

Lifestyle psychiatry: a conceptual framework for application in mental healthcare and support

Article

Published Version

Creative Commons: Attribution-Noncommercial 4.0

Deenik, J., Vermeulen, J. M., Teasdale, S. B. ORCID: <https://orcid.org/0000-0001-5812-1081>, Schuch, F. B., Marx, W., Perry, B., Diez, G. G., Castellanos, N., Elshazly, M., Gatera, G., Waugh, M., Hepsomali, P. ORCID: <https://orcid.org/0000-0001-5812-1081>, Bueno-Antequera, J., Borrueto Sánchez, J., Lopez Moral, A., López-Sánchez, C., Oviedo Caro, M. A., Dejonge, M., Noortman, C., van Schothorst, M., den Bleijker, N., Scrivano, L., Noordsey, D. L., Fabian, H., Jachyra, P., Chapman, J., Merlo, G., Manger, S., O'Neill, A., Machaczek, K. K., Ardill-Young, O., Ramírez, P., Matthews, E., Lambert, J., Firth, J., Hassan, L., Jacka, F. N., Ward, P., Stubbs, B., Cahn, W., Rosenbaum, S., Vancampfort, D. and Firth, J. (2025) Lifestyle psychiatry: a conceptual framework for application in mental healthcare and support. *BMJ Mental Health*, 28 (1). e301980. ISSN 2755-9734 doi: [10.1136/bmjment-2025-301980](https://doi.org/10.1136/bmjment-2025-301980) Available at <https://centaur.reading.ac.uk/125505/>

To link to this article DOI: <http://dx.doi.org/10.1136/bmjment-2025-301980>

Publisher: BMJ

All outputs in CentAUR are protected by Intellectual Property Rights law, including copyright law. Copyright and IPR is retained by the creators or other copyright holders. Terms and conditions for use of this material are defined in the [End User Agreement](#).

www.reading.ac.uk/centaur

CentAUR

Central Archive at the University of Reading

Reading's research outputs online

Lifestyle psychiatry: a conceptual framework for application in mental healthcare and support

Jeroen Deenik ,^{1,2} Jentien M Vermeulen,³ Scott B Teasdale,⁴ Felipe Barreto Schuch,^{5,6} Wolfgang Marx,⁷ Ben Perry,⁸ Gustavo G Diez,⁹ Nazareth Castellanos,⁹ Mohamed Elshazly,¹⁰ Grace Gatera,¹¹ Matt Waugh,^{12,13} Piril Hepsonali,¹⁴ Javier Bueno-Antequera,¹⁵ Jesús Borruco Sánchez ,¹⁵ Alvaro Lopez Moral,¹⁶ Camilo López-Sánchez ,¹⁵ Miguel Angel Oviedo Caro,^{15,16} Melissa Dejonge,¹⁷ Chermaine Noortman,^{1,2} Myrthe van Schothorst,^{1,2} Natascha den Bleijker,^{1,18} Luana Scrivano,^{19,20} Douglas L Noordsy ,²¹ Hannah Fabian,^{20,22} Patrick Jachyra,^{23,24} Justin Chapman ,^{25,26} Gia Merlo ,²⁷ Sam Manger,²⁸ Adrienne O'neill,⁷ Katarzyna Karolina Machaczek,²⁹ Oliver Ardill-Young,^{4,30} Paula Ramírez,³¹ Evan Matthews,³² Jeffrey Lambert,³³ Josh Firth,^{34,35} Lamiece Hassan,²⁰ Felice N Jacka,⁷ Philip Ward,^{36,37} Brendon Stubbs,^{38,39} Wiepke Cahn,^{40,41} Simon Rosenbaum ,⁴ Davy Vancampfort,^{42,43} Joseph Firth^{44,45}

For numbered affiliations see end of article.

Correspondence to

Dr Jeroen Deenik; j.deenik@ggzcentraal.nl

Received 30 July 2025

Accepted 3 November 2025

ABSTRACT

Lifestyle-related behaviours—such as sedentary behaviour, physical inactivity, poor nutrition, disrupted sleep and substance use—are increasingly recognised as important factors in the onset and persistence of mental illness. Evidence for the efficacy and cost-efficiency of lifestyle interventions in mental health is growing, and such approaches are now embedded in international guidelines and endorsed by major health organisations and associations as 'lifestyle psychiatry'. Nevertheless, despite this progress, these interventions remain underused in mental healthcare and support. One contributing factor is the lack of a shared conceptual understanding of 'lifestyle psychiatry', which risks fragmented practice, inconsistency in research and uncertainty around its role in policy, care and support. This paper presents a conceptual framework for lifestyle psychiatry, developed through an iterative, collaborative process involving 43 contributors across 15 countries, representing clinical, academic, policy and lived experience expertise. The framework defines core domains, outlines key challenges to behaviour change specific to mental health populations and emphasises multilevel and equity-oriented approaches. It aligns with person-centred and recovery-oriented care and serves as a shared reference point for practical application and future development. With this, we aim to support the structured, context-sensitive integration of lifestyle psychiatry into mental healthcare and support.



© Author(s) (or their employer(s)) 2025. Re-use permitted under CC BY-NC. Published by BMJ Group.

To cite: Deenik J, Vermeulen JM, Teasdale SB, et al. *BMJ Mental Health* 2025;28:1–7.

