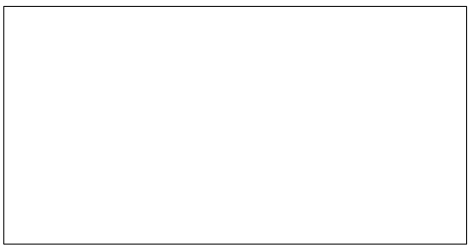

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Towards the standardization of physical activity programs for severe mental ill health: A survey of current practice across 54 mental health trusts in England

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ABSTRACT

Aims: While physical activity (PA) is recommended in the treatment of severe mental illness (SMI), there are no standardized processes for implementing PA in mental healthcare, and the extent to which PA programs have been implemented is unknown. Therefore, we sought to describe usual care in terms of the provision of PA in the National Health Service (NHS) mental health trusts in England for people with SMI.
Methods: We invited all NHS Mental Health Trusts across England to participate in a bespoke survey.
Results: Fifty-two mental health trusts (96.2%) responded, of which 47 (87%) offered some form of physical activity provision. The provision across these 47 trusts comprised 93 different types of PA programs. The programs that were identified showed vast differences in the types of physical activity offered, the settings in which they were provided, and the providers.
Conclusions: Although existing mental healthcare services are demonstrating good practice in some areas, the findings of this survey underline the pressing need for more standardization of PA programs that are delivered to people with SMI, better allocation of resources, staff training, improved monitoring of the delivery of these programs, and better PA support for patients as they transition to community care.

1. Introduction

People with severe mental illness (SMI), including schizophrenia or other psychotic disorders, bipolar disorder, or depression with psychotic features (NHS England, 2018), experience significant health inequalities compared with those who do not have SMI. Heart, liver, and respiratory diseases, as well as diabetes and obesity are three to five times more common among people with SMI than those without such disorders (Reilly et al., 2015; Correll et al., 2017; Liu et al., 2017), leading to premature deaths (De Hert et al., 2011). While the life expectancy of those without SMI has steadily increased over recent decades, the life expectancy of people with SMI has declined (Dregan et al., 2020).

Inadequate provision of physical health initiatives for people with SMI appears to contribute significantly to these inequalities, with some figures indicating that as much as three-quarters of premature deaths among people with SMI are associated with inactivity (WHO, 2014; Vancamfort et al., 2016a, 2016b, 2017a), sedentary behavior (Vancamfort et al., 2016a), smoking, and poor diet (WHO, 2014; Reilly et al., 2015).

Extensive research has established that individuals with SMI typically engage in less physical activity (Vancamfort et al., 2016a; Liu et al., 2017) and more sedentary behavior than do those without SMI (Schuch et al., 2016; Stubbs et al., 2016a, 2016b; Vancamford et al., 2017b). Low physical activity levels among people with SMI have complex determinants, including poverty, unemployment, social isolation, and stigma (Machaczek et al., 2022). These determinants also affect motivation and opportunities to take part in physical activities.

Nonetheless, physical activity interventions, such as football and

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netball, are proving increasingly popular among people with SMI (Soudy et al., 2015; Fenton et al., 2017). Furthermore, guidelines from the World Health Organization (Bull et al., 2020), the European Psychiatric Association (EPA) (Stubbs et al., 2018), and the National Institute for Health and Care Excellence (NICE, 2014) recommend that physical activity is used to preserve health and improve outcomes in people treated for SMI.

EPA, for example, recommends 150 min of moderate to vigorous physical activity per week, divided into three sessions and provided by qualified professionals (Stubbs et al., 2018).

Physical activity interventions delivered by qualified professionals such as certified yoga instructors, physical therapists, exercise psychologists, or health care practitioners with physical activity and exercise qualifications, have the lowest drop-out rates (Vancamfort et al., 2016b).

Moreover, several meta-analyses of physical activity interventions for people with SMI have demonstrated that interventions incorporating professional support for physical activity also have a significantly larger effect on cardiorespiratory fitness (Vancamfort et al., 2016b; Stubbs et al., 2016c, 2017a).

