EXPLORING THE IMPLEMENTATION OF A PSYCHOLOGICALLY INFORMED

MENTAL SKILLS TRAINING PROGRAMME FOR YOUNG PEOPLE EXPERIENCING

HOMELESSNESS

By

GRACE LOUISE TIDMARSH

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Abstract

The aim of this thesis was to explore the implementation of the mental skills training programme My Strengths Training for Life™ (MST4Life™) delivered to young people experiencing homelessness. After reviewing the literature in Chapter 1 and providing an overview of the underpinning research philosophy and methods in Chapter 2, Chapter 3 investigated the extent to which MST4Life™ was delivered in the intended delivery style using observations and facilitator self-reflection forms. Informed by and building on findings from Chapter 3, Chapter 4 presents a systematic review that examined process evaluations of positive youth development (PYD) programmes for disadvantaged (or at-risk) youth. The systematic review examined the quality of the studies, methods used and barriers and enablers that these studies experienced in implementing PYD programmes to this population. Chapter 5 explored the extent to which MST4Life™ was delivered in the intended style from the perspective of programme participants through thematically analysing diary room entries. This chapter also explored the challenges and barriers to young people's engagement in MST4Life™. Chapter 6 examined the feasibility of a study protocol designed to investigate the extent to which the training was delivered as intended to frontline service staff implementing MST4Life™. In this study, pre- and post-training data from training recipients were also collected to examine outcomes of the training and to enhance understanding how the training was implemented. Overall, this thesis makes a novel contribution to the discipline of sport and exercise psychology by highlighting the importance of conducting process evaluations to investigate the implementation of programmes or interventions. This thesis also makes vital contributions for frontline services supporting young people at-risk of or experiencing homelessness, demonstrating key programme components to promote young people's engagement as well as providing evidence that it is possible to train frontline service staff to deliver psychologically informed programmes with fidelity to delivery style.

Dedication

This thesis is dedicated to all those who have experienced and continue to experience domestic abuse and the services that support survivors. The strength, bravery, courage, and determination to keep going every day in-spite of the traumatic events is beyond words. I dedicate this thesis to you and the amazing team at Broxtowe Women's Project without whom I would not have been around to complete this thesis. Thank you.

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Publications and conference presentations produced during the PhD

Publications which are part of this PhD

1. Tidmarsh, G., Whiting, R., Thompson, J.L., & Cumming, J. (2021) Assessing the Fidelity of Delivery Style of a Mental Skills Training Programme for Young People Experiencing Homelessness. *Evaluation and Program Planning*. (Submitted to Journal: Under Review)
2. Tidmarsh, G., Thompson, J.L., Quinton, M.L., & Cumming J. (2021) Process evaluations of positive youth development programmes for disadvantaged young people: A systematic review. *Journal of Positive Youth Development.* (Submitted to Journal: Under Review)
3. Tidmarsh, G., Quinton, M.L., Thompson, J.L., Parry, B.J., Cooley, S.J., & Cumming J. (2022). A platform for youth voice in My Strengths Training for Life™: A vital component of process evaluations. *Sport and Exercise Psychology Review, Special Issue: Equality, Diversity, and Inclusion* (Accepted)

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List of Abbreviations

Abbreviation	Meaning
ACEs	Adverse childhood experiences
AGT	Achievement goal theory
BPNT	Basic psychological needs theory
LSAs	Learning support assistants
MST4Life™	My Strengths Training for Life™
MST	Mental skills training
NEET	Not in education, employment, or training
PIE	Psychologically informed environment
PYD	Positive youth development
RDS	Relational development systems
SDT	Self-determination Theory
UK	United Kingdom
USA	United States of America
YP	Young people

General Introduction

Understanding youth homelessness within England

The substantial rise in numbers of youth experiencing homelessness, in conjunction with increasingly complex individual needs is of growing concern. Support services have been under intensified pressure to meet the needs of young people experiencing homelessness at a time when services are experiencing both an increase in demand and decrease in resources (Homeless Link, 2021). This thesis focuses on youth experiencing homelessness in England, United Kingdom (UK). Data show that 121,000 young people (aged between 16-24 years) contacted their local authority for support due to homelessness or risk of homelessness during the 2019-2020 financial year (Centrepoint, 2020c). This is a 40.6% increase from the 2016-2017 financial year, despite the introduction of the Homelessness Reduction Act in England, 2017. Due to the Covid-19 pandemic many young people have experienced increased exposure to housing insecurity and homelessness. We see this reflected in a recent (Centrepoint, 2020b) report where 78% of 53 Local Authority respondents reported an increase in young people experiencing homelessness in their area.

Homelessness is defined as a situation when an individual does not have a safe place to call "home". As well as individuals sleeping rough, many individuals who experience homelessness do so through sofa surfing, staying on night buses or with strangers (Clarke, 2016). Homeless Link reported levels of sofa surfing to be particularly high in youth homelessness when compared to those over the age of 25. However, the Covid-19 restrictions and Lockdown of March 2020, meant this option was no longer viable, forcing more young people into sleep roughing (HomelessLink, 2021). In London, official rough sleeping figures for under 25's showed a 47% increase from July to September 2020 compared to the same period during in 2019 (Greater London Assembly, 2020). The reasons a young person may experience homelessness are numerous and complex. These include, but are not limited to, family breakdown; physical and mental health issues (including drug and alcohol abuse);

exclusion from school; leaving care; refugee status; and gang crime (Centrepoint, 2020c). The Covid-19 pandemic saw family breakdown remain the most common cause of youth homelessness for males and females; however, females (14%) were more likely than males (2%) to become homeless due to domestic abuse (HomelessLink, 2021).

As well as accommodation and crisis support provided by many services, it is vital that young people are supported to develop a variety of skills to enable them to exit homelessness, re-engage in either education, employment, or training, as well as to live independently. As evidenced in the most recent Young and Homeless Report (HomelessLink, 2021), lack of independent living skills (71% of respondents) and mental health challenges (64% of respondents) were the top two support needs of young people accessing services in August 2020. Supported housing is where young people live in on-site accommodation with support workers and provision of opportunities to develop some of the above skills as well as navigate various local authority systems. However, the increased demand for services, increasingly complex needs of young people combined with limited resources presents challenges to services in meeting the development needs of young people experiencing homelessness.

When we consider the development needs of young people at risk of or experiencing homelessness it is important to consider the neurological process of development. Structural and functional brain development occurs until around 25 years of age, contributing to many of the typical adolescent behaviours such as greater risk taking and increased emotional reactivity (Blakemore, 2012; Blakemore & Choudhury, 2006). Young people experiencing homelessness typically have experience of multiple adverse childhood experiences (ACE's) (Centrepoint, 2020c; Koh & Montgomery, 2021). Multiple ACE's can negatively impact neurological development during adolescence, impacting development of pathways relating to executive functions such as emotional regulation (Boullier & Blair, 2018). Further to this,

ACE's can put individuals at greater risk of experiencing chronic stress, depression, anxiety, and physical ill-health as a result of maladaptive and harmful coping strategies (Felitti, 2009). Thus, meeting the multiple and complex needs of young people experiencing homelessness has become increasingly challenging for underfunded services.

Traditionally, interventions and service provision for youth experiencing homelessness have had an over-reliance on deficit-based approaches (Cronley & Evans, 2017). Deficit-based approaches view people as problems to be solved and focus on 'what is wrong with someone' and look to understand someone's incompetence's (Sweeney et al., 2018). Motivation theories such as self-determination theory (SDT) (Ryan & Deci, 2000) argue that autonomy, competence, and relatedness are important determinants of motivation. As such the focus of deficit-based models on an individual's incompetences does not foster intrinsic motivation and positive development as compared with strengths-based approaches (Cooley et al., 2019; Cumming et al., 2022; Hiemstra & Van Yperen, 2015). Strengths-based approaches to supporting high-risk youth has been recommended as a more effective means to support young people experiencing homelessness to achieve positive outcomes (Thompson et al., 2016). Psychological approaches that focus on strengths and positive achievements are becoming part of support for youth experiencing homelessness and will be discussed in the next section.

What is strengths-based psychology?

Strengths-based psychology focuses on identifying areas in life in which a person succeeds, their assets, skills demonstrated in doing so, as well as their capacity and potential (Cooley et al., 2019; Peterson & Park, 2009). Strengths-based interventions may be vital for young people experiencing homelessness who generally report fewer strengths, and instead

perceive themselves as problems that need 'fixing' alongside feelings of disempowerment and lack of control (Bender et al., 2007; Gomez & Ryan, 2016; Heinze, 2013). There are a variety of theories and approaches within strengths-based psychology. This thesis focuses on positive youth development (PYD)(Benson et al., 2007; Lerner et al., 2005), Basic Psychological Needs Theory (BPNT) (Deci & Ryan, 2002), and mental skills training (MST)(Vealey, 2007).

Positive Youth Development. In developmental science, PYD is a vast field of research and applied practice that portrays young people as resources to be developed rather than problems in society that need to be "fixed" (Benson et al., 2007; Damon, 2004; Lerner et al., 2005; Lerner et al., 2016). At the heart of PYD is the belief that all youth have the potential for healthy, successful development (Lerner et al., 2005; Lerner et al., 2014; Lerner et al., 2019). PYD is comprised of four distinct components: 1) It is comprehensive in its scope, linking contexts, its production of experiences and enhancement of positive developmental outcomes for youth; 2) It promotes access to positive experiences, resources, and opportunities beneficial to the individual and society; 3) It is developmental, with emphasis placed on growth and that youth are key actors in the production of positive development; and 4) It is collaborative in its approach, bringing together ideas, strategies, and practices across a variety of fields (e.g., public health, prevention, developmental psychology, community, and sport) (Benson et al., 2007).

MST4Life™ and this thesis incorporated Lerner et al.'s (2015) PYD model derived from relational-development systems (RDS) (Overton, 2015). The RDS model represents individual ←→ context relations as bi-directional. A key aspect of RDS is that neural plasticity is greater during adolescence and is therefore a developmental period with great potential for sustained change (Overton, 2010). To promote positive development the individual ←→ context relations must be mutually beneficial (Lerner & Chase, 2019; Lerner

et al., 2014). For example, resources within a programme environment should promote both skill development and social engagement as well as offer opportunities for young people to apply their strengths in leadership roles and contribute back to their community (Lerner et al., 2011). Thus, PYD programmes aim to promote positive change through bidirectional relations that are positive for both the individual and the environment.

Common indicators of PYD are the Five Cs (Lerner et al., 2005): competence (e.g., cognitive, social, and academic abilities), confidence (e.g., individual's view of their positive value and capacities), connection (e.g., an individual's positive relationship with other people and organisations), character (e.g., morality and integrity), and caring (e.g., capacity to sympathise and empathise with others). Healthy youth development occurs systematically over time, and youth thrive when individual strengths are aligned with contextual resources in relation to the Five Cs (Chauveron et al., 2016; Gestsdóttir et al., 2011; Lerner et al., 2015). Development in the Five Cs can be achieved through positive and sustained adult-youth relationships, skill building by engaging young people in activities (e.g., performing arts, sports, volunteerism), and opportunities for participation in and leadership of community-based activities (Chauveron et al., 2016). This can result in awareness of and development of strengths such as cognitive and behavioural competence, confidence, positive social connections, strong character, caring and compassion (Hamilton et al., 2004). The development of these strengths such as positive social connections is important to consider in the context of young people experiencing homelessness and the MST4Life™ project of which the overarching aim is to aid social inclusion (Cumming et al., 2022).

Another important aspect of development influenced by PYD is that of internal self-regulation (ISR). Research with American youth has suggested ISR is developed in individuals as they set and reach goals in contexts with positive options (Gestsdóttir & Lerner, 2007). ISR involves skills such as goal setting and management, executive functions

(e.g., emotion regulation), finding and using resources to increase the chances of achieving goals and using strategic thinking (Baltes et al., 2006; Gestsdottir & Lerner, 2008). Strong ISR skills are important in adolescence as it has been proposed as fundamental in youths capacity to adapt to variation in their environments, make choices from multiple different paths, reflect on past choices, and deal with adversity (Gestsdóttir et al., 2011; McClelland et al., 2010; Trommsdorff, 2012). These skills are important for young people experiencing homelessness as they navigate the complex and dynamic environments of housing services and engage in decision making around their future.

PYD has been widely applied in school-based contexts (Buenconsejo & Datu, 2021). The school-based *Try Volunteering* PYD programme is one programme which directly targeted program goals towards the Five Cs of PYD (Truskauskaitė-Kunevičienė et al., 2020). Programme results showed that programme participants showed an increase in competence, connection and caring and maintained stable levels of confidence and character. In comparison, non-programme participants in the control group showed a decrease in competence, confidence, and character, whilst maintaining stable levels of connection and caring. The *Try Volunteering* programme demonstrates that successful PYD programmes can promote development of the Five Cs. Similarly, the 4-H study based in American schools suggests that growth in the Five Cs in early adolescence promotes longer-term contribution to oneself and their community (Lerner et al., 2005; Lerner et al., 2014). Higher levels of PYD have also been shown to act as protective factors in adolescents at-risk of depression and substance abuse (Milot Travers & Mahalik, 2019). This finding is significant in relation to MST4Life™ because the complex needs of young people experiencing homelessness commonly involve ill-mental health and substance abuse (HomelessLink, 2021).

Limited research of PYD has been conducted within emerging adults. However one study applying the Five Cs in Spanish emerging adults reported that when young people

experience high levels of the Five Cs they show more happiness through a positive effect on gratitude and optimism (Gomez-Baya et al., 2021). Importantly, this suggests that the positive development achieved through the mutually beneficial individual ←→ context relations of adolescent PYD has been successfully applied in emerging adults, the same age group of which receive MST4Life™.

As such, the Five C components, alongside its strengths-based focus, make PYD within RDS a suitable theory in the context of supporting youth experiencing homelessness and meeting their complex support needs whilst enabling them to develop vital life skills such as intentional self-regulation. However due to the higher number of ACEs that young people experiencing homelessness, participants on MST4Life™ need additional support to self-regulate effectively owing to impact of trauma on neurological development (Boullier & Blair, 2018). MST4Life™ therefore aims to provide additional support through implementing a psychoeducational activities (through MST) that are delivered in a way that meets young people's basic psychological needs.

Self-determination theory (SDT) is a theory of motivation developed by Deci and Ryan (1985). This theory proposes that behaviour is directed by motivation regulations varying in levels of self-determination. Motivation regulations include those which are not, or are less, self-determined extrinsic motivation (i.e., externally regulated motivation and introjected motivation), and those which are more self-determined and autonomous ~~motivations~~ (e.g., identified, and intrinsic motivations) (Deci & Ryan, 1985; Ryan and Deci 2000). Although not considered formally a regulation in SDT individuals can also experience amotivation. Both externally and more autonomous forms of motivation can be highly influential determinants of an individual's behaviour. However, more autonomous forms of motivation (e.g., with intrinsic motivation being the most self-determined) are more robust, ~~and~~ enduring and conducive to optimal functioning (Deci & Ryan, 2002; Ryan & Deci,

2000). Through its sub-theory BPNT, SDT also assumes that the satisfaction of basic psychological needs (autonomy, competence, and relatedness) promotes more autonomous forms of motivation (Deci & Ryan, 2002). Autonomy is the extent to which an individual feels they are masters of their own destiny and have a level of control over their lives and behaviours. Competence is the extent to which an individual feels they have the skills and knowledge to achieve and master things which are important to them. Finally, relatedness (also referred to as connection) is the extent to which an individual experiences a sense of belonging and connectedness with others in a way which promotes feelings of safety and respect. Ultimately when an individual can pursue their goals in their own way rather than according to a pre-defined system or set of rules, they experience higher basic need satisfaction, more autonomous forms of motivation, greater well-being, and achievement of the goals themselves (Deci, 2000). Evidence in support of these theoretical propositions will be discussed in the paragraphs below.

SDT has been successfully applied within the settings of sport and exercise, education, and public health (Fortier et al., 2012). For example, in a 10 week intervention aimed at increasing physical activity, participants in the intervention group received two need supportive text messages (Kinnafick et al., 2016). Increased levels of autonomy support and psychological need satisfaction were reported (Kinnafick et al., 2016). Although all participants reported an increase in intrinsic motivation, at the 4-month follow up, moderate intensity exercise was greater in the intervention group with the control group returning to baseline levels suggesting that motivation to engage in physical activity had endured in the group who experienced psychological need satisfaction. SDT research also demonstrates that the environment intentionally created is a key factor in supporting basic psychological needs and thus promoting intrinsic motivation From an SDT perspective, there are a number of key characteristics needed within an intentionally created environment to foster the development

of an individual's psychological needs. Behaviours demonstrated by those delivering coaching or delivering interventions form an individual's interpersonal coaching or delivery style (Balaguer et al., 2012) which impact the environment created. For example, the desired inter-personal style would include autonomy supportive behaviours such as providing choice and opportunity for input. Additionally, competence supportive behaviours (e.g., providing positive reinforcement and recognising effort) would support individuals to engage positively in an appropriate level of challenge. An inter-personal style that fostered relatedness needs would create a friendly and safe environment. However, the above key characteristics are not always present and athletes (adult and youth) can experience an absence of need support or need thwarting behaviours from coaches (Deci and Ryan, 2002; Bartholomew et al., 2011). When these characteristics are not present and need support is absent or needs are thwarted the coaching environment is therefore more likely to be more controlling (Bartholomew et al., 2011; Tessier et al., 2013). Research has also shown that where players perceived a coach-created controlling environment it was positively associated with changes in psychological need thwarting that corresponded to increases in player burnout (Balaguer et al., 2012).

Research in University athletes has demonstrated that where participants perceived an increase in perceptions of a task-involving motivational climate (as opposed to an ego-involving motivational climate) that an increased satisfaction of the needs for autonomy, competence and relatedness were predicted (Reinboth & Duda, 2006).

In addition to research outlined above in adult populations, extensive research into autonomous (and, specifically, intrinsic) motivation grounded in BPNT has also been conducted in youth populations within physical education and sport contexts. For example, research in physical education has suggested that when teachers created a more mastery-based climate this positively impacted on mediating variables (autonomy, competence,

relatedness) which were found to foster more self-determined motivation (Standage et al., 2003, 2006). Similarly, in their research into the mediating role of basic psychological needs and self-determined motivation, Leo et al. (2022) supported a hypothesised multilevel path model capturing positive relationship of perceived need-supportive teaching to physical activity engagement and intentions by means of needs satisfaction and autonomous motivation. Additionally, they reported a negative relationship of perceived need-thwarting teaching to engagement and intentions via the mediational roles of frustration and amotivation.

A recent systematic review of 21 studies in physical education and youth sport settings concluded that despite small effect sizes, the interventions [that targeted teaching and/or coaching behaviours] had a positive impact on students' and athletes' motivation (i.e., were promotive of more autonomous motivation) (Raabe et al., 2019). Similar results have also been reported when exploring youth engagement in physical education through examining the peer-created motivational climate through an SDT lens (Tidmarsh et al., 2020).

Research in youth sport has similarly found that reporting the experience of need-supportive coach behaviour positively predicted the development of more autonomous forms of motivation in youth athletes (Chu & Zhang, 2019; Fenton et al., 2014; Rottensteiner et al., 2015). A study investigating the impact of coach autonomy support specifically on autonomous motivation and daily moderate-to-vigorous physical activity (MVPA) in male youth footballers (*M age* = 12.79 ± 1.85 years) found coach-provided autonomy support to predict autonomous motivation which was associated with increased daily MVPA (Fenton et al., 2014). Furthermore, in a study examining motivational antecedents to youth athletes' (*n =1962)* sustained participation in youth team sport, Rottensteiner et al. (2015) reported that players with higher perceived competence reported higher levels of relative autonomous motivation. In sum, the evidence presented supports the use of SDT and BPNT with young

people in regard to fostering self-determined forms of motivation. Research is now beginning to consider the benefits of SDT and BPNT for specific groups such as those experiencing homelessness.

Despite the application of SDT and BPNT being highly relevant to youth experiencing homelessness, there is limited work based on SDT involving young people experiencing homelessness (Krabbenborg et al., 2015). Often young people experiencing homelessness are marginalised, and struggle with a lack of control and feelings of loss of direction and purpose. Supporting young people experiencing homelessness through the application of SDT to meet their basic needs can elicit feelings of empowerment and embed a desire to achieve goals. SDT has been successfully applied in the context of youth homelessness within the Netherlands through Houvast; a strengths-based intervention. Results show that a higher proportion of young people who received care according to Houvast were still receiving care at follow up and successfully completed the trajectory compared to those who received care as usual (Krabbenborg et al., 2015). Furthermore, results found that social support mediated competence and relatedness and that participants who experienced greater competence and relatedness were shown to have a higher quality of life (Krabbenborg, Boersma, van der Veld, Vollebergh, et al., 2017). Houvast provides evidence that strengths-based programmes underpinned by SDT can be effective in supporting youth experiencing homelessness outside of the UK to achieve positive outcomes.

Similar positive results have been seen in the application of SDT in adults experiencing homelessness (Dakin, 2011; Phipps et al., 2021). For example, in a study exploring adult women's experiences of homelessness it has been argued that conducting research using an SDT framework allowed for women to be framed as competent and autonomous in contrast to services which elicited feelings of low self-worth and incompetence (Phipps et al., 2021). Vital to this, however, is ensuring that individuals have

the skills to support this positive psychological development such as the capacity for intentional self-regulation (as discussed within the PYD section of this chapter), decision making, and appraisal of risk (Cumming et al., 2022; Duda et al., 2005). One approach that addresses skills building to support positive psychological development is mental skills training (MST).

Mental Skills Training. MST was developed within sport psychology and is considered as part of the foundation of many athletes' psychological support. Vealey (2007), defined MST as the learning and implementation of mental techniques that assist an individual's development of mental skills to achieve performance success and well-being (p.288). Importantly, this definition emphasizes the distinction between mental skills (e.g., an individual's capacity to regulate their own cognitive, affective, and behavioural state, etc.) and mental techniques, which are the methods an individual can use to regulate their own mental state (e.g., positive self-talk, imagery, and goal setting, etc.). Furthermore, MST can also help an individual develop and enhance mental qualities to achieve a desired mental state (e.g., high robust confidence, high-quality motivation, and highly organised, etc.) (Holland et al., 2010). Essentially MST uses techniques to develop skills that in turn help the individual to achieve desired mental qualities such as high robust confidence, and high-quality motivation (Holland et al., 2017). For example, in a study examining the effects of a mental skills package (including goal setting, activation regulation, self-talk, mental imagery and concentration) on 'repeatable and good performance' in semi-professional cricketers, results indicated that participants who received the mental skills package improved performance consistency as well as actual performance (Thelwell & Maynard, 2003). Similar results have also been demonstrated in football (Thelwell et al., 2006). There is also evidence that using mental skills training promotes benefits beyond sport performance. In a qualitative MST programme delivered to youth rugby players participants reported that they had an increased

understanding of MST strategies to manage their rugby performance, as well as being able to transfer these skills to other areas of their life such as different sports and school (Sharp et al., 2013). Following the delivery of a psychological skills training programme (including goal setting, visualisation and thought stopping) for youth swimmers, results show that participants experienced an improvement in three different swimming strokes (Sheard & Golby, 2006). These studies demonstrate the potential of MST to contribute to positive development of athletes beyond their sporting performance, and the potential for its application beyond sport settings.