INTRODUCTION

Despite advances in treatment, many people living with mental illness continue to face significant challenges.¹ Preventive strategies have also yielded limited progress. Modifiable health behaviours—such as sedentary behaviour, physical inactivity,

poor quality nutrition and sleep and substance use (including smoking)—are linked to the onset and persistence of mental illness.²

Lifestyle interventions hold growing clinical and economic value for improving mental health. They complement their established role for physical health conditions—especially relevant for those at higher risk for or living with mental illness.³ They may support recovery, prevent deterioration and improve long-term stability.² This has led to the inclusion of lifestyle strategies in mental health guidelines across global, regional and national levels.^{4–11}

While lifestyle medicine has traditionally focused on chronic physical conditions,^{12,13} its application to mental health remains limited. The growing attention to 'lifestyle psychiatry'—reflected in recent initiatives by the World Psychiatric Association, WHO and national bodies^{11,14–17}—signals momentum for change. However, consensus on what constitutes 'lifestyle psychiatry' is still lacking. Previous definitions have helped shape the field by situating lifestyle psychiatry within lifestyle medicine and offering pragmatic frameworks that highlight key lifestyle domains and the relevance of behaviour change across mental health contexts.^{12,13,18–20} However, they reflect varied, often emergent perspectives and differ in emphasis and scope. The term 'lifestyle' itself has different meanings across cultures and sectors, from personal behaviour to wellness trends, further complicating consistent use in clinical and policy settings.¹⁸ Without a clear conceptual framework, lifestyle-related approaches risk remaining vague, overly broad or misinterpreted, either by implying personal blame or becoming distorted by commercial, ideological or popular media narratives that undermine their clarity and role in care and support.

A shared conceptualisation can help prevent conceptual drift and foster alignment across scientific, clinical and policy domains. Therefore, we aimed to provide a conceptual foundation to guide the development and integration of lifestyle psychiatry in research, practice and policy.

METHODS

The development of this framework was guided by an iterative, participatory consultation process involving 43 coauthors across 15 countries, representing diverse expertise in mental healthcare, research, policy and lived experience. Grounded in earlier work within lifestyle medicine and its definitions, this initiative aimed to translate these foundations into a field-specific framework for lifestyle psychiatry.

An initial structure and conceptualisation were drafted by the first author, informed by a narrative scoping of relevant literature—including back-and-forward citation tracking to identify key sources and foundational concepts—supplemented by clinical experience and engagement with emerging discussions in the field. The written output was shared with the broader author group for reflection, discussion and input. Across seven iterative feedback rounds—including written feedback through comments or direct edits, as well as consensus-driven editing—authors refined the framework's core domains, underlying principles and key barriers to implementation in mental health contexts. This process was collaborative, multidisciplinary and grounded in shared expertise, transparency and critical dialogue. In addition to group-wide review rounds, targeted discussions in smaller groups or one-on-one were held as needed to address specific content areas or feedback points. Key decisions were documented and circulated with each draft.

Although no formal consensus methodology (eg, Delphi or nominal group technique) was used, the process followed key principles of collaborative framework development. The resulting structure reflects a synthesis of shared experiences, literature-based reasoning and interdisciplinary dialogue, with a focus on supporting conceptual clarity, clinical relevance and cross-contextual applicability.

PRESENTATION

Lifestyle medicine as a basis for informing lifestyle psychiatry

Lifestyle psychiatry is considered a branch of lifestyle medicine that focuses on the context of mental healthcare and support. Therefore, it is helpful to first briefly outline the broader principles of lifestyle medicine before delineating the scope and direction of lifestyle psychiatry.

Multiple definitions of lifestyle medicine are in circulation, with two predominant interpretations emerging. One by Egger *et al*,²¹ informing the Australasian Society of Lifestyle Medicine (ASLM),²² and Guthrie,²³ underpinning the American College of Lifestyle Medicine (ACLM) and the Lifestyle Medicine Global Alliance^{24 25} (see table 1). Both position lifestyle medicine as a foundational component of conventional care rather than a separate or alternative discipline.

Table 1 Definitions of lifestyle medicine

Egger <i>et al</i> ^{21*}	The application of environmental, behavioural, medical and motivational principles to the management (including self-care and self-management) of lifestyle-related health problems in a clinical and/or public health setting.
Guthrie ^{23†}	The use of evidence-based lifestyle therapeutic approaches, such as predominantly whole food, plant-based diet, physical activity, sleep, stress management, tobacco cessation and other non-drug modalities to prevent, treat and, oftentimes, reverse lifestyle-related chronic diseases.

*Basis for, for example, Australasian Society of Lifestyle Medicine.

†Basis for, for example, American College of Lifestyle Medicine and Lifestyle Medicine Global Alliance.

Despite shared principles, they differ in emphasis. For example, Egger *et al* included public health, explicitly recognising structural and societal influences on health, helping to avoid simplistic views of individual responsibility or 'choice'. This reduces the risk of individual 'blame' often associated with lifestyle-related illness.^{21 26} Guthrie placed greater emphasis on chronic disease and the importance of evidence-based interventions, helping to protect the field from commercial distortion or poorly supported practices.²⁶ A synthesis of both approaches—for example, evidence-based interventions and involving environmental factors—is preferable.²³ Recognising environmental factors and the necessary quality assurance, both the ASLM and ACLM add social connectedness and involvement of trained professionals as important factors.^{22 24}

Conceptualising lifestyle psychiatry

Lifestyle psychiatry applies the principles of lifestyle medicine to support the health and well-being of people at higher risk for or living with mental illness, integrating interventions that promote a healthy lifestyle across all phases of care and support, while being responsive to their unique needs and lived experiences.

To support the need for a clear conceptualisation of lifestyle psychiatry, as proposed in this paper, figure 1 visualises key barriers to lifestyle change commonly faced by people at higher risk for or living with mental illness. While some also apply to other vulnerable populations, such as individuals living in poverty or facing chronic physical illness, they tend to be more pronounced and interrelated in the context of mental illness—underscoring the need for a dedicated approach. Grounded in ecological models of health behaviour, the figure illustrates how lifestyle behaviour is shaped by individual, interpersonal, community/environmental and policy/societal influences, reinforcing the need for multilevel action. While not all barriers are detailed here, they reflect recurring themes drawn from clinical experience, implementation research and perspectives from health professionals and lived experience^{2-4 6 7 27} and highlight potential leverage points for intervention within mental health systems. Addressing these barriers effectively often requires tailored approaches to fluctuating motivation, cognitive capacity, self-stigma, discrimination and structural limitations—factors especially relevant to the sustainability of lifestyle interventions in the context of mental healthcare and support. Building on the definition of lifestyle medicine, we propose a conceptual definition of lifestyle psychiatry below, which we subsequently break down into its core components to clarify the rationale behind each element.

