never	Almost never	Sometimes	About half of the time	Often	Most of the time	Always
1. At work, my team feels bursting with energy	○	○	○	○	○	○	○
2. At their job, my team feels strong and vigorous	○	○	○	○	○	○	○
3. My team is enthusiastic about their job	○	○	○	○	○	○	○
4. This job inspires my team	○	○	○	○	○	○	○
5. When they arrive at work, my team feels like starting to work	○	○	○	○	○	○	○
6. My team feels happy when they are working intensely	○	○	○	○	○	○	○
7. My team is proud of the work that they do	○	○	○	○	○	○	○
8. My team is immersed in their work	○	○	○	○	○	○	○
9. My team get carried away when they are working	○	○	○	○	○	○	○

>>

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The following sets of questions will ask about **you as an individual.**

Please press the button below to continue...

Please tell us to what extent do you agree with the following statements

	Never	Almost never	Sometimes	About half of the time	Often	Most of the time	Always
1. I exert my full effort to my job	○	○	○	○	○	○	○
2. I try my hardest to perform well on my job	○	○	○	○	○	○	○
3. I feel energetic at my job	○	○	○	○	○	○	○
4. I am enthusiastic in my job	○	○	○	○	○	○	○
5. At work, my mind is focused on my job	○	○	○	○	○	○	○
6. At work, I am absorbed by my job	○	○	○	○	○	○	○
7. I am proud of my job	○	○	○	○	○	○	○
8. At work, I devote a lot of attention to my job	○	○	○	○	○	○	○
9. I work with intensity on my job	○	○	○	○	○	○	○

Please tell us to what extent do you agree with the following statements

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. I feel that the work I do on my job is valuable	O	O	O	O	O	O	O
2. I am afraid to express my opinions at work	O	O	O	O	O	O	O
3. I am able to deal with problems that come up at work	O	O	O	O	O	O	O
4. I am able to handle the physical demands at work	O	O	O	O	O	O	O
5. The work I do on this job is meaningful to me	O	O	O	O	O	O	O
6. My job activities are significant to me	O	O	O	O	O	O	O
7. I am able to think clearly at work	O	O	O	O	O	O	O
8. I am able to display the appropriate emotions at work	O	O	O	O	O	O	O
9. My job activities are personally meaningful to me	O	O	O	O	O	O	O

10. The work I do on this job is very important to me	○	○	○	○	○	○	○
11. There is a threatening environment at work	○	○	○	○	○	○	○
12. I am able to handle competing demands at work	○	○	○	○	○	○	○
13. I'm not afraid to be myself at work	○	○	○	○	○	○	○
14. The work I do on this job is worthwhile	○	○	○	○	○	○	○

>>

How many direct reports do you have as per today?

How long have you been leading your team?

Less than 1 month

1-3 months

3-6 months

6-12 months

1-2 years

2 years or more

Please tell us which of these age group that you belong to

18 - 24

25 - 34

35 - 44

45 - 54

55 - 64

64 or more

Please tell us your gender

Female

Male

Prefer not to say

>>

We thank you for your time spent taking this survey.
Your response has been recorded.

APPENDIX 3C. QUESTIONNAIRE FOR TEAM MEMBERS (INDONESIAN)

Terimakasih atas niat baik dan kesediaan Anda untuk berpartisipasi dalam penelitian ini!

Penelitian ini diadakan dalam rangka disertasi S3 dari seorang mahasiswa Indonesia di Henley Business School – University of Reading, Inggris. Penelitian ini bertujuan untuk mengungkap pengaruh kepemimpinan tim terhadap totalitas kerja dari para anggota tim.

Dalam kuisioner ini, Anda akan diminta untuk menjawab beberapa pertanyaan seputar kondisi Anda dan tim Anda di dalam keseharian kerja. Tidak ada jawaban benar/salah atau baik/buruk. Anda diminta untuk memberikan jawaban jujur yang paling sesuai dengan apa yang Anda rasakan dalam keseharian Anda bekerja. Kami juga berharap Anda dapat memberikan tingkat upaya yang sama dalam menjawab setiap pertanyaan, baik di awal maupun di akhir kuisioner ini.

Kami menjamin sepenuhnya kerahasiaan identitas Anda dan jawaban yang Anda berikan dalam kuisioner ini sesuai dengan standar yang ditetapkan oleh University of Reading Research Ethic Committee. Jawaban Anda hanya akan dapat diakses oleh tim peneliti dan tidak akan diteruskan kepada siapapun di dalam perusahaan Anda. Laporan akhir dari penelitian ini hanya akan menampilkan temuan secara keseluruhan dimana identitas individu tidak akan dapat dilacak. Keikutsertaan Anda dalam penelitian ini sepenuhnya bersifat sukarela. Anda dapat mengundurkan diri dari penelitian ini kapan saja dan tanpa perlu alasan apapun.

Informasi lebih lengkap mengenai penelitian ini tertera di Lembar Informasi penelitian yang dapat diakses melalui http://bit.ly/2kOLeAH. Anda juga dapat menghubungi peneliti melalui alamat email w.c.suganda@pgr.reading.ac.uk jika ada pertanyaan lebih lanjut berkaitan dengan penelitian ini.

Lembar Persetujuan:

Dengan melanjutkan mengisi kuisioner ini, Anda menyatakan bahwa Anda setuju dengan pertanyaan berikut:

"Saya telah membaca semua ketentuan dalam Lembar Informasi penelitian ini dan telah memahami semua hak dan kewajiban saya terkait keikutsertaan saya dalam penelitian ini. **Saya setuju untuk mengikuti penelitian ini** secara sadar tanpa paksaan dari pihak manapun."

1. Silakan masukan kode tim Anda[1]

[1]Kode tim Anda tertera dalam pesan elektronik yang dikirimkan oleh departemen HR atau supervisor Anda bersamaan dengan tautan kuisioner online ini.

[Dropdown ▼]

---

2. Silakan pilih tingkatan jabatan Anda di perusahaan[2]

[2]Anda berperan sebagai supervisor (pemimpin tim) jika nama Anda tertera di sebelah kode tim diatas

Supervisor (Pemimpin Tim)

Pramuniaga (Anggota Tim)

>>

Di bagian berikut ini, kami akan bertanya tentang **tim kerja Anda**

Silakan ambil waktu sejenak untuk mengingat kembali mengenai keadaan tim kerja Anda dan tekan tombol di bawah ini untuk melanjutkan...

>>

Seberapa sering tim Anda selaras dengan pernyataan-pernyataan berikut ini

	Tidak pernah	Hampir tidak pernah	Sesekali	Kadang-kadang	Sering	Hampir selalu	Selalu
1. Kami merasa penuh energi ketika sedang bekerja	O	O	O	O	O	O	O
2. Kami terbenam pada pekerjaan kami	O	O	O	O	O	O	O
3. Kami bangga terhadap pekerjaan yang kami lakukan	O	O	O	O	O	O	O
4. Pekerjaan ini memberikan inspirasi bagi kami	O	O	O	O	O	O	O
5. Kami bersemangat untuk mulai bekerja ketika kami tiba di tempat kerja	O	O	O	O	O	O	O
6. Kami terbawa suasana kerja ketika kami sedang bekerja	O	O	O	O	O	O	O
7. Kami merasa kuat dan tangguh dalam melakukan pekerjaan kami	O	O	O	O	O	O	O
8. Kami antusias terhadap pekerjaan kami	O	O	O	O	O	O	O
9. Kami merasa bahagia ketika kami bekerja keras	O	O	O	O	O	O	O

>>

Di dalam pekerjaan, seberapa sering tim saya secara aktif melakukan hal-hal berikut ini...

	Tidak pernah	Hampir tidak pernah	Sesekali	Kadang-kadang	Sering	Hampir selalu	Selalu
1. Merancang strategi menyeluruh untuk memandu aktivitas-aktivitas tim kami	○	○	○	○	○	○	○
2. Mengidentifikasikan tantangan-tantangan utama yang akan dihadapi	○	○	○	○	○	○	○
3. Mengawasi aspek-aspek penting dalam lingkungan kerja kami (cth: stok barang, peralatan dan alur kerja, arus informasi)	○	○	○	○	○	○	○
4. Membantu satu sama lain ketika membutuhkan bantuan	○	○	○	○	○	○	○
5. Saling berkoordinasi dalam berbagai aktivitas pekerjaan	○	○	○	○	○	○	○
6. Memastikan semua orang dalam tim memahami tujuan tim dengan jelas	○	○	○	○	○	○	○
7. Meminta masukan dari para pemangku kepentingan (cth: pelanggan, top management, dan unit organisasional lainnya) tentang seberapa baik kami mencapai tujuan tim	○	○	○	○	○	○	○

>>

Di dalam pekerjaan, seberapa sering tim saya secara aktif melakukan hal-hal berikut ini...