Therefore, healthcare services are uniquely positioned to support people with SMI to increase their physical activity levels, through embedding physical activity programs as routine mental healthcare. Despite this, there is a lack of understanding regarding the availability of physical activity programs in care services and a need for more standardization to allow optimal implementation and delivery.

Previously, one study provided examples of physical activity programs that had been successfully implemented in Australian mental health settings (Lederman et al., 2017). Furthermore, two surveys were conducted in ten National Health Service (NHS) mental health trusts in England that participated in a clinical trial, STructured lifestyle Education for People WIth SchizophrEnia (STEPWISE), to explore the usual care provision of lifestyle interventions that included elements of physical activity and healthy eating. The purpose of STEPWISE was to support weight reduction in people with schizophrenia by providing a theory-informed, group-based, structured lifestyle education program in a community mental health setting (Gossage-Worrall et al., 2016). The first survey, conducted in 2015, highlighted that eight out of ten trusts delivered healthy lifestyle programs (Swaby et al., 2017). Where such programs were provided, these were ad hoc; hence they varied substantially, were rarely standardized, and were not commonly accessed (Swaby et al., 2017). The second follow-up survey revealed that the number of trusts delivering lifestyle programs declined to four during the STEPWISE trial (Swaby et al., 2019). Trusts not offering lifestyle programs would signpost patients to non-NHS-based providers, such as local councils or voluntary sector organizations (Swaby et al., 2019). In addition, seven out of ten trusts reported changes in service provision. These changes included an improved awareness of the necessity of physical health monitoring of patients with SMI, expansion of gyms, and plans for trust-led lifestyle programs, among others (Swaby et al., 2019).

This current study was designed to provide further insights into the physical activity programs typically offered by the NHS mental health trusts to people with SMI to: (i) assess the widespread availability of physical activity programs in mental healthcare on a national scale, (ii) identify the types of physical activity delivered, and (iii) begin to elucidate the common and ideal processes for delivering evidence-based physical activity through national healthcare settings.

2. Methods

2.1. Study tool design and content

The bespoke online survey developed for this study comprised 19 questions that covered information on the usual provision of physical activity to people with SMI (see Appendix A for the survey). The survey was created using Qualtrics, an online survey software (www.Qualtrics.com).

The design and development of the survey entailed an iterative process, informed by:

(a) Survey-development working group meetings. The working group members included a senior clinician working in a mental health trust in England (head of physiotherapy), and five academics with a good understanding of mental health secondary services in England. Two working group members were the authors of international guidance on implementing and delivering physical activity programs for people with SMI as part of usual care.

(b) A literature search on providing physical activity programs in mental health trusts in England. A search strategy was developed that focused on delivering physical activity to people with SMI as part of the usual care provided by mental health trusts in England. Search terms related to the mental health services provision, physical activity, exercise, exercise therapy and England, were combined with terms describing severe mental illnesses. Searches were also conducted without the search term 'England'. This was done to identify any similar projects conducted elsewhere in the world. Searches were conducted on MEDLINE (including Medline-in Process and Epub ahead of print), CINAHL, and EMBASE. These searches were complemented by searching gray literature sources, including Google Scholar, OpenGrey (gray literature database), and EThOs (the British Library e-theses online service) for unpublished data, regulatory documents, and conference proceedings. Documents published before 2010 were excluded on the assumption that the service provision they describe would be outdated. The total number of relevant papers which were identified through the searches was three (Lederman et al., 2017; Swaby et al., 2017; Swaby et al., 2019). (See Appendix B for the search terms and details of relevant papers).

(c) The Template for Intervention Description and Replication (TIDieR) checklist/guideline (Hoffmann et al., 2014). The TIDieR was developed to improve the reporting of interventions in research studies. In this study, it was used as a guide to ensure that the survey captured the key aspects of physical activity programs while considering the service delivery (i.e., the type of data on physical activity provisions the trusts were likely to collect and the purpose and method of the study). (See Appendix c for the details of the use of TIDieR.)