Lifestyle psychiatry is the application of individually tailored, single or multiple evidence-based lifestyle interventions, including—but not limited to—a healthy diet, regular physical activity, adequate sleep, stress management, reduction and avoidance of harmful substance use, and meaningful social connectedness—for the prevention, treatment, and recovery support of individuals at higher risk for or living with mental illness. These interventions may be self-led or delivered by qualified professionals and supported by systems

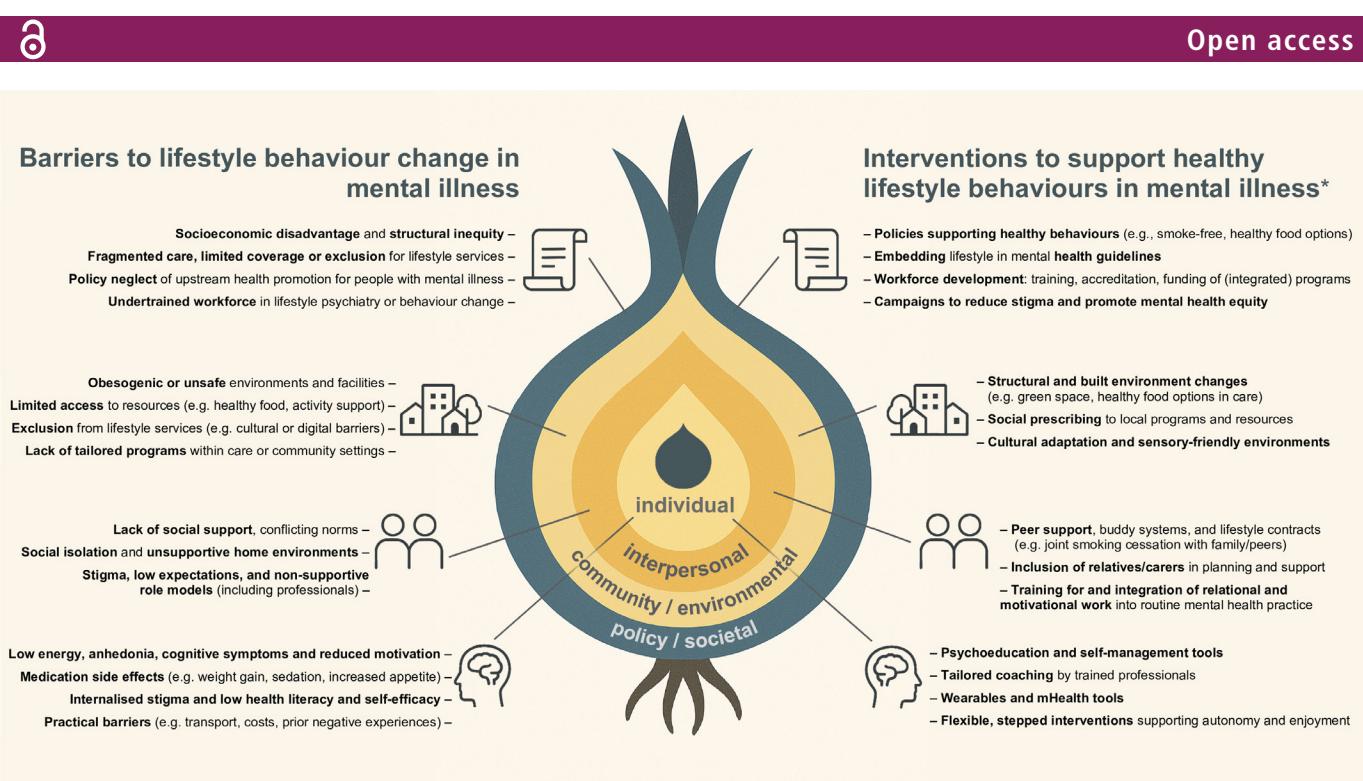


Figure 1 Conceptual model informed by ecological frameworks of health behaviour,^{47 48} illustrating selected (non-exhaustive) barriers and example interventions at different levels relevant to lifestyle psychiatry, reflecting key insights from consolidated findings of recent evidence syntheses and expert guidance.^{2-4 6 7 27} *Evidence-based, multiphase application (from prevention to recovery), self-led and/or professionally supported, person-sensitive and context-sensitive delivered.

and policies that address both individual and broader socioecological factors, aligned with existing mental healthcare and support.

The application of individually tailored, single or multiple evidence-based lifestyle interventions

The conceptual foundation of lifestyle psychiatry rests on evidence-based interventions. As discussed earlier, this anchors the field in approaches with demonstrated clinical relevance and avoids inclusion of practices that are poorly supported or diluted by commercial, ideological or popular narratives. At the same time, evidence should not be interpreted too narrowly. Particularly in the context of lifestyle interventions, spanning multiple domains and system levels, there must be room for innovation, cultural relevance and adaptation to reflect the diversity of human experiences.

Lived experience plays a key role in this regard. Individuals at higher risk for or living with mental illness often face fluctuating motivation, self-stigma, discrimination and access barriers, which directly affect effectiveness and implementation in real-world settings. Experiential evidence from lived experience should inform the design of interventions to ensure they are acceptable, accessible and feasible across diverse contexts. In addition, valuable theoretical and practical insights may also be drawn from other medical fields in which lifestyle management forms a cornerstone of treatment and prevention.¹²

Including—but not limited to—a healthy diet, regular physical activity, adequate sleep, stress management, reduction and avoidance of harmful substance use, and meaningful social connectedness

These domains represent modifiable behaviours with robust evidence for their influence on physical and mental health outcomes in people at higher risk for or living with mental

illness.^{2-4 6 7 27} While the listed behaviours are core targets in line with lifestyle medicine, the phrasing ‘but not limited to’ signals the field’s evolving nature and accommodates additional health-related behaviours where relevant and supported by evidence, such as work-directed activities and green prescriptions.⁴

Another critical consideration is that in some conditions, lifestyle-related behaviours are deeply interwoven with psychopathology and require nuanced application. For example, people at higher risk of or living with mental illness are more vulnerable to developing substance dependence,^{28 29} and eating disorders involve disrupted relationships with food, weight and body image. While lifestyle psychiatry emphasises healthy behaviours, these domains must be approached with caution in such contexts to avoid oversimplification or unintended harm.^{3 4 6} When appropriately applied, lifestyle psychiatry can complement specialised care by fostering structured, health-oriented routines that support symptom management, improve functioning and contribute to recovery.