Despite this potential, MST has not been widely utilised outside of the sports setting. There is growing evidence to support the effectiveness of MST in the military (Adler et al., 2015), training for surgeons (Anton & Stefanidis, 2016; Deshauer et al., 2019), and in the music industry (Hoffman & Hanrahan, 2012). Similarly, to sport these studies focus on high level performance in environments that are known for sustained and elevated levels of pressure and stress. One area in which the use of MST is under-utilised is within disadvantaged communities. Given the previously discussed implications of ACE's on brain development (e.g., inhibited development of executive functioning) and the benefits of MST in supporting individuals to develop techniques, mental skills and qualities that support positive outcomes such as improved confidence and self-regulation, MST therefore has the capacity to support positive development in young people experiencing homelessness.

Despite this capacity for positive development, the wider project in which this thesis is situated - My Strengths Training for Life™ (MST4Life™) programme for youth experiencing homelessness - is the first strengths-based psychology programme within this field to be underpinned by mental skills training, alongside other strengths-based psychology approaches which are more commonly seen in this field (Cumming et al., 2022). For example, underpinning the programme within the RDS model of PYD places emphasis not

only on the content of the programme but on the context in which it is delivered to promote mutually beneficial individual ←→ context relations (Lerner et al., 2014; Overton, 2015). Additionally, the concept of intentional self-regulation is argued to be a key process in the alignment of adolescents' strengths with the resources in their contexts to promote thriving (Gestsdottir et al., 2017; Gestsdottir et al., 2011). Through the implementation of MST through activities within MST4Life™ participants had the opportunity to develop skills that promote intentional self-regulation. MST4Life™ was established in 2014. My role as a doctoral researcher within the project was not part of the original evaluation plan but introduced following an additional three years of funding. The additional funding through an ESRC studentship was an opportunity to add the research conducted and presented within this thesis onto the existing evaluation plan. My role in conducting these evaluations provided more in-depth understanding around the implementation of MST4Life™. Further details on my role are provided in Chapter 2.

Context of a unique mental skills training programme to support youth experiencing homelessness: My Strengths Training for Life™

MST4Life™ is a co-developed, community-based participatory research programme involving sport psychologists at the University of Birmingham and staff and young people at a youth homelessness charity in Birmingham. The programme was needed to aid social inclusion and support young people to achieve positive outcomes (e.g., improved wellbeing, and engagement in education, employment, and training). The programme logic model (Figure 1.1) (Cumming et al., 2022) demonstrates the inputs and outputs of the programme. MST4Life™ is underpinned by strengths-based sports psychology theories, including PYD, SDT and MST (Deci & Ryan, 1985; Lerner et al., 2005; Vealey, 2007).

Figure 1.1:

The MST4Life™ Logic Model from Cumming et al. (2022)
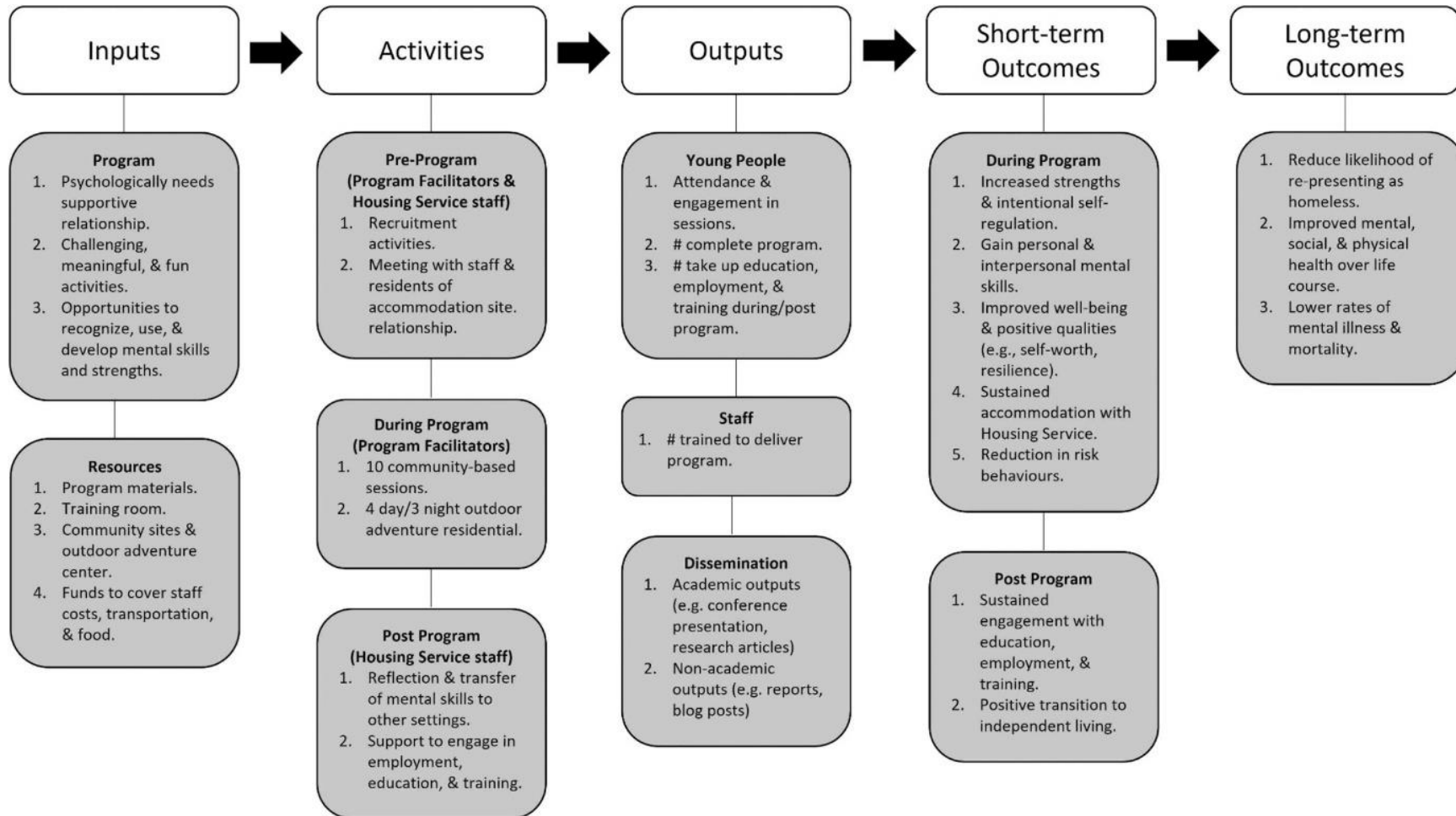
MST4Life™ was initially delivered by staff with a broad psychology background from the University of Birmingham as well as co-deliverers from the youth homelessness charity (further details on the charity can be found in Chapters 3, 5, and 6). Co-deliverers underwent extensive training in the underpinning theories and techniques required to deliver a psychologically informed intervention. The importance of the climate created by significant others in supporting participants basic psychology needs, promoting engagement, and sustained intrinsic motivation has been highlighted throughout the strengths-based psychology section of this general introduction. As such staff were trained to deliver the programme using the intended delivery underpinned by the CARES model (**C**ompetence supportive, **A**utonomy supportive, **R**elatedness and interpersonal involvement, **E**ngagement through communication, and **S**tructure and group management; see Figure 1.2) (Cumming et al., 2022). The CARES model aligns with BPNT to support participants basic psychological needs of autonomy, competence, and relatedness (Deci and Ryan, 2002).

The programme is designed for 16–25-year-old young people experiencing homelessness and consists of two phases. Phase 1 consists of 10 two-hour sessions (delivered in the young people's local service, and phase 2 is a 3-night, 4-day outdoor adventure education residential in the Lake District. The 10 sessions consist of both individual (e.g., strengths profile and dream team) and group activities (e.g., air vehicle challenge and emotional awareness). Sessions are designed to provide participants with the opportunity to engage in experiential learning experiences, enabling them to develop mental techniques and skills. This aspect of the programme is also seen in the residential phase whereby participants can utilise and develop new skills in a unique and challenging environment.

Outcome evaluations of MST4Life™ have demonstrated that by providing participants the opportunity to engage in challenging and meaningful activities and build skills and positive caring relationships with peers and adults, the programme enables young

people to improve their strengths, mental skills and wellbeing and decrease engagement in unhealthy and risky behaviours (Cooley et al., 2019; Parry et al., 2021). For example, the use of strengths profiling within MST4Life™ provided evidence that character strengths and resilience were significantly and meaningfully improved pre/post-intervention (Cooley et al., 2019). In the longer term this can support young people to become engaged in education, employment, and training (Quinton et al., 2021).

Additionally, findings from a realist evaluation of MST4Life™ suggest that a psychologically-informed approach, use of an outdoor transfer setting, and an experiential learning framework, were core components in driving positive outcomes in participants (Parry et al., 2022). An economic evaluation of MST4Life™ has demonstrated that the programme is cost-effective and significantly supports young people above and beyond traditional forms of support that young people receive in supported accommodations (Jabbour & Siu, 2019). Results from the evaluation show that MST4Life™ has supported young people to sustain their accommodation, move out of homelessness and engaging in education or employment. It is important that as the implementation of strengths-based programmes supporting young people experiencing homelessness continues to increase, such programmes need to transition to become programmes that are also evidence-based. To enable this transition, it is important to understand if programmes such as MST4Life™ are delivered as designed. This can be achieved through undertaking process evaluations of interventions.

Figure 1.2:

The CARES delivery model for the intended delivery style within MST4Life™ (Cumming et al., 2022)

Competence supportive
- Provides positive reinforcement or praise
- Encourages problem-solving, decision-making and initiative, rather than giving answers or solutions straight away
- References participants' mental strengths and roles during discussions, prompting participant to identify strengths and roles themselves first
- Communicates belief in participants to learn and succeed if struggling
- Provides opportunities for and encourages leadership, if applicable

Autonomy supportive
- Acknowledges negative affect and feedback non-defensively, and is able to explore the issue to reach more constructive expression
- Points out the rationale value of an activity, rule or request
- Provides meaningful choices
- Emphasises and encourages intrinsic interest in activity
- Provides opportunity for input and initiative

Relatedness supportive
- Communicates of warmth, friendliness and acceptance
- Shows care and concern for participants
- Engages in informal, non-session focussed conversation
- Displays enthusiasm, energy, and use of humour
- Apparent level of comfort of facilitator

Engagement & communication
- Encourages participation in activities and discussion, attempts to include all members of the group
- Asks open questions
- Adopts appropriate language and style of communication, adjusting content or style of communication to help understanding if applicable

Structure & group management
- Maintains general order; redirects negative behaviour or extended unrelated discussion
- Reinforces group rules when necessary, in a non-confrontational manner
- Gives clear instructions and guidance for activities
- If discussion drifts for extended period, is able to redirect conversation or behaviour back toward session objectives
- Ensures session materials are organised and readily available
- Arrives on time

Process evaluations play a key role in research

The evaluation of research is needed to determine whether an intervention or experiment is successful (Anderson et al., 2013; Dobson & Cook, 1980; Skivington et al., 2021). Evaluations can be process or outcome evaluations and consist of many sub-areas (see Figure 1.3). Most common examples include the use of outcome evaluations exploring whether an intervention worked or not. However, this thesis focussed on process evaluations. Despite an increase in published studies of process evaluations in fields such as nursing care (Huryk, 2010; Painter et al., 2010) and chronic illness prevention programmes (Braun et al., 2010; Karwalajtys et al., 2009), process evaluations have been neglected in evaluation research. This is particularly the case within the fields of positive youth development and homelessness, where there is a paucity of process evaluation evidence (Hodge et al., 2013; Walton et al., 2017). Not only is there a scarcity of process evaluations in the published literature, those that have been conducted and published have been deemed of poor to average quality due to a lack of systematically measured barriers of, and facilitators to, intervention delivery (Wierenga et al., 2013).

Programme underperformance is normally considered a function of either theoretical or implementation failure (Bickman, 1987). Theoretical failure refers to the ineffectiveness of the programme or intervention itself. On the other hand, implementation failure refers to delivery that is sufficiently divergent from the programme design (Miller & Miller, 2016). Process evaluations provide insight into the causal mechanisms of interventions, the contextual factors, and inform as to whether an intervention is ineffective due to implementation failure or failure of the intervention itself (Liu et al., 2016a). Similarly, they can inform us of deviations in successful interventions, enabling an understanding of whether deviations were due to flexible study design or due to alternative implementation. Process

evaluations enable researchers and stakeholders to explore the relationship between effectiveness and implementation of the evaluation, such as understanding whether challenges with implementation account for variability in intervention effectiveness (Iachini et al., 2014). Understanding this relationship is especially important when considering the variety of contexts in which research is conducted, especially in contexts which are complex in nature, or when the intervention being delivered is defined as complex (Skivington et al., 2021). Developing a deep understanding of context and complexity within studies enables researchers and services to illuminate the black box of evaluation through insight into how and why a programme is or is not effective within its context.

Figure 1.3:

A flow chart showing the variety of ways in which an intervention can be evaluated
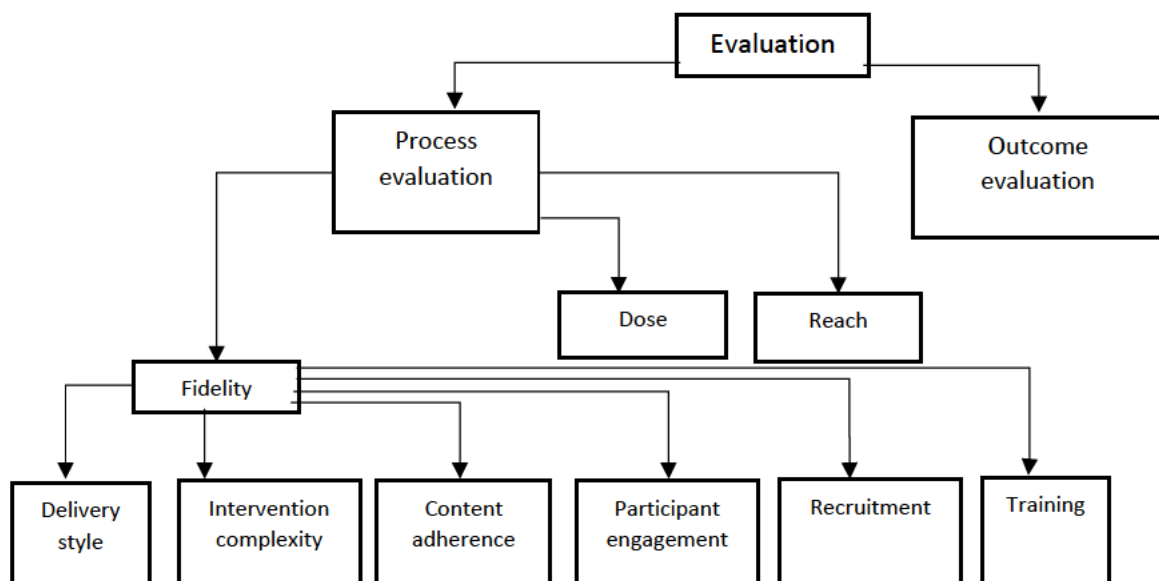
In a recent evaluation of a complex housing intervention in Canada, Macnaughton et al. (2018) stated the importance of evaluating complex interventions within their natural context to ensure that dynamics of implementation reflect real world service settings. This enables programme practices to be refined and improves the integration of the programme

into the host organisation and community (Macnaughton et al., 2018). Process evaluations are typically described as encompassing three dimensions: fidelity, dose and reach (Steckler & Linnan, 2002). The fidelity of an intervention is the extent to which an intervention is delivered as intended. The dose is the amount of the planned intervention that is actually delivered, whilst the reach is the proportion of intended recipients who actually participate in the intervention. These elements can be incorporated within a process evaluation or conducted individually as standalone research.

Fidelity assessments are vital but rarely used

Although rarely conducted, fidelity assessments of interventions are of vital importance to understanding intervention implementation and how this adheres to the intended delivery model (Monroe-DeVita et al., 2012). The paucity of fidelity assessments is a major gap in practice and in the scientific literature and leads to intervention results being attributed to the intervention as described in the methods section of scientific publications rather than the intervention as delivered in reality (Walton, 2017). Thus, the general lack of fidelity assessments across various disciplines can lead to ineffective interventions informing policy or clinical practice and effective interventions not being adopted, resulting in higher economic and scientific costs (Bellg, 2004; Borrelli, 2011). Conducting fidelity assessments allows for the results (positive or negative) to be correctly attributed to the programme as delivered, and subsequently provides a clearer understanding of intervention effectiveness. For an intervention to be replicable and adoptable by services, sufficient information about the intervention is required (Moncher & Prinz, 1991). Assessments of intervention fidelity are therefore needed for four main reasons: (a) to ensure the intervention is delivered in line with the protocol; (b) to enable a more accurate understanding of effectiveness of interventions; (c) to provide programme developers with information as to the details of what is delivered

within the sessions; and (d) to create a platform for potential improvements post-intervention and real-time corrections during intervention delivery (Kaye & Osteen, 2011; Walton et al., 2017).

A variety of components can be examined within fidelity assessments. These include quality of delivery, such as adherence to session content (Dusenbury et al., 2003), dose delivered (Booth et al., 2007), delivery style, participant responsiveness (engagement), recruitment, training and intervention complexity (Borrelli, 2011; Hardeman et al., 2008; Hasson, 2010; Mihalic et al., 2008). Utilising and examining multiple, if not all of these components, is recommended as they inform one another and can be used to inform external validity. External validity refers to the extent to which the intervention can be replicated and its generalisability to other settings. For example, delivery style and engagement scores could be used to inform external validity; engagement scores could be low and if delivery style has been assessed and found to be poor, the researcher is able to draw more accurate and reliable conclusions as to why engagement was low rather than focussing on the limitations of the interventions.

Conducting fidelity assessments. Fidelity assessments can be conducted using a variety of data collection methods. These include audio-recording, video-recording, self-report, observation, rating scales, checklists, and interviews (individual and group). In determining which method/s to use, researchers must consider the context and type of intervention being assessed to ensure appropriateness and feasibility of the method, especially for complex interventions. For example, audio-recording multiple groups in large spaces would be difficult to implement, limiting the collection of coherent data for transcription. Researchers can, however, combine methods so that the limitations of one approach can be offset by the strengths of another (see Table 1.1 for strengths and limitations of data collection methods).

Additionally, a selection of methods which include quantitative self-report measures alongside others, such as observation by trained professionals, can be used to enable comparison of actual and perceived performance. A recent study assessing the fidelity of a second chance programme to assist offenders transition back into the community used a mixed methods approach, combining quantitative observation and qualitative individual and group interviews to gain a better understanding of barriers and enablers to implementation success (Miller & Miller, 2016). Additionally, the use of real-time observations, audio-recording and self-report have been successfully applied in educational (Maynard et al., 2013) and health settings (Rixon et al., 2016). In a recent study assessing the extent to which teachers exhibit need supportive (autonomy, competence and relatedness) behaviours in physical education, Haerens (Haerens et al., 2013), conducted video-recordings of 74 individual PE lessons. The occurrence of 21 need-supportive behaviours were coded over 5-minute intervals. Pupils also completed a survey assessing perceived need support using a short version of the Teacher and Social Context questionnaire (TASCQ) (Belmont et al., 1988). The study found modest associations between observed teacher autonomy and relatedness supportive behaviour and students' perceptions of these teacher behaviours. The authors acknowledge, however, that only need supportive behaviours were observed, and highlighted the importance of observing both need-thwarting and need-supportive behaviours. More recent work on developing observational tools to assess need supportive behaviour in sports coaches observed both need supportive and need thwarting behaviours (Smith et al., 2016).

Table 1.1:

The strengths and limitations of data collection methods used in fidelity assessment studies (adapted from Borelli, 2011)

Method	Strengths	Limitations
Audio-recording	• Enables objective evaluation of treatment content and dosage. Coders rate adherence to the protocol, can be done by multiple coders per session. • Allows for specific feedback to providers during supervision. • Enables providers in training to listen to previous visits. • Ensures standardization within and between providers. • Digital recorders are inexpensive, and data can be stored on an external hard drive.	• Slightly obtrusive. • Both the control and the intervention groups should be monitored, and taping may influence the participant in unknown ways.
Video-recording	• Has the same advantages as audio-recording. • Video-recording enables the evaluation of nonverbal behaviours in both provider and patient.	• More obtrusive and costly; video-recording may further influence participant behaviour.
Real time observations	• Same advantages as recording (audio/video), however observer will be more likely to get a more authentic sense of atmosphere and also any pre and post engagements outside of the official session.	• More obtrusive and costly (financially and time). Would require more than one observer to be present/observe over the course of the programme to overcome any potential risk of bias.

	• Observer can build rapport with participants which may overcome barriers of being taped.	• Could potentially have a greater influence on participant behaviour.
Facilitator self-report checklist	• Serves as a reminder to facilitators/deliverers the active ingredients to be delivered.	• Takes more facilitator/deliverer time than recording (audio/video).
	• Providers might be more likely to deliver treatment components if they know they have to check off a "no" if they don't deliver the component. Self-report data can be used as a supplement to direct methods of assessment, and both methods can be compared to each other.	• Potential for providers to rate themselves as more adherent than they really are.
		• Low agreement between self-report and observational methods.
	• Affords immediate access to integrity data.	
Participant self-report questionnaire	• Enables assessment of whether participants received the required treatment components or contraindicated components.	• Subject to memory bias and accuracy. Participants may not want to give bad ratings to facilitators/deliverers.
	• Assess nonspecific process issues (participant felt listened to versus rushed, participant felt understood versus uncomfortable, and participant felt respected versus criticized).	• Participants may not have the knowledge or training to describe what happened at the session at the level needed for analysis.
	• Participant satisfaction with programme and perceptions of programme effectiveness can also be assessed.	

Interviews (individual or group)	• Enables in-depth exploration of individuals thoughts and feelings. • Can provide the opportunity to expand on answers provided in questionnaire responses. • Group interviews can create an environment whereby participants can bounce thoughts and ideas off each other and create a discussion.	• Interviews can be time consuming • Participants might answer with social desirability • Require experienced individuals to conduct the interviews

In addition to the choice of method/s used in fidelity assessment research, the process and timeliness of their implementation during data collection are also vital to ensure the intervention (or programme) is evaluated holistically rather than at one time point. A common weakness of fidelity assessment studies is the lack of reporting regarding the stages at which data collection and more specifically observations took place; this is the case for entire programmes or specified samples (Haerens et al., 2013). An exception to this is a school-based intervention fidelity study (Kitzman-Ulrich et al., 2009) in which these components were described in detail, stating the timings and locations of observations throughout the intervention. Observations took place in 2-week blocks (3 sessions/week) during weeks 1 and 2, 8 and 9, and 15 and 16 of a 17-week programme. Furthermore, the staggered start of different delivery locations enabled observations to take place at the same time points in each school. This approach enabled data collection throughout programme delivery, giving a more thorough insight into programme delivery, an aspect which is even more vital for evaluating complex interventions.