(d) Before the data collection commenced, the survey was pilot-tested with a physical activity lead and an occupational therapist, who were in charge of delivering physical activity programs in the trusts where they worked. The purpose of the pilot tests was to examine i) content readability, ii) accuracy in depicting the NHS mental health services in England and characteristics of the physical activity programs that could be delivered as part of usual care provision, and iii) technical glitches.

The final version of the survey included questions about the types of physical activity programs provided and for which groups of patients, where and by whom, and how they were delivered—in inpatient and outpatient settings. The survey also included an open-ended question aimed at ascertaining whether the respondents believed that their physical activity programs met the needs of patients. See Appendix D for a detailed description of the survey items, including why the selected items were included.

Physical activity programs were defined in this study as any program that incorporates an element of physical activity.

2.2. Procedure

Data collection took place between June 1, 2022, and November 30, 2022. All mental health trusts in England ($n = 54$) were approached and

invited to complete the survey online or over the telephone with a researcher (KM or EP). They were also asked to complete a separate survey for each physical activity program they offered.

If a study team member had a personal contact in the mental health trust, that contact was approached and asked to signpost the most appropriate person or people (in cases where there was more than one physical activity program) to complete the survey.

If the research team had no personal contacts, we initially approached the trusts' research and development (R&D) teams to ask them to signpost us to the appropriate person or people. If the R&D team could not signpost us, we requested the information under the Freedom of Information Act (FOIA). The FoI Act provides interested parties with the statutory right to access information from public authorities, i.e., organizations that exercise functions of a public nature and that receive public money, such as government departments, local authorities, and the NHS (Freedom of Information Act 2000). Each public authority has a dedicated FoI team. The FoI was used to gain information on physical activity programs from 37 NHS trusts. Two trusts did not respond to the FoI request.

For those who completed the survey over the phone or submitted responses to the FOI requests, the researcher entered the results directly into Qualtrics.

2.3. Analysis

Data were exported from Qualtrics to an SPSS data file and a Microsoft Excel document. Simple descriptive statistics (e.g., proportions, percentages) were produced to describe the different types of services provided.

The free-text responses were analyzed using the principles of the framework analysis (Gale et al., 2013). The data analysis was undertaken by two team members (KM and EP). Please see Appendix E for details of the data analysis process.

3. Results

Fifty-two of the 54 NHS mental health trusts participated in the survey. In total, 93 individual survey responses, each describing a physical activity program, were submitted.

3.1. The availability and key features of physical activity programs in mental health trusts

The following sections describe the availability and key features of physical activity programs in mental health trusts.

3.1.1. The availability of physical activity programs

Five trusts reported that they did not offer physical activity programs to people with SMI. This included one trust that reported it referred all eligible patients with SMI to an external provider. In total, 47 trusts reported running at least one physical activity program. Twenty-one trusts completed multiple surveys (this was because they provided more than one physical activity program, which usually meant that there were different programs in different trust locations). The maximum number of physical activity programs reported by trusts was nine. Please see Table 1 for a breakdown of the number of physical activity programs per trust.

The following section presents results at the physical activity program level.

Of the 93 programs that were provided, 44 (47%) were for inpatients, 15 (16%) for outpatients, and 28 (30%) for a mixture of inpatients and outpatients. There were six (6%) missing answers to this question. Of the available programs, 69 (74%) were offered to all service users across the trusts; nine (10%) were offered only to those who expressed interest in taking part in physical activity, and six (6%) were offered only to those who were eligible.

Table 1
A breakdown of physical activity programs per trust.