Finally, the inclusion of *meaningful* social connectedness is particularly salient to mental health. This domain is increasingly recognised in clinical guidelines for its importance to mental health.⁴ Beyond interpersonal relationships, emerging models highlight connections to nature, community, culture, spirituality and self as essential subcomponents.³⁰ We also emphasise *meaningful* connection, as digital technologies like smartphones and social media increasingly shape how people relate to others. While they can offer support, they may also increase the risk for depressive symptoms, anxiety and lifestyle disruption, particularly in young people.³¹⁻³⁴ Lifestyle psychiatry must therefore not only promote engagement, but also help individuals develop

forms of connection that are meaningful, appropriate and supportive of mental well-being.

For the prevention, treatment and recovery support of individuals at higher risk of or living with mental illness

Lifestyle psychiatry spans the full continuum from prevention to treatment and recovery support for individuals at higher risk of or living with mental illness. Lifestyle-related behaviours contribute to both the development and treatment of mental and physical health conditions. In mental healthcare and support, these interventions have been shown to influence not only core psychiatric symptoms but also broader outcomes such as quality of life and psychosocial and cognitive functioning.^{2-4,7}

In practice, lifestyle psychiatry is typically applied in secondary and tertiary prevention, treatment and recovery support. This includes settings ranging from clinical care to community-based services, including those supporting people with severe and persistent mental illness.⁷ Interventions may be delivered at different levels (see examples in figure 1) to support protective lifestyle behaviours. Examples include peer-led activity groups in inpatient settings, tailored nutrition education in early intervention services, or social prescribing (ie, referral to non-clinical services such as walking clubs or community gardens). Supporting recovery also requires attention to psychosocial and cultural dimensions that—although extending beyond lifestyle alone—substantially shape health behaviour. An individual's sense of meaning and purpose, experiences of social exclusion, discrimination or perceived loss of identity or cultural connection can profoundly affect their motivation and capacity for behaviour change.³⁵ These factors often determine *whether, how* and *why* individuals engage with any form of care—including lifestyle-based approaches. Actively considering these influences improves personal and cultural relevance and enhances sustainability and impact across diverse settings.³⁵

Taken together, this highlights that lifestyle psychiatry is not solely about symptom relief, but also about enabling people to pursue well-being and meaningful participation in daily life.

These interventions may be self-led or delivered by qualified professionals

These interventions may be self-led or facilitated by professionals, depending on individual needs, preferences and capacities. Self-led strategies are consistent with chronic care models and include behaviour changes initiated and maintained by individuals themselves. These approaches can be effective, particularly when supported by accessible resources such as psychoeducation, peer-led programmes and tools providing feedback, monitoring or reinforcement of progress (eg, digital applications, structured self-reporting or community-based programmes).

However, self-led efforts may require guidance and monitoring to ensure they are safe, effective, evidence-based and clinically appropriate—particularly in complex or comorbid presentations. Challenges such as symptom burden, fluctuating motivation or difficulty navigating health information may otherwise limit effectiveness. Individuals at higher risk for or living with mental illness often face additional, non-volitional barriers complicating self-management. These include symptoms such as fatigue, low motivation, cognitive impairment, side effects of psychotropic medication (eg, weight gain, sedation, appetite dysregulation) and functional limitations that interfere with healthy routines (see figure 1). These challenges are consistently reflected in lived experience accounts, which emphasise the need for tailored, proactive support in lifestyle change.^{2,3,6,27,36}

Therefore, the role of qualified professionals remains essential in promoting equitable access and sustainable outcomes. Interventions led by qualified professionals tend to show greater adherence and effectiveness than more generalist involvement.^{2,6,7,11,37-40} While backgrounds of 'qualified professionals' vary by context, their expertise ideally spans three domains: knowledge of lifestyle behaviours (eg, physical activity, nutrition), understanding of mental illness and its functional impact, and skills in behavioural change. Examples include allied health professionals (eg, dietitians, physiotherapists, exercise physiologists), mental health professionals (eg, psychologists, psychiatrists, nurse practitioners) trained in lifestyle behavioural change and trained peer workers with lived expertise. Their involvement helps tailor interventions to individual capacities and preferences and adapt to complex needs across settings, thereby improving access, feasibility and impact. Recent global policy highlights the need for broader workforce inclusion in systems providing mental healthcare and support—including professionals with expertise in lifestyle-related interventions.¹⁷ Task-sharing, in which specific responsibilities are redistributed across this wider professional base, is especially relevant to lifestyle psychiatry. It can enhance implementation, reduce the burden on overstretched traditional roles and enable more contextually appropriate and sustainable delivery.⁶ Within this model, referring or prescribing professionals—such as general practitioners, psychiatrists, psychologists or nurse specialists—continue to play a central coordinating role. Rather than delivering every component themselves, they are vital in identifying opportunities for lifestyle interventions, initiating referrals, facilitating interdisciplinary collaboration, supporting training efforts and advocating for system-level integration.

To be most effective, this tailoring should be informed by co-design with people with lived experience. This enhances individual, cultural and contextual fit across life stages and service settings.⁶ Importantly, individual support must be paired with awareness of structural factors that shape behaviour. This helps avoid narratives of personal blame and acknowledges that mental health and lifestyle outcomes arise from complex, intersecting causes. Attributing responsibility solely to the individual can be unhelpful, inaccurate or even unjust.² Recognising this complexity is crucial in building more inclusive and supportive models of care and support, as also discussed in the following section.