	Tidak pernah	Hampir tidak pernah	Sesekali	Kadang-kadang	Sering	Hampir selalu	Selalu
1. Tetap termotivasi meski dalam situasi sulit	O	O	O	O	O	O	O
2. Saling menghormati satu sama lain	O	O	O	O	O	O	O
3. Menjaga suasana harmonis dalam kelompok	O	O	O	O	O	O	O
4. Memiliki rasa kebersamaan dan kedekatan antar anggota tim	O	O	O	O	O	O	O
5. Mengatasi konflik-konflik personal dengan cara yang adil dan merata	O	O	O	O	O	O	O
6. Mengelola stres	O	O	O	O	O	O	O
7. Saling menjaga untuk mencegah situasi menjadi terlalu emosional atau membuat frustrasi	O	O	O	O	O	O	O
8. Menjaga keseimbangan emosi di dalam tim	O	O	O	O	O	O	O
9. Merasa bangga terhadap keberhasilan-keberhasilan yang dicapai	O	O	O	O	O	O	O

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10. Mendorong adanya diskusi sehat dan pertukaran ide	○	○	○	○	○	○	○
11. Mengembangkan rasa percaya terhadap kemampuan tim untuk bisa bekerja dengan baik	○	○	○	○	○	○	○
12. Bekerja keras untuk meminimalisir konflik kerja antar anggota tim	○	○	○	○	○	○	○
13. Mendorong satu sama lain untuk bekerja sebaik mungkin	○	○	○	○	○	○	○
14. Memberi penghargaan terhadap prestasi para anggota tim	○	○	○	○	○	○	○
15. Menjaga sikap kerja yang positif	○	○	○	○	○	○	○

>>

Di bagian berikut ini, kami akan bertanya tentang **pemimpin tim kerja (supervisor) Anda***.

*mengacu pada supervisor yang namanya tercantum di sebelah kode tim Anda.

Silakan ambil waktu sejenak untuk mengingat sikap pemimpin tim Anda dan tekan tombol di bawah ini untuk melanjutkan...

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Sejauh mana pemimpin tim Anda...

	Sangat tidak setuju	Tidak setuju	Agak tidak setuju	Netral	Agak setuju	Setuju	Sangat setuju
1. Membentuk atau membantu pembentukan target untuk kinerja tim Anda	○	○	○	○	○	○	○
2. Meninjau ulang apakah target yang ditetapkan dalam tim itu realistis, menantang, dan sesuai dengan keperluan bisnis perusahaan	○	○	○	○	○	○	○
3. Mengembangkan dan menyampaikan misi tim dengan jelas	○	○	○	○	○	○	○
4. Bekerja sama dengan keseluruhan tim dan masing-masing orang dalam tim Anda untuk merancang target kerja	○	○	○	○	○	○	○
5. Memastikan tim memiliki arahan yang jelas	○	○	○	○	○	○	○
6. Meminta anggota tim untuk mematuhi aturan dan ketentuan kerja	○	○	○	○	○	○	○
7. Memastikan tim memiliki pemahaman yang jelas mengenai tujuan misi	○	○	○	○	○	○	○
8. Menekankan pentingnya memiliki penghayatan menjalani misi bersama	○	○	○	○	○	○	○

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9. Mengkomunikasikan apa yang diinginkan dari tim Anda	○	○	○	○	○	○	○
10. Menjelaskan dan menegaskan apa yang diinginkan dari tim saya	○	○	○	○	○	○	○
Menjaga standar kerja dengan jelas	○	○	○	○	○	○	○
Mengkomunikasikan permintaan akan kinerja tim yang baik	○	○	○	○	○	○	○
Menetapkan atau membantu penetapan target yang menantang dan realistis	○	○	○	○	○	○	○
Memastikan bahwa tim Anda memiliki target kerja yang jelas	○	○	○	○	○	○	○
Membantu menyampaikan visi yang jelas mengenai arah tujuan tim	○	○	○	○	○	○	○

>>

Sejauh mana pemimpin tim Anda...

	Sangat tidak setuju	Tidak setuju	Agak tidak setuju	Netral	Agak setuju	Setuju	Sangat setuju
1. Membantu anggota tim yang baru untuk mengembangkan keterampilan-keterampilan mereka lebih jauh	○	○	○	○	○	○	○
2. Memberikan instruksi tugas-tugas apa yang harus dikerjakan para anggota tim	○	○	○	○	○	○	○
3. Membantu tim Anda untuk belajar dari kejadian-kejadian atau pengalaman-pengalaman di masa lalu	○	○	○	○	○	○	○
4. Memberikan masukan yang membangun	○	○	○	○	○	○	○
5. Meninjau hasil-hasil pencapaian kerja yang relevan dengan tim Anda	○	○	○	○	○	○	○
6. Mengkomunikasikan persoalan-persoalan bisnis, hasil usaha, dan hasil kinerja tim	○	○	○	○	○	○	○
7. Membantu anggota tim yang baru untuk belajar melakukan pekerjaan mereka	○	○	○	○	○	○	○

>>

8. Memberikan penghargaan untuk hasil kerja para anggota tim berdasarkan target pencapaian	○	○	○	○	○	○	○
9. Menyampaikan komentar positif ketika tim Anda bekerja dengan baik	○	○	○	○	○	○	○
10. Memastikan tim Anda memiliki kemampuan untuk menyelesaikan masalah dan keterampilan interpersonal yang dibutuhkan	○	○	○	○	○	○	○

Sejauh mana pemimpin tim Anda…

	Sangat tidak setuju	Tidak setuju	Agak tidak setuju	Netral	Agak setuju	Setuju	Sangat setuju
1. Ikut bekerja dengan penuh semangat dan membantu tugas-tugas tim	○	○	○	○	○	○	○
2. Terlibat dengan bawahannya dan membantu tim melakukan pekerjaannya	○	○	○	○	○	○	○
3. Akan bekerja bersama dalam tim untuk menyelesaikan pekerjaan	○	○	○	○	○	○	○
4. Segera menanggapi kebutuhan-kebutuhan atau keprihatinan-keprihatinan anggota tim dengan segera	○	○	○	○	○	○	○
5. Memperhatikan kesejahteraan personal (wellbeing) para anggota tim	○	○	○	○	○	○	○
6. Melakukan hal-hal yang dapat menimbulkan rasa nyaman sebagai anggota tim	○	○	○	○	○	○	○
7. Mengambil bagian dalam tindakan-tindakan yang menunjukkan sikap hormat dan kepedulian terhadap para anggota tim	○	○	○	○	○	○	○

8. Bekerja bersama dengan anggota tim untuk membantu pekerjaan mereka	○	○	○	○	○	○	○
9. Turun tangan untuk membantu anggota tim menyelesaikan pekerjaannya	○	○	○	○	○	○	○
10. Melakukan tindakan-tindakan di luar kepentingannya sendiri untuk kebaikan/kepentingan tim	○	○	○	○	○	○	○

>>

Di bagian selanjutnya, kami akan bertanya tentang **Anda sebagai seorang individu.**

Silakan tekan tombol di bawah ini untuk melanjutkan...

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>>

Seberapa sering Anda merasa selaras dengan pernyataan-pernyataan berikut ini

	Tidak pernah	Hampir tidak pernah	Sesekali	Kadang-kadang	Sering	Hampir selalu	Selalu
1. Saya berusaha sebaik mungkin untuk melakukan kinerja terbaik pada pekerjaan saya	O	O	O	O	O	O	O
2. Saya bekerja dengan sekuat tenaga pada pekerjaan saya	O	O	O	O	O	O	O
3. Sewaktu bekerja, saya terlarut pada pekerjaan saya	O	O	O	O	O	O	O
4. Saya merasa bersemangat dalam melakukan pekerjaan saya	O	O	O	O	O	O	O
5. Sewaktu bekerja, saya memberikan perhatian yang sangat besar pada pekerjaan saya	O	O	O	O	O	O	O
6. Saya merasa antusias terhadap pekerjaan saya	O	O	O	O	O	O	O
7. Sewaktu bekerja, pikiran saya tertuju pada pekerjaan saya	O	O	O	O	O	O	O
8. Saya mengerahkan seluruh daya dan upaya saya untuk pekerjaan saya	O	O	O	O	O	O	O
9. Saya merasa bangga pada pekerjaan saya	O	O	O	O	O	O	O

Sejauh mana Anda setuju dengan pernyataan-pernyataan berikut ini

	Sangat tidak setuju	Tidak setuju	Agak tidak setuju	Netral	Agak setuju	Setuju	Sangat setuju
1. Saya mampu untuk berpikir jernih terkait pekerjaan saya	O	O	O	O	O	O	O
2. Saya takut untuk mengutarakan pendapat-pendapat saya di tempat kerja	O	O	O	O	O	O	O
3. Saya merasa bahwa pekerjaan yang saya lakukan itu berharga	O	O	O	O	O	O	O
4. Saya mampu untuk menampilkan emosi-emosi yang sesuai di pekerjaan saya	O	O	O	O	O	O	O
5. Pekerjaan yang saya lakukan sangat penting bagi saya	O	O	O	O	O	O	O
6. Pekerjaan yang saya lakukan bermakna bagi saya	O	O	O	O	O	O	O
7. Apa yang saya dapatkan dari pekerjaan saya sebanding dengan upaya yang saya curahkan	O	O	O	O	O	O	O
8. Saya mampu untuk menangani tuntutan-tuntutan fisik di pekerjaan saya	O	O	O	O	O	O	O

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9. Saya mampu untuk mengatasi permasalahan-permasalahan yang muncul di pekerjaan saya	○	○	○	○	○	○	○
10. Aktivitas-aktivitas pekerjaan saya memiliki makna tersendiri bagi saya	○	○	○	○	○	○	○
11. Saya merasa lingkungan kerja saya penuh ancaman / tekanan	○	○	○	○	○	○	○
12. Saya tidak takut untuk menjadi diri saya sendiri di tempat kerja	○	○	○	○	○	○	○
13. Saya mampu untuk menangani tuntutan-tuntutan pekerjaan yang beragam	○	○	○	○	○	○	○
14. Saya merasa aktivitas-aktivitas pekerjaan saya itu penting	○	○	○	○	○	○	○

>>

Sudah berapa lamakah Anda berada dalam tim kerja Anda yang sekarang?