Number of MH trusts that offered physical activity programs	Number of physical activity programs offered
26	1
12	2
4	5
2	4
2	3
1	9
Total: 47	Total: 93

3.1.2. Eligibility criteria for physical activity programs

The reported eligibility criteria varied across the programs. In all programs, patients' eligibility depended upon meeting the physical health or risk assessment criteria. Seven (7%) programs had limited space available and accepted patients to the program based on need. These programs accepted service users with a greater need for physical activity based on their physical health measures (such as a high body mass index). Fifteen (16%) programs were not offered to all patients, but further justification as to why was not provided by the respondents. There were nine (10%) missing answers to this question.

3.1.3. The proportion of eligible patients referred to physical activity programs in a typical month and how many attended

Information about the proportion of eligible patients referred to physical activity programs in a typical month was provided for 55 programs (59%). However, responses varied substantially: some respondents provided the percentage of referred patients; others provided numbers of referred patients but not the total number of eligible patients; and two respondents provided a comprehensive breakdown by trust location. This mix of answers made it challenging to decipher the proportion of eligible patients referred to physical activity programs.

Similarly, it was challenging to ascertain what proportion of referred patients attended the programs. For example, 16 respondents stated that 100% of eligible patients were referred to the programs in a typical month. Of these, one stated that 100% referred patients had attended. Yet, from other responses, it was clear that attendance fluctuated and varied greatly.

3.1.4. The key features of physical activity programs

Concerning the key features of programs that were offered, respondents listed the following: supervised sessions ($n = 84$; 90%), peer support ($n = 47$; 51%), physical activity counseling from a trained facilitator ($n = 45$; 48%), information about physical activity ($n = 69$; 74%), and other features (i.e., an adaptation to the patients' needs) ($n = 30$; 32%).[1]

In 54 (58%) programs, patients could choose the form of support they wanted to help them to engage in physical activity (e.g., face-to-face individual, face-to-face group, online one-to-one, online group, one-to-one by telephone). Three programs offered no flexibility in provision. Information about whether patients could choose the form of support was not provided for 36 (38%) programs.

The programs were offered via multiple modes of delivery. Fifty-five programs (59%) were ongoing courses (with no fixed start or finish date), 55 (59%) were offered as drop-in sessions (with no previous registration required), and 24 (26%) were provided over fixed periods (e.g., as one-session-a-week for 8 weeks programs).

Programs also included strategies to promote engagement in physical activity. These included brief advice on physical activity ($n = 70$; 75%), financial support—for example, to help with the costs of gym membership ($n = 22$; 24%), one-off activity events ($n = 12$; 13%), and other strategies ($n = 25$; 27%).

[1] Multiple options were available for the responses, adding up to over 100%.

3.1.5. Types of physical activity that were offered

Various types of physical activity were offered, with walking ($n = 69$; 74%), gym-based exercise ($n = 66$; 71%), and football ($n = 60$; 65%) being the most common. Please see Table 2 for details.

3.1.6. Physical activity program staff

In terms of the types of clinicians or practitioners who delivered the physical activity programs, most of the sessions were provided by occupational therapists ($n = 67$; 72%), followed by fitness instructors ($n = 54$; 61%), mental health workers with sports and fitness qualifications ($n = 41$; 44%), peer support workers ($n = 31$; 33%), physiotherapists ($n = 30$; 32%), healthy-living advisors ($n = 17$; 18%), clinicians ($n = 11$; 12%), and others ($n = 13$; 14%).

3.1.7. Qualifications of physical activity program staff

Clinicians or practitioners who delivered the programs had a wide range of qualifications, the most commonly reported was to degree level or above in a sports- or exercise-related field. However, other physical activity-specific qualifications were also reported, such as an advanced diploma in yoga. Please see Table 3 for details.

3.1.8. Programs that included signposting to various physical activity providers

Eighty-five programs (91%) included signposting patients to other physical activity providers. Table 4 shows the details.

3.1.9. Respondents' perception of physical activity provision

When asked whether the physical activity programs met the patients' needs, 51 (55%) respondents said yes and 27 (29%) said no. Ten (11%) respondents felt that, although their provision was adequate, there was room for improvement. Five (5%) respondents did not answer this question.