Supported by systems and policies that address both individual and broader socio-ecological factors

To be truly effective and equitable, lifestyle interventions must be embedded within environments that make healthy choices more accessible, achievable and sustainable. Determinants such as poverty, food insecurity, housing instability, discrimination, unemployment, poorer health literacy and limited access to healthcare and safe and health-supporting environments exert strong influence on both mental health and lifestyle risk behaviours.^{2-4,6,12,41-43} These determinants often lie beyond individual control and disproportionately affect people experiencing or vulnerable to mental illness. If lifestyle psychiatry interventions focus solely on individual behaviour, they risk widening existing health inequalities: those with fewer barriers tend to benefit more, while those in greatest need are excluded or underserved.^{3,6,26,44} Following the principle of proportionate universalism (ie, providing universal interventions scaled to need), achieving equity and impact requires action on both individual and structural levels (see figure 1 for examples).⁴²

Health and social care systems share responsibility for reducing contextual obstacles and creating supportive structures for health-promoting behaviour. Yet in many contexts, these systems still fall short, particularly for individuals facing intersecting disadvantages. Addressing this requires coordinated efforts across healthcare, community and policy sectors.^{2-4,6}

While broader policy and societal shifts are essential for long-term sustainability, it is important to recognise that meaningful systemic action can start within the immediate context of support and care. Teams and community-based services—across healthcare, social care, education and outreach contexts—can start adapting local practices, workflows, policies and environments to better support healthy behaviour. Many successful initiatives have emerged in such local settings, gradually building momentum for broader structural shifts.

Recent international examples demonstrate that targeted lifestyle interventions can be implemented effectively even in low-resource or high-risk contexts and among marginalised populations, such as inpatient mental health wards, community clinics or refugee settings.^{6,45,46} Nonetheless, sustainable progress depends on institutional and societal commitment, including the removal of systemic barriers, supportive policies, viable financial reimbursement models, structural funding mechanisms and organisational leadership. Without these foundations, local innovations risk remaining fragmented or unsustainable over time.

Aligned with existing mental healthcare and support

Lifestyle psychiatry is not a new, separate discipline, but a foundational component of quality care and support for people with mental health challenges. While it draws on the broader foundation of lifestyle medicine, it is embedded within the context of mental healthcare and support and complements existing therapeutic approaches. It offers a structured, evidence-informed way to address modifiable behaviours that impact both mental and physical health. Rather than an optional add-on, lifestyle psychiatry is relevant to all stages and types of mental illness, contributing directly to treatment, recovery and quality of life. While much of the clinical evidence involves adjunctive use, addressing lifestyle behaviours is not merely complementary, but essential: neglecting factors such as physical inactivity, poor diet, disrupted sleep or social isolation can undermine treatment and delay or limit recovery outcomes.^{2,4,6} Rather than operating in isolation, lifestyle psychiatry aligns with widely adopted principles in mental healthcare and support, such as recovery-oriented care, collaborative treatment planning and patient empowerment. These approaches share a focus on supporting individuals to live meaningful, self-directed lives despite ongoing challenges.

Importantly, lifestyle interventions can be embedded in personalised care plans and monitored using structured assessments, outcome measures and documentation practices, just as with pharmacological or psychotherapeutic interventions. In this way, lifestyle psychiatry complements—not replaces—existing approaches and helps ensure care and support better reflects the complexity of recovery and well-being.

DISCUSSION

This paper offers a conceptual foundation for lifestyle psychiatry—an emerging field that builds on the principles of lifestyle medicine, while explicitly addressing the unique barriers and opportunities within mental healthcare and support. While the development process was participatory and iterative, involving experts across 15 countries, it did not follow a formal consensus

methodology. Moreover, despite broad international involvement, certain regions and perspectives may still be underrepresented. A key strength of the framework lies in the diversity of its contributors, spanning clinical, academic, policy and lived experience perspectives, and the transparency of its development process.

By defining its scope and rationale, we aim to foster greater clarity, coherence and credibility across research, clinical practice and policy. Although increasingly recognised by international professional organisations, lifestyle psychiatry remains underused in mental health systems. Continued efforts are needed to embed lifestyle-based approaches in care pathways, professional training and structural policies, ensuring that such interventions are accessible, sustainable and responsive to the needs of people at higher risk for or living with mental illness. These efforts must also be grounded in co-design with people with lived experience, enabling the development of interventions, environments and policies that are not only effective, but also empowering, equitable and relevant to end users. Advancing lifestyle psychiatry in this way offers a meaningful path toward more holistic, person-centred and health-promoting mental healthcare and support that is responsive to diverse lived experiences and needs of the people it aims to serve.

Author affiliations

¹GGz Centraal, Amersfoort, The Netherlands

²Mental Health and Neuroscience Research Institute, Department of Psychiatry and Neuropsychology, Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, LI, The Netherlands

³Department of Psychiatry, Amsterdam University Medical Centres, Amsterdam, The Netherlands

⁴Nutrition, Exercise & Social Equity (NExUS) Research Group, University of New South Wales Discipline of Psychiatry & Mental Health, Randwick, New South Wales, Australia

⁵Federal University of Santa Maria Department of Sport Method and Techniques, Santa Maria, RS, Brazil

⁶Faculty of Health Sciences, Universidad Autónoma de Chile, Temuco, Araucania, Chile

⁷Institute for Mental and Physical Health and Clinical Translation, Deakin University Food and Mood Centre, Geelong, Victoria, Australia

⁸University of Birmingham, Birmingham, UK

⁹Nirakara Institute, Madrid, Community of Madrid, Spain

¹⁰National Health Service England, Redditch, UK

¹¹My Mind Our Humanity, Rwanda, Rwanda

¹²Manchester University NHS Foundation Trust, Manchester, UK

¹³Central and North West London Mental Health NHS Trust, London, UK

¹⁴University of Reading School of Psychology and Clinical Language Sciences, Reading, UK

¹⁵Physical Performance & Sports Research Center (CIRFD), Department of Sports and Computer Science, Section of Physical Education and Sports, Faculty of Sport Science, Pablo de Olavide University, Seville, Spain