Kurang dari 1 bulan

1-3 bulan

3-6 bulan

6-12 bulan

1-2 tahun

Lebih dari 2 tahun

Sudah berapa lamakah Anda bekerja untuk perusahaan Anda yang sekarang?

Kurang dari 6 bulan

6 bulan - 1 tahun

1 - 2 tahun

2 - 4 tahun

4 - 8 tahun

Lebih dari 8 tahun

Berapakah usia Anda?

18 - 24

25 - 34

35 - 44

45 - 54

55 - 64

Lebih dari 64 tahun

Apakah jenis kelamin Anda?

Perempuan

Laki-laki

>>

Kami berterima kasih atas waktu yang sudah Anda luangkan untuk mengikuti survei ini.
Respons Anda telah direkam.

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APPENDIX 3D. QUESTIONNAIRE FOR TEAM LEADERS (INDONESIAN)

Terimakasih atas niat baik dan kesediaan Anda untuk berpartisipasi dalam penelitian ini!

Penelitian ini diadakan dalam rangka disertasi S3 dari seorang mahasiswa Indonesia di Henley Business School – University of Reading, Inggris. Penelitian ini bertujuan untuk mengungkap pengaruh kepemimpinan tim terhadap totalitas kerja dari para anggota tim.

Dalam kuisioner ini, Anda akan diminta untuk menjawab beberapa pertanyaan seputar kondisi Anda dan tim Anda di dalam keseharian kerja. Tidak ada jawaban benar/salah atau baik/buruk. Anda diminta untuk memberikan jawaban jujur yang paling sesuai dengan apa yang Anda rasakan dalam keseharian Anda bekerja. Kami juga berharap Anda dapat memberikan tingkat upaya yang sama dalam menjawab setiap pertanyaan, baik di awal maupun di akhir kuisioner ini.

Kami menjamin sepenuhnya kerahasiaan identitas Anda dan jawaban yang Anda berikan dalam kuisioner ini sesuai dengan standar yang ditetapkan oleh University of Reading Research Ethic Committee. Jawaban Anda hanya akan dapat diakses oleh tim peneliti dan tidak akan diteruskan kepada siapapun di dalam perusahaan Anda. Laporan akhir dari penelitian ini hanya akan menampilkan temuan secara keseluruhan dimana identitas individu tidak akan dapat dilacak. Keikutsertaan Anda dalam penelitian ini sepenuhnya bersifat sukarela. Anda dapat mengundurkan diri dari penelitian ini kapan saja dan tanpa perlu alasan apapun.

Informasi lebih lengkap mengenai penelitian ini tertera di Lembar Informasi penelitian yang dapat diakses melalui http://bit.ly/2kOLeAH. Anda juga dapat menghubungi peneliti melalui alamat email w.c.suganda@pgr.reading.ac.uk jika ada pertanyaan lebih lanjut berkaitan dengan penelitian ini.

Lembar Persetujuan:

Dengan melanjutkan mengisi kuisioner ini, Anda menyatakan bahwa Anda setuju dengan pertanyaan berikut:

"Saya telah membaca semua ketentuan dalam Lembar Informasi penelitian ini dan telah memahami semua hak dan kewajiban saya terkait keikutsertaan saya dalam penelitian ini. **Saya setuju untuk mengikuti penelitian ini** secara sadar tanpa paksaan dari pihak manapun."

>>

1. Silakan masukan kode tim Anda[1]

[1]Kode tim Anda tertera dalam pesan elektronik yang dikirimkan oleh departemen HR atau supervisor Anda bersamaan dengan tautan kuisioner online ini.

[_____ ⌄]

---

2. Silakan pilih tingkatan jabatan Anda di perusahaan[2]

[2]Anda berperan sebagai supervisor (pemimpin tim) jika nama Anda tertera di sebelah kode tim diatas

Supervisor (Pemimpin Tim)

Pramuniaga (Anggota Tim)

[>>]

Di bagian berikut ini, kami akan bertanya tentang **tim yang Anda pimpin.**

Silakan ambil waktu sejenak untuk mengingat kembali keadaan tim yang Anda pimpin dan tekan tombol di bawah ini untuk melanjutkan...

[>>]

Seberapa sering Anda melihat tim Anda selaras dengan pernyataan-pernyataan berikut ini…

	Tidak pernah	Hampir tidak pernah	Sesekali	Kadang-kadang	Sering	Hampir selalu	Selalu
1. Tim saya penuh dengan energi ketika sedang bekerja	○	○	○	○	○	○	○
2. Tim saya adalah tim yang kuat dan tangguh dalam melakukan pekerjaan mereka	○	○	○	○	○	○	○
3. Tim saya antusias terhadap pekerjaan mereka	○	○	○	○	○	○	○
4. Pekerjaan ini memberikan inspirasi bagi tim saya	○	○	○	○	○	○	○
5. Tim saya bersemangat untuk mulai bekerja ketika mereka tiba di tempat kerja	○	○	○	○	○	○	○
6. Tim saya merasa bahagia ketika mereka bekerja keras	○	○	○	○	○	○	○
7. Tim saya bangga terhadap pekerjaan yang mereka lakukan	○	○	○	○	○	○	○
8. Tim saya terlarut pada pekerjaan mereka	○	○	○	○	○	○	○
9. Tim saya terbawa suasana kerja ketika mereka sedang bekerja	○	○	○	○	○	○	○

>>

Di dalam pekerjaan, seberapa sering tim Anda secara aktif melakukan hal-hal berikut ini…

	Tidak pernah	Hampir tidak pernah	Sesekali	Kadang-kadang	Sering	Hampir selalu	Selalu
1. Mengidentifikasikan tantangan-tantangan utama yang akan mereka hadapi	O	O	O	O	O	O	O
2. Memastikan semua orang dalam tim memahami tujuan tim dengan jelas	O	O	O	O	O	O	O
3. Merancang strategi menyeluruh untuk memandu aktivitas tim	O	O	O	O	O	O	O
4. Meminta masukan dari para pemangku kepentingan (cth: pelanggan, top management, dan unit organisasional lainnya) tentang seberapa baik mereka mencapai tujuan mereka	O	O	O	O	O	O	O
5. Mengawasi aspek-aspek penting dalam lingkungan kerja mereka (cth: stok barang, peralatan dan alur kerja, arus informasi)	O	O	O	O	O	O	O
6. Membantu satu sama lain ketika membutuhkan bantuan	O	O	O	O	O	O	O
7. Saling berkoordinasi dalam aktivitas pekerjaan mereka	O	O	O	O	O	O	O

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Di dalam pekerjaan, seberapa sering tim Anda secara aktif melakukan hal-hal berikut ini...

	Tidak pernah	Hampir tidak pernah	Sesekali	Kadang-kadang	Sering	Hampir selalu	Selalu
1. Mengatasi konflik-konflik personal dengan cara yang adil dan merata	○	○	○	○	○	○	○
2. Saling menghormati satu sama lain	○	○	○	○	○	○	○
3. Menjaga suasana harmonis dalam tim	○	○	○	○	○	○	○
4. Bekerja keras untuk meminimalisir konflik kerja antar anggota tim	○	○	○	○	○	○	○
5. Mendorong adanya diskusi sehat dan pertukaran ide	○	○	○	○	○	○	○
6. Merasa bangga terhadap keberhasilan-keberhasilan yang dicapai	○	○	○	○	○	○	○
7. Mengembangkan rasa percaya terhadap kemampuan tim untuk bisa bekerja dengan baik	○	○	○	○	○	○	○
8. Mendorong satu sama lain untuk bekerja sebaik mungkin	○	○	○	○	○	○	○
9. Tetap termotivasi meski dalam situasi sulit	○	○	○	○	○	○	○

10. Memberi penghargaan terhadap prestasi para anggota tim	○	○	○	○	○	○	○
11. Memiliki rasa kebersamaan dan kedekatan antar anggota tim	○	○	○	○	○	○	○
12. Mengelola stres	○	○	○	○	○	○	○
13. Menjaga keseimbangan emosi di dalam tim	○	○	○	○	○	○	○
14. Saling menjaga untuk mencegah situasi menjadi terlalu emosional atau membuat frustrasi	○	○	○	○	○	○	○
15. Menjaga sikap kerja yang positif	○	○	○	○	○	○	○

>>

Sejauh mana Anda setuju dengan pernyataan-pernyataan berikut ini...