Table 2
Types of physical activity included in programs.

Type of physical activity	N (%)
Walking group	69 (74%)
Access to the gym	66 (71%)
Football	60 (65%)
Access to fitness classes	49 (53%)
Yoga	40 (43%)
Cycling	33 (35%)
Basketball	31 (33%)
Swimming	26 (28%)
Badminton	17 (18%)
Netball	12 (13%)
Table tennis	12 (13%)
Dance, gardening	10 (11%)
Tennis	8 (9%)
Boxing	7 (7%)
Tai Chi, seated exercises/boccia, volleyball	6 (6%)
Climbing, gold, cricket, rounders, surfing, circuit	4 (4%)
Running, pool, Pilates	3 (3%)
Netball, air hockey, Xbox, table football	2 (2%)
Mindfulness exercise, swing ball, quilts, judo, Frisbee, athletics, curling, rugby, trampolining, fishing, spinning, HIIT, Dots	3 (1%)

Table 3
Qualifications of program providers.

Qualifications of program providers	N (%)
Other training reported	72 (77%)
To degree level or above	46 (49%)
Sports specific	8 (9%)
The BTEC* Level 2	3 (3%)
The BTEC Level 3	9 (10%)
The BTEC Level 4	5 (5%)
Yoga	2 (2%)
Various	7 (7%)
Not clear	7 (7%)
None	2 (2%)
Details not provided	29 (31%)

* The BTEC (Business and Technology Education Council) diploma is a vocational qualification studies at school or college.

Table 4
Types of providers signposted to by the program staff.

Types of providers signposted to by the program staff	N (%)
Local council	73 (78%)
Charity	49 (53%)
Not for profit company	36 (38%)
Other third sector	33 (35%)
Secondary care trust	12 (13%)
Other NHS	6 (6%)
Other: Football club	3 (3%)
Other: Cricket club	1 (1%)

3.2. Findings from responses to the open-ended question

The respondents were asked to share any additional thoughts they might have about physical activity provision in the trusts where they worked. The analysis of their responses established three key themes: 'barriers to the provision of physical activity programs', 'perceptions of what is working well', and 'opportunities for improved services'.

3.2.1. Barriers to the provision of physical activity programs

The respondents described several barriers that prevented them from helping patients engage in physical activity. The key barrier was inadequate resource allocation for physical activity provision, which was linked to multiple challenges, as described below.

Firstly, the allocation of resources for physical activity infrastructure was inadequate:

> "The gym is not sufficient and not in good working order currently. Also, we do not have a sports technician."
>
> Head of Allied Health Profession

Secondly, the allocation of resources for staff training was inadequate:

> "Budget cuts reduce our ability to introduce major changes and to invest in physical activity training courses for staff."
>
> Senior Occupational Therapist

Thirdly, there was an underinvestment in staff, which led to staff shortages, high workloads, and limited or no capacity to provide physical activity programs:

> "There are not enough staff to focus on and support patients in this area. A single occupational therapist is left to provide a health promotion intervention independently. The nominated physical health practitioner does not have sufficient time to reach all patients. A dedicated staff member or team (for health interventions and physical activity/exercise facilitation) is required to focus on this full-time role."
>
> Physical Activity Coordinator

Fourthly, some respondents felt that, despite the high demand for their services, investment in qualified exercise professionals was insufficient:

> "The program should be supported by qualified fitness coaches and professionals."
>
> Head of Occupational Therapy

Fifthly, one respondent reported that underinvestment and budget cuts led to the termination of physical activity programs[2]:

> "Many physical activity programs have been cut due to sustained and widespread reductions in the trust's budget in recent years."
>
> Head of Allied Health Professions

Sixthly, in some instances scarce resources meant that physical activity programs were accessible only to specific clinical populations:

> "The group is open to all service users who are overweight, who are willing to engage in the weight management group, and where there are no concerns from the clinical team in regard to other related physical health or mental health issues where it is deemed that it would be detrimental to the service user."
>
> Sports Team Care Assistant