Monitoring fidelity of complex interventions. The challenges associated with monitoring fidelity can be exacerbated when monitoring fidelity of complex interventions. Challenges can vary depending on the type and context in which the intervention is delivered. Challenges can include multi-site delivery and time constraints, which can increase logistical difficulties as well as multi-level delivery across organisations (Skivington et al., 2021). Research conducted by Mihalic et al. (2008), delivering a complex intervention focusing on life skills and drug prevention for deprived American youth experienced a greater and more complex set of challenges in conducting fidelity assessments. Although results showed that facilitator characteristics and better student behaviour were significantly related to a greater proportion of material delivered by teachers (content adherence), due to the complex nature of the intervention and more complex needs of its recipients, poor student behaviour and poor

classroom management skills were key influencers of poor programme fidelity. Additionally, Mihalic and colleagues reported that assessing fidelity across multiple delivery sites, combined with teachers' lack of additional time to support the intervention, meant that time constraints were a barrier. In summary, conducting fidelity and process evaluations are challenging and time-consuming, especially within complex interventions, but these evaluations are vital to conducting research examining the efficacy of interventions.

Overall, when monitoring fidelity of any intervention, the following points are important to consider. Firstly, details such as sampling or analysis methods and psychometric and implementation qualities need to be fully reported and defined. Secondly, fidelity measures should be practical and of high quality (Walton et al., 2017). An example of this would be considering both need-supportive and need-thwarting behaviours when observing delivery style of an intervention (Hearens et al., 2013). Thirdly, as highlighted by Melde et al. (2006), providing sufficient training and maintaining a relationship between program developers and the providers is vital when an intervention may be co-delivered or delivered by non-experts. Finally, it has also been stated that a key aspect missing from many published papers of fidelity assessment is a lack of transparency and reflection of factors that may have influenced implementation in different community settings, such as challenges surrounding time constraints and participant behaviour (Monscher and Prinz, 1991; Durlak & DuPre, 2008; Maynard et al., 2013). In sum, the lack of reporting on essential study components, high-quality, practical fidelity measures, relationships and training for key stakeholders and lack of transparency and reflection of factors influencing programme implementation are key gaps that will be addressed within this thesis.

Thesis Aims

Broadly, this thesis was the first of its kind to conduct a process evaluation exploring the delivery of a psychologically informed mental skills training programme for youth

experiencing homelessness. It has been recognised that there are a variety of ways to conduct process evaluations of programmes and interventions. However, little is known about how these methods work in complex community settings involving disadvantaged youth (especially young people experiencing homelessness). A small number of process evaluations have been conducted on PYD programmes for disadvantaged youth (Kenyon et al., 2019; Tingey et al., 2016), but the quality of these studies is mixed. To date no systematic review of these studies has been conducted to inform a broader understanding of the process evaluation methods used within these settings. This thesis therefore aimed to understand the challenges of conducting process evaluations in complex community settings and demonstrate how despite using flexible approaches that rigorous research can be conducted within such settings. By doing so this thesis may contribute to the development of a more in-depth understanding of how to design and implement sustainable programmes that are meaningful, culturally relevant, and effective in promoting positive development in disadvantaged youth.

Furthermore, more knowledge is required on the barriers and enablers to delivering such programmes as designed broadly, and specifically in terms of the youth homelessness context through the MST4Life™ programme. Understanding barriers and enablers to delivering programmes as designed is important to ensure that programme designs meet the needs of participants but are also suitable for delivery in complex settings, where the need for flexibility is often key to promote engagement. Such information is important for researchers and services as understanding these barriers and enablers is significant to influence guidelines for delivery and how deliverers are trained.

Additionally, there is little to no research on the extent to which it is possible to train front-line service staff of youth housing services to deliver psychologically informed programmes. This is important as MST4Life™ is a community-based programme where

sustainability of the programme is a key feature (Cumming et al., 2022). As housing services experience greater demand, service users with more complex needs, and reduced funding, the need for psychologically informed programmes that can be delivered by frontline staff are essential to support staff to meet the needs of young people beyond crisis support. Originally this aim was to be achieved through both a study on the delivery of MST4Life™ itself, and a study evaluating the training and application of this training of the frontline service staff. Unfortunately, due to COVID-19, the latter study was unable to go ahead as originally planned. It is included in this thesis as a feasibility study in Chapter 6. See Table 1.2 for a breakdown of the thesis aims and studies, and the chapters in which they are reported.

Table 1.2

Overview of thesis aims and the chapters in which they are reported.

Aim	Chapter covered in
To understand the methods used in process evaluation	Chapters 3, 4, 5 and 6
To develop an understanding of barriers and enablers to delivering strengths-based programmes for disadvantaged youth as designed	Chapters 3, 4, 5 and 6
To develop an understanding of programme delivery from the YP perspective; what do they perceive supports (or does not support) their engagement within MST4Life™	Chapter 5
To understand the extent to which it is possible to train frontline service staff to deliver psychologically informed interventions	Chapters 3 and 6

General Methods

This thesis is underpinned by a critical realist philosophy and implements a mixed-methods approach as part of the process evaluation of MST4Life™ and contributes to the wider evaluation of the project. This chapter describes the philosophical underpinning, methodology, data collection methods, data analysis, and ethical considerations that are included in this thesis. This chapter also demonstrates how and where different methods of data collection are used within the various empirical studies that form part of this PhD thesis. Furthermore, this chapter demonstrates how the methods implemented are in-line with a critical realist philosophy, as well as suitability for use in a complex community setting.

Underpinning Research Philosophy: Critical Realism

Critical realism is a meta-theoretical position comprised of a realist social ontology and constructionist epistemology (Ryba et al., 2020; Wiltshire, 2018). The meta-theoretical composition of critical realism means that unlike other theoretical positions (e.g., constructionism) it avoids committing an epistemic fallacy. An epistemic fallacy is where ontological claims about 'being' are reduced to epistemological claims about knowledge. For example, a constructionist may make an ontological claim about the extent to which the world is real because they are sceptical of our ability to produce knowledge about the world (epistemological claim) (Bhaskar, 1975). This approach, however, mistakes the reality of the world with our knowledge of it (Gorski, 2013); Pringle and Falcous (2018) argued that our epistemological beliefs can be a limiting factor in our ability to make a difference. Critical realism accepts that meaning and discourse are important, but that they are not the only things that exist. It acknowledges the world is real and that knowledge production is fallible and theory dependent, but is not theoretically-determined (Gorski, 2013).

Critical realism broadly claims that a reality exists independently of the researcher's ideas and descriptions of it (Wiltshire, 2018). Similar to pure realism, critical realism also claims that there is one single reality or truth. Critical realism however differs from pure realism in that it conceptualises and accepts that there will be different views, and various interpretations of this single reality or truth (Ronkainen & Wiltshire, 2019; Wiltshire, 2018). This meta-theoretical position therefore retains a concept of reality or truth (ontological position) but recognises that human practices shape how we experience and know about this reality or truth (epistemological position) (Braun & Clarke, 2021b; Gorski, 2013). Based upon the notion of multiple perspectives and experiences of one single truth or reality, critical realism is therefore an appropriate philosophy for research carried out in complex community settings. The research presented in this thesis takes place in a frontline service for young people experiencing homelessness; it is essential that the underpinning research philosophy embraces the complexity of the community and people within it rather than trying to control them.

As described in the general introduction, MST4Life™ is a co-designed, community-based programme delivered in a frontline housing service supporting young people experiencing homelessness. Adopting a critical realist approach for the work carried out within this thesis supports greater interdisciplinary research and impact, which has arguably been absent in sport, exercise and health work (Wiltshire, 2018). The setting of MST4Life™ is interdisciplinary in its nature, transcending sport psychology, social work, and clinical psychology domains. Critical realism encourages impact by asking researchers to focus on explanations. Causality is complex within critical realism because it is context dependent and can arise from interrelated entities. Research should not search for cause and effect but mechanisms that produce, generate, or make something happen (Ryba et al., 2020; Wiltshire, 2018).

When considering research in complex health interventions, Clark et al. (2012) argued that causal explanations are needed to make a difference and necessary for the capacity of research to improve outcomes. Thus, once we have arrived at causal explanations, we are in a better position to make recommendations about policies and practices (Wiltshire, 2018). This is essential for work evaluating programme implementation (as within this thesis), which by nature results in recommendations of best practice as well as aspects or approaches that need changing. Recent research within critical realism has called for greater implementation of mixed methods research to better research causal explanations (Pringle & Falcous, 2018; Ryba et al., 2020; Wiltshire, 2018).

Mixed Methods Research

Overall, this thesis takes a mixed methods approach, comprised of two mixed-methods studies and two qualitative studies. This thesis implements a mixed-methods approach to investigate the same phenomenon concurrently rather than implementing a sequential mixed methods approach (Jones & Gratton, 2015; Teddlie & Tashakkori, 2011). An overview of the methodology, methods, and data analysis used within each of the four empirical chapters is included in Table 2.1. Each Chapter (3, 4, 5 & 6) has its own detailed methods section. Mixed methods research has been defined by Creswell and Plano Clark as (2007, 2011, 2018):

"Mixed method is a research design with philosophical assumptions as well as methods of inquiry. As a methodology it involves philosophical assumptions that guide the direction of the collection and analysis and the mixing of qualitative and quantitative approaches in many phases of the research project. As a method it focusses on collecting, analysing, and mixing both quantitative and qualitative data in a single or series of studies. Its central premise is that the use of quantitative and qualitative approaches, in combination,

provides better understanding of research problems than either approach alone." (Creswell, 2007, p. p. 5)

Although evidence suggests that the use of mixed method research has increased within sport and exercise psychology, there are aspects deemed controversial depending on a researcher's underpinning philosophy (McGannon & Schweinbenz, 2011; Sparkes, 2015). A mixed method research design is appropriate for use alongside a critical realist philosophy, as using a mixed method research design can increase the scope of research by promoting breadth and depth of data collected through collecting both quantitative and qualitative data (Greene et al., 1989). The main aim of critical realism is to encourage researchers to identify and develop an understanding of causal mechanisms and accepts different interpretations of a single reality as valid. Therefore, collecting both quantitative and qualitative supports the understanding of different interpretations of a single reality, and provides breadth and depth of data that support the understanding of causal mechanisms whilst accepting the complexities of the settings in which data are collected. Furthermore, a mixed method research design can counter the limitations of qualitative or quantitative work done in isolation when investigating phenomena (Creswell et al., 2006; Rossman & Wilson, 1985). As demonstrated in Table 2.1, a variety of data collection methods are combined throughout this thesis to answer the research questions posed in the general introduction.

Table 2.1

Overview of methodology, data collection methods, data analysis and PhD researcher involvement across the four studies conducted as part of this thesis

Chapter	Methodology	Data collection method(s)	Data analysis method(s)	PhD researcher involvement in terms of methods and analysis.
Chapter 3: Assessing the fidelity of delivery style of a mental skills training programme for young people experiencing homelessness	Mixed methods	Observation tool and facilitator self-reflection form. Both collected qualitative and quantitative data through completion of rating scale type questions and open ended reflective questions.	Quantitative data were analysed using descriptive statistics and the Mann Whitney-U Test. Qualitative data were analysed using thematic analysis.	I was involved in developing the later iterations of the observation and self-reflection tools which a colleague had already begun developing prior to the beginning of my PhD. I conducted data collection as an observer, and subsequently trained two additional observers to support data collection. I analysed the data.
Chapter 4: Understanding delivery of positive youth development	Qualitative	Data extraction tool for study information. Quality assessment tools: JBI quality assessment tool	Descriptive statistics used to provide overview of the quality of included studies and key study information	I designed this study and developed the PICO-D statement included in this study, developed the search strategy, ran all

		for qualitative studies, JBI quality assessment for analytical cross-sectional papers and the Mixed Methods Assessment Tool.	e.g., study design, data collection tools. Qualitative data were analysed using thematic analysis.	literature searches, led and completed all data extraction and data analysis.
programmes for disadvantaged youth: A systematic review				
Chapter 5: A Platform for Youth Voice in MST4Life: A vital component of process evaluations	Qualitative	Diary room	Data were analysed using reflexive thematic analysis.	Data had previously been collected during programme delivery by colleagues. These data were analysed and included in this thesis due to the Covid-19 pandemic preventing the originally planned data collection. See COVID-19 disruption statement for further details. I analysed all data.
Chapter 6: Exploring processes and outcomes of an online training	Mixed methods	Observation tool and training-facilitator self-reflection form collected	Quantitative data were analysed using descriptive statistics. Qualitative data	I designed all data collection tools and conducted observations and completed all data analyses.

| day for frontline staff delivering a mental skills curriculum in a new frontline service: A feasibility study of a protocol | quantitative data from rating scale questions and qualitative data from open-ended reflective questions. Pre- and post-training questionnaires: Likert-scale questions used to obtain quantitative and open-ended reflective questions for qualitative data. | were analysed using content analysis. |

Data analysis

This thesis includes four types of data analyses and both quantitative and qualitative analysis methods were utilised.

Quantitative data analysis

Descriptive statistics and the non-parametric Mann-Whitney U test were used to analyse quantitative data. This non-parametric test was used due to the small sample size and non-normal distribution of data (i.e., data were nominal or ordinal). The nature of questions in understanding the fidelity of programme implementation warrants descriptive statistics to support knowledge and understanding of how programmes and training are delivered in comparison to design. Descriptive statistics were used in Chapter 6 to analyse fidelity scores from the observer and training facilitator; due to the Covid-19 pandemic, the number of participants and opportunity to collect data were far fewer than had been planned for in the original research design, where independent t-tests would have been used.

Qualitative data analysis

Qualitative data in Chapters 3, 4, and 5 were analysed using reflexive thematic analysis (Braun & Clarke, 2019, 2021a). Reflexive thematic analysis is described in detail within each chapter. Overall, reflexive thematic analysis was underpinned and implemented in line with the critical realist philosophy whereby a mediated reflection of reality is accessed; that is, you access your participant's perception of (their) reality which is shaped by and embedded within their social context (Braun & Clarke, 2021b).

Ethical considerations

All studies received ethical approval from the University of Birmingham Science, Technology, Engineering and Mathematics (STEM) Ethical Review Committee (Chapters 3,

4 and 5, ERN_13-1069 and Chapter 6 ERN_20-0073). As highlighted in the general introduction and throughout this thesis, the support needs of young people experiencing homelessness are often complex, such as mental ill health and trauma and negative past relationships with adults. Therefore, there were multiple ethical considerations to consider, including how best to gain consent of young people for the research and how best to conduct the observations.

Traditional observation methods see those conducting observations as typically distant and refraining from engagement with those involved. For example, non-participant observation is the most common and simple form of observation, where the researcher will observe the phenomenon from the outside without getting involved . In relation to Chapter 3, non-participant observation remained the core approach to observe those delivering MST4Life™. However, adaptations were made to meet the needs of the participants engaged in the programme. Whilst completing observations the researchers still sat out of the way. However, the observers engaged with participants before the programme began, during the breaks and at the end of the session to build rapport with the young people. This engagement was important to build rapport with the young people, ensuring they felt comfortable engaging in the programme as they normally would, whether observers where there or not. Furthermore, this approach to the role of the observer aligns with the programme ethos of building positive relationships with adults and fostering a sense of relatedness (Deci, 2000; Deci & Ryan, 2002) within the delivery of MST4Life™.

A flexible approach to gaining the young people's consent was taken by using both verbal and written approaches. This adaptability was important in relation to meeting the young people's needs and supporting them to feel comfortable. Information sheets and consent forms are often un-read or partially read and this approach does not relate to the dynamic contexts of real world settings (Pollock, 2012). For example, if despite completing

written consent at the start of the programme there was session that a young person didn't feel comfortable to be observed, the observation would not take place. This situation never occurred but was something planned for in advance. Given the vulnerable nature of the young people engaged in MST4Life™ creating a personal as well as contractual approach to participant consent was important. This approach created a reciprocal exchange where participants could ask questions about the procedures and reasons for conducting observations and promoted informed consent (British Sociological Association, 2002; Pollock, 2012)

Ethical considerations were also required in terms of engaging staff in research. Within the specific context this research was conducted where frontline services in youth homelessness faced increased demands, reduced funding and limited resources. Increased demands meant that St Basils staff often had high caseloads and limited time to complete additional paperwork (e.g., questionnaires) within their working hours. Additionally, due to reduced funding and limited resources (e.g., for staff wages) some staff were working additional jobs outside of their work in the frontline service, again limiting their capacity to complete lengthy additional paperwork. Engagement in any research aspect of MST4Life™ was therefore optional and did not impact on their job security or performance expectations.

In summary, this thesis is underpinned by a critical realist philosophy and utilised a mixed method research design to meet the aims of this thesis (as described in Chapter 1) and implemented actions to meet participant needs in line with key ethical considerations within this complex community setting. Detailed methods sections are included within Chapter 3, 4, 5, and 6, where methodological and ethical considerations relevant to each study are discussed.

Researcher positionality

Within this thesis, reflexive thematic analysis was applied to data analysis within Chapters 3, 4, and 5, to develop themes around the implementation of MST4Life™ (Chapters 3 and 5) and around implementation of PYD projects for disadvantaged young people (Chapter 4) (Braun & Clarke, 2019). Reflexive thematic analysis requires the researcher to state their positionality within the research and how this influenced their interpretation of the data (Braun & Clarke, 2019). Researcher positionality must also consider how beliefs and experiences of the researcher influenced the research process; as such, this is also discussed within this positionality statement (Holmes, 2020).

As the PhD student I conducted the data analysis for all three chapters, and consulted with the wider research team in critical discussions, engaging in an iterative process to refine and reconsider themes (Smith & McGannon, 2018). I was not present for all of the data collection. MST4Life™ had already been delivered for three years prior to my joining the team as a Masters student and research assistant in 2017, and then beginning this PhD in 2018. To support my development and understanding within this context, I received three days of Psychologically Informed Environments training from St Basils (November, 2018), which aimed to develop awareness of the impact of childhood trauma and provide psychological tools to respond to young people's complex support needs in an adaptive way (Cumming et al., 2017).

Additionally, I also attended a three-day delivery training course (July 2018) provided to frontline staff from St Basils who would be delivering MST4Life™ aimed at developing an in-depth understanding of the programme, including the desired delivery style, and underpinning psychological theories. I also attended later iterations of the three-day delivery training, a mental health first aid course, took part in the wider research team meetings, and

attended two reflective practice sessions with a clinical psychologist. Despite the comprehensive training received to develop my knowledge of and ability to interact with young people and staff within the youth homelessness service, it is important to consider that position as a white, cisgender, female who was an insider to the organisation impacted my ability to engage in this setting. The participants (staff and young people) were diverse in their ethnic backgrounds and as such my cultural references were often different from my own. Although I always make an exerted effort to understand different cultural and contextual reference points it is important to acknowledge these may have impacted the extent to which individuals felt able to approach and engage in the first place. My role as an outsider to the organisation was mixed in its impact to engaging and interacting in this context. Some staff and young people were more open based on my role as an 'outsider' to the organisation and others saw this as something to be wary about. This is an especially important consideration given the past-negative experiences of adult relationships as discussed in the ethics section of this thesis.

Attending these training courses along with my previous post-graduate training in sport and exercise psychology meant that I was able to understand the ethos and approach with St Basils and MST4Life™, as well as gain an insight into frontline service staff development and training prior to observing their delivery of MST4Life™. Attending these training courses also meant that I was able to build a rapport with the frontline service staff that I (and my colleagues) would be observing. Whilst there is the potential that building rapport with them may have influenced their responses in the self-reflection forms, I believe this rapport and my previous experience working in similar settings enabled me to support staff to engage in completion of the self-reflection forms, understand the purpose of self-reflection tools (e.g., to support their development), and helped to reduce participants responding in a socially desired way (Bergen & Labonté, 2020). Building rapport with

research participants even in mixed methods research has been encouraged in complex community settings to develop an appreciation of the different culture and meanings that the researcher may not have previously understood due to various demographic differences (Canales, 2013; Shannon-Baker, 2016). Furthermore, from informal conversations frontline service staff mentioned that although I was external to the delivery team and St Basils, being able to get to know me at the training aided them to feel more comfortable during the observations and focus more on delivering the programme than being observed. This was key for the research process and ethically to limit the extent to which the observations impacted the delivery of MST4Life™ and ultimately the young people's experience of the programme.

For the data analysis within Chapters 3 and 4 (exploring implementation fidelity of MST4Life™ and other PYD programmes) my practical work developing and delivering PYD programmes outside of an academic setting provided an insider's view to implementing programmes. This insider's view to delivering PYD programmes enabled me to bring a broader understanding and experience of the challenges and difficulties of delivering PYD programmes in complex community settings, and with multiple organisations. Although this understanding developed my perspectives on the challenges to delivering such programmes, I believe that this combined with the theoretical knowledge I developed meant that I was able to develop themes that were representative of real world implementation and different participants experiences within that.

For chapter 5, which used diary room entries from young people participating in MST4Life™, I was not present for any data collection; although some data were collected after I joined the team, I was not involved in programme delivery or data collection for this study. However, through my previous experience working with disadvantaged youth on PYD programmes outside of the MST4Life™ context this provided important understanding through working closely with the young people around the context of their support needs. I

worked to design and deliver a bespoke version of the National Citizens Service (NCS) programme to develop more specific provision of their mainstream programme for young people in alternative education settings.

I have also worked providing behavioural support for students in pupil referral units. Working in the pupil referral units significantly shaped my attitudes and knowledge towards working with disadvantaged young people. It was significant in confirming my belief (and in alignment with PYD) that all youth have the capacity for positive development when supported appropriately. It also provided hands on experience to the challenges of implementing these approaches, especially as a white female, from a well-educated background. Often the young people in the pupil referral units experienced socio-economic disadvantage, were involved in gangs and experienced severe ill-mental health. Although I have my own experience of trauma and ill-mental health it was essential to actively listen to the young people and take on board their feedback for the programme to understand the impact of this within their unique contexts. Additionally, through the flexible approach taken during the observations I was able to engage in informal conversations with the young people, build rapport and develop a greater understanding around their life story and the role of MST4Life™ within that.

Inevitably engaging with the young people within the programme and in my previous work with disadvantaged youth shaped my interpretation of the data collected from diary room entries in Chapter 5. However, these experiences and the opportunity to build rapport and meet with programme participants supported me to develop a deeper understanding of the young people's lives. Thus, this served to reinforce my passion for working with and supporting disadvantaged young people to achieve positive outcomes and to present their thoughts and opinions in a way that was meaningful and relevant to their experiences. This aligns with the critical realist perspective that underpinned this thesis (Wiltshire, 2018).

In sum, my past experience and the rapport and relationships built with young people and facilitators delivering MST4Life™ shaped my interpretation of the data presented in this thesis. However, as previously highlighted, these experiences and interactions enabled me to develop a deeper understanding of working within and receiving support in this complex setting. Therefore, my invested interest in the social mission of the wider MST4Life™ project and frontline services reinforced the importance of presenting the rich and complex perspectives of each participant with integrity.

**Study 1: Assessing the fidelity of delivery style of a mental skills training programme
for young people experiencing homelessness**

This chapter has been submitted to the Journal *Evaluation and Programme Planning* and is
currently under review.

Revisions submitted 29.10.2021

Introduction

Many interventions utilise outcome evaluations to demonstrate effectiveness in achieving programme goals (Anderson et al., 2013; Pettee et al., 2011). Conclusions around intervention effectiveness are often based upon outcome results and procedures described in the methods, rather than on procedures implemented (Dobson & Cook, 1980; Pettee et al., 2011). The assumption that an intervention has been delivered as described can present challenges for researchers and practitioners during implementation. These include making content changes due to time constraints, adaptations to meet participant needs, and/or insufficient training for deliverers. Less commonly done, process evaluations are critical to understanding how programmes are implemented and whether implementation challenges may account for the variability in programme impact (Iachini et al., 2014).