	Sangat tidak setuju	Tidak setuju	Agak tidak setuju	Netral	Agak setuju	Setuju	Sangat setuju
1. Saya mendukung tim saya untuk bekerja kembali sebagai satu unit di masa depan	O	O	O	O	O	O	O
2. Tim saya mampu bekerja sama sebagai satu unit	O	O	O	O	O	O	O
3. Tim ini akan bekerja sama dengan baik di masa depan	O	O	O	O	O	O	O
4. Sebagai unit kerja, tim saya menunjukkan tanda-tanda keretakan	O	O	O	O	O	O	O
5. Tim saya sangat kompeten	O	O	O	O	O	O	O
6. Tim saya menyelesaikan pekerjaan dengan sangat efektif	O	O	O	O	O	O	O
7. Tim saya telah menunjukkan kinerja yang baik	O	O	O	O	O	O	O

>>

Di bagian selanjutnya, kami akan bertanya tentang **Anda sebagai seorang individu.**

Silakan tekan tombol di bawah ini untuk melanjutkan...

>>

Seberapa sering Anda merasa selaras dengan pernyataan-pernyataan berikut ini

	Tidak pernah	Hampir tidak pernah	Sesekali	Kadang-kadang	Sering	Hampir selalu	Selalu
1. Sewaktu bekerja, pikiran saya tertuju pada pekerjaan saya	○	○	○	○	○	○	○
2. Saya bekerja dengan sekuat tenaga pada pekerjaan saya	○	○	○	○	○	○	○
3. Sewaktu bekerja, saya memberikan perhatian yang sangat besar pada pekerjaan saya	○	○	○	○	○	○	○
4. Saya merasa antusias terhadap pekerjaan saya	○	○	○	○	○	○	○
5. Saya mengerahkan seluruh daya dan upaya saya untuk pekerjaan saya	○	○	○	○	○	○	○
6. Sewaktu bekerja, saya terlarut pada pekerjaan saya	○	○	○	○	○	○	○
7. Saya merasa bangga pada pekerjaan saya	○	○	○	○	○	○	○
8. Saya berusaha sebaik mungkin untuk melakukan kinerja terbaik pada pekerjaan saya	○	○	○	○	○	○	○
9. Saya merasa bersemangat dalam melakukan pekerjaan saya	○	○	○	○	○	○	○

>>

Sejauh mana Anda setuju dengan pernyataan-pernyataan berikut ini

	Sangat tidak setuju	Tidak setuju	Agak tidak setuju	Netral	Agak setuju	Setuju	Sangat setuju
1. Aktivitas-aktivitas pekerjaan saya memiliki makna tersendiri bagi saya	○	○	○	○	○	○	○
2. Saya mampu untuk mengatasi permasalahan-permasalahan yang muncul di pekerjaan saya	○	○	○	○	○	○	○
3. Saya merasa aktivitas-aktivitas pekerjaan saya itu penting	○	○	○	○	○	○	○
4. Saya merasa bahwa pekerjaan yang saya lakukan itu berharga	○	○	○	○	○	○	○
5. Saya merasa lingkungan kerja saya penuh ancaman / tekanan	○	○	○	○	○	○	○
6. Apa yang saya dapatkan dari pekerjaan saya sebanding dengan upaya yang saya curahkan	○	○	○	○	○	○	○
7. Saya takut untuk mengutarakan pendapat-pendapat saya di tempat kerja	○	○	○	○	○	○	○
8. Saya mampu untuk menangani tuntutan-tuntutan pekerjaan yang beragam	○	○	○	○	○	○	○

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9. Saya mampu untuk menangani tuntutan-tuntutan fisik di pekerjaan saya	○	○	○	○	○	○	○
10. Pekerjaan yang saya lakukan bermakna bagi saya	○	○	○	○	○	○	○
11. Saya mampu untuk menampilkan emosi-emosi yang sesuai di pekerjaan saya	○	○	○	○	○	○	○
12. Saya mampu untuk berpikir jernih terkait pekerjaan saya	○	○	○	○	○	○	○
13. Saya tidak takut untuk menjadi diri saya sendiri di tempat kerja	○	○	○	○	○	○	○
14. Pekerjaan yang saya lakukan sangat penting bagi saya	○	○	○	○	○	○	○

>>

Berapakah jumlah pramuniaga yang ada dalam tim kerja* yang Anda pimpin?

*bukan di keseluruhan toko, tetapi di tim dimana Anda menjadi supervisor

Sudah berapa lamakah Anda memimpin tim kerja Anda yang sekarang?

Kurang dari 1 bulan

1-3 bulan

3-6 bulan

6-12 bulan

1-2 tahun

Lebih dari 2 tahun

Sudah berapa lamakah Anda bekerja untuk perusahaan Anda yang sekarang?

Kurang dari 6 bulan

6 bulan- 1 tahun

1 - 2 tahun

2 - 4 tahun

4 - 8 tahun

Lebih dari 8 tahun

Manakah dari kelompok umur berikut ini yang merepresentasikan usia Anda

18 - 24

25 - 34

35 - 44

45 - 54

55 - 64

Lebih dari 64 tahun

Apakah jenis kelamin Anda?

Perempuan

Laki-laki

>>

Kami berterima kasih atas waktu yang sudah Anda luangkan untuk mengikuti survei ini.
Respons Anda telah direkam.

APPENDIX 4A. RESEARCH INFORMATION SHEET (ENGLISH)

Wendy Suganda, MBA
Dr Ana Margarida Graça,
Dr Ann Parkinson,
Dr Caroline Rook

Leadership, Organisations and Behaviour
Henley Business School
University of Reading

Information Sheet
(English Version)

Background of the Study

An Indonesian student at Henley Business School, United Kingdom is carrying out a research study as part of his PhD completion. Your participation in filling out the online questionnaire would help the researcher in pursuing a PhD degree.

What the study seeks to achieve

This study aims to examine how leadership approaches and personal interactions within a team play role in influencing team members' engagement. Specifically, this study aims to answer this research question: "How does team leadership influence personal and team engagement?" To this end, the researcher has developed an online survey for both team members and team leaders.

How you, your team and your organisation could benefit from this research project

Participating in this research will provide you with an opportunity to reflect on your own leadership experiences as part of a team or as a team leader. The findings of this research can help you and your team to understand better leadership approaches that can influence team members' engagement. The findings of this research could also suggest recommendations to your organisation of how to improve employee engagement within the organisation. A written report of the findings of the research will be available upon request once this research project is due to its completion.

What participation in this research means for you?

If you wish to participate in this research with your teams, we would ask every team member and team leader to complete an online questionnaire. The questionnaire will take approximately 10-15 minutes of your time. Your confidentiality will be safeguarded throughout this research, which complies with the requirements of the University Research Ethics Committee. Information collected by the surveys will be strictly confidential, accessed only by the researchers working on this project, and used for research purposes only. Data will be stored and disposed of securely. When publishing the research findings, your identity will not be revealed, and survey responses will not be available in any form that allows individual responses to be identified. All data will be presented in aggregated form so that individual responses will not be identifiable.

For more information please contact Wendy Suganda (w.c.suganda@pgr.reading.ac.uk)

APPENDIX 4B. RESEARCH INFORMATION SHEET (INDONESIAN)

Henley
Business School
UNIVERSITY OF READING

Wendy Suganda, MBA
Supervisors:
Dr Ana Margarida Graça,
Dr Ann Parkinson,
Dr Caroline Rook

Leadership, Organisations and Behaviour
Henley Business School
University of Reading

Lembar Informasi*
(*English version is available on the next page)

Latar Belakang Penelitian

Seorang mahasiswa Indonesia di Henley Business School, Inggris tengah mengadakan penelitian ini sebagai salah satu prasyarat kelulusannya dalam studi S3 yang sedang ditempuh. Kesediaan Anda untuk mengisi kuisioner penelitian ini dengan seksama akan sangat membantu peneliti dalam proses kelulusan studinya.

Tujuan Penelitian

Penelitian ini hendak mengungkap bagaimana proses kepemimpinan dan interaksi dalam sebuah tim kerja berpengaruh pada totalitas kerja dari para anggota timnya. Khususnya, penelitian ini bertujuan untuk menjawab pertanyaan: "Bagaimanakah kepemimpinan dalam sebuah tim mempengaruhi totalitas kerja dari anggota tim" Untuk itu, peneliti telah menyusun sebuah kusioner online untuk diisi oleh para pemimpin dan anggota timnya.

Apakah manfaat penelitian ini bagi Anda, tim Anda, dan organisasi Anda

Keikutsertaan dalam penelitian ini dapat menjadi sebuah kesempatan bagi Anda untuk merefleksikan pengalaman kepemimpinan Anda sebagai anggota atau pemimpin tim. Penemuan dari penelitian ini dapat membantu Anda untuk lebih memahami kiat-kiat untuk meningkatkan totalitas kerja dari tim Anda. Penemuan dari penelitian ini juga dapat memberikan masukan cara upaya bagi organisasi Anda untuk meningkatkan kenyamanan, semangat, dan totalitas kerja dari pada karyawannya. Peneliti dapat menyediakan laporan tertulis mengenai rangkuman hasil penelitian ini ketika proses penelitian telah selesai.

Apa sajakah yang harus Anda lakukan dalam keikutsertaan Anda di penelitian ini?