Seventhly, lack of investment resulted in staff not being able to help patients with SMI access physical activity opportunities outside the trust's provision, such as swimming lessons:

> "Some activities aren't accessible, as they are too expensive."
>
> Chief Nurse

The respondents described additional barriers that prevented them from helping patients to engage in physical activity. These included safety measures and a limited appreciation for the role of physical activity in the management of SMI:

Safety measures linked to the use of facilities or the COVID-19 pandemic were reported to negatively affect the provision of physical activity programs:

> "There are some units where facilities place restrictions upon what can be offered."
>
> Occupational Therapy Lead

In addition, a limited appreciation for the role of physical activity in the management of SMI presented a barrier to provision:

> "The service is not promoted as effectively as it could be among the ward staff. It's often seen as the 'gym team,' and the wide range of services we can offer, such as activities that people can do in their bedrooms, are not being referred. We started changing this perception, but due to COVID-19, we are back to square one."
>
> Health Trainer, Psychosis Service

3.2.2. *Perceptions of what is working well*

Some respondents reported that physical activity programs were successfully integrated into their routine healthcare provision:

> "There is a range of physical activities that patients can access, and we are always looking to expand the activities we deliver based on service needs. There are physical activities available for all wards, with the [recreation department on site] offering two multi-gyms, tennis courts, and a sports hall. The [trust] also runs community football in collaboration with [name of organizations], as well as walking groups, cycling, and swimming activities."
>
> Clinical Lead, Occupational Therapist

Similarly, others indicated that, despite the odds (e.g., having a small team), they found ways to provide comprehensive programs by developing formalized partnerships and referral pathways with community-based physical activity providers. This included, for example, outsourcing physical activity sessions to local recovery colleges[3]:

> "…a range of things on offer across our services, often bespoke to an individual or a range of service users. Below are some examples of what we offer: a) There are a small number of clinical exercise staff who work across the trust and provide in-reach programs in some of the wards. Some of the sites have gyms where they bring patients or outside spaces such as outside gyms. b) There are several external people coming in to offer a range of physical activity programs such as yoga. The trust also has a relationship with the recovery college, which offers various courses."
>
> Physical Health Lead

On some occasions, physical activity provision involved supporting patients with their transition to community care by encouraging continued participation in physical activity programs that were started during their hospital stay:

> "We would support individual clients with community resources as part of an individual treatment plan. We also use the [charity's name] workers to assist with physical activity as appropriate…"
>
> Operational Lead in Early Intervention

A few respondents reported that the trusts where they worked had begun to appoint qualified physical activity professionals to run physical activity programs:

> "We created a new staff appointment to integrate physical activity into the routine care of patients with SMI."
>
> Head Occupational Therapist

In addition, respondents believed that a high degree of flexibility in provision facilitated tailoring of the programs to patients' needs and preferences:

> "They [the team in charge of delivery of physical activity programs for patients with SMI] changed working hours to meet the needs of the patients—they work in the evenings; they provide comprehensive services in terms of reviews and assessment."
>
> Clinical Specialist Occupational Therapist

However, it is important to note that comprehensive physical activity programs seemed to be few and far between.

3.2.3. *Opportunities for improved services*

Respondents believed that physical activity provision was or should be a strategic aim of the trust:

> "More needs to be done, but there are strategic aims related to this within the new Physical Health in Mental Health and Learning Disabilities strategy."
>
> Head of Inpatient and Urgent Care

Some respondents raised the importance of creating culture change through staff education about the benefits of physical activity:

> "We teach our staff the importance of regular exercise within our Physical Health in Mental Health training."
>
> Occupational Therapist

Some respondents suggested that the issue of scarce resources for physical activity provision could be addressed by considering the use of non-traditional spaces and facilities for physical activity, such as the patient's bedsides:

[2] This code was labeled as deviant, given that it represented one trust only.