Encompassed within process evaluations are fidelity assessments, which are vital to measuring adherence to programme implementation and enabling outcomes to be correctly attributed (or not) to interventions. Evaluators use fidelity assessments to: (a) ensure the intervention is delivered in line with the protocol; (b) enable a more thorough understanding of effectiveness of complex interventions; (c) provide programme developers with the details of what is delivered within the programme sessions; and (d) create a platform for potential improvements post-intervention and for real-time corrections during intervention delivery (Kaye & Osteen, 2011; Walton et al., 2017). Fidelity assessments provide a platform for researchers and stakeholders to gain an in-depth understanding of programme implementation and make evidence-based alterations to delivery where needed. Experts have highlighted that fidelity assessments are rarely implemented due to their cost and time-consuming nature (Hardeman et al., 2008; Borelli, 2011). But, without these assessments, there is a risk of ineffective interventions informing policy or clinical practice, resulting in higher economic,

societal, and scientific costs (Bellg, 2004; Borrelli, 2011). Therefore, experts advocate the use of fidelity assessments to inform policy and practice and inform more effective use of funding (Bruns et al., 2004).

Methods of Implementing Fidelity Assessments

Fidelity can be part of a full process evaluation or conducted as a standalone piece of research to assess one or more of the following: quality of delivery (e.g., adherence to session content), dosage of delivery received, delivery style, participant responsiveness (engagement), recruitment, and intervention complexity (Borrelli, 2011; Hardeman et al., 2008; Hasson, 2010; Mihalic et al., 2008). Used in isolation or in combination to improve rigour, evaluators can employ a variety of methodological tools including audio-recording, video-recording, self-report, real-time observations, rating scales, and questionnaires. The use of real-time observations, audio-recording and self-report have been applied successfully in educational (Maynard et al., 2013) and health settings (Rixon et al., 2016). Employing multiple methods also provides evaluators with an opportunity to draw comparisons. For instance, Hardemen et al. (2008) audio-recorded sessions in a physical activity behaviour change intervention to assess adherence to delivery behaviours and collected self-report data from facilitators. Combining these methods enabled the researchers to compare actual delivery with perceived delivery.

Evaluators must also consider the frequency, time points (e.g., beginning, middle, and end of programme), and duration of data collection (e.g., entire or part). Collecting data throughout the intervention ensures data are representative of the entire programme, as is reporting sampling and analysis techniques in full (Kitzman-Ulrich et al., 2009). In their evaluation of the "Active by Choice Today" randomised school-based trial, Kitzman-Ulrich et al. (2009) conducted observations in 2-week blocks (3 sessions/week) during Weeks 1 and 2, 8 and 9, and 15 and 16 of a 17-week programme. The staggered start at each location

enabled observations to be conducted at different sites. Thus, evaluators observed the same time points for each programme as well as collected data across the full programme, which enhanced the understanding of programme mechanisms.

Challenges of Delivering Complex Interventions with Fidelity

Fidelity assessments are especially important when evaluating complex interventions where multiple factors can influence the extent to which fidelity of delivery is achieved. A complex intervention comprises of multiple interacting components, although additional dimensions of complexity could include the implementation difficulty and the number of organisational levels targeted (Moore et al., 2015). Due to their nature, complex interventions usually undergo some degree of tailoring when implemented in new contexts. Capturing what is delivered in practice, with close reference to intervention theory, can enable evaluators to distinguish between adaptations made to the intervention to fit different contexts, as compared to changes that undermine intervention fidelity (Bumbarger & Perkins, 2008; Hawe et al., 2004; Moore et al., 2015).

Tailoring of complex interventions is important for meeting the varying needs of participants. However, tailoring complex interventions can present facilitators with several challenges to delivering with fidelity. Capturing these challenges enables discussions around improving adherence to delivering the intervention as designed (Wierenga et al., 2013), yet remains an under-reported area of fidelity assessments. In a complex intervention for disadvantaged youth, Mihilac et al. (2008) described multiple barriers to delivering with fidelity including poor behaviour of participants, lack of classroom management skills from staff, and logistical challenges of delivering across multiple sites. Given the similarities of their target population to that of the present study, we expected to experience similar challenges in the delivery of a strengths-based intervention with young people experiencing homelessness, participating in the MST4Life™ programme.

Fidelity of Delivery Style for Interventions with Young People Experiencing Homelessness

Homelessness among young people (16-24 years) is an increasing social and economic problem in the United Kingdom (UK). Frontline service providers are under pressure to support the rising number of young people experiencing homelessness whilst simultaneously experiencing cuts to their funding and a reduction in resources and capacity (Homeless Link, 2021). Furthermore, services have limited access to specialist mental health support and early intervention initiatives, resulting in a lack of ability to meet the complex needs of young people experiencing homelessness at a crucial time in their development towards independence and adult life (MacKie & Thomas, 2014). Strengths-based practice has been increasingly advocated over more traditional deficit-based/risk reduction approaches that emphasize negative outcomes and reinforce negative stereotypes (Cronley & Evans, 2017).

Although frontline service staff have experience in engaging with YP within housing services their roles have been predominantly focused on meeting YPs basic needs e.g., housing, food, water, and crisis support rather than providing more holistic support by incorporating long-term personal development and emotional needs. Moving to roles that require staff to provide strengths-based holistic support requires shifts in peoples personal and professional frameworks, something which is not always easy (Blundo, 2001). Furthermore, in a study assessing the integration of strengths-based interventions in child welfare provision one challenge that was reported was that despite leaders being onboard staff did not always want to implement the strengths-based strategies (Sabalauskas et al., 2014). To ensure that a strengths-based and psychologically informed approach is used in practice, assessing the fidelity of delivery style is key to understand if key concepts of the outlined approach are implemented. Within this study delivery style is defined as the intentional behaviours and actions of the people delivering (or supporting) a programme to

create the social climate and atmosphere that enables participants to achieve positive outcomes. Within PYD, the climate has been recognised as the social environment that is created with and between adults, peers, and parents (Holt et al., 2017). However, few studies have investigated fidelity in delivery study, so it is not known what factors enable or inhibit facilitators to deliver a programme with high fidelity to delivery style (Tidmarsh et al., 2021) and therefore the extent to which desired social climate is achieved.

Previous studies provide evidence of the benefits of continued support and training for staff. Assessing the fidelity of delivery style acts as an ongoing feedback mechanism to identify programme facilitators' further training needs and if/when booster sessions are needed (Cumming et al., 2021). Ongoing support beyond initial training has been highlighted as a key strategy for ensuring fidelity (McQuillin et al., 2015). Studies within school-based youth mentorship programmes reported that ongoing support and training predicted greater anticipation of continuing to mentor young people as well as producing stronger youth outcomes (DuBois et al., 2002; McQuillin & Lyons, 2021; McQuillin et al., 2015). As such, ongoing support and training has the potential to contribute to overcoming barriers to delivering programmes with fidelity to delivery style reported in other PYD programmes for disadvantaged young people. These include challenges retaining staff, staff knowledge of programme components and style, and managing participant behaviour (Collins et al., 2013; Kenyon et al., 2019; Mihalic et al., 2008). The extent to which evaluating the fidelity of delivery style through understanding barriers to delivery in strengths-based PYD programmes for young people experiencing homelessness is yet be explored. However, evaluations have the potential to further benefit programme facilitators in achieving delivery style expectations and therefore supporting positive youth outcomes.

Programs and approaches (including delivery style as defined in this paper, as well the content) have the capacity to impede youth development as well as promote it (Roth &

Brooks-Gunn, 2016). Encouraging autonomy in participants is achieved through a strengths-based delivery style created through the purposeful actions and behaviours of facilitators. In a study aimed at understanding organisations serving runaway and homeless youth in America, Gwadz et al. (2019) compared higher and lower quality services and reported that lower quality services focussed more on basic services and crisis support with less attention given to emotional support. In contrast, higher quality services focussed on short and long-term goals, developed youth centred environments, and encouraged autonomy. A key component of PYD programmes is that young people are approached as people who can develop rather than problems that need to be solved (Roth & Brooks-Gunn, 2003), a more recent view which has been adopted within the context of homelessness. Supporting young people in this manner is achieved through language and style, as much as the activities used within a PYD programme. As such understanding the extent to which delivery style is implemented is an essential component to creating high quality services that can address YPs complex needs beyond immediate crisis support, ensuring practices implemented promote not impede youth development.

Homelessness also has a detrimental impact on a young person's health, well-being, and future economic prospects (Homeless Link, 2021). As such, there is a pressing need for effective interventions that can address the co-occurring challenges that these young people experience and be delivered within the constraints faced by public services. To address this gap, the MST4Life™ programme was co-produced with young people and staff from a homeless service in the UK to improve well-being and employability. It draws from aspects of sport psychology including mental skills training (MST), an approach more typically associated with elite sportspeople (Vealey, 2007), and is underpinned by strengths-based psychology through PYD (Krabbenborg et al., 2013) and SDT (Deci, 2000; Deci & Ryan,

1985). The programme is also framed in the housing services' psychologically informed environments framework (Cumming et al., 2017).

Aims and Hypotheses

The study aimed to explore the extent to which frontline service staff were able to deliver a psychologically informed intervention with high fidelity of delivery style. Due to the extensive psychological training and education possessed by programme deliverers compared to the co-deliverers previous experience predominantly in crisis support, it was hypothesised that the programme: (a) will be delivered with higher fidelity by programme deliverers with postgraduate level psychology training; and (b) will be delivered with lower fidelity by co-deliverers (frontline service staff). The objectives addressed to meet the study aim included: (a) comparing achieved fidelity scores from observations of the delivery team with their self-reported fidelity scores; and (b) qualitatively exploring the challenges and enablers to delivering a complex intervention with fidelity.

The present study set out to address the current gaps around conducting fidelity assessments of complex interventions for populations with high need support. Fidelity studies within the field of homelessness have focused on provision of housing at crisis point (Bernard, 2018; Rae et al., 2018). To our knowledge, this study is the first to assess the fidelity of delivery style within a programme delivered to young people experiencing homelessness, who are currently living in supported accommodation with the aim of improving their progression into independence. MST4Life™ was delivered by facilitators with postgraduate level training in psychology, and frontline service staff without in-depth training in psychology; thus, this evaluation specifically considered fidelity of delivery style. Understanding the extent to which it is possible for programmes such as MST4Life™ to be delivered with fidelity by frontline staff is key to understand the viability of frontline services adopting these programmes in the future.

Methods

Intervention Setting

The current study was part of a larger ongoing outcome and process evaluation of MST4Life™ (see Parry et al., 2021; Quinton et al., 2021) an intervention implemented between 2014-2020 across 21 accommodation sites of the housing service. To ensure sustainability of MST4Life™, the delivery team expanded in the second half of the intervention to include front-line service staff and more robust evaluation (compared with only self-reflection forms and enjoyment ratings). The pilot and main fidelity assessment drew on 3 waves of programme delivery between April 2018 and June 2019. The pilot study aimed to develop the observation/self-reflection tool and adapt traditional observation processes for the main study. The housing service supports young people aged 16-25 who are experiencing homelessness or at risk of homelessness, helping over 5000 young people per year within the West Midlands, UK. The service has 39 supported accommodation schemes as well as a range of prevention, employability, and engagement services to help young people regain the stability needed to rebuild their lives, and gain skills, confidence, and employment.

Programme. MST4Life™ is for young people (aged 16-25 years) who are experiencing homelessness or at risk living in supported accommodation, and includes training for frontline staff (e.g., support workers, employability coaches) to deliver and support the programme. Involving staff in the design and delivery model is critical to supporting the long-term sustainability and impact of the intervention, and improve engagement and uptake of service users to community based programmes such as MST4Life™ (Greenhalgh et al., 2016). Young people accessing MST4Life™ often have poor mental health and other high support needs (e.g., substance abuse, learning difficulties, pregnant, or young parent). Throughout the pilot phase of the fidelity assessment 34 young

people were taking part in MST4Life™ and 53 during the main study. Total numbers of YP were taken from registers completed by facilitators. Demographic information was collected (see Table 3.1); however, it does not represent the total number of YP engaged in MST4Life™ during the fidelity assessment as not all YP completed questionnaires (38.2% = pilot work, 54.7% = main study).

MST4Life™ aims to provide participants with skills building opportunities through challenging and meaningful activities and build positive relationships with adults and peers. It is a complex intervention consisting of two phases and delivered at multiple accommodations sites. Phase 1 involves 10 two-hour sessions in the young person's local service (sessions include individual and team tasks such as emotional regulation and air vehicle challenge). Phase 2 is a 3-night/4-day outdoor adventure education residential (activities include canoeing, high ropes, and hiking). Delivery of phase 2 is assisted by trained outdoor instructors. In the short term, MST4Life™ aims to increase participants' mental skills, strengths and wellbeing and reduce engagement in risky behaviours. MST4Life™ is delivered by facilitators from an academic institution and staff from the homeless service trained as co-deliverers.

Table 3.1

Table showing demographic information collected from YP engaged in MST4Life™ during

the pilot and main study

	Pilot Study	Main Study
Average Age ± SD (years)	19.0±1.5	19.5±2.5
Gender	Female = 10 Male = 3 Non-Binary = 1	Female = 7 Male = 13
Ethnicity	White = 4 Black/African/Caribbean/Black British = 4 Other = 1	White = 18 Black/African/Caribbean/Black British = 2 Mixed = 2 Arab = 1
EET/NEET Status*	EET = 6 NEET looking for work = 5 NEET not looking for work = 1	NEET looking for work = 1 NEET not looking for work = 1 Unable to work/other = 6

Note: Engaged in employment, education, or training = EET; Not engaged in employment, education, or training = NEET.

Study Participants.

Delivery Team. The delivery team ($N = 8$) consisted of four deliverers (all with postgraduate psychology training) and four co-deliverers (frontline staff from the housing service, with undergraduate degrees in social care). All the delivery team received PIE training (Cumming et al., 2017) through the housing service as part of staff training and support. Deliverers (3 male, 1 female; *M* Age = 28.2 ± 4.8 years) had a wide range of experience working within MST (between 1 to 12 years) and had previously delivered at least 50 MST4Life™ sessions; more experienced facilitators had delivered over 200 sessions. Co-deliverers (1 male, 3 female; *M* age = 39.4 ± 9.6 years) had a range of experience working with youth (8 to 20 years) and had minimal previous exposure to MST4Life™ delivery sessions prior to this study (range = 5 to 10 sessions). Co-deliverers received three days of training from programme deliverers to develop their understanding of MST and its

underpinning theories (SDT and PYD), delivery style, session content, and reflection techniques. Other housing service staff would also attend MST4Life™ sessions in the role of support workers for the YP, or to stay late where young people had requested MST4Life™ be delivered in the evening.

Procedures

A mixed methods approach assessed the fidelity of delivery style of MST4Life™ using systematic observation and self-reported ratings. The use of self-report measures is deemed an unreliable measure of fidelity when used alone due to over-reporting of fidelity (Breitenstein et al., 2010; Hardeman et al., 2008; Walton et al., 2017). However, self-report data can be useful to enable a holistic assessment of fidelity of delivery style. Facilitator perceptions of their adherence to delivery style are key to allowing the comparison to observed adherence, and to make effective amendments (Hardeman et al., 2008) and highlight where further training may be required. The same rating scale was used for both types of data to assess the degree to which programme facilitators delivered MST4Life™ in the intended style. Ethical approval was granted by the University ethics committee. Delivery team and observer consent were obtained prior to the study (see Appendix 2-4 for participant information sheets, Appendix 5 for consent form, and Appendix 6-8 for demographic questionnaires). YP engaging in MST4Life™ provided written consent (See Appendix 1). Verbal consent was obtained from the YP prior to the start of each observed session.

Observers

Three individuals (two female, one male, *M* Age = 24.5 ± 1.7 years) carried out face-to-face observations during the pilot work and main study. Face-to-face observations were considered most appropriate as nine YP participating in MST4Life™ did not consent to photographs or recordings being taken of them. The lead observer (female) carried out all observations during the pilot study. Additional observers were recruited and trained to

conduct observations in the main study alongside the lead observer. Through previous work the lead observer had a good understanding of the unique challenges that can occur when working alongside YP with ill-mental health, complex needs, and traumatic past experiences; characteristics which were present within the recipients of the MST4Life™ programme. All observers had good knowledge of SDT (Ryan & Deci, 2000), possessing a sound understanding of the theory underpinning both the intervention and the observation tool.

After introducing themselves and checking all participants in the room were comfortable for the observation to proceed, the observer would move to the back of the room and observe the session with minimal interaction. Observations lasted for the entirety of each session, and a form was completed by the observer for each facilitator and co-deliverer present ($n = 2$ forms per session). Field notes were made throughout on behaviours and conduct that stood out as either good or poor practice. Direct quotes of facilitator's comments were also noted. Following the session, the rating scale was completed as well as a written overview of the session alongside any suggestions for improvements. Observations were not conducted in Sessions 1 or 2 of Phase 1 to allow the YP time to become familiar with each other and the facilitators before adding in another unknown factor.

Tool Development

The observation and self-reflection scales are a bespoke tool (see Appendix 9 and 10) developed to meet the needs of the MST4Life™ project and frontline housing service it is delivered in. The observation and self-reflection tools described above were developed using an iterative approach whereby alterations were made during and following the pilot study. Content validity was checked through working with university deliverers and frontline service staff through individual feedback and meetings to review and change the tool. A number of frontline staff noted the tool was quite long and that some items could have been more appropriately named. As a result, some items were removed where they were deemed

not applicable to delivery style and also to ensure the tool remained a manageable size in terms of time to complete. For example, item 25 had initially been two separate items; behaviour management and group focus maintained and was combined to form one item.

The tool is underpinned by Deci and Ryan's BPNT (2002) and the final version comprised of 5 sections, totalling 27 items (see Table 3.2) to assess the extent to which facilitators displayed need supportive (e.g., providing opportunity for input and choice) or need thwarting behaviours (e.g., uses controlling language). Need support is where behaviours are exhibited that promote positive feelings of autonomy, competence, and relatedness, whereas thwarting is a behaviour (or behaviours) which directly inhibits the promotion of those needs or decreases current levels (Deci & Ryan, 2002). Each item was rated on a scale of 0 to 3 (0 = not at all demonstrated; 1 = Displayed, but in a limited way; 2 = Displayed with moderate frequency or conviction; 3 = consistently demonstrated with conviction). The maximum score possible for supportive behaviours is 45, whilst the maximum score for thwarting behaviours is 42. The total score for each participant was calculated by adding up the score from each item and then the total score was converted to a percentage. Thresholds for fidelity level achieved were set a-priori based on discussion amongst the research team and the housing service and were defined as follows for need supportive behaviours: low = $\leq$ 59%, medium = 60-79%, high = $\geq$ 80%. These thresholds are similar to those seen elsewhere within fidelity assessments in an educational setting where programmes were delivered with adequate fidelity at 65% (Lorentson et al., 2014) and 80% (Balu & Quint, 2014).

Self-reflection forms were completed by facilitators and co-deliverers after each session (in the pilot and main study) during Phase 1, and an overall written reflection was provided following the outdoor adventure education (OAE) residential (Phase 2). Self-reflection forms were identical to the observation form. Deliverers also completed questions

designed to facilitate written reflection of challenges and successes of the session, areas for improvement for future delivery, and any additional comments deliverers wished to make.

Table 3.2

The Sections and Items Within the Observation and Self-report Tool

Section	Need supportive items	Need thwarting items	Total items for section
Competence	2	2	4
Autonomy	3	5	8
Relatedness	5	2	7
Communication	3	1	4
Structure	2	2	4
Entire tool	**15**	**12**	**27**

Data Collection

Pilot study. A total of 18 observations were conducted across three accommodation sites and the OAE centre where MST4Life™ was delivered between April 2018 and June 2018. Sessions were purposively selected to represent early, middle and late stages of programme delivery (Kitzman-Ulrich et al., 2009). In total, seven out of nine selected sessions were observed at accommodation sites. Two deliverers were observed per session. Similarly, three out of four sessions were observed at the OAE centre. Only one deliverer per session was observed at the OAE centre. Programme facilitators completed the rating tool following each session delivered in local accommodation ($n = 47$). Four were not completed due to session cancellation. The remaining self-reflections were not completed despite the session being delivered. In the pilot study, 30% of sessions were systematically selected for observation. Cancellation of some sessions ($n = 2$) meant that the number of observed

sessions was below the 30% threshold. Thus, 40% of sessions were selected for observation

in the main study which is within the range recommended by Schlosser (2002).

Main study. The number of sessions delivered by each facilitator and co-deliverer

and the number of sessions observed are reported in Table 3.3. In total 45 observations were

completed between October 2018 and March 2019 across two programmes delivered over six

accommodation sites. Two deliverers were observed during Phase 1 sessions and only one

during Phase 2. Deliverers completed the rating tool following each session ($n = 84$).

Table 3.3

Data on the number of times facilitators delivered sessions, and frequency of observations for

each individual

		Phase 1		Phase 2	
Project	Facilitator	Sessions facilitated	Number of times observed	Sessions facilitated	Number of times observed
Pilot	F1	15	4	6	1
	F2	16	5	6	1
	F3	16	4	6	1
	F4	6	2	N/A	N/A
Main	F1	9	4	N/A	N/A
study	F2	21	9	6	2
	F3	22	8	6	2
	F4	1	1	N/A	N/A
	CD1	13	5	N/A	N/A
	CD2	6	5	6	2

CD3	13	5	N/A	N/A
CD4	7	2	6	0

Note. N/A: Non-applicable for this facilitator as not present during Phase 2 of programme delivery.

Data Analyses

Data from observations, self-report questionnaires, and written reflections from the main study were analysed using both quantitative and qualitative methods. Quantitative data were analysed using SPSS (Version 24, 2018). The non-parametric Mann-Whitney U test was used to analyse fidelity scores, as these data were not normally distributed (i.e., data were nominal or ordinal). Qualitative data were extracted from the observation and self-report tools and thematically analysed (Braun & Clarke, 2006, 2013). Familiarisation, generation of initial codes and initial themes were completed by the lead author using an inductive approach. Initial codes were created using NVIVO (Version 11, 2017) and developed further by hand. Rigour and trustworthiness were established through critical appraisal of themes to broaden the interpretation of the data beyond the first author. The second author and programme facilitators acted as critical friends who encouraged reflection on, and development of, more nuanced reading of the data as well as challenging example quotes and themes (Smith & McGannon, 2018). Unlike the quantitative results, the findings from the pilot and main studies are presented together for the qualitative.

<div align="center">

Results

</div>

Fidelity Scores

Pilot study. The mean overall adherence score of observed sessions was 89.9% ± 8.8 and the overall adherence score of the facilitator self-report questionnaires was 96.6% ± 3.9. Observations were on average 6% lower than self-report scores.

Main Study. In the main study scores from the observed sessions ($N = 45$) and the facilitator self-report questionnaires for the entire programme ($N = 84$) indicated high adherence to delivery style. The mean overall adherence score of observed sessions was 82.2 ± 15.7%, and facilitator self-report mean adherence score was 89.3 ± 6.2%. Observations were on average 9% lower than the self-report scores, however both fidelity scores fall within the "high" category. Details of adherence scores are reported in Table 3.4.