Jika Anda dan tim Anda tidak berkeberatan untuk berpartisipasi dalam penelitian ini, kami akan bertanya kepada setiap anggota tim dan kepada pemimpin tim untuk mengisi sebuah kuisioner online. Kuisioner tersebut akan memakan waktu sekitar 10-15 menit. Kerahasiaan akan data yang Anda berikan dalam proses pengisian kuisioner ini akan dijaga dengan ketat, yaitu dengan prosedur yang diatur oleh University of Reading Research Ethics Committee. Semua informasi yang diambil dari kuisioner ini hanya akan digunakan khusus untuk tujuan penelitian ini dan hanya akan dapat diakses oleh tim peneliti yang mengadakan penelitian ini. Data Anda akan disimpan di ruang penyimpanan digital yang aman. Ketika kami mempublikasi temuan dari penelitian ini, identitas pribadi Anda tidak akan kami ungkap. Semua data akan dipresentasikan dalam bentuk agregat sehingga respon individu tidak akan dapat dilacak.
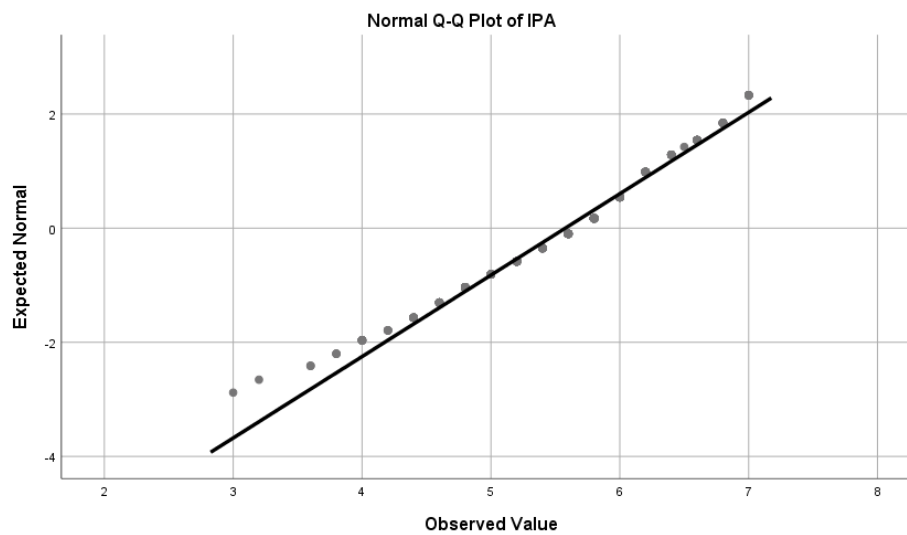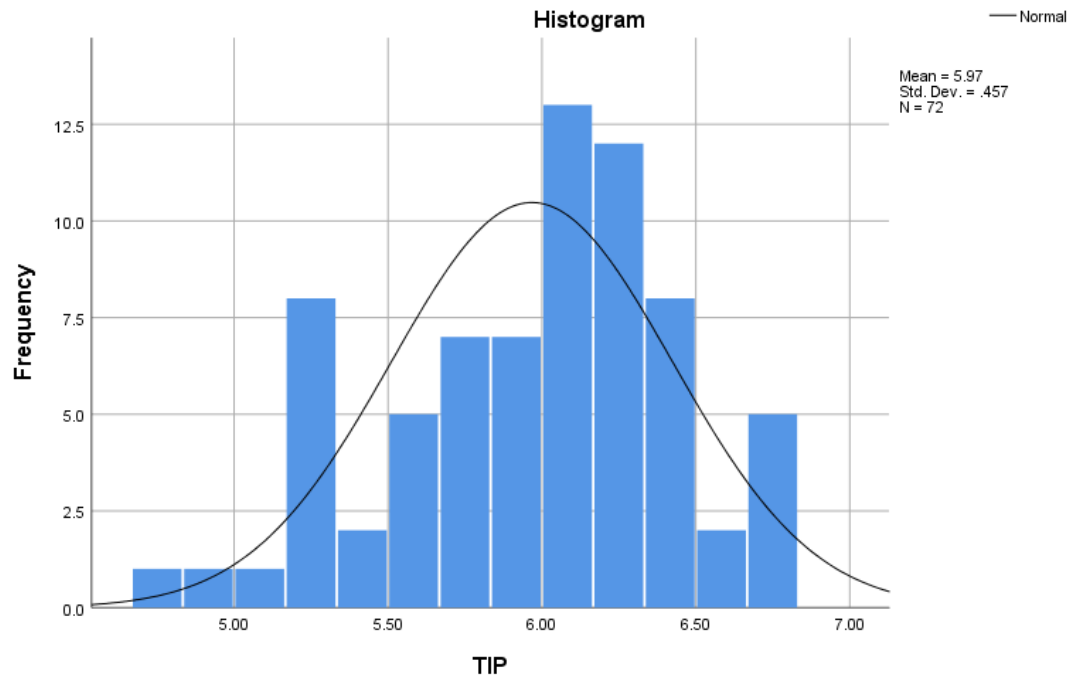
Untuk informasi lebih lanjut silakan hubungi Wendy Suganda (w.c.suganda@pgr.reading.ac.uk)