¹⁶Department of Physical Education and Sport, Universidad de Sevilla, Seville, Spain

¹⁷University of Toronto Faculty of Kinesiology & Physical Education, Toronto, Ontario, Canada

¹⁸University Medical Centre Utrecht Brain Centre, Utrecht, The Netherlands

¹⁹Department of Sciences for the Quality of Life, Alma Mater Studiorum Università di Bologna, Bologna, Emilia-Romagna, Italy

²⁰The University of Manchester Division of Psychology and Mental Health, Manchester, UK

²¹Stanford University Department of Psychiatry and Behavioral Sciences, Stanford, California, USA

²²King's College London Institute of Psychiatry Psychology & Neuroscience, London, UK

²³Durham University Department of Sport and Exercise Sciences, Durham, UK

²⁴Azrieli Adult Neurodevelopmental Centre, Campbell Family Mental Health Research Institute, Centre for Addiction and Mental Health, Toronto, Ontario, Canada

²⁵Centre for Mental Health, Griffith University School of Pharmacy and Medical Sciences, Brisbane, Queensland, Australia

²⁶Addictions and Mental Health Service, Metro South, Brisbane, Queensland, Australia

²⁷Psychiatry, New York University Grossman School of Medicine, New York, New York, USA

²⁸James Cook University College of Medicine and Dentistry, Townsville City, Queensland, Australia
²⁹Advanced Wellbeing Research Centre, Sheffield Hallam University, Sheffield, UK
³⁰Mindgardens Neuroscience Network, Sydney, UK
³¹NGO RESPIRA en Colombia, Bógota, Colombia
³²Centre for Health Behaviour Research, South East Technological University - Waterford Campus, Waterford, County Waterford, Ireland
³³University of Bath Department for Health, Bath, UK
³⁴University of Leeds School of Biology, Leeds, UK
³⁵University of Oxford Department of Biology, Oxford, UK
³⁶University of New South Wales Discipline of Psychiatry & Mental Health, Sydney, New South Wales, Australia
³⁷Schizophrenia Research Unit, South Western Sydney Local Health District and Ingham Institute of Applied Medical Research, Liverpool Hospital, Liverpool, New South Wales, Australia
³⁸University of Vienna Institute of Sport Science, Vienna, Vienna, Austria
³⁹Psychological Medicine, King's College London, London, UK
⁴⁰Psychiatry, University Medical Centre Utrecht Brain Centre, Utrecht, The Netherlands
⁴¹Altrecht Foundation for Mental Health Care, Utrecht, The Netherlands
⁴²KU Leuven Department of Rehabilitation Sciences, Leuven, Flanders, Belgium
⁴³KU Leuven Psychiatric University Hospital KU Leuven - Campus Kortenberg, Kortenberg, Flanders, Belgium
⁴⁴Division of Psychology and Mental Health, Manchester Academic Health Science Centre, The University of Manchester, Manchester, UK
⁴⁵Manchester Academic Health Science Centre, Greater Manchester Mental Health NHS Foundation Trust, Manchester, UK

Social media Jeroen Deenik, LinkedIn @jdeenik

Contributors JD conceived the initial idea for the manuscript and led its development. Early conceptual work was informed by prior collaboration with JMV and WC. The core framework and direction of the manuscript were further developed in close consultation with JF, BS, DV, SR, PW, SBT, FBS and WM. JD coordinated the writing process and drafted the initial version of the manuscript. All authors contributed to shaping the framework and/or manuscript through conceptual input, written contributions, discussion or critical review. All authors participated in multiple review rounds and approved the final version for submission. JD is the guarantor and accepts full responsibility for the finished work, the integrity of its content, and the decision to submit for publication. ChatGPT (OpenAI) was used to improve English language clarity during manuscript preparation. DALL-E (OpenAI) supported the visual development of a figure based on an author-generated concept. All AI-assisted content was reviewed and adapted by the authors to ensure accuracy and appropriateness.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests JD has served in unpaid advisory roles with non-profit organisations in the field of lifestyle psychiatry. He received royalties from Bohn Stafleu van Loghum for the Dutch Handbook on Lifestyle Psychiatry, and honouraria for lectures and presentations (donated to institutions rather than personally). JMV received royalties from Bohn Stafleu van Loghum for the Dutch handbook on Lifestyle Psychiatry, and honouraria for lectures and presentations (donated to institutions rather than personally). SBT is funded by a National Health and Medical Research Council (NHMRC) EL1 Investigator Fellowship (APP2017302). WM is funded by a NHMRC Investigator Fellowship and received research seed funding from the Institute for Mental and Physical Health and Clinical Translation (IMPACT), Deakin University. He also received funding from Farmers Union (a Bega Group brand), received an honourarium from VitaFoods Asia and serves in an unpaid role as president of the International Society for Nutritional Psychiatry Research. CN is funded by grants from ZonMw and de Hersenstichting. DLN received royalties from American Psychiatric Association Publishing for a book on lifestyle psychiatry. GM received royalties for books from Oxford University Press and Taylor and Francis, and honouraria for lectures and presentations at academic institutions. She is also chair of the American Psychiatric Association Lifestyle Psychiatry Caucus. AO is funded by an NHMRC Emerging Leader Fellowship. KKM is supported in part by NIHR grants NIHR201618 and NIHR206943. EM is co-financed by the Government of Ireland and the European Union through the ERDF Southern, Eastern & Midland Regional Programme 2021–2027 and the Northern & Western Regional Programme 2021–2027 as part of South East Technological University TU RISE. LH received an honourarium for a presentation. FNJ is funded by a NHMRC Investigator Fellowship and has received competitive research funding from IMPACT; Infectious Diseases and Immunology Research, Deakin University and Barwon Health; multiple Medical Research Future Fund schemes; the Rome Foundation; Foundation Fundamental; The Waterloo Foundation; The JTM Foundation; The Serp Hills Foundation; the Wilson Foundation; and the NHMRC of Research Excellence. She also received funding from Farmers Union (a Bega Group brand) and interventional products for investigator-initiated trials from Bega Cheese, A2 Milk Company and Be Fit Foods.