[3] Recovery colleges in the UK provide a range of online educational courses and resources to people who might be struggling with mental health issues.

"Sometimes little is needed to help people, as we can offer things that people can do in their bedrooms."

Interim Service Manager, Adult Rehabilitation & Neuropsychiatry Services

Others believed that provision could be improved through the use of community-based support for physical activity that would include the input of multidisciplinary teams:

"This could be improved further, perhaps with specific formal programs that could be referred to support inpatient clients to maintain their health and well-being in the community, with input from trained fitness instructors, physiotherapists, occupational therapists, and dieticians to support specific mental health conditions and side effects from medication."

Physical Health Lead

Overwhelmingly, the respondents believed that more investment was necessary to improve the provision of physical activity programs. This was the case with trusts that offered comprehensive programs (judged by the relatively high number of physical activity programs run by the trust) and those with a much more modest provision (with one or no physical activity programs):

"…we could deliver better service to more people with additional staff and a larger budget. More investment in physical activity and social engagement is required as a first-line, real-world solution to the increasing CVD [cardio vascular disease] risk and mortality associated with a mental health diagnosis."

Head of Inclusion, Recovery, Occupational Therapy

4. Discussion

The nationwide analysis of real-world settings, which covered 52 out of the 54 NHS mental health trusts in England, enabled us to provide new insights into the provision of physical activity within mental healthcare on a broader scale than previously examined elsewhere. It allowed us to identify positive and challenging aspects of service provision in inpatient and outpatient settings and provide suggestions on how services could be improved based on the experiences and views of trust staff.

The findings revealed significant differences between the number of programs per trust, with some trusts having much richer offerings than others, which appeared to be indicative of significant disparities in the provision of the programs.

The 93 separate programs that were identified showed vast differences in the types of physical activity offered, the settings in which they were provided, and the providers. The most commonly offered activities were walking, gym access, and football. Most of the programs were targeted at inpatients, which suggests that there may be a gap in provision for outpatients. Occupational therapists were most often responsible for delivering these programs, followed by fitness instructors and specially trained mental health staff.

Notably, due to a lack of consistent monitoring and data, it was difficult to determine the type and number of eligible patients who had been referred to physical activity programs and how many attended.

The results of the survey confirmed previous research findings (Ball et al., 2022) on barriers to the provision of physical activity programs (e.g., inadequate allocation of resources, safety measures, or limited appreciation among clinical staff for the role of physical activity in the management of SMI). A strength of the current study was that it reported views from a nationwide population of professionals working in mental health trusts.

The findings also highlighted several opportunities for improvement; these included recognizing physical activity provision as a strategic priority, creating culture change through staff education about the benefits of physical activity (Lederman et al., 2017), innovative delivery methods (e.g., use of non-traditional spaces and facilities for physical activity), the use of community-based support for physical activity, and more investment in physical activity programs.

Regarding the common and ideal processes for delivering evidence-based physical activity through national healthcare settings, encouragingly, many programs offered a high degree of flexibility by allowing patients to choose the form of physical activity support they received, which is in line with behavioral science recommendations (e.g., the autonomy of behavior (Deci and Ryan, 1987)). Some trusts employed qualified physical activity professionals to run physical activity programs, and some made inroads into supporting patients to maintain their physical activity levels after discharge from inpatient settings.

4.1. Limitations

The survey was conducted anonymously, so we cannot provide a comprehensive breakdown of responses by characteristics, such as geographic location, as that could jeopardize the trust's anonymity. This means we cannot describe regional differences in provision or, for example, the nature of the setting (e.g., urban, rural). On some occasions, we received more than one response from a trust. In two such cases, respondents provided contradictory information about physical activity provision: one respondent reported a lack of programs, yet the other reported that the trust offered physical activity programs. This implies that some respondents might not be aware of physical activity programs that were delivered in trust locations other than where they worked. This also suggests that some programs might have remained unreported because respondents who worked in a trust location that offered no physical activity provision may have been unaware of programs in other trust locations.