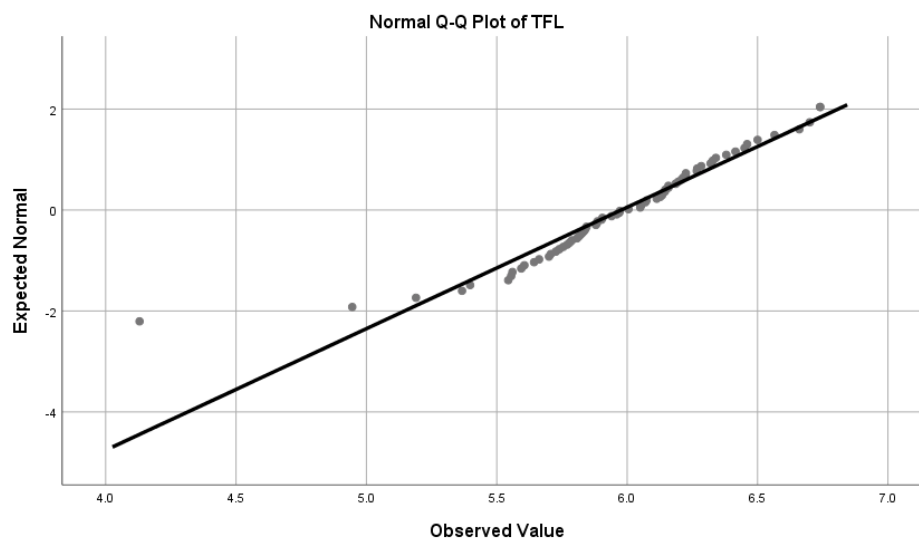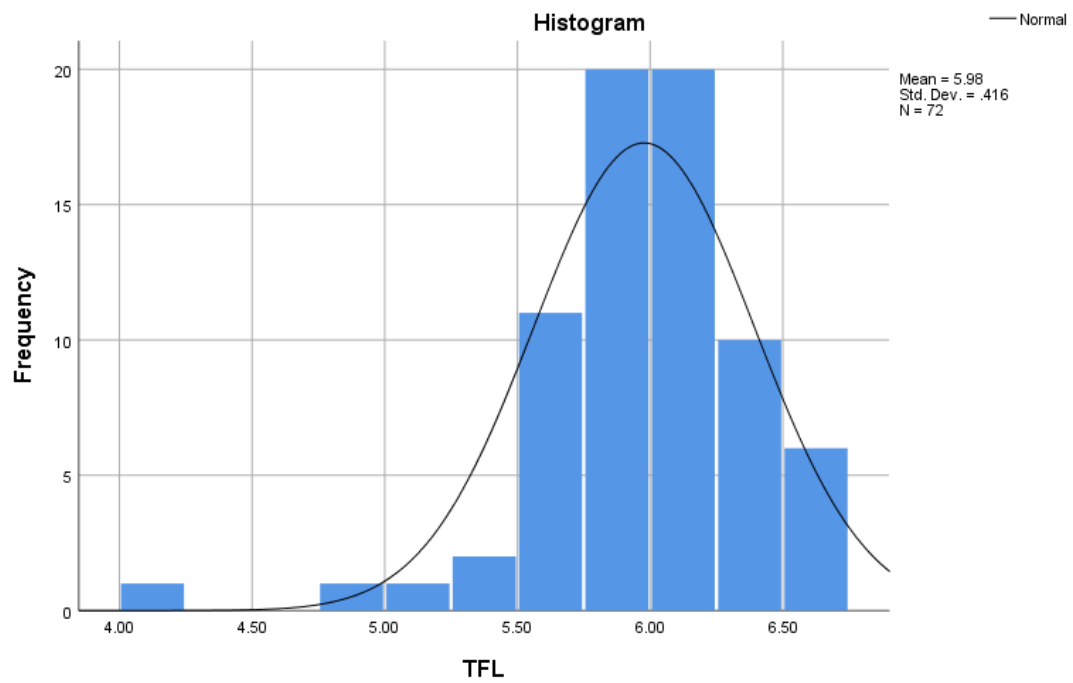# APPENDIX 5. HISTOGRAM, NORMAL CURVE AND Q-Q PLOTS FOR EACH VARIABLES
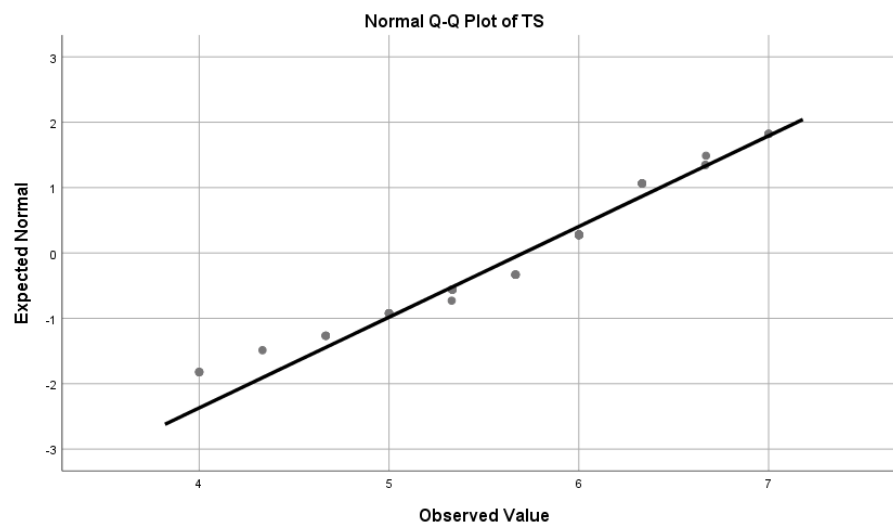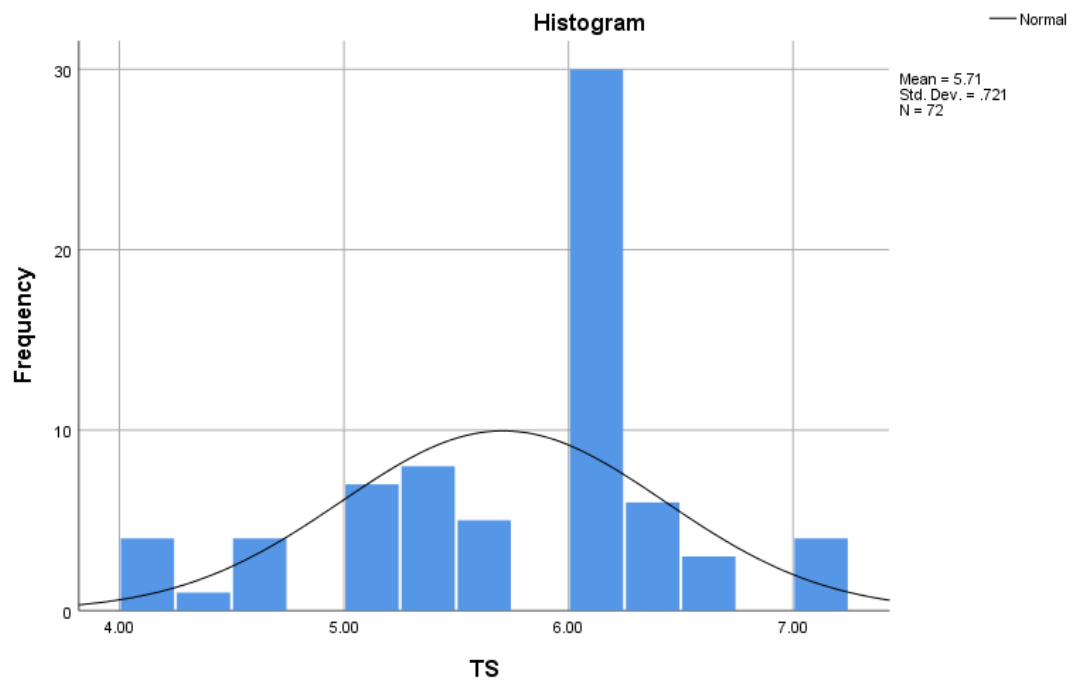
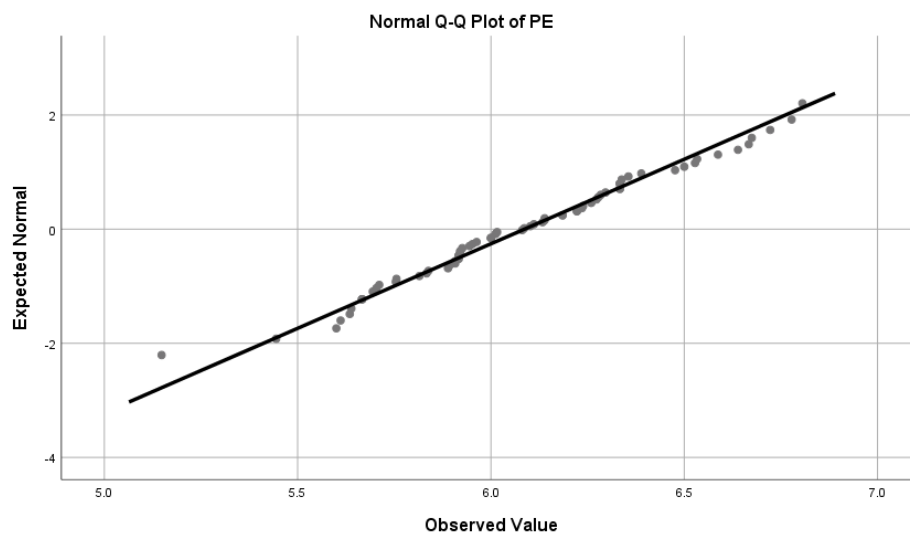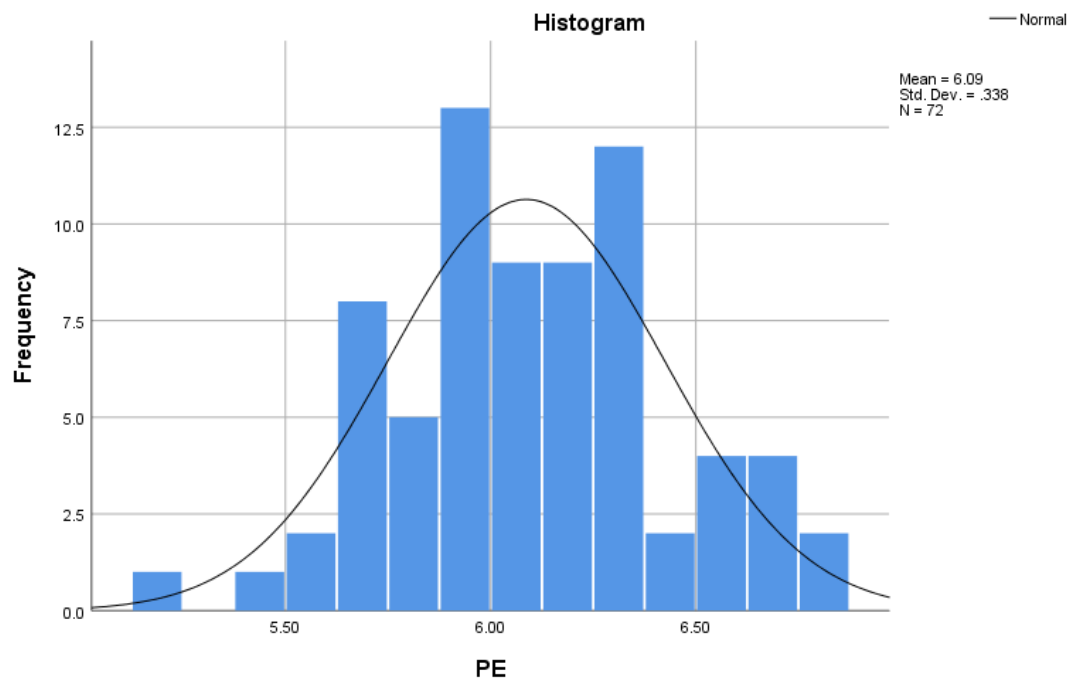## 5.1. TEAM WORK ENGAGEMENT
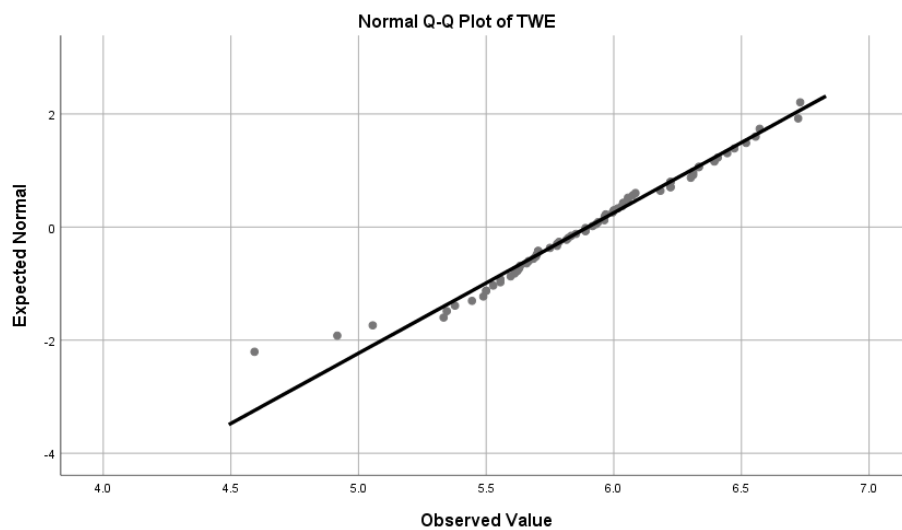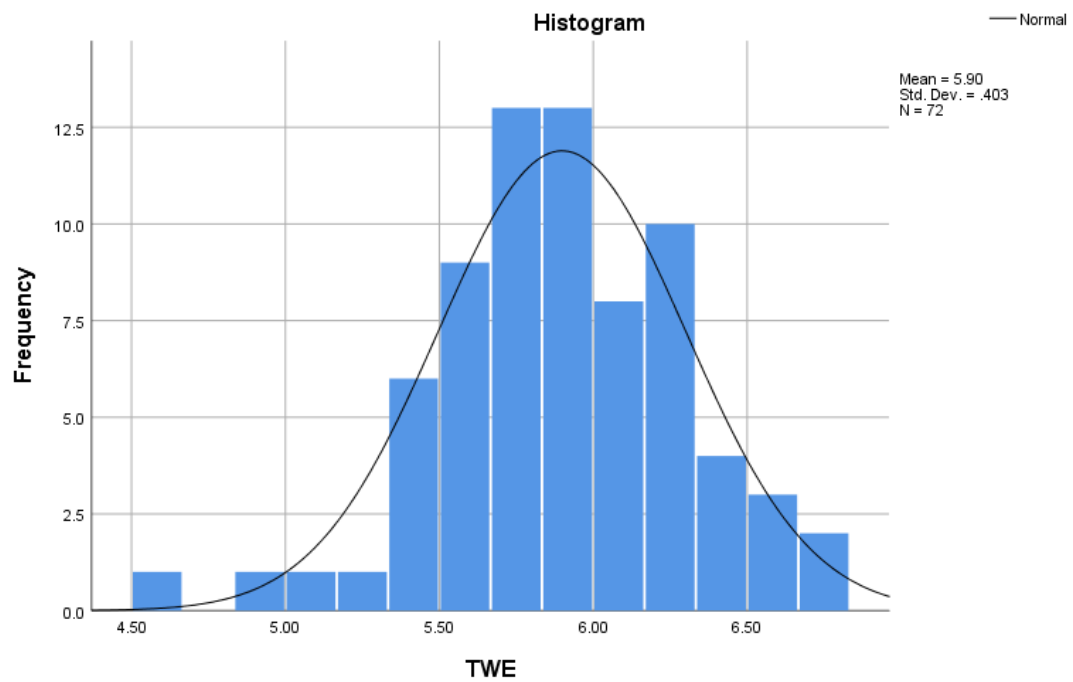
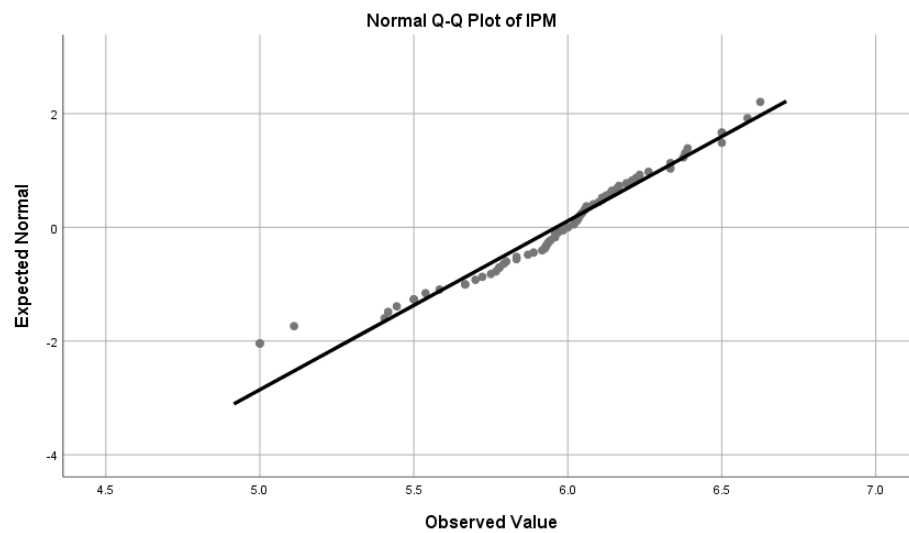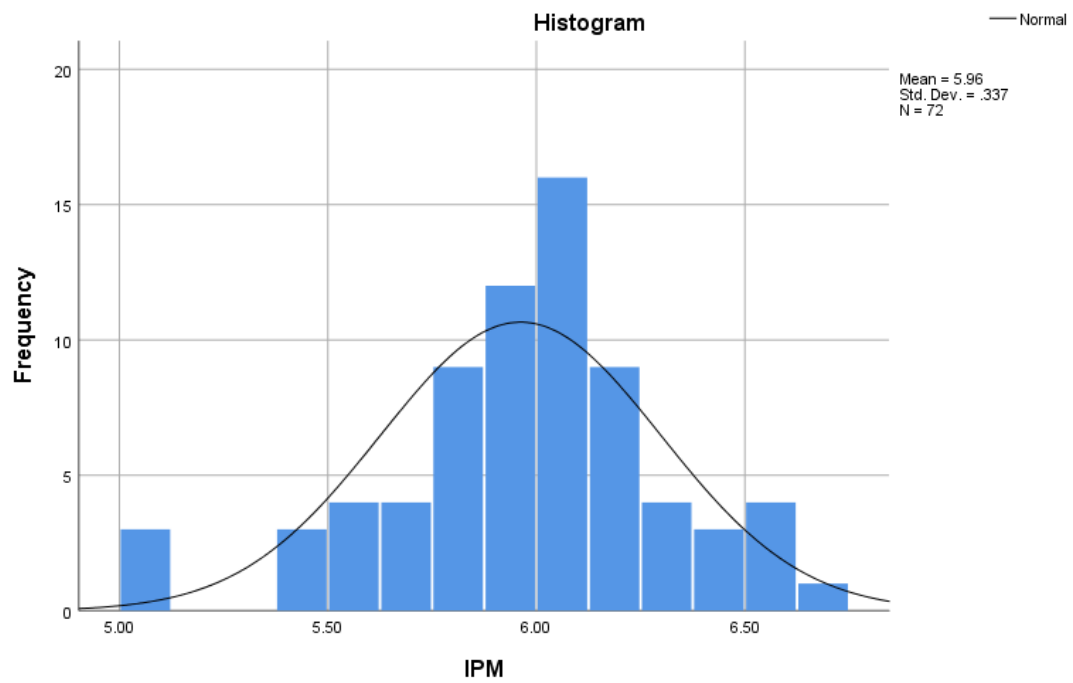## 5.2. Team Interpersonal Processes