Table 3.4

Observation and Self-report Scores from Each Session

Facilitator (employer)	Need Supportive Behaviours		Need Thwarting behaviours	
	Observed	*Self-report*	*Observed*	*Self-report*
F1	High (98%)	High (92%)	0%	0.8%
F2	High (97%)	High (97%)	0.2%	0%
F3	High (93%)	High (93%)	0.6%	1%
F4[1]	High (97%)	-	0%	-
CD1	Medium (71%)	High (85%)	0%	5.5%
CD2	Medium (69%)	High (93%)	3.7%	7.5%

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[1] Self-report data were not available for F4. Also, there are a number of self-report data missing for project 2, which was due to young people not attending, leading to cancellation of the session, in conjunction with F4 being a regular facilitator at this location.

CD3	Low (57%)	High (86%)	8%	8.3%
CD4	Medium (77%)	Medium (79%)	10.5%	9.3%
Combined average:	**High (82%)**	**High (89%)**	**3%**	**4.3%**

Note. F = facilitator from the University; CD = facilitator from the housing service acting as co-deliverer.

Mann-Whitney U analyses indicated that observation scores of the more experienced university staff were significantly higher from frontline staff *(p = .029).* There was no significant difference between facilitators and frontline service staff for self-report scores (*p = .114*). Regarding level of psychology training, there was a significant difference between observation scores and the deliverers with postgraduate psychology training (*p = .029)*, indicating that those with psychology backgrounds were able to deliver the programme with higher fidelity. There was no significant difference between self-report scores and level of psychology background (*p = .114).*

Barriers and Enablers Influencing Fidelity of Delivery Style

The main themes highlighting barriers to, and enablers of, fidelity of delivery style are reported in Table 3.5. The themes were inclusive of facilitator, participant, service provider staff, and outdoor instructors' behaviours, as well as factors outside of individuals' direct control, such as the weather. During the identification of the themes, it became apparent that some barriers and enablers were present only in Phase 1 and others only in Phase 2, whilst some were present across both phases (see Table 3.5).

Table 3.5

Main Themes Highlighting Barriers and Enablers of Fidelity of Delivery Style Across Phases 1 and 2 of MST4Life™

Barriers and Enablers to fidelity of delivery style	Phase 1 (local service)	Phase 2 (OAE)
Barriers		
Poor communication	X	
High support needs of young people	X	X
Practical challenges	X	
Participant behaviour	X	
Departures from PIE/MST approach by service provider staff	X	X
Weather		X
Enablers		
Teamwork and communication	X	X
Positive participant behaviour	X	X
Outdoor instructor support		X

Barriers to Fidelity of Delivery Style

Poor communication, practical challenges, and participant behaviour were barriers to fidelity of delivery style that were only relevant during Phase 1 of MST4Life™. Facilitators perceived poor communication with YP as a barrier to delivery, such as attempting to explain a concept to a participant in a complex manner that was not understood by YP. Facilitators also discussed how poor communication between service provider staff and YP created a barrier to delivering in the desired style. For example, one facilitator discussed how staff had

not encouraged YP to attend the session in advance, "Some staff did not knock on YP's doors until 11am (when we were meeting!)" (F1)[2]. Within the theme of practical challenges, facilitators discussed how changes in availability of regularly used delivery space presented issues in adhering to the delivery style when they had to deliver a session in the staff office. Furthermore, other practical barriers discussed included the scheduling of sessions, which were sometimes back-to-back sessions at different locations, and concerns regarding the time of the sessions. Finally, a variety of participant behaviours presented as a barrier, including poor punctuality, coming, and going throughout the session, fluctuations in attendance, inappropriate discussions, and use of mobile phones. For example, F2 discussed how participant behaviour provided a challenge to delivering the session, "the [number] of young people might not have actually been the direct challenge, but more the staggered arrival of them".

Two themes were consistent barriers across both phases of the programme. High support needs, including those related to physical and mental health, as well as language barriers and drug use, required increased one-to-one support for some YP. Meeting high support needs for the YP was emotionally draining for facilitators and meant that they could not always spend time with each YP during an activity. For example:

"I think maybe the way I did strengths profiles could have been a bit better, like, maybe going around more and having some one-to-one conversations, I did try and do this a bit but was also helping YP2 with it as it was her first time doing it." (F2)

Inconsistencies in service provider staff taking a strengths-based or psychologically-informed (i.e., PIE) approach towards young people and engagement within sessions and activities was a further barrier common to both phases. F3 gave the example of a staff

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[2] Note that throughout the qualitative results, section letters and numbers have been used to protect the identity of facilitators, young people and service staff; F is used when the individual is the facilitator, YP when the individual is the young person, CD when the individual is a co-deliver, S when the individual is a member of staff from the homeless service, and O when the individual is an observer.

member encouraging young people to help tidy up more during Phase 2 by promoting external rewards, "She [staff member] then said there would be a prize for whoever did the best job. I didn't like this so much as it goes against the autonomy supportive approach we try to have." Offering an external reward goes against the delivery style encouraged in MST4Life™ which values development of intrinsic motivation where participants are encouraged to do things for the feeling it creates internally rather than an external reward (extrinsic motivation).

Enabling Factors to Fidelity of Delivery Style

Whilst no enabling factors were distinct to Phase 1, there were two themes which were present across both phases of the programme: teamwork and communication. These enablers occurred between facilitators, facilitators and service provider staff, and between service provider staff and YP. One facilitator described an occasion where a member of service provider staff was present in a Phase 1 session, as well as commenting on their behaviours to communicate with YP before the start of the session:

> "S1 was absolutely great not only in bringing the YP there, but also chasing up beforehand, ringing around other staff and also displaying co-deliverer behaviours in terms of helping the girls problem solve rather than giving them the answers." (F1)

> Furthermore, another facilitator discussed in-depth an example of communication

between facilitators and service provider staff. A young person who required high need support due to ill-health experienced a manifestation of their condition whilst out on the cave walk. The facilitator highlighted how excellent communication (e.g., clear speech, appropriate body language, and effective decision making) between all parties enabled the activity to continue running smoothly, safely, and enjoyably for the group:

"S2 was sat with her (YP), and (O1) was there too, as I walked over O1 and I made a subtle and efficient decision that I'd stay with YP and S2 and she (O1) went on with the rest of the group." (F2)

Co-delivery staff also discussed the importance of good communication and teamwork prior to the sessions themselves:

"I have been meeting F2 half hour before the session which really helps prepare for the session, F2 has generally been very helpful, encouraging, and his laid-back nature has helped me to start to flourish in my delivery without feeling too pressured." (CD1)

Positive participant behaviour was another enabling theme which was identified across both phases. Facilitators discussed YP showing positive behaviours including supporting one another generally, as well as during activities and engaging in activities even under difficult circumstances. One facilitator described how even in bad weather the YP "threw themselves" into the activity. Additionally, facilitators also discussed how even when the number of YP in the session was low (e.g., 2), that they "were very engaged so that wasn't a problem".

Distinct to Phase 2, the final theme of what enabled fidelity of delivery style was the support received from the instructors of the OAE centre and was frequently discussed by facilitators during their Phase 2 reflections. Communication between themselves (facilitators) and outdoor instructors, as well as the outdoor instructors' support of YP was described as consistent with the desired delivery style. For example, one facilitator discussed how the preparation and communication prior to the outdoor adventure trip was key to enabling the delivery of the project for one particular young person:

"One thing I feel like we did really well was prep for the needs of this trip (mainly YP1), which contributed towards what felt like a pretty smooth-running trip… The

phone conversations with the outdoor instructors really helped too, so definitely keeping that communication going is key." (F1)

Discussion

This study examined the extent to which it is possible for frontline service staff of a housing service to deliver a psychologically informed intervention with high fidelity through assessing fidelity of delivery style, comparing fidelity of delivery by deliverers and frontline service staff, and through exploring barriers and enablers to delivering MST4Life™ using the intended delivery style. Results show that MST4Life™ was delivered with high fidelity. The reasons for this are presented in this discussion and considered within the context of the theories (PIEs and SDT) which underpin the programme's design as well as the wider fidelity literature.

Programme Adherence

Results from this evaluation show that it is possible for frontline staff from a youth housing service to deliver psychologically informed programmes with high fidelity. Although frontline staff did not score as highly as those with extensive psychology training (postgraduate level), they did deliver the programme with high fidelity, suggesting it is therefore possible to train frontline service staff to deliver psychologically informed interventions with high fidelity to delivery style. Frontline staff from the housing service also demonstrated a greater number of need thwarting behaviours and fewer need supportive behaviours than facilitators with psychological training. Research by Smith et al. (2016) found similar results, whereby despite scores which showed a high number of need supportive behaviours displayed by coaches, novice coaches displayed a higher number of need thwarting behaviours compared to those with more experience. Overall, the most experienced facilitators delivered MST4Life™ with higher levels of fidelity. This (i.e., more

experienced facilitators delivering with higher levels of fidelity) was planned from the outset; initially facilitators from the university delivered the programme and mid-way through the project co-delivery training was introduced to enable frontline service staff to deliver the programme as part of the housing service's sustainability plans. Therefore, further improvements in fidelity could be achieved by frontline staff as their experience of delivering the programme increases (Weiss & Westerhof, 2020; Wenz-Gross & Upshur, 2012).

Furthermore, reflective practice may also be a contributing factor in enabling the deliverers to deliver the sessions with such high fidelity. Reflective practice enables individuals (and teams) to become more self-aware, resilient, better able to cope with change, maintain and enhance skills and improve job performance (Edward & Hercelinskyj, 2007; Heyler, 2016). As such, despite delivering within a complex intervention and with participants who have complex needs, engagement in reflective practice encouraged deliverers to reflect on positive aspects of past delivery and areas for improvement and how that might be achieved. The deliverers from the university with postgraduate level psychology training and greater experience in programme delivery also had more experience engaging in regular self-initiated reflective practice compared with frontline staff. University deliverers kept a diary of delivery experiences from the programme outset, engaged in a debrief following each session as well as team reviews during and post programme delivery.

Frontline service staff did engage in self-reflection by completing the self-reflection forms after each session, which also provided a reminder of core delivery elements. Additionally, having an experienced facilitator model the desired delivery style during each session and engaging in informal post-session discussion debriefs with the university facilitator helped to clarify and extend knowledge of the co-deliverers beyond the initial training. This variation in prior experience of self-reflection may offer an explanation to the greater difference in self-rated scores compared to observed scores of the frontline staff who

were also less experienced in delivery. The difference in delivery and self-reflection experience, as well as scores, emphasizes the importance of continuous staff training (on delivery and reflective practice) and reflective practice in enabling facilitators to improve and develop skills and styles required to deliver complex interventions in the community setting (McNicholas et al., 2019; Weiss & Westerhof, 2020).

Results show that despite differences in fidelity between the more experienced programme delivers and the co-deliverers, overall, MST4Life™ was delivered with high fidelity of delivery style. However, it is still important to highlight that as well as factors that enabled fidelity of delivery style, deliverers also experienced several barriers.

Factors Affecting Delivery Style

Of the barriers and enablers to the fidelity of delivery style, a few were only relevant to certain phases. Most, however, related to both phases of the programme and highlight the challenges and key factors to delivering a complex intervention with high fidelity. Distinct to Phase 1 were practical challenges and participant behaviour. Practical challenges included difficulties with available space to deliver sessions, and the high volume of sessions within a short time period including sometimes two sessions back-to-back but in different locations. Participant behaviour included lateness to sessions, poor attitude towards sessions, and mobile phone use. These behaviours are consistent with other complex interventions delivered to disadvantaged youth. Mihalic et al. (2008) cited common barriers as: (a) finding room in the schedule; (b) classroom management difficulties; and (c) gaining full support from key stakeholders. The latter was also perceived as a barrier to fidelity of delivery style by MST4Life™ facilitators across both phases and was also reported by Durlak and DuPre (2008). MST4Life™ facilitators discussed how even when they were trying to deliver in the correct style, sometimes the member of staff (both those directly co-delivering and those acting in a support role) from the service provider would not always display appropriate

behaviours or communicate effectively (communication was inconsistent from frontline service staff and as such also appears within the enabling factors).

However, more commonly within this theme facilitators discussed feeling mixed levels of support and endorsement of the programme by some frontline service staff supporting the programme, e.g., sometimes support staff seemed unhappy when a programme time (chosen by YP) runs past the time they are due to finish, leading to interrupting programme delivery to remind of the time, creating a sense of having to rush and feeling as though it was extra work encouraging YP to attend. University facilitators perceived that mixed support and endorsement from frontline staff led to young people arriving with no idea about the programme, as well as facilitators feeling pressured to rush sessions due to staff who were in a hurry to leave. Where support from frontline staff was mixed it limited available time for facilitators to engage the YP in in-depth discussions or reflections due to starting sessions late or having to explain additional things.

This is an important barrier to consider. Firstly it highlights the importance of factoring in time to engage in in-depth conversation, an opportunity during which facilitators can build rapport with individuals and create a sense of relatedness (Deci and Ryan, 2002), and begin to further understand and listen to a YP. Time to engage in in-depth discussions can allow the strengths-based approach to be implemented in a way that is tailored to the individual, enabling further discovery of a YPs strengths. These strengths can be used throughout the programme and beyond where a meaningful rationale is given for its application in the individual's wider life. Secondly, it highlights the broader challenges faced by frontline service staff including but not limited to, underfunded services, high caseloads, low-wages (and working second jobs) and family responsibilities (e.g., having to leave to pick up children). Staff play a crucial role in maintaining young people's engagement (Parry et al., 2021) in MST4Life™. It is vital to work collaboratively with frontline staff when

making key decisions to ensure that these facilitate frontline staff in supporting the project and young people's engagement within it as well as being appropriate for the YP. This combination of findings further indicates the essential role frontline service staff play (as key gate keepers) in supporting effective programme delivery and is a vital element in bridging the research to applied practice gap (Ely et al., 2020; Weiss & Westerhof, 2020).

As well as barriers to fidelity, there were also several enabling factors. One was relevant only to Phase 2 of the programme, and that was the support and good communication of the outdoor instructors which enabled sessions to be prepared so that they would support the complex needs of the young people. Good communication with outdoor instructors was key during the outdoor activities, as it meant that sessions could be designed with an appropriate level of challenge, whilst remaining achievable for a variety of abilities: a key aspect for meeting young people's competency needs (Deci & Ryan, 2002). Similar to Mihalic and colleagues (2008), who also reported positive participant behaviour as enabling factor, MST4Life™ facilitators also perceived this to be the case, especially when participants were engaged and on time. For example, facilitators discussed how when good communication occurred between themselves and service provider staff, and between service provider staff and young people it ensured fidelity by helping with practical issues such as starting on time and consistency in need supportive behaviours.

In summary, MST4Life™ can be delivered with high fidelity, showing a greater level of fidelity than other studies as well as a lower discrepancy between observed and self-report scores, likely due to the extensive experience of the facilitators. There are a variety of perceived barriers and enablers to delivering with fidelity that are consistent with other complex interventions, including support from stakeholders, participant behaviour and practical considerations. The high fidelity of delivery style scores achieved in this study and barriers and enablers discussed tell us that it is possible to deliver programmes with high

fidelity despite the complex settings in which they are delivered. Additionally, the barriers highlighted (logistical and practical challenges, mixed levels of support from service staff and participant behaviour) are consistent with those from previous studies (Melde et al., 2006; Mihalic et al., 2008). Despite progress in co-designing complex programmes since the early 2000's, the barriers faced are largely still the same and are linked to larger systemic changes required in funding housing services for disadvantaged youth.

Limitations and future research directions

Firstly, although training on using the observation tools and the context of MST4Life™ was provided to observers, and regular meetings were held to confirm that observers had developed the same interpretation for each behaviour, there was no opportunity to practice observations prior to data collection in the main study. Although not possible in the current study due to time constraints, the inclusion of video training would have strengthened observer training prior to data collection, through exposure to simulated sessions that depicted increasingly complex events as well as showing need supportive and need thwarting behaviours (Dempsey et al., 2012). The inclusion of videos showcasing a variety of situations as well as need supportive and need thwarting behaviours would better enable discussion around observers' understanding of the observation tool during training and throughout the data collection period. As such, ensuring a greater level of accuracy and minimisation of observer drift during data collection (Yoder et al., 2018). Inclusion of videos within training observers is especially important given the complex context of MST4Life™ where participant and logistical challenges mean that there can be a variety of influences which may make conducting observations more challenging.

A further limitation of this study and a vital step forward for future research is the need to evaluate staff training. This study evaluated delivery team performance (fidelity of

delivery style); however, no rigorous evaluation was conducted of the training the frontline

service staff received prior to delivery. Understanding effectiveness of staff training is key to

illuminating present and future staff performance and ensuring sufficient and appropriate

training is delivered to enable those delivering programmes to do so with high fidelity.

Evaluating both fidelity of delivery as well as training received also enables more valuable

provision of top-up training to address areas where staff would find more training beneficial.

Evaluation of staff training was not included within this study due to time constraints,

however it is something we strongly recommend future studies include as part of their

process evaluations.

Lessons Learned

Important lessons learned through this study can inform future program planning and

evaluation in the area of complex community interventions:

1.   Allowing for flexibility

Flexibility is not synonymous with lack of rigour in terms of programme delivery or

evaluation. The programme was designed to enable flexibility in delivery by having

the delivery style as a core active ingredient so that adaptations could be made to meet

the needs of programme participants (Harn et al., 2013; Webster-Stratton et al., 2011).

Ensuring adaptability to changing situations in an evaluation is vital to support data

collection when evaluating complex community programmes; there are many factors

that cannot be controlled, particularly when programme participants have high need

support requirements (Cohen et al., 2008). On a small number of occasions

programme participants did not turn up, leading to a session being cancelled, and no

observation would take place due to the fixed nature of data collection time points in

the pilot study. As a result, a range of data collection points were used in the main

study, e.g., data collection point 2 taking place between sessions 4-6, meant that data

collection could take place in a systematic and rigorous way. Additionally, observing in an OAE setting requires a flexible approach to completion of data collection tools to account for safety (e.g., during climbing the "Old Man" at Coniston and navigating rocky terrain) and challenges of completing the form during poor weather conditions (e.g., rain). Requesting completion of the form by observers within 1 hour of the activity meant that their own safety could be maintained when it was not safe or practical for the form to be completed in real time. It is vital that flexibility within programmes is reflected and continued within evaluations.

2. Meeting the emotional needs of the young people

Given the complex needs and vulnerable nature of the young people involved in the intervention, ensuring the young people felt comfortable was key to minimising the impact of the observer's presence. As such, during the design of the study, project developers and facilitators decided that the observer should build rapport with the young people rather than assume a more traditional observation style throughout (e.g., creating a sense of distance; Melde et al., 2006).

3. Facilitating frontline staff support expectations

Despite many advocates and high levels of support from frontline staff within the housing service, staff could sometimes display mixed levels of support towards the programme. As aforementioned, this mixed support was likely as result of not being involved in key decisions which affected their ability to support the delivery of MST4Life™ amongst high caseloads. It is vital to not only manage frontline staff expectations in terms of how to support programme delivery but to create an environment in which this also possible. How to create this environment and manage multiple needs (staff and participants) was a steep learning curve for both researchers and frontline service staff combined with having to meet the complex and varied

needs of the YP accessing the service. As such, we recommend researchers

collaborate with frontline staff and YP from the beginning (e.g., design) and

throughout the programme when making key decisions to ensure that programme

delivery (and support of) and YPs participation is achievable in practice by all

involved. When the programme is intended to be incorporated into the service long-

term (as with MST4Life™) the importance of facilitating frontline staff support

through collaboration is of even greater importance.

Conclusion

As the UK faces increasing numbers of youth experiencing homelessness, there is a

pressing need for effective interventions that can both address the many and often co-

occurring challenges that these young people experience and be delivered with high fidelity

within the constraints faced by public services. This unique study was the first to assess

fidelity of delivery style of a complex community intervention for youth experiencing

homelessness, serving as an exemplar of the practices a program provider is meant to use in

implementing a programme to ensure the context is strengths-based and psychologically

informed. The study provides evidence that frontline staff can deliver psychologically

informed programmes with high fidelity of delivery style and consequently, can be trained to

deliver psychologically based programmes in complex settings. Furthermore, it highlights the

vital nature of process evaluations in understanding mechanisms which make a programme

successful (or not), such as flexible design and delivery and buy-in from service staff. This

study goes some way to filling the need for greater understanding of how to implement

programmes with high fidelity to delivery style as well as the feasibility to conducting such

evaluations. However, it is essential that when researchers and organisations design

programmes, they consider the evaluation of processes from the outset to ensure that

programme outcomes can be correctly attributed to the programme, and to improve the

uptake of successful programmes which will be of most benefit to their recipients.

Study 2: Process evaluations of positive youth development programmes for disadvantaged young people: A systematic review

This chapter has been submitted to the Journal of Positive Youth Development and is currently under review.

Introduction

Over the past 10 years there has been an increase in the number of disadvantaged young people, coinciding with a growing gap in income and opportunity between the least and most disadvantaged. In 2015, it was estimated that 2.7 million young people (14-24 years) were living in poverty in the UK (Born & Aldridge, 2015). Furthermore, those aged 18-24 are twice as likely to be out of education and employment compared to their more advantaged peers (Gadsby, 2019). To address challenges such as poor educational attainment, homelessness, increased involvement in violence, drugs, and alcohol, poor physical and mental health, and a lack of key life skills, the use of PYD programmes has increased, particularly in sport, educational and community settings. PYD programmes are strengths-based and support young people to achieve positive development through life skills (Lerner et al., 2009). Ensuring such programmes are well designed, implemented, and evaluated is essential to meeting the needs of disadvantaged young people. Although conducting outcome evaluations is common, the use of process evaluations is still insufficient in number and quality (Iachini et al., 2014). These evaluations are vital to facilitate best quality provision of programmes to support disadvantaged young people.

PYD does not happen automatically; it is an intentional process that promotes development of essential life skills and protective factors (Pierce, 2017; Shek et al., 2019). Life skills can be behavioural (e.g., being assertive), cognitive (e.g., effective decision making), interpersonal (e.g., communication with others), and intrapersonal (e.g., setting personal goals) (Danish et al., 2004; Gould & Carson, 2008; Parry et al., 2021). Development of such skills can result in a healthier and more productive adolescence and adulthood. PYD acknowledges that young people are active agents in their development and that all young people have the capacity for growth. Such opportunities are vital for disadvantaged young people, many of whom experience a lack of agency and positive relationships with peers and

adults, are exposed to engaging in high-risk activities (drugs, alcohol), and are negatively stereotyped within the community (Cronley & Evans, 2017; Mihalic et al., 2008).

Process evaluations are vital to illuminate the mechanisms underpinning programme design, implementation, and evaluation (Moore et al., 2015), and incorporate adherence to programme content, delivery style, participant engagement, recruitment, and staff training. Developing a deeper understanding of these aspects of PYD programmes is imperative to enable progression in policy development, programme design and provision, as well as research to better meet the practical, emotional, and developmental needs of disadvantaged young people. Process evaluations can take form through overarching models such as the Kirkpatrick model (Kirkpatrick, 2006) or a theoretical framework such as realist evaluation (Kazi, 2003). Different models will suit different types of programmes depending on the aim, theories, and context of the programme being evaluated. Moreover, variety of data collection methods can also be used either in isolation or combined, including questionnaires; self-report tools; observation (face-to-face, audio and videorecording); interviews (face-to-face, phone, videocall); and focus groups (Borrelli, 2011; Moore et al., 2015).