Responses to questions regarding the proportion of eligible patients referred to physical activity programs and the proportion of those who attended varied substantially. It was clear that some trusts collected comprehensive information, but these sites seemed to be the exception rather than the rule.

In cases where the survey was completed via a request under the FoI Act, responses were usually more comprehensive than the information received from other respondents. However, the main drawback of collecting information via a FoI request was that in many cases, and in line with the FoI regulations, respondents did not express their views regarding whether or not they believed their physical activity offer met the needs of their patients.

4.2. Future research

Future studies should not rely on one data collection method but should utilize a mixed-methods approach that would enable them to provide a full/comprehensive description of the usual treatment concerning physical activity programs. In addition, we suggest that further studies be undertaken according to longitudinal designs to provide insights into the long-term effects of physical activity provision on mental health recovery, physical health, and well-being among people who live with SMI. Evaluation of the programs' cost-effectiveness is also urgently required. Moreover, ongoing physical activity programs could be studied to understand what works, for whom, under what circumstances, and why. These lessons could be used to develop and implement more effective programs.

Given the economic challenges, it is important to understand how the NHS and community providers can work together to ensure ongoing support for physical activity that spans inpatient and community provision for this clinical population. Therefore, it is important to determine what constitutes a successful transition of physical activity support from inpatient to outpatient and community setting and how this can be facilitated.

4.3. Implications for practice

As a future direction, in line with the WHO, EPA and NICE guidance, trust-led physical activity programs should become a core part of preventing and managing physical health in people with SMI (Bull et al., 2020; Stubbs et al., 2018; NICE, 2015). To achieve optimum patient outcomes, an investment in staff, infrastructure (e.g., well-equipped gyms, indoors and outdoors), ongoing monitoring, and external evaluations will be essential.

It may also be helpful to standardize provision while ensuring scope for tailoring programs to the unique contexts in which they are provided (e.g., physical environment, location of programs, and the availability of community-based physical activity providers that cater their offer to the needs of people with SMI).

We advocate that programs are organized and delivered by qualified professionals (physical therapists, other clinicians trained in physical activity provision, and qualified physical activity and exercise professionals). Those professionals should become a core part of multidisciplinary teams that provide holistic care addressing the complex needs of people with SMI.

Essentially, meaningful engagement with patients is fundamental to designing programs that meet their needs. Moreover, patients' experiences and perceptions should form part of program evaluations.

There is also an urgent need to share data and good practices to progress the field.

5. Conclusions

The findings of this study provide crucial new insights across three key areas. First, a comprehensive assessment of the current state of physical activity programs across the NHS, this study enabled the first-ever nationwide mapping of existing resources regarding physical activity in real-world mental health settings. Second, our study helps to show how and whether evidence-based delivery of physical activity programs is happening in real-world settings.

By examining the types of physical activity offered and the delivery personnel, this study details emergent patterns of best practice, areas for potential improvement, and avenues for future research.

Aggregation of all responses across the included trusts has helped to identify the common and ideal processes for delivering evidence-based physical activity through national healthcare settings. These included flexible provision, delivery by qualified physical activity professionals, and support for patients to maintain their physical activity levels after discharge from inpatient settings.

In summary, although existing mental healthcare services demonstrate good practice in some areas, they are not fully compliant with the WHO, EPA and NICE recommendations on providing physical activity programs as part of usual care. The findings of this survey underline the pressing need for more standardization of physical activity programs delivered to people with SMI, better allocation of resources, staff training, improved monitoring of the delivery of these programs, and better physical activity support for patients as they transition to community care.

Ethics approval

Ethical approval was granted by the Northumbria University Ethics Committee for the use of survey data for research purposes [Ref: 45,416].

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Availability of data and materials

The datasets generated and analyzed during the current study are available upon request.

Disclaimer

None.

Author statement

All authors meet authorship criteria and agree to submission of this paper.

Declaration of Competing Interest

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Supplementary materials

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