She has received honouraria for multiple presentations from various organisations (donated to institutions rather than personally) and serves in unpaid advisory board roles (eg, Dauten Family Centre for Bipolar Treatment Innovation, Zoe Ltd). FNJ is the founder and immediate past president of the International Society for Nutritional Psychiatry Research. BS is supported by an NIHR Advanced Fellowship (NIHR301206) and serves on the editorial boards of the *Journal of Physical Activity and Health*, *Ageing Research Reviews*, *Mental Health and Physical Activity*, *The Journal of Evidence Based Medicine* and *The Brazilian Journal of Psychiatry*. BS received honouraria from a co-edited book on exercise and mental illness (Elsevier), an associated educational course, and unrelated advisory work for ASICS and FitXR LTD. WC received royalties from Bohn Stafleu van Loghum for the Dutch Handbook on Lifestyle Psychiatry and honouraria for lectures and presentations (donated to institutions rather than personally). SR is funded by an NHMRC EL2 Investigator Fellowship (APP2017506). JF is supported by a UKRI Future Leaders Fellowship (MR/Y033876/1) and the NIHR Manchester Biomedical Research Centre (NIHR203308). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care. JF has provided consultancy, speaking engagements and/or advisory services to Atheneum, Bayer, ParachuteBH Ltd, LLMental, Nestlé UK, HedoniaUS and Arthur D. Little, independent of this work. All honouraria were received within the past 36 months but not during or since the initial planning of this work. All other authors declare no competing interests.

Patient and public involvement statement The coauthor team for this paper includes 15 mental health lived experience researchers.

Patient consent for publication Not applicable.

Ethics approval Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement No data are available.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <https://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iDs

Jeroen Deenik <https://orcid.org/0000-0002-1463-8676>
Jesús Borrueto Sánchez <https://orcid.org/0009-0003-3818-4386>
Camilo López-Sánchez <https://orcid.org/0009-0008-5517-8144>
Douglas L Noordsy <https://orcid.org/0000-0002-9538-5016>
Justin Chapman <https://orcid.org/0000-0002-2958-2783>
Gia Merlo <https://orcid.org/0000-0002-7209-5403>
Simon Rosenbaum <https://orcid.org/0000-0002-8984-4941>

REFERENCES

- 1 Fan Y, Fan A, Yang Z, et al. Global burden of mental disorders in 204 countries and territories, 1990–2021: results from the global burden of disease study 2021. *BMJ Psychiatry* 2025;25:486.
- 2 Firth J, Solmi M, Wootton RE, et al. A meta-review of "lifestyle psychiatry": the role of exercise, smoking, diet and sleep in the prevention and treatment of mental disorders. *World Psychiatry* 2020;19:360–80.
- 3 Firth J, Siddiqi N, Koyanagi A, et al. The Lancet Psychiatry Commission: a blueprint for protecting physical health in people with mental illness. *Lancet Psychiatry* 2019;6:675–712.
- 4 Marx W, Manger SH, Blencowe M, et al. Clinical guidelines for the use of lifestyle-based mental health care in major depressive disorder: World Federation of Societies for Biological Psychiatry (WFSBP) and Australasian Society of Lifestyle Medicine (ASLM) taskforce. *World J Biol Psychiatry* 2023;24:333–86.
- 5 Malhi GS, Bell E, Bassett D, et al. The 2020 Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for mood disorders. *Aust N Z J Psychiatry* 2021;55:7–117.
- 6 Teasdale SB, Machaczek KK, Marx W, et al. Implementing lifestyle interventions in mental health care: third report of the Lancet Psychiatry Physical Health Commission. *Lancet Psychiatry* 2025;12:700–22.
- 7 Mauris I, Wagner S, Spaeth J, et al. EPA guidance on lifestyle interventions for adults with severe mental illness: A meta-review of the evidence. *Eur Psychiatr* 2024;67:e80.
- 8 AKWA GGZ. Zorgstandaard leefstijl [lifestyle care standard]. Utrecht AKWA GGZ [Dutch Alliance for Quality in Mental Health Care]; 2024.
- 9 Manger S. Lifestyle interventions for mental health. *Aust J Gen Pract* 2019;48:670–3.
- 10 Lam RW, Kennedy SH, Adams C, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) 2023 Update on Clinical Guidelines for Management of Major Depressive Disorder in Adults: Réseau canadien pour les traitements de l'humeur et de l'anxiété (CANMAT) 2023 : Mise à jour des lignes directrices cliniques pour la prise en charge du trouble dépressif majeur chez les adultes. *Can J Psychiatry* 2024;69:641–87.

11 Merlo G, Porter-Stransky KA, Sugden SG, et al. American Psychiatric Association Lifestyle Psychiatry Presidential Workgroup Report. *Am J Psychiatry* 2025;182:885–7.

12 Opie RS, Jacka FN, Marx W, et al. Designing Lifestyle Interventions for Common Mental Disorders: What Can We Learn from Diabetes Prevention Programs? *Nutrients* 2021;13:3766.

13 Merlo G, Vela A. Mental Health in Lifestyle Medicine: A Call to Action. *Am J Lifestyle Med* 2022;16:7–20.

14 Viswanathan R. Lifestyle and Global Psychiatry. *PN* 2024;59.

15 World Psychiatric Association. WPA action plan 2023–2026. Geneva: World Psychiatry Association; 2023.

16 Wasserman D. The WPA Action Plan 2023–2026. *World Psychiatry* 2024;23:165–6.

17 WHO. *Guidance on mental health policy and strategic action plans*. Geneva: World Health Organisation, 2025.

18 Noordsy DL. Introduction to lifestyle psychiatry. In: Noordsy DL, ed. *Lifestyle psychiatry*. 3. Washington, DC: American Psychiatric Association Publishing, 2019.

19 Merlo G, Fagundes CP. Introduction to lifestyle psychiatry. In: Merlo G, Fagundes CP, eds. *Lifestyle psychiatry: through the lens of behavioral medicine*. Boca Raton: CRC Press, 2023.