Despite the valuable and necessary contribution of process evaluations, their use within PYD programmes for disadvantaged young people is rare. As these programmes are often complex to implement, the added workload alongside conducting a rigorous process evaluation may be unmanageable. Process evaluations can be seen as costly and time-consuming. However, foregoing process evaluations may prove more costly in the long term due to risk of the programme being classified as effective, when what is actually delivered in the real world differs from reported programme design (Borrelli, 2011; Moore et al., 2015; Tidmarsh et al., 2021). This could lead to services using programmes which are not effective at improving outcomes. Furthermore, foregoing process evaluations means that essential

information around barriers and enablers to implementation from a variety of perspectives remains unknown, causing the research-to-practice gap to further increase.

Study Aims

This systematic review is the first to examine process evaluations of complex PYD programmes delivered to disadvantaged young people. It is vital to understand the processes underlying the results of these programmes to enable best practice within programme design and implementation. In particular, the barriers and enablers to delivering programmes as designed are important to understand what works and what does not in the real world. Furthermore, understanding how current process evaluations have been conducted will help improve design, uptake, and quality of future process evaluations. High quality reporting creates greater understanding around methods used within programme evaluations and enables more informed decisions around programme effectiveness and policy development surrounding provision for disadvantaged young people. This study therefore set out to systematically review process evaluations of PYD programmes for disadvantaged young people with three main aims:

1. To explore barriers and facilitators to delivering PYD programmes as designed in complex community settings.
2. To evaluate process evaluation methods used.
3. To critically evaluate the quality of reporting within the process evaluations.

Methods

This systematic review was carried out following the PRISMA guidelines (Moher et al., 2009). A PICO-D (Population, Intervention, Comparison, Outcome, Design) statement was defined at the outset. Design was included as part of the PICO statement to identify the variety of studies published in this emerging field of process evaluations of PYD programmes

for disadvantaged young people. This approach has been successfully used in other fields such as public health (Chegini et al., 2019; Cuthbert et al., 2019; Scott et al., 2014).

Eligibility Criteria

For inclusion in this review, studies fulfilled the following PICO-D statement:

Population

Disadvantaged/at-risk young people aged 10-24 years. In this paper disadvantaged young people included those whom: experience substance/alcohol misuse, homelessness, emotional health concerns, teenage parenthood, low educational attainment (less than 5 GCSES grade A-C/9-4 students sitting GCSE level exams, which would be aged 15-16 years old and comparable to those in high school in the United States), those who are not in education, employment, or training (NEET), those involved in crime and those from low socio-economic backgrounds, care leavers, and young carers (Atfield & Green, 2019; Barnes et al., 2011).

Intervention

Process evaluations of PYD interventions for disadvantaged young people. Process evaluations were described as a study which aims to understand the functioning of an intervention, by examining implementation, mechanisms of impact, and contextual factors (Moore et al., 2015). Studies being evaluated were complex interventions which, in this case, are interventions that comprise of multiple interacting components where additional dimensions of complexity could include the difficulty of their implementation and the number of organisational levels they target (Moore et al., 2015). PYD interventions were those that engage young people within their communities, schools, organisations, peer groups, and families in a productive and constructive way; recognise, use, and enhance young people's strengths; promote positives outcomes for young people by providing opportunities,

fostering positive relationships, improving leadership skills and encouraging less engagement in risky behaviours (Damon, 2004; IWGYP, 2016; Lerner et al., 2005; Lerner et al., 2016).

Comparison

Based on other systematic reviews of process evaluations, this aspect is not applicable to the current review as no comparison or control groups are being compared e.g., of a type of exercise, activity, or treatment (Liu et al., 2016b).

Outcome

(1) Barriers and enablers to implementation.

(2) Process evaluation methods used, and the process evaluation areas targeted.

(3) Strengths and limitations of process evaluation methodology.

Design

Process evaluations of interest included quantitative, qualitative, or mixed methods approaches. Study designs included were randomised control trials (RCTs), non-randomised interventions, cross-sectional studies, longitudinal/cohort designs, and case studies.

Exclusion criteria included:

- Article types: non-peer reviewed articles and grey literature sources. Articles published in non-English languages.
- Study type: Any study that did not describe or include findings from a process evaluation of a PYD programme.

Search Strategy and Article Screening

Web of Science, Psych INFO, Scopus, and Embase databases were searched in January 2022. A total of 68 records were identified (after eliminating duplicates), without a

date range restriction. From that total, 42 abstracts and 16 full text articles were excluded based on the exclusion criteria (see Figure 4.1). Based on the PICO-D, the following search criteria were developed with the assistance of a research librarian: ("Process evaluation") AND "positive youth development" AND disadvantaged OR homeless* OR vulnerable OR "low socio-economic" OR "at-risk" AND "youth" OR "young people" OR "emerging adults" AND intervention* OR program*.

A two-step process was used for study screening. Titles and abstracts were screened by the PhD student and two colleagues against the PICO-D statement (Scott et al., 2014) and exclusion criteria. Each article was classified as "include", "exclude", or "unclear". Any disagreements between the two authors were discussed to reach a consensus.

Data Extraction and Quality Assessment

The first author extracted data from all included studies. One colleague independently extracted data from 50% of the included studies. Any discrepancies were discussed with the second author. All included studies were quality assessed by the PhD student. Due to the range of study designs employed in the included studies, four quality assessment tools were used: JBI quality assessment for qualitative studies (Lockwood et al., 2015), JBI quality assessment for analytical cross-sectional studies (Moola et al., 2020), JBI quality assessment for randomised control trials (Tufanaru et al., 2020), and the Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018).

Figure 4.1:

PRISMA Flow Diagram (Moher et al.,2009)


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Identification

    Records identified through        Additional records identified
    database searching                through other sources
    (n = 74)                          (n = 0)

                          Records after duplicates removed
                          (n = 68)

Screening

    Records screened                  Records excluded
    (n = 68)                          (n = 42)

Eligibility

    Full-text articles                Full-text articles
    assessed for eligibility          excluded, with reasons
    (n = 26)                          (n = 16):
                                      No process evaluation
                                      data; only outcome
                                      evaluation (n = 8)
                                      Book chapters (n = 2)
                                      Youth outside of age
                                      range (n = 2)
                                      Conference proceeding
                                      (n = 1)
                                      Study sample not
Included                              disadvantaged (n = 3)

    Studies included in
    qualitative synthesis
    (n = 10)
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Results

In total, 74 papers were identified from searching and reference checking of included papers (see Figure 4.1). Following abstract screening, 42 papers were excluded. Full texts were assessed for the remaining 26 papers. Following exclusion of those that did not meet inclusion criteria, 10 studies were included (see Table 4.1).

Table 4.1

Author/s, title, publication date and journal for the 10 studies included within this systematic

review.

Author/s	Title	Date published	Journal
Collins et al	Cyclopedia: sustaining a positive youth development program through community partnership	2013	International Journal of Human Development
Coser et al	Finding a voice: participatory research with street-involved youth in the youth injection prevention project.	2014	Health Promotion Practice
Goldberg	A Program for disadvantaged young people in an Israeli development town – an evaluation	1979	Anthropology and Education Quarterly
Gwadz, et al.	Understanding Organizations Serving Runaway and Homeless Youth: A Multi-setting, Multi-perspective Qualitative Exploration	2019	Child and Adolescent Social Work Journal
Kenyon et al	My Journey: Development and Practice-Based Evidence of a Culturally Attuned Teen Pregnancy Prevention Program for Native Youth	2019	International Journal of Environmental Research and Public Health
Knoll et al	The Toronto Youth Outreach Worker Program for transitional aged youth 12-24: Process Evaluation	2012	Canadian Journal of Community
Kuosmanen et al	A pilot evaluation of the SPARX-R gaming intervention for preventing depression and improving wellbeing among adolescents in alternative education	2017	Journal of Internet Intervention
Newman et al	Process Evaluation Examining the implementation of a sport-based PYD program	2020	Journal of Youth Development
Tingey et al	Entrepreneurship education: A strength-based approach to substance use and suicide prevention for American Indian adolescents	2016	Journal of American Indian and Alaska Native Mental Health Research
Zimmerman	Youth Empowerment Solutions for Peaceful Communities: combining theory and practice in a community-level violence prevention curriculum	2011	Journal of Health Promotion Practice

Overview of Included Studies

Detailed information on each included study is reported in Table 4.2. Designs employed were quantitative (n = 5); qualitative (n = 4); mixed methods (n = 1). Participant details were provided in full for six out of the ten process evaluations. Participants included young people receiving the programme, programme delivery staff, and administrative support staff. Studies represent a range of geographical locations from Ireland, Canada, and the United States, and participants encompass a range of nationalities and ethnicities including American, African American, White, Irish, and Native American. All but one study (Kuosmanen et al., 2017) assessed PYD programmes delivered in face-to-face settings.

Evaluations varied in their number and scope of aims. All studies reported barriers and enablers to programme delivery, and seven stated this as an aim of the evaluation. Two studies explicitly stated evaluating fidelity (or adherence) of delivery style and content. Three studies reported results on dose, five on engagement of participants, and two on gaps in service provision for disadvantaged young people.

Evaluation data were collected using a variety of methods across studies including registers (n = 1), field notes (n = 2), meeting notes (n = 2), face-to-face interviews (n = 4), focus groups (n = 3), observations (n = 2), questionnaires (n = 4), self-reflective session logs (n = 1) and feedback forms (n = 1). Of the evaluations that used questionaries as a data collection method, two reported administering them online, one used paper versions, and one was not specified. Of the studies that used questionnaires, feedback forms, observations, and self-reflection forms, four used tools developed by the research team, one adapted standardised tools, one used a standardised tool, and one did not report adequate details about the tool used.

Table 4.2

Descriptions of the 10 included studies

Author (year)	Participant details				Evaluation details		
	Country conducted Total number; (Gender). Age (years)	Ethnicity	Evaluation aim(s)	Data collection method(s) and tools used.	Results	Enablers	Barriers
Collins et al (2013)	United States of America (New York) Total = 68 (M = 41 F = 27) Age Range = 12-17	Black African American = 98%	Primary: Understand participant engagement. Secondary: understand enablers and barriers to implementation	Session registers, number of miles cycled, and number of photographs posted. Collected continuously over 24 week of programme delivery.	Drop in mileage per rider from season 1 to season 2 – 41.3 miles down to 17.4 0% females in 2010; 54% females in 2011 (compared to 32% female composition of club) Number of reflective writing posts (average 2.6 posts in 2010, dropped to 0.5 in 2011) • Drop in mileage over the two seasons from 41.3 to 17.4 miles/rider. Many of the 50 riders only attended one or two sessions.	Funding from community partners and low running costs after initial set up. Community support: volunteers, donations of equipment and community club have access to existing population of at-risk youth. Cyclopedia Junior programme as feeder programme with 30 additional children Awards party (free dinner) & personalised	Programme start-up costs and costs/rider Lack of parental buy in Older riders dislike riding with younger riders Unpredictable participant attendance Lack of appeal for completing post ride written reflections, length of the rides, combined with unpredictable ratios of co-leaders to rider's little time to promote reflective writing
Coser et al (2014)	Canada (Vancouver) Total = 6	European = 3 South Asian = 1	Primary: Understand how youth core researchers were	Face-to-face interviews with youth core	N/A	Team building activities, regular meetings, supportive and caring environment	Demands of personal life e.g., childhood trauma, mental/physical health issues, parenting

	(M = 2, F = 3, Transgender =1) Age Range = 19-24	Aboriginal = 1 African American = 1	personally affected in their involvement in the research team. Secondary: Understand barriers and enablers to implementation	researchers, field notes, minutes from meetings and debriefing sessions. Data collected during programme delivery and post-delivery.		between youth core researchers and academics. Provision of youth counsellor for youth core researchers.	responsibilities and unhealthy relationships (provision to support affected project timeline and budget). Additional workload on academics to encourage and support youth core researchers. Difference in education of youth core researchers – one-to-one learning, slower pace (difficult to maintain engagement of all – unequal power dynamics).
Goldberg (1979)	Israel Total = 3	Israeli = 1 Moroccan = 2	Primary: 1. Create flexible and multipurpose framework seeking the active participation of marginal youths and their gradual involvement with "established" youths. 2. Help marginal youths integrate into the society at the highest possible levels. 3. Achieve the above through maximization of	Field notes, face-to-face interviews, meetings (+ notes) and official documents. Data collected continuously	N/A	Researchers acting as communication channel between different areas of the admin/funding/directorate. Flexible response to local realities in terms of program modification Promotion of local autonomy	Small "pool" of talent to employ from in the area Lack of clarity in the role especially Director of Youthtown led to inconsistent approaches and lack of holistic responsibility Involvement in local politics e.g., political rivalry Poor behaviour from programme participants Logistical challenges e.g., travel, multi-site delivery and available space.

			self-rule in an informal and nonauthoritarian atmosphere. 4. Continuously attempt to contact marginalized youths to include in the Youthtown framework 5. To achieve social integration, within Youthtown, between youths of different social backgrounds.				Lack of knowledge around programme content from delivery staff
Gwadz, et al. (2019)	United States Total = 138 Youth: N = 84 M = 34 F = 50 Age Range = 16-21, M age = 19.3 (SD 1.5). Staff: N = 54	American = 16.7% African American = 45.2% Hispanic/Latino = 23.8% Multi-racial = 14.3%	Primary = Explore characteristics of higher quality organisations for runaway homeless youth and understand gaps/challenges that remain in service provision. Secondary: Factors driving variability in organisation level-characteristics of	Semi-structured interviews with staff and focus group interviews with youth.	N/A	Youth centred philosophy understood by staff and clients Developmentally appropriate relationships between staff and youth that promote autonomy A focus on short- and long-term goals within anticipated setbacks and crises Ongoing internal quality assessments	Lack of funding Maintaining high quality staff Articulating organizational practices Heavy focus on crises management and less attention on the higher order aspects of the YPQA model.

			higher and lower quality settings.				
Kenyon et al. (2019)	United States Total = 45 (M = 22, F = 23) Age Range = 11-14 (M= 13 .2)	Native American	Primary: Fidelity of delivery style, adherence to programme content, engagement. Secondary: Dose delivered	Face-to-face observations and questionnaire (paper based). Collected during programme delivery: 79% of 82 lessons had fidelity and implementation monitoring. Fidelity across all 3 semesters and student data collected during semester 1. Tools developed amongst research team. Likert rating scale (1=poor, 5 = excellent).	Fidelity of delivery style - Ranged from M= 3.94 (SD = 0.85) to M = 4.33 (Sd = 0.63). Dose delivered – M = 95% of the curriculum was implemented; class length ranged from 25 to 60 minutes, with the average length being 52 minutes (SD = 7.4). Engagement - Ranged from M = 3.73 (SD = 0.74) to 3.90 (SD = 0.68) (Ranged from M = 3.73 (SD = 0.74) to 3.90 (SD = 0.68)	Good behaviour Culturally relevant/meaningful and hands-on activities Experience of facilitators: Of the three semesters My Journey was implemented, program fidelity was highest in the second semester (spring of 2016).	Hyperactive and disruptive participant behaviour. Poor time keeping (e.g., inaccurate estimates of how long activities would take). Experience level of facilitator (e.g., lack of content knowledge; Fidelity was lowest the third semester (fall of 2016).
Knoll et al. (2012)	Canada (Toronto) Total: N =58 from 13 neighbourhoods		Primary: To explore youth engagement with the service, and barriers and enablers to implementation.	36 interviews (nine youths, five family members, nine outreach workers, six partner agency	N/A	Warm and friendly, authentic, supportive, good listeners. Knowledge and skills of youth outreach workers.	Involvement with youths ended after the YOW made a referral to a service: they couldn't follow up with the youths. – interferes with authentic and beneficial relationship development.

				representatives, five service systems representatives and two representatives from the Ontario Ministry of Children and Youth services).			Lack of clear communication between YOW program and partner agencies meant it was unclear who YOW were targeting for help and what other YOW were doing. Lack of clarity on relationships with partner agencies.
	Youth: N = 31 Adult: N = 27		Secondary: Identify gaps in service provision.				
				Three youth-led focus groups (22 participants). Interview guides developed by researchers.			
Kuosma nen et al. (2017)	Ireland Outreach centres: N = 21 Youth: N = 146 M = 68 F = 78 Age Range = 15-20 M Age = 17.6	Irish	Primary: 1) To examine the impact of SPARX-R on symptoms of depression and anxiety among a universal alternative education student population. 2) To examine the impact of SPARX-R on	Assessments conducted at baseline and 7-weeks post intervention. Online questionnaires 13-item Short Moods and Feelings questionnaire	N = 66 included in analysis. Dose: 70% did not complete the programme Engagement: 40% practiced little to none of the techniques taught in the program	Computer based gaming approach helped overcome ill-literacy	High level and variety of need support Poor literacy skills prevented completion of many self-report questionnaires used to evaluate programme outcomes

				Generalised Anxiety Disorder Rating Scale (GAD-7)			
			psychological wellbeing, coping and emotion regulation among a universal alternative education student population.				
				The Warwick-Edinburgh Mental Wellbeing Scale			
			3) To explore user satisfaction and acceptability.				
			4) To explore the relationship between program engagement and outcomes.	15-item Coping Strategy Indicator			
				Emotion Regulation Questionnaire			
				Acceptability measured using adapted from eHealth evaluation studies by the authors.			
Newman et al (2020)	United States of America Total = 26 (M = 11, F = 15) Age Range = 19-27	Caucasian = 57.7%, African American = 19.2%, Not reported = 23.1%	Primary: fidelity of delivery style, adherence to programme content, and dose delivered Secondary: Explore which program	Session logs: 37-item self-reflexive evaluation tool, developed by research team. 5-point Likert scale (0 =none,	1,260 session logs completed. Fidelity of delivery style - (Perceived implementation of program climate (M = 90.15/100, SD = 8.64) Program instruction (M = 84.91/100 SD = 11.88)	Indoor setting – fewer distractions to mitigate and less subject to adverse weather such as high temperatures and rainstorms	Outdoor setting – may be more distracting in nature than indoor sports (less control & consistency).

			characteristics relate to implementation i.e., additional information about context in which Session logs were completed (e.g., type & setting of sport)	4=total). Total score out of 100 (100% = perfect implementation). Collected during programme delivery: 4x daily for 15 days after each 60-minute session (5 program staff were substitutes for staff who were unable to attend an entire day of camp).	Adherence to programme Content - Program instruction (M = 84.91/100 SD = 11.88).		
Tingey et al. (2016)	United States (Alaska)	American Indian	Primary: Describe an entrepreneurship education program for American Indian youth and the study design evaluating its efficacy, currently being conducted within a tribal reservation.	Feedback forms completed after each lesson during pilot implementation. Youth completed informal feedback forms.		Younger youth were more engaged than older youth/young adults. Engaging with younger youth promoted school attendance prior to drop out – meant that more youth were involved than if recruited at the age where most drop-out occurs. Working with the Apache community to co-create the programme to understand	Lesson content was not interactive enough – felt too much like school Extensive transport needs/logistical challenges meant that lessons often started late (lack of time to cover content and build relationships.

				Self-report measures via Audio Computer Assisted Self Interview, baseline, immediately post intervention, 6months, 12 months and 24 months post intervention. Self-report measures adapted to reflect local language, clarity and flow.		community culture and youth needs. Enrolling younger youth enables longer term follow-up and support during critical transition periods.	
Zimmerman et al. (2011)	United States	Most participants African American	Primary: Describe development and evaluation of the YES program. Secondary: Program revision	Continuous process of evaluation. Sessions formally reviewed using form developed by researchers. One session observation conducted weekly using form	Year 1 and Year 2 Youth based ratings - results based on Likert scale (1-5, 1 = the worst, 5 = the best): Community development project: Yr. 1 = 3.90 (SD = 1.18), Yr. 2 = 3.89 (SD = 1.32) Cultural identity: Yr. 1 = 2.67 (SD = 1.02), Yr. 2 = 3.00 (SD = 1.20)	Session content well connected to youth community project development Youth engaged because they liked working to improve their community Sessions that were fun, active, and provided time for discussion. Addressing youth needs reduced fidelity in sticking to programme content but	Student engagement Not enough hands-on activities "more fun and interactive" Not enough discussion time Sessions too school like Not enough explicit link with cultural identity elements Session structure and instructions to complicated and lengthy

	developed by researchers.	Programme planning: Yr. 1 = 3.62 (SD 1.32), Yr. 2 3.11 (SD = 1.29).	increased participant engagement.
	Formal rating of activities and handouts within each session on rating scale (E = poor, A = excellent).		
	Questionnaire and focus groups with youth at the end of the summer program.		
	Curriculum Activities Engagement Questionnaire		

Quality Assessment of Included Studies

Results of the quality assessments are reported in Table 4.3 (see appendix 13-15 for quality assessment forms). Overall, most qualitative papers did not include a description of underlying philosophy (Q6), or how the researcher is located within the research (Q7). Furthermore, no descriptions of methods used to analyse qualitative data were provided, making it difficult to determine which results were driven by data (Q8-Q10). Quantitative studies utilised rating tools or scales to monitor processes within delivery. However, no further description of scale style or measures were provided, and as such were scored as "no" or "unclear" (Q5 -Q7). There were no studies which had "yes" outcomes for all measures.

Table 4.3

The quality assessment results for each study

Author, Year	Methodology	Quality Assessment Tool	Outcome (Reviewer – author GT)
Collins et al., 2013	Quantitative	JBI quality assessment for analytical cross-sectional papers	No = Q1, Q2 Unclear = Q3, Q4, Q5, Q6, Q7, Q8
Coser et al., 2014	Qualitative	JBI quality assessment for qualitative papers	Yes = Q2, Q3, Q4, Q5, Q8, Q10 No = Q1, Q6, Q7, Q9
Goldberg, 1979	Qualitative	JBI quality assessment for qualitative papers	Yes = Q1, Q2, Q3, Q9 No = Q6, Q7 Unclear = Q4, Q5, Q8, Q10
Gwadz et al., 2019	Qualitative	JBI quality assessment for qualitative papers	Yes = Q1, Q2, Q3, Q4, Q5, Q8, Q9, Q10 No = Q6, Q7
Kenyon et al., 2019	Quantitative	JBI quality assessment for analytical cross-sectional papers	N/A = Q1 Yes = Q2, Q3, Q4, Q7, Q8 Unclear = Q5, Q6
Knoll et al., 2012	Qualitative	JBI quality assessment for qualitative papers	Yes = Q2, Q3, Q4, Q5, Q8, Q9, Q10 No = Q1, Q6, Unclear = Q7
Kuosmanen et al., 2017	Quantitative	JBI quality assessment for analytical cross-sectional papers	Yes = Q2, Q4, Q7, Q8 No = Q1 Unclear = Q3, Q5, Q6

Newman et al., 2020	Quantitative	JBI quality assessment for analytical cross-sectional papers	N/A = Q1, Q3 Yes = Q2, Q4, Q5, Q8 No = Q7 Unclear = Q6
Tingey et al., 2016	Quantitative	JBI quality assessment tool for randomised control trial papers	Yes = Q1, Q3, Q7, Q8, Q9, Q10, Q11, Q12, Q13 Unclear = Q2, Q4, Q5, Q6
Zimmerman et al., 2011	Mixed Methods	MMAT (Qualitative, Quantitative descriptive, Mixed Methods)	Yes = Q1.1, Q1.2, Q5.1 No = Q1.5, Q5.5 Unclear = QS1, QS2, Q1.3, Q1.4, Q4.1, Q4.2, Q4.3, Q4.4, Q4.5, Q5.2, Q5.3, Q5.4

Enablers and Barriers to Delivering Programmes with Fidelity

Upon completion of the narrative analysis of results and discussion sections of included studies, themes were developed regarding barriers and enablers to delivering programmes as intended for disadvantaged young people (see Table 4.4). Barriers included sessions feeling too much like school, difficulties related to meeting high level support needs and behaviour management, lack of funding, logistical challenges, variance in quality of staff, and lack of clarity and communication. Enablers included continuous communication and collaboration in the community, meeting young people's needs, and communication within the programme delivery team.