5.3. Team Functional Leadership
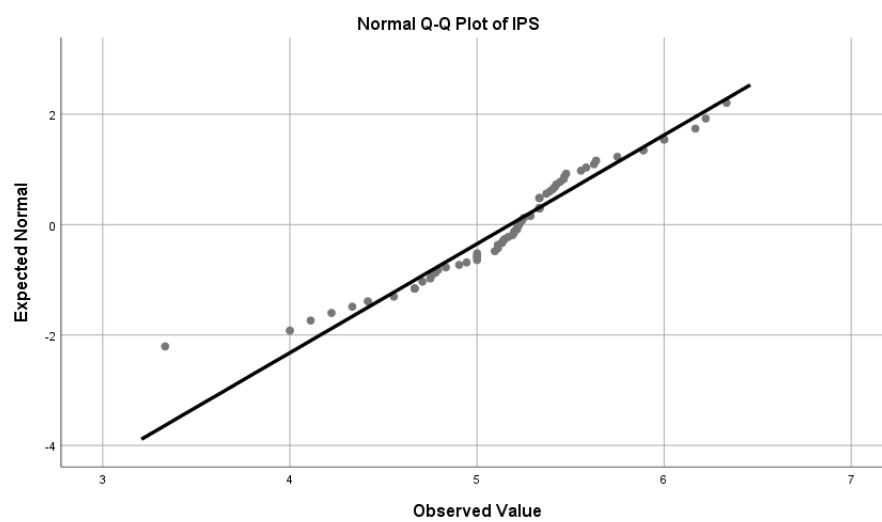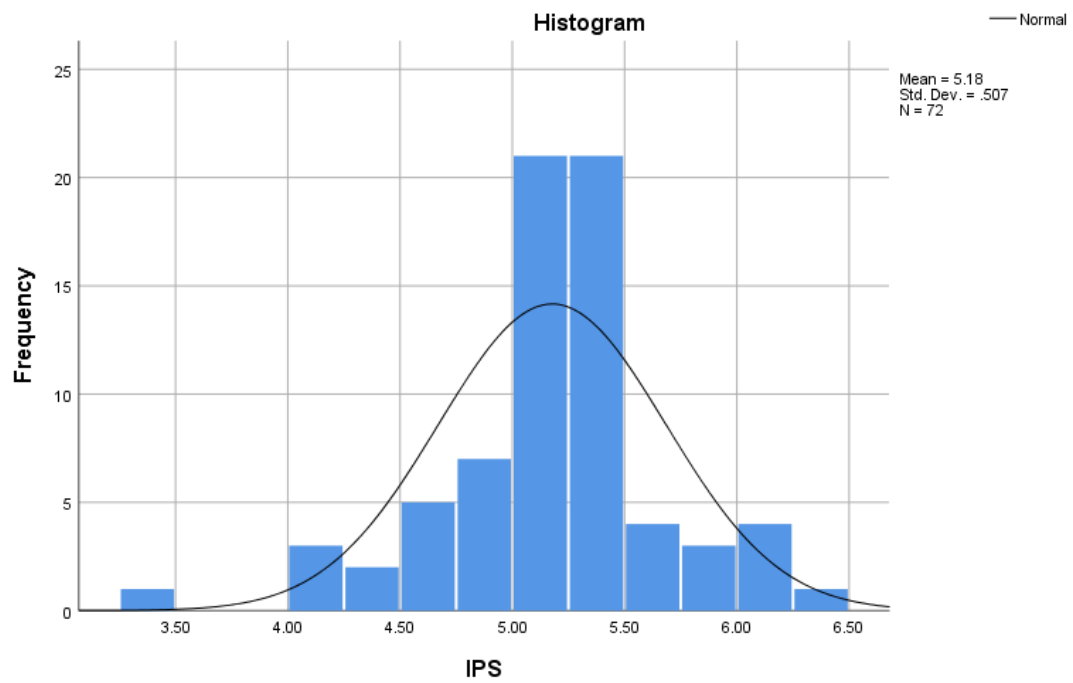
5.4. PERCEIVED TEAM PERFORMANCE
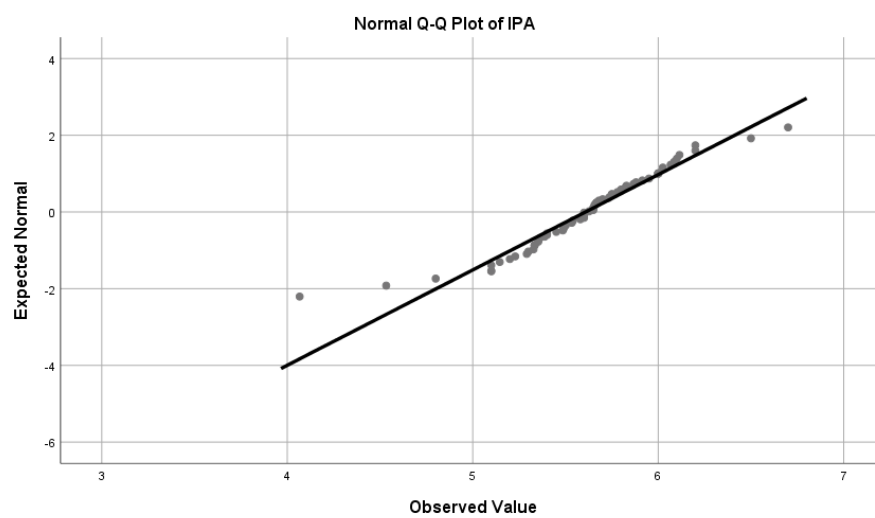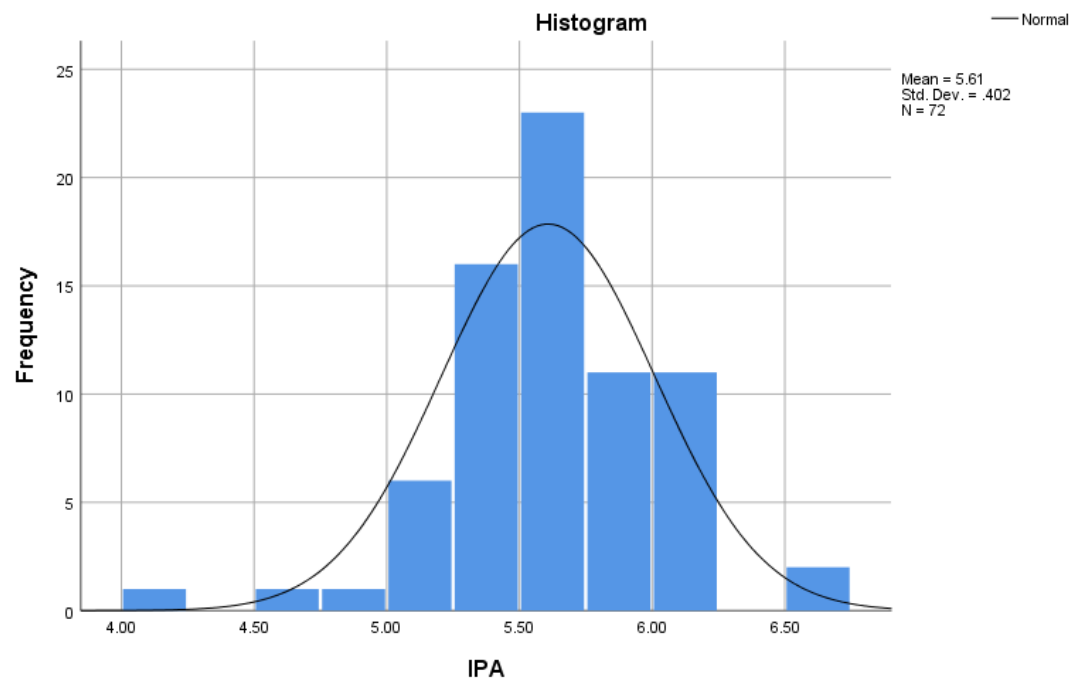
5.5. PERSONAL ENGAGEMENT