20 Firth J, Ward PB, Stubbs B. Editorial: Lifestyle Psychiatry. *Front Psychiatry* 2019;10:597.

21 Egger G, Binns A, Rossner S, et al. Introduction to the role of lifestyle factors in medicine. In: Sagner M, Egger G, Binns A, eds. *Lifestyle medicine: lifestyle, the environment and preventive medicine in health and disease*. Elsevier Science, 2017.

22 Australasian Society of Lifestyle Medicine. Lifestyle medicine. 2021. Available: <https://www.lifestylemedicine.org.au/lifestyle-medicine/> [Accessed 24 Nov 2024].

23 Guthrie GE. What Is Lifestyle Medicine? *Am J Lifestyle Med* 2018;12:363–4.

24 American College of Lifestyle Medicine. About us. 2021. Available: <https://lifestylemedicine.org/about-us/> [Accessed 24 Nov 2024].

25 Lifestyle Medicine Global Alliance. Lifestyle medicine. 2021. Available: <https://lifestylemedicineglobal.org/lifestyle-medicine-4/> [Accessed 24 Nov 2024].

26 Nunan D, Blane DN, McCartney M. Exemplary medical care or Trojan horse? An analysis of the 'lifestyle medicine' movement. *Br J Gen Pract* 2021;71:229–32.

27 Vancampfort D, Firth J, Stubbs B, et al. The efficacy, mechanisms and implementation of physical activity as an adjunctive treatment in mental disorders: a meta-review of outcomes, neurobiology and key determinants. *World Psychiatry* 2025;24:227–39.

28 Tesselaar DRM, Schellekens AFA, Homberg JR, et al. Psychiatric comorbidity in substance use disorders, a systematic review of neuro-imaging findings. *Neurosci Biobehav Rev* 2025;177:106325.

29 Vink JM, Treur JL, Pasman JA, et al. Investigating genetic correlation and causality between nicotine dependence and ADHD in a broader psychiatric context. *American J of Med Genetics Pt B* 2021;186:423–9.

30 Merlo G, Snellman L, Sugden SG. Connectedness: The Updated and Expanded Pillar of Lifestyle Psychiatry and Lifestyle Medicine. *Am J Lifestyle Med* 2025.

31 Firth J, Torous J, López-Gil JF, et al. From "online brains" to "online lives": understanding the individualized impacts of internet use across psychological, cognitive and social dimensions. *World Psychiatry* 2024;23:176–90.

32 Augner C, Vlasak T, Aichhorn W, et al. The association between problematic smartphone use and symptoms of anxiety and depression—a meta-analysis. *J Public Health (Oxf)* 2023;45:193–201.

33 Fassi L, Thomas K, Parry DA, et al. Social Media Use and Internalizing Symptoms in Clinical and Community Adolescent Samples: A Systematic Review and Meta-Analysis. *JAMA Pediatr* 2024;178:814–22.

34 Ahmed O, Walsh El, Dawel A, et al. Social media use, mental health and sleep: A systematic review with meta-analyses. *J Affect Disord* 2024;367:701–12.

35 Egger G, Stevens J, Binns A, et al. Psychosocial Determinants of Chronic Disease: Implications for Lifestyle Medicine. *Am J Lifestyle Med* 2019;13:526–32.

36 Richardson K, Petukhova R, Hughes S, et al. The acceptability of lifestyle medicine for the treatment of mental illness: perspectives of people with and without lived experience of mental illness. *BMC Public Health* 2024;24:171.

37 Stubbs B, Vancampfort D, Rosenbaum S, et al. Dropout from exercise randomized controlled trials among people with depression: A meta-analysis and meta regression. *J Affect Disord* 2016;190:457–66.

38 Vancampfort D, Sánchez CPR, Hallgren M, et al. Dropout from exercise randomized controlled trials among people with anxiety and stress-related disorders: A meta-analysis and meta-regression. *J Affect Disord* 2021;282:996–1004.

39 Vancampfort D, Rosenbaum S, Schuch FB, et al. Prevalence and predictors of treatment dropout from physical activity interventions in schizophrenia: a meta-analysis. *Gen Hosp Psychiatry* 2016;39:15–23.

40 Rocks T, Teasdale SB, Fehily C, et al. Effectiveness of nutrition and dietary interventions for people with serious mental illness: systematic review and meta-analysis. *Med J Aust* 2022;217 Suppl 7:S7–21.

41 Teasdale SB, Müller-Stierlin AS, Ruusunen A, et al. Prevalence of food insecurity in people with major depression, bipolar disorder, and schizophrenia and related psychoses: A systematic review and meta-analysis. *Crit Rev Food Sci Nutr* 2023;63:4485–502.

42 Marmot M. Fair society, healthy lives: strategic review of health inequalities in England post-2010. London Institute of Health Equity; 2010.

43 Degan TJ, Kelly PJ, Robinson LD, et al. Health literacy in people living with mental illness: A latent profile analysis. *Psychiatry Res* 2019;280:112499.

44 Kriznik NM, Kinmonth AL, Ling T, et al. Moving beyond individual choice in policies to reduce health inequalities: the integration of dynamic with individual explanations. *J Public Health (Oxf)* 2018;40:764–75.

45 Rosenbaum S, Farella A, Latimer K, et al. Implementing sport and physical activity across each layer of the mental health and psychosocial support (MHPSS) pyramid for populations affected by displacement. *Ment Health Phys Act* 2025;29:100701.

46 Karstensen V, Piskorz-Ryń O, Karna W, et al. The Role of Sports in Promoting Social Inclusion and Health in Marginalized Communities. *Int J Sport Stud Health* 2024;7:41–8.

47 McLeroy KR, Bibeau D, Steckler A, et al. An ecological perspective on health promotion programs. *Health Educ Q* 1988;15:351–77.

48 Sallis JF, Owen N, Fisher EB. Ecological models of health behavior. In: *Health behavior and health education: theory, research, and practice*. Hoboken: Wiley, 2008: 465–85.