Table 4.4

Themes across barriers and enablers to delivering PYD programmes in complex community settings

	Theme	Description	Examples
Barriers	No more school please!	Across most studies a common barrier discussed was that there was lack of appeal to engage when sessions felt like a school lesson and were not interactive, hands on or perceived as fun.	"Not enough hands-on activities "more fun and interactive" "Lesson content was not interactive enough – felt too much like school" "Lack of appeal for completing post ride written reflections, length of the rides, combined with unpredictable ratios of co-leaders to rider's, little time to promote reflective writing"
	Challenges of meeting high level support needs and behaviour management.	Working to deliver engaging and beneficial PYD programmes was challenging due to the complex nature, variety of, and high level of need support required in each programme for participants. This included mental, physical, social, and educational needs. This was not only a challenge in terms of the programme delivery itself but in terms of working alongside youth to evaluate the programmes. In addition, several papers mentioned disruptive and hyper-active behaviour from participants as influencing programme implementation.	"Poor literacy skills prevented completion of many self-report questionnaires used to evaluate programme outcomes". "Demands of personal life e.g., childhood trauma, mental/physical health issues, parenting responsibilities and unhealthy relationships" "Addressing youth needs reduced fidelity in sticking to programme content but increased participant engagement." "Heavy focus on crises management and less attention on the higher order aspects of the YPQA model."
	Lack of funding	A lack of funding was challenging in terms of starting up community programmes and their sustainability once academic	"Heavy focus on crises management and less attention on the higher order aspects of the YPQA model."

		institutions handing over full responsibility to the community or delivery partner. Furthermore, having insufficient funding to support the more complex needs of the young people meant that the budgets of programmes were affected as well as their ability to deliver all aspects of a programme or development opportunities.	"Programme start-up costs and costs/rider were expensive"
	Logistical challenges	A small number of papers noted challenges around transport needs and multi-site delivery as well as space available in community settings to deliver in person sessions.	"Extensive transport needs/logistical challenges meant that lessons often started late (lack of time to cover content and build relationships)".
	Fluctuation in quality level of staff delivering programmes.	Challenges around staff competence in terms of experience, knowledge of programme content as well as ability of community settings to retain staff who are involved in the programmes or support services. This affected fidelity of delivery of programmes.	"Poor time keeping from staff affected fidelity (e.g., inaccurate estimates of how long activities would take)." "Experience level of facilitator (e.g., lack of content knowledge)."
	Lack of clarity and communication	Several studies reported that poor communication (verbal and written) resulted in challenges in delivering programmes as intended due to lack clarity around individual roles and articulating organisational practices.	"Lack of clarity in the roles, especially the director of YouthTown led to inconsistent approaches and lack of holistic responsibility" "Lack of clear communication between YOW program and partner agencies meant it was unclear who YOW were targeting for help and what other YOW staff were doing".
Enablers	At the heart of the community.	Ensuring continuous collaboration and engagement with the variety of individuals and groups that make up the local community where programmes are delivered was essential to enable programmes to be culturally relevant in terms of their content, delivery style,	"Youth engaged because they liked working to improve their community" "Working with the Apache community to co-create the programme to understand community culture and youth needs."

	location and that programmes had beneficial outcomes for the community. Where there was a lack of parental support or links to the community's culture this created challenges for delivery.	"Community support: volunteers, donations of equipment and community club have access to existing population of at-risk youth." "Flexible response to local realities in terms of program modification"
Understanding and meeting youth needs.	Having a positive, youth centred approach created, culturally relevant, supportive, rewarding programmes that faced less barriers in terms of youth engagement than those perceived as "school like". Furthermore, being able to recruit younger participants enabled earlier intervention and continued support for a longer duration in community-based programmes and increased youth engagement.	"Provision of youth counsellor for youth core researchers" "Participants preferred sessions that were fun, active and provided time for discussion" "Computer based gaming helped overcome ill-literacy". "Holding a free personalised awards party for participants with free meal helped with engagement and provided recognition for this".
	The experience, knowledge, support and communication between university researchers, programme facilitators, and participants was a key ingredient in supporting programme delivery and youth engagement.	"Team building activities, regular meetings, supportive and caring environment between youth core researchers and academics." "Youth centred philosophy understood by staff and clients"

Discussion

This systematic review aimed to synthesise process evaluations of PYD programmes for disadvantaged young people by analysing barriers and facilitators to delivering PYD programmes as designed in complex community settings, evaluating process evaluation methods used, and critically evaluating the quality of reporting. Results show that there is a scarcity of published process evaluations of PYD programmes for disadvantaged young people (10-24 years), and those conducted varied in quality. The 10 studies included in the review used a variety of methods to assess numerous aspects of programme delivery, including barriers and enablers to delivering PYD programmes as intended in complex community settings.

Methods Used to Assess Programme Implementation

The variety of methods used (including observations, questionnaires, and interviews) demonstrates that it is possible to capture implementation data in numerous ways regarding the extent to which programmes are delivered as intended (e.g., reporting staff training, staff demographic information, observation scores, delivery team reflections). Despite this potential, and some studies using a combination of tools within their quantitative or qualitative design, only one study (Zimmerman et al., 2011) used a mixed methods approach. Employing a mixed methodology research design can increase the scope or breadth of a process evaluation and can counter the limitations of qualitative or quantitative work done in isolation (Creswell et al., 2006; Rossman & Wilson, 1985). The very nature of a process evaluation is to understand the reality of mechanisms of programme implementation as compared to how it was designed. It is important to collect a variety of data using methods most suitable for the setting to ensure holistic, in-depth understanding of the extent to which such programmes are delivered with fidelity to design. This understanding can support

applied researchers to develop programmes or interventions that are culturally relevant, meet the needs of participants, and are feasible for delivery in complex settings, as well as services developing their own programmes to provide relevant and effective support (Brunton et al., 2017; Krabbenborg et al., 2013).

Of the five studies using questionnaires and self-reflection forms, all these tools were developed or adapted by the programme researchers (Kenyon et al., 2019; Tingey et al., 2016). This meant that studies scored "no" on the quality assessment tools for using verified tools, suggesting an aspect of low quality in these studies. Using validated tools (e.g., questionnaires, observation, or self-reflection forms) is recognised as the gold standard. Using tools that have not been validated in the population of interest may be subject to measurement error, and any conclusions drawn cannot be made with confidence (Dowrick et al., 2015). Many tools do not offer sufficient flexibility within their assessment criteria. Flexibility is a key ingredient of many programmes delivered for disadvantaged young people in complex community settings (Rangiwhetu et al., 2020). Flexibility and rigour are, however, not incompatible. In many PYD programmes for disadvantaged young people, flexibility and rigour are synonymous with enabling programmes to support young peoples to achieve positive outcomes (Tidmarsh et al., 2021; Wiltshire, 2018). It is vital that tools and methods used are reflective of the complex and dynamic environments in which these programmes are delivered and that quality assessment tools incorporate this moving forward. It is also recommended that researchers seek to provide validity and reliability evidence of the tools developed within these settings. This would increase the number of validated tools that are available for use across complex community settings, supporting the field to move forward in producing and conducting high quality, and high impact research.

Barriers and Enablers to Delivering Programmes as Intended

Barriers to delivering PYD programmes for disadvantaged young people included programmes being too much like school, challenges of meeting the high level of support needed, behaviour management, lack of funding, logistical challenges, fluctuation in experience/quality of staff delivering programmes, and lack of clear communication. Across these barriers there was a common theme regarding staff experience and skill level, where staff struggled to manage challenging and disruptive participant behaviour (Kenyon et al., 2019), had poor time keeping, or a lack of knowledge surrounding programme content (Kenyon et al., 2019; Tingey et al., 2016). These types of barriers were common across all studies which evaluated programmes delivered in person (n = 9).

Within educational settings, the effects of disruptive behaviour are well documented and include limiting time for activity instruction, fostering an environment not conducive to learning, and contributing to negative interactions between peers and facilitators (Pas et al., 2015). Being able to minimise disruptive behaviour from participants within programme delivery settings through behaviour management techniques is essential to support programmes to be delivered with adherence to design. Managing behaviour effectively can reduce the negative impacts of disruptive behaviour by still allowing sufficient time to explain activities and development of positive relationships between participants and programme delivery staff. Development of positive relationships is an important part of creating a sense of connection (one of the components of the Five Cs model of PYD) which in turn promotes thriving in young people (Bowers et al., 2014; Li & Julian, 2012). Ensuring staff receive adequate and effective training on behaviour management techniques as well as programme content is vital and can improve the ability of programme delivery staff to meet the complex needs of participants. In a study of learning support assistants (LSAs) (N=154) in Northern Ireland, 84% of participants reported that behaviour management was a major

challenge in the classroom that negatively impacted students learning and was highlighted as a key area for continued professional development to enable LSAs to meet students' complex needs (McConkey & Abbott, 2011). Understanding staff training in more detail (e.g., content covered, duration of training, type of training delivered, how was understanding tested) through reporting of participant information as well as evaluating staff training itself is essential to addressing barriers around behaviour management, knowledge of programme content, and the ability of delivery staff to meet the complex needs of individuals.

Several studies (Collins et al., 2013; Kenyon et al., 2019; Tingey et al., 2016; Zimmerman et al., 2011) reported that good communication, relationships, and respect for local communities supported the delivery of programmes as intended, as well as increasing engagement from participants and sustainability of the programmes. Community engagement in research has been established as essential to offer a platform for expression and autonomy to disempowered groups through addressing socially-situated problems and to develop, enhance and maintain relationships between researchers, communities, and key stakeholders (Brunton et al., 2017; Johnston & Lane, 2019). Additionally, cultivating these relationships within the local community and engaging in co-design of such programmes has the potential to ensure programmes are more culturally relevant and better suited to participant needs (Bonevski et al., 2014; Cyril et al., 2015). This tailoring is important as sessions that are perceived as meaningful by young people can improve engagement and decrease disruptive behaviour resulting in higher adherence to programme design. Studies including Goldberg (1979), highlighted the importance of the community supporting delivery of such programmes, especially in complex settings, such as where political, social, and economic challenges require navigating by delivery staff and at the higher levels of organisation. Several included studies report that where effective community engagement/support did not

occur, there was a high turnover of staff and lack of understanding of cultural nuances of these complex settings and delivering the programme as intended was not possible.

Implications for Applied Research

It is evident that there are numerous challenges to understand and overcome when delivering PYD programmes to disadvantaged young people in complex community settings. It is not always essential that programmes are delivered with high fidelity, but it is vital to know when this is (or is not) the case so that we can enhance our understanding of delivering effective programmes in these settings and correctly attribute outcomes achieved. This notion is crucial in complex community settings to inform decision making about discontinuing unsuccessful programmes and allocating services' funds to the more successful programmes. Given the large body of PYD work that exists it is surprising that so few process evaluations of programmes have been so far undertaken. More process evaluations are required to increase knowledge and understanding of delivering PYD programmes for disadvantaged young people in complex community settings. Therefore, we recommend the following key considerations based on this systematic review for process evaluations in applied research settings:

1. Conducting more research is important, but it is vital that this research is rigorous in quality. To improve the quality of process evaluations, demographic information (e.g., age, ethnicity, qualification type and subject, sex, gender) of programme and evaluation participants should be provided. This is essential to provide further context for the study results, especially for complex and diverse settings. For example, Quinton et al. (2021) examined baseline characteristics of youth experiencing homelessness who participated in a mental skills training programme. Results show that benefits of the programme were achieved regardless of the demographic diversity

of participants involved. Despite differences at baseline benefits from the programme were similar across participants, enabling some young people to catch up in terms of wellbeing benefits. Further context can enable greater understanding of the results within the complex communities they are situated, developing much needed knowledge of what works for whom.

2. Evaluators should state their ontological and epistemological positioning with regards to the research and how this influences design, data collection, analysis, results, and discussion. This information is important as there are a variety of philosophical standpoints with different assumptions on reality and the creation of knowledge. These assumptions underpin a researcher's approach to the project through informing research design, research questions and data analyses and interpretation. Reporting of researcher positionality also supports more contextual understanding of trustworthiness, credibility, and validity of the research (Bahari, 2010; Tuli, 2010).

3. Process evaluations must be considered from the outset of programme design to enable an evaluation reflective of the entire programme, but also a greater choice in methods. This is important to enable programme delivery data to be collected from the beginning as well as document changes over time (Weiss & Westerhof, 2020; Wenz-Gross & Upshur, 2012). We recommend that future process evaluations in applied settings use a mixed methods design where appropriate, enabling a more comprehensive evaluation of programme implementation. Mixed methodology can counter the limitations of qualitative or quantitative work done in isolation (Creswell et al., 2006; Rossman & Wilson, 1985) supporting development of greater depth and breadth of understanding how to deliver effective, relevant, and sustainable PYD programmes to disadvantaged youth.

4. Based on community engagement being an enabling factor and the benefits of co-design and co-production being well documented (Bonevski et al., 2014; Brunton et al., 2017), we recommend engagement with key stakeholders, local community, and participants in designing and producing programmes and their evaluations. This will enable more suitable programmes to be developed from the outset as well as enabling evaluations that are appropriate and viable within complex community settings.

Limitations

This systematic review is limited by publication bias, as only published, peer-reviewed journal articles were included. Typically, peer-reviewed papers have been through a rigorous process prior to publication and as such the quality of research published should be higher. However, this is not always the case (Larson & Chung, 2012). Additionally, this systematic review aimed to evaluate the quality of published manuscripts so including only peer-reviewed articles was important to meet this research aim and help bridge the research-practice gap. There is the potential that process evaluations conducted on PYD programmes delivered to disadvantaged young people that have not been published in an academic journal have therefore been excluded. Furthermore, this systematic review covers broadly the topic of disadvantaged young people and does not consider the nuances for sub-groups e.g., young people experiencing homelessness or substance misuse. This is due to the small number of process evaluations that have been conducted within the overall population of disadvantaged young people. As numbers of process evaluations increase, it would be beneficial to conduct systematic reviews of studies focusing on these specific sub-groups to allow knowledge development and translation within specific contexts.

Conclusion

This systematic review assessed process evaluations of PYD programmes delivered to disadvantaged young people in complex community settings. It highlights the essential nature of community engagement in designing and evaluating programmes, to support programmes to be delivered as intended and suitable evaluation methods used. Furthermore, results show that despite a variety of methods being used across the 10 included studies, only one study used a mixed methods approach. We recommend that where appropriate, more studies use a mixed methods approach to ensure comprehensive evaluations of programmes can be conducted. This systematic review also identified several areas in which the quality of reporting must be improved (e.g., including more demographic information and author positionality, both ontological and epistemological). Critically, this review also highlighted the importance of flexibility in delivering and evaluating PYD programmes in complex community settings. It is vital this is reflected in verified questionnaires and tools but also in quality assessment tools; using a verified tool does not necessarily mean it is appropriate for community settings where contexts can differ greatly. Considering these enabling factors and implications for applied research provides guidance to services and communities supporting disadvantaged young people to uptake successful and relevant programmes that can be sustained over time.

Study 3: A Platform for Youth Voice in MST4Life™: A Vital Component of Process Evaluations

Introduction

MST supports athletes to achieve their sporting potential and is considered the foundation of many athletes' psychological support (Holland et al., 2017). MST is the learning and implementation of techniques that assist athletes' development of mental skills and characteristics to achieve performance success and well-being (Vealey, 2007). MST has been successfully implemented across a variety of individual and team sports for adult and youth athletes (Dohme et al., 2020; Sharp et al., 2013; Thelwell et al., 2006). In answer to calls for the discipline of sport and exercise psychology to extend its reach beyond enhancing sporting performance (Schinke et al., 2016), there is evidence of its successful application in the military (Fitzwater et al., 2018; Jensen et al., 2020) and surgeons (Anton & Stefanidis, 2016; Deshauer et al., 2019). MST has also been implemented in settings supporting young people experiencing homelessness through the MST4Life™ programme.

MST4Life™ is a co-produced, strengths-based, MST programme adapted for delivery in a UK-based housing service supporting young people aged 16-25 years experiencing homelessness (Cumming et al., 2022). MST4Life™ is underpinned by SDT (Deci & Ryan, 2002) and PYD (Lerner et al., 2009; Lerner et al., 2005; Lerner et al., 2017) as well as aspects of cognitive behavioural therapy and solution-focused approaches (Cumming et al., 2017). MST4Life™ was delivered between 2014-2020 across 21 accommodation sites of the housing service and comprised 10 sessions within local accommodation sites (Phase 1), as well as a 3-night, 4-day outdoor education residential (Phase 2) (Parry et al., 2021). Through the provision of skills building opportunities, challenging and meaningful activities, and the opportunity to develop positive relationships with adults and peers, the programme aims to improve wellbeing, increase engagement in education, employment, and training opportunities, and promote social inclusion for young people experiencing homelessness (Parry et al., 2021). See Cumming et al. (2022) for a more detailed overview of MST4Life™

(e.g., programme activities, TIDieR checklist, and logic model). The present study contributes to the wider evaluation of MST4Life which has implemented a variety of data collection methods (Cooley et al., 2019; Parry et al., 2021; Parry et al., 2022; Quinton et al., 2021; Tidmarsh et al., 2021).

Data show that 121,000 UK-based young people (aged 16-24 years) contacted their local authority for support due to homelessness or risk of homelessness during the 2019-2020 financial year (Centrepoint, 2020a). Since the COVID-19 pandemic, 78% of Council respondents reported an increase in young people experiencing homelessness in their area (Centrepoint, 2020b). However, it is generally assumed that homelessness is something experienced by adults. In a critical multicultural analysis, Kim and Wee (2020) reported that of the 25 children's books on homelessness (published in United States) included in their study, 16 (64%) of them portrayed people experiencing homelessness as adults, of which 81.9% were adult male characters.

Furthermore, negative public stereotypes portray people experiencing homelessness as untrustworthy, more likely to have troubled families and engage in criminal activities, and assume the cause is the individual's fault (Belcher & DeForge, 2012; Weng & Clark, 2018). Socially constructed stereotypes create stigma and can lead to individuals being excluded from society (Rayburn & Guittar, 2013). It has been proposed that one solution to overcoming stigma and therefore supporting positive development for young people experiencing homelessness is to look for solutions that promote empowerment, selfhood and autonomy (Watson & Cuervo, 2017). Strengths-based programmes like MST4Life™ have capacity to support PYD through promoting autonomy, competence, and relatedness (Cooley et al., 2019; Parry et al., 2021; Parry et al., 2022; Quinton et al., 2021; Tidmarsh et al., 2021). Engaging participants in programme evaluation offers further opportunities for empowerment and positive contribution to community development (a key concept of PYD programmes).

Despite this potential, many programmes engage young people in evaluating programme outcomes, but do not include them when evaluating processes of programme implementation.

There can be challenges to engaging young people experiencing homelessness in evaluating programme implementation using traditional data collection methods (e.g., questionnaires and interviews). For example, Schueller et al. (2019) conducted a feasibility trial of a mobile phone-based intervention to improve mental health among young people experiencing homelessness. Despite not finding changes in clinical outcomes, results show that using mobile phones to deliver and evaluate the intervention was feasible to engage young people experiencing homelessness, with 52% of participants ($n = 23$) stating they would recommend the programme to others. Kuosmanen et al. (2017) conducted a gaming-based intervention for young people experiencing depression and anxiety. Despite using a computer-based gaming approach for the intervention as a means to overcome illiteracy, the data collection component consisted of five questionnaires. The authors reported the use of questionnaires acted as a barrier for young people with lower-literacy skills. Similarly, questionnaires were also used in MST4Life™ to obtain pre- and post-programme data which is acknowledged as a limitation of the current MST4Life™ evaluations (Quinton et al., 2021).

Although interviews and focus groups have been successfully implemented in various types of research with children and young people, vulnerable young people can find it difficult to express their views to adults, especially those in positions of authority (Bradbury-Jones et al., 2018; Davies & Morgan, 2005). Furthermore, although some research has successfully conducted interviews and focus groups with a trusted social worker present (Törrönen & Vornanen, 2014) these effects may be limited where the research seeks to evaluate service provision. Having the support worker present may impact the extent to which the participant feels they can be honest about the service, thus increasing the likelihood

of producing socially desirable responses. Ensuring research design and methods are inclusive and adaptable are key factors to support vulnerable young people in complex community settings to exercise their voice through engaging in research and evaluation (Aldridge, 2007; Bradbury-Jones et al., 2018; Tidmarsh et al., 2021). It is essential that programme participants are included in evaluating them to promote meaningful and relevant changes to programme delivery and implementation. The use of innovative and creative methods that avoid the limitations of traditional data collection methods are needed to promote engagement in evaluation that is accessible to young people experiencing homelessness or those at risk.

Process Evaluations

Process evaluations enable researchers and services to understand the mechanisms that impact programme success. Programme underperformance can be attributed to theoretical and/or implementation failure (Bickman, 1987; Liu et al., 2016b). Process evaluations are essential to enable programme outcomes to be attributed to what is actually delivered rather than the programme's design. This is especially important as the implementation of MST programmes moves into new territories where settings are complex (Skivington et al., 2021), such as frontline-service where MST4Life™ was delivered.

Previous process evaluations of MST4Life™ have focussed on the perspective of programme facilitators, frontline staff, and observers (Tidmarsh et al., 2021). Furthermore, this study builds on a realist evaluation exploring MST4Life™ outcomes which included the participants' perspectives (Parry et al., 2021). Positioning the community and participants at the heart of programme evaluation aligns with the community-based approach used in MST4Life™ to ensure its culturally relevant (Bonevski et al., 2014; Cumming et al., 2022; Cyril et al., 2015; Tidmarsh et al., 2021).

Research in public health has also highlighted that where participants are included within research, it offers a platform for expression, autonomy and can empower groups experiencing disempowerment (Brunton et al., 2017; Johnston & Lane, 2019). MST4Life™ is underpinned by both SDT (Deci & Ryan, 2000) and PYD (Lerner et al., 2009; Lerner et al., 2005; Lerner et al., 2017), of which promoting autonomy, expression, and empowerment are key components. As such, the engagement of young people in the evaluation of MST4Life™ offers additional opportunities for positive development beyond the programme. This is especially important as young people experiencing homelessness typically report feelings of disempowerment and negative stereotyping, as well as lack of representation, and limited access to suitable support services (Centrepoint, 2020a; Cronley & Evans, 2017).

Study Aims

Process evaluations are an underused, yet vital component in understanding the effectiveness of programmes in sport and exercise psychology. Despite the benefits of including participants in process evaluation, their involvement is most common when evaluating programme outcomes. The present study aimed to address these gaps, through understanding the engagement and opinions of young people experiencing homelessness taking part in MST4Life™. Through the use of diary rooms across multiple time points, the study evaluated MST4Life™ from the perspective of the young people through: (1) understanding which programme mechanisms supported or hindered engagement in MST4Life™; and (2) exploring key components of successful programme delivery. Through addressing these gaps, this study provides evidence illustrating the importance of process evaluations of MST programmes within, and beyond sport, as well as the importance of using innovative methods to ensure participant engagement in such evaluations is accessible.