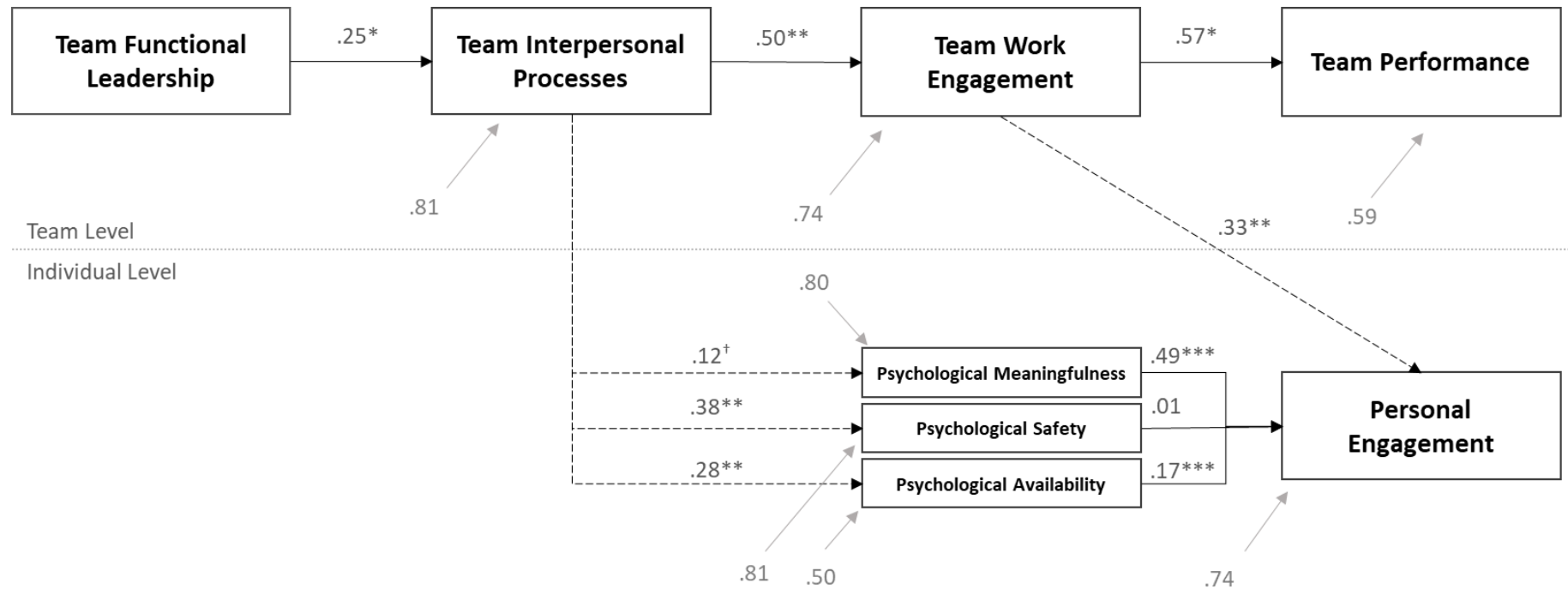## 5.6. INDIVIDUAL PSYCHOLOGICAL MEANINGFULNESS

5.7. Individual Psychoological Safety

5.8. INDIVIDUAL PSYCHOLOGICAL AVAILABILITY

APPENDIX 6. RESULTS OF MULTILEVEL STRUCTURAL EQUATIONAL MODELLING

$\chi^2(54)=59.77$, n.s, CFI = 0.98, RMSEA= .015, SRMR$_w$ = .012, SRMR$_b$ =.121

FIGURE 6.3. RESULTS OF MULTILEVEL STRUCTURAL EQUATION MODELLING WITH ERROR TERMS

Note: Dotted line signifies cross-level relationship.

† $p<.10$; * $p<.05$; ** $p<.01$; *** $p<.001$. $N= 583$ individuals in 72 team