Methods

This qualitative study used an instrumental case study design to gain an insider's view of MST4Life™ (Crowe et al., 2011; Stake, 2005). Importantly, the value of using an instrumental case study is not in presenting the typicality of the case, but in gaining a broader appreciation of an issue or phenomenon (Stake, 1995). Thus, this design aligns with a critical realist philosophy whereby each individual's assumed reality is valid (Maxwell, 2012; Wiltshire, 2018). Ethical approval was received from the University's Ethical Review Committee.

Participants

Qualitative data were collected from 44 participants between April 2015 and July 2018 across 14 MST4Life™ programmes. Of those participants who provided demographic data (73%), young people were on average 20.3±2.1 years of age. There were 20 and 13 participants identifying as female or male, respectively; 11 did not report their gender. 12 participants did not report their ethnicity. Of the 32 who did, participants identified as: Asian/British Asian $n=3$, Black/African/Caribbean/Black British $n=5$, Mixed $n=5$, White $n=19$.

Data Collection

Participants took part in semi-structured diary rooms which have been successfully used to evaluate learning experiences (Cooley et al., 2014; Larkin & Jorgensen, 2016; Noyes, 2004) and conduct service evaluations (NHS, 2010) in a variety of settings. A recent systematic review (Tidmarsh et al., 2021) reported that low literacy levels combined with traditional evaluation methods such as surveys acted as barriers to engaging disadvantaged young people in evaluating programmes. Video diary rooms are a unique data collection

method enabling a flexible approach that can overcome barriers such as illiteracy and meet the individual needs of each participant.

Participants chose how to complete a diary room entry from several options (see Table 5.1). The first three options could also be audio-recorded rather than video-recorded. A flexible approach to the diary room was vital to ensure participants could engage in a way that felt comfortable for them to explore and express their opinions of MST4Life™.

Table 5.1:

Description the four ways in which MST4Life™ participants could engage with the diary rooms.

Option number	Option description
One	Complete the diary room with a programme facilitator present to ask questions and manage the recording equipment.
Two	The programme facilitator would set up the recording equipment and then participants would complete the diary room alone; questions were spaced out on individual cards and the participant would select the questions they wanted to answer and read them aloud before answering.
Three	Participants could engage in a diary room entry together and ask each other questions from those set out on the table.
Four	Participants who weren't comfortable to be recorded or preferred to write could respond to their chosen questions by writing down their answers

Diary room entries were invited at three time points during Phase 1 of each 10-week programme: week three (*n=23)*, week eight (*n=7)* and week 10 (*n=15)*. Within each diary room, participants could choose which questions to respond to. Questions were designed to

be semi-structured and open-ended to encourage in-depth responses. Ice breaker questions were also included at all time points, for example "What activities/hobbies do you like to do?" and "If you were a boxer what would your walk on song be and why?".

At time point one, questions explored the reasons for getting involved in the programme, expectations of MST4Life™ and initial thoughts about the programme. At time point two, questions included: "How have you found the recent sessions in this programme? (for example, Birmingham Safari, Cake Sale planning, The Cake Sale, Air Vehicle Challenge) Please explain…", "Do you feel you have used any of these skills or strengths in the sessions or away from the programme?", and "What are your views on the style and approach of the people who delivered this programme?". At time point three, questions explored challenges participants faced during the programme and how they overcame them, whether they had discovered any new strengths, what their thoughts were on the style and approach of the people who delivered this [MST4Life™] programme, and if participants would recommend this programme to other young people in the service.

Data Analysis

Diary rooms were transcribed verbatim. Data were analysed using reflexive thematic analysis (Braun & Clarke, 2019, 2021a) to answer the research question: What key factors support young people's engagement in MST4Life™ from the participant's perspective? Braun and Clarke's (2006) six phases of thematic analysis guided reflexive data analysis (see Table 5.2) in line with a critical realist approach. Analysis focussed on reporting the assumed reality that was evident in the data (Ronkainen & Wiltshire, 2019); that is, the participant's thoughts and experiences during their engagement in MST4Life™. Rigour was established throughout the phases of reviewing, defining and naming themes. Themes and codes were presented to colleagues who acted as critical colleagues and challenged theme names and

example codes, and encouraged reflection on original thoughts to broaden interpretation beyond that of the first author (Smith & McGannon, 2018).

Table 5.2

Explanation of the use of Braun and Clarke's (2006) six stages of thematic analysis to reflexively analyse diary room entries.

Stage of thematic analysis	Actions
Familiarisation	Re-reading of full transcripts and where available watching original recordings of diary rooms.
Generating initial codes	Microsoft Word was used to collate data into one document with the initial codes.
Searching for themes	Codes were highlighted using different colours to show where they might fit into a potential theme.
Reviewing and defining themes	These phases were completed by hand. The highlighted codes were cut out and re-analysed to develop and define themes. The cut out codes were spread out on a table and then posted and organised onto a large whiteboard into the themes. This approach enabled the implementation of reflexive analysis by fostering active engagement with critical appraisal of the codes and themes through being able to see the 'whole picture'. For example, where the first author was unsure of a code, they could pick up the code and move it to another theme and see the extent to which did or not fit within a theme.
Producing the report	Selection of a variety of extracts from the codes that relate back to the research question and final analysis whilst the report was written.

<center>**Results**</center>

Through reflexive thematic analysis (Braun & Clarke, 2019), three higher order themes were identified to answer the research questions (see Table 5.3): "Programme content: A move towards meaningful and engaging activities"; "Key ingredients for a strengths-based delivery style: Fostering young people to feel empowered and promoting positive development"; and "Understanding and meeting the complex needs of programme participants".

Programme Content: A Move Towards Meaningful and Engaging Activities

Participants expressed their feelings about the programme content, including how it was important that the skills developed within MST4Life™ were currently useful and could be used outside of the programme, as well as having activities that were engaging and that didn't feel like a school lesson. These findings were subsequently organised into two lower order themes: 'Developing skills that are useful and helpful that can be transferred to everyday life outside of the programme' and 'Avoiding a "school like" environment'.

Having content that was meaningful and transferrable was something that supported young people to engage in the programme from the outset. For example, one participant stated their reasons for getting involved in MST4Life™: P1 "I think I wanted to get involved in this programme because it's a good opportunity… it can teach me a lot about myself and how I can use skills in everyday life.". Another participant commented on how one of the specific sessions (the Air Vehicle Challenge) enabled them to develop skills around persevering and overcoming challenges:

Table 5.3

Table of themes

Higher order theme	Lower order theme	Example quotes (the included quotes are examples from selected from each theme to represent a variety of participant responses).
Programme content: A move towards meaningful and engaging activities	Developing skills that are useful and helpful that can be transferred to everyday life outside of the programme.	P1 "I think I wanted to get involved in this programme because it's a good opportunity to like it can teach me a lot about myself and how I can use skills in everyday life."

P39 "It's good man, it makes you think, it makes you like… Well, I've learned a few things here as well like, what some kind of words means but year it just makes you think about your future a bit more."

P35 "Yeah and that can be I suppose applied to any situation in life as well, today may have been a bit of fun and you know like, it was a great experience being able to make our vehicles to blow them along with the hair dryer but in fact we do face those kinds of things on a day-to-day basis where you are sometimes going to stumble at the first hurdle; but it's about picking it up and making those modifications to ensure you're gonna achieve what you want to". |

		P3 "I think the programme will give a lot of confidence with a lot of people, (inaudible) peoples to work together… so boost your motivations, your self-esteem level. This programme is good somehow."
	Avoiding a 'school like' environment.	P38 "I think as well more outdoor sessions. I mean I know we haven't had the best weather, but the cake sale and Birmingham Safari were brilliant, we were out interacting with people, and it just made us like… set the tone for Coniston really"
		P5 "I thought it would just be like, sitting in a room all day and just filling out paperwork and that, but it's not… so that's good [laughs]."
		P29 "My thoughts are too much writing, but obviously we are only in week 3 so I can't really put you's down for that"
		P8 "I'm really enjoying the programme, like it's fun, you know, it's not just a standard sit down class doing work and that, everyone's really interactive with each other."
key ingredients for a strengths based delivery style: fostering	Keeping sessions fun and low stakes.	P12 "I think the style and approach of the people that delivered the programme was very, very great, energetic, and it felt like I could talk to them about anything."
		P13 "You know, it wasn't too formal, it was nice you could come here, you can have a laugh, it wasn't intimidating. It was good, it was fun, and I think it was really good."

young people to feel empowered and promoting positive development.		P42 "So far it's fun and challenging in the same respect. To be able to interact with fellow young people in learning new ideas/thoughts."
		P35 "… Like pressure, we weren't under any pressure we were just, you know, we were there having fun as young people, selling cakes and making people's days a bit brighter."
	Challenging the stigma of homelessness: Promoting participants to feel a sense of belonging and worthiness.	P35 "We need more people like you [MST4Life™ facilitators] that care about people like us, because it makes us believe and care about ourselves if that makes sense?"
		P13 "Don't be scared, just go for it like, you know, people here aren't going to judge you, its not that sort of environment."
		P38 "It really goes to show what we can achieve when you have faith in yourself, like, and that faith stems from the fact these people [the facilitators] believe in us, young homeless people who live in a hostel who often feel like we've been forgotten about by the rest of society …. For them to come and show how passionate they are about us as young people, it only reinforces the fact that we do matter and its brilliant."
		P35 "I think MST4Life has kind of broken through that stigma of like 'ah it's a bit embarrassing isn't it like, we live in a hostel, we are homeless, whatever' Why? Why is it embarrassing? When we can do something like, to help the next set of people that will be in our position."

P31 "And I think, like a session like this has brought a lot of people together so I think that's really good."

Friendly, approachable, and relatable service staff and facilitators.

P5 "Because my key worker mentioned it to me, she asked if I wanted to go on it, and I was like yeah, I'll give it a go."

P35 "… but the fact that you guys really did think about everything, put everything in place to ensure that we were all there together and we're a team, we're all working together, it just made us feel comfortable and for me any issues I have faced I've had the support workers and the MST workers to overcome them."

P14 "The people are nice; they actually help you understand and they're good to get along with"

P44 "I think the team has been really great. …. I think the brunt of the experience has come from you guys, and not the exercises. And I think you could lean into that kind of".

P20? "But I think it's a very good thing to have a mixed team in terms of age because you have people who are very experienced, who have had enough time to figure out exactly what their aim, exactly what the job is, and then you have people who are in the process of figuring out the job. 'Knowledgeable' and a 'fresh take' on one team is very good. As I was saying earlier, it's a bit

of a dream team right now, just the diversity of ages, genders, in everything. You're covering every base. Someone can relate to each of you."

P15 "… in the past not really being able to relate to, not authority figures, but to people who are working, who help, like teachers, staff in different places you know, usually there's no rapport, no connection or there's nothing. But so far I've had a really interesting conversation with each member of the team… Each person has a really specific thing you can go to them for, I feel like at least. And that's super cool."

P7 "Errm, I really like the programme. X and X are really really really cool people, and I can't wait for the next session."

Understanding and meeting the complex needs of programme participants	P25 "Change of time"
	P13 "Just make the hours a bit more suitable for everyone, so like sixth form and things like that."
	P27 "Just finding the time really, even though I'm unemployed you know what I mean, I have a busy schedule like, trying to help a lot of people and trying to make money on the side, and trying to do all sorts of things you know what I mean. Trying to find a new jobs and what not."
	P4 "I really, really, like the programme so far. I think they could improve slightly… by making it more understandable, because you can't always understand it. But other than that, it's cool."

P15 "That's mostly my anxiety or other plans, because I can't really leave my flat a lot these days."

P29 "At the moment I am going through some problems, my daughters taken from me at the moment."

P28 "My mum has to deal with certain things in her life, so I have to go make sure she's alright."

P39 "lost my yard, lost my flat"

P28 "Probably just because of my self-esteem and confidence at the moment, it's been knocked…"

P35 "With someone who has anxiety, like, a lot of the time having to go over to like, for example the campus of the University, had I had to do that alone would have been a very different story and I would have been anxious, and it probably would have been to the point where I probably would have not come because of my anxiety."

P40 "everyone's good and you get your bus fare paid for"

P13 "I think there are a lot of things I can apply to day-to-day life, you know, because it's not just specific situations that those skills are necessary, you can apply them to whatever situation and, you know, they're useful. But without the programme I obviously wouldn't have known, you know, put into practice and learn how to use these new skills."

In addition to developing transferrable skills, participants discussed the importance of activities that required minimal writing, were hands-on and in environments that didn't feel like a classroom. One participant described how they liked the sessions that were conducted outside of the accommodation sites, and that they would like more outdoor sessions in general: P38 "I think as well more outdoor sessions. I mean I know we haven't had the best weather, but the Cake Sale and Birmingham Safari were brilliant, we were out interacting with people…".

Participants had varied opinions for the writing elements of the programme. For example, one participant thought that there wasn't much writing: P5 "I thought it would just be like, sitting in a room all day and just filling out paperwork and that, but it's not… so that's good [laughs]". Whilst another participant felt there was too much writing when completing the diary room at the first time point: P29 "My thoughts are too much writing, but obviously we are only in week three so I can't really put [you] down for that".

Key Ingredients for a Strengths-based Delivery Style: Fostering Young People to Feel Empowered and Promoting Positive Development

Within this theme three lower order themes were identified: 'Keeping sessions fun and low stakes'; 'Challenging the stigma of homelessness: promoting participants to feel a sense of belonging and worthiness'; and 'Friendly, approachable, and relatable facilitators'.

Participants discussed how the informal approach of the programme meant it was fun and enjoyable while also being motivating. For example, one participant discussed how they

could "have a laugh" when they came to the MST4Life™ sessions. Another participant discussed this from a different perspective in terms of motivation: P40 "Lively [the delivery style], like everything's on point… on point like, everything's motivated like… it gets done and like everyone's laid back but also they're doing work and having fun."

Numerous participants also discussed how there was no judgement (from peers or facilitators) when they were engaging in MST4Life™. For example: P34 "I think the good thing was about, it was because we was all from the same group, there were no differences in our like, there was no judgement at all, nobody to judge us because we were all, all of us were in the same… programme." Furthermore, participants also described how they felt the programme and its facilitators were breaking down the stigma associated with experiencing homelessness. One participant stated:

P38 "It really goes to show what we can achieve when you have faith in yourself, like, and that faith stems from the fact these people [the facilitators] believe in us, young homeless people who live in a hostel who often feel like we've been forgotten about by the rest of society …. For them to come and show how passionate they are about us as young people, it only reinforces the fact that we do matter and it's brilliant."

Finally, within this theme, participants described how facilitators and frontline staff being approachable and friendly were key components that fostered their engagement in the programme. For example, several participants described how their support workers had encouraged them to get involved in MST4Life™. Additionally, participants described MST4Life™ facilitators as role models and people who support them, and as people they can engage with. For example, participant 14 stated, "The people are nice, they actually help you understand and they're good to get along with". Whilst another participant discussed this in relation to their previous experience with adults they viewed as authority figures:

P15 "… in the past not really being able to relate to, not authority figures, but to people who are working, who help, like teachers, staff in different places you know, usually there's no rapport, no connection or there's nothing. But so far, I've had a really interesting conversation with each member of the team… Each person has a really specific thing you can go to them for, I feel like at least. And that's super cool."

Understanding and Meeting the Complex Needs of Programme Participants

This theme details the complex needs of young people who engage in MST4Life™ from their own perspective. Participants described how anxiety made it difficult for them to leave their flat, having to deal with regaining custody of their children, financial insecurity and supporting members of their family also experiencing trauma. For example, participant 29 stated: "At the moment I am going through some problems, my daughter's taken from me at the moment."

Participants also highlight how the programme facilitators met their needs, and also the challenges of meeting young people's needs when they conflict with one another. For example, one participant described how agreeing to travel to/from activities as a group enabled them to engage despite experiencing anxiety:

P35 "With someone who has anxiety, like, a lot of the time having to go over to like, for example the campus of the University, had I had to do that alone it would have been a very different story and I would have been anxious, and it probably would have been to the point where I probably would have not come because of my anxiety."

One thing participants found challenging was the times of day that the MST4Life™ sessions were delivered. These were suitable for some participants but not everyone. Participant 13 stated: "Just make the hours a bit more suitable for everyone, so like sixth form and things like that." Young people (and staff) were consulted prior to the programme start

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about the ideal time and day for sessions; times were therefore decided based on the needs of the young people who attended the pre-programme meeting; however, planning MST4Life™ around young people's other commitments was sometimes difficult due to individual needs differing.

Discussion

This study implemented novel methods (e.g., diary rooms) to examine the implementation of MST4Life™ from the perspective of young people on the programme. Process evaluations are rare in sport psychology and this study demonstrates the value of conducting process evaluations when creating sport psychology-based programmes for marginalised young people. Participants who engaged in diary rooms highlighted aspects of programme delivery that were consistent with the intended, strengths-based, and psychologically informed delivery style (underpinned by SDT and PYD). They also made suggestions for programme improvement, which were focused more on specific content or practical challenges rather than the delivery style.

Results show that the environment purposefully created by facilitators and frontline staff through implementing the CARES model (Cumming et al., 2022) helped young people experiencing homelessness to feel supported, valued, and fostered continued engagement within MST4Life™. An evaluation of the implementation of MST4Life™ (Tidmarsh et al., 2021) reported the programme to be delivered with high fidelity to the intended style, however this evaluation did not consider the perspective of programme participants. The current study, however, provides further evidence (from the young people's perspective) that facilitators delivering MST4Life™ implemented the programme with fidelity to the intended strengths-based delivery style, which aims to support participant needs for autonomy, competence, and relatedness (Deci, 2000; Parry et al., 2022; Ryan & Deci, 2000). This

finding corroborates evidence from an evaluation of Dutch youth housing services which suggested strengths-based practices can nurture young people's basic psychological needs (Krabbenborg et al., 2017).

Highly stressful events or life traumas, such as abuse, neglect, and family breakdown (Centrepoint, 2020c) are reasons a young person may be experiencing homelessness. Homelessness is also a traumatic life experience. By intentionally creating an environment that supports young people's basic psychological needs through a strengths-based delivery style, it is possible for psychological growth to be promoted (Linley & Joseph, 2004; Parry et al., 2022; Watson & Cuervo, 2017) following trauma, often referred to as post-traumatic growth (Tedeschi & Calhoun, 2004). In the context of MST4Life™ the implementation of a strengths-based, psychologically informed, MST programme which supported young people to develop psychological skills, techniques, and characteristics. Results suggest that the intentional strengths-based delivery style along with meaningful and transferrable skills were key ingredients for fostering young people's engagement. Similar results have been found in other evaluations of MST4Life™ (Cooley et al., 2019; Parry et al., 2021) as well as in a cluster randomised control trial testing the effectiveness of Houvast, a strengths-based intervention for young adults experiencing homelessness in the Netherlands (Krabbenborg, Boersma, van der Veld, van Hulst, et al., 2017).

Participants described facilitators as 'friendly', 'approachable', 'supportive', and effective at breaking down social stigma associated with homelessness. Young people experiencing homelessness and the associated traumas often have negative past experiences leading to poor relationships with both adults and peers (Bradbury-Jones et al., 2018; Davies & Morgan, 2005; Gwadz et al., 2018). Research within education has shown that meeting students' relatedness needs in terms of the student-teacher relationship was linked to outcomes including self-efficacy, engagement, and retention (Beachboard et al., 2011;

Inkelas et al., 2007; McMahon & Hanrahan, 2020). A study investigating the association between autonomy, competence, and relatedness, and quality of life of young Dutch people experiencing homelessness found that social support mediated competence and relatedness (Krabbenborg, Boersma, van der Veld, Vollebergh, et al., 2017). Similarly, the results from the current study highlighting the positive and supportive nature of the relationship between programme facilitators and young people, and the young people and their support workers, provide evidence that meeting young people's relatedness needs in the context of youth homelessness fostered their engagement in MST4Life™. In line with the ethos of PYD, social support (or positive relationships) from those in key positions (e.g., support workers and housing service staff) can contribute to successful pathways out of homelessness, into stable housing and reducing engagement in risky behaviours (Hwang et al., 2009; Johnstone et al., 2016; Krabbenborg, Boersma, van der Veld, van Hulst, et al., 2017; Krabbenborg, Boersma, van der Veld, Vollebergh, et al., 2017; Padgett et al., 2008). It is evident that supporting young people to exit homelessness extends beyond crisis management and somewhere to live, and that a variety of wider support is needed for positive long-term outcomes.

In a recent report by HomelessLink (2021), the highest support need reported by 71% of respondents was a lack of independent living skills (e.g., planning, communicating with others, teamwork, and support seeking). Results from the present study show that the opportunity to develop life skills through the programme was a key driver for participants deciding to take part in MST4Life™. Results also suggest that participants felt a sense of mastery and competence from the tasks they engaged in. Importantly, participants also discussed how they were then able to use the skills they developed from the programme in everyday life. The opportunities to develop skills within tasks and through experiential learning experiences are essential for young people experiencing homelessness to support

them in transitions to independent living (Bani-Fatemi et al., 2020; HomelessLink, 2021;

Parry et al., 2021).

Strengths and Limitations

It is important to consider the results of this study within the context of its strengths

and limitations. One strength is the implementation of diary rooms and choice on how to

engage with them. Offering choice in this way is a continuation of the implementation of the

strengths-based programme and supports positive development through providing accessible

ways for young people to express their opinions and contributing to their community

(through evaluating the programme; Lerner et al., 2005) and promoting a sense of autonomy

(Deci and Ryan, 2002). Another strength of the study was the implementation of diary rooms

across multiple delivery sites and at multiple time points across the 10-week programme.

This supported data collection that reflected the entire programme and therefore enhanced the

understanding of programme mechanisms (Kitzman-Ulrich et al., 2009; Tidmarsh et al.,

2021).

The aim of this study was to conduct an in-depth exploration of the implementation of

MST4Life™ as part of a wider mixed methods evaluation to directly apply to this programme

within St Basils (Cooley et al., 2019; Cumming et al., 2022; Parry et al., 2021; Parry et al.,

2022; Quinton et al., 2021; Tidmarsh et al., 2021). Thus, by design this study was a targeted,

focussed, in-depth exploration of these participants experiences within the MST4Life™

programme. Despite this approach meeting the study aims, it limits the generalisability of the

findings in that they may only apply to young people experiencing homelessness in

Birmingham, engaging with support services at St Basils. These findings may not represent

other young people experiencing or at-risk of homelessness across the UK or beyond.

However, we do know that strengths-based programs aiming to promote basic psychological

needs and health and well-being through psychoeducational workshops have also been found to elicit positive outcomes in other countries (Bani-Fatemi et al., 2020; Krabbenborg, Boersma, van der Veld, van Hulst, et al., 2017; Krabbenborg, Boersma, van der Veld, Vollebergh, et al., 2017). Findings may apply to young people at-risk of or experiencing homelessness in similar communities and engaging with support services similar to St Basils; however future research is required to address this limitation. Findings also provide insights into using innovative data collection methods to evaluate a variety of sport psychology interventions.

A further limitation of this study is that all questions were asked in English. A recent report from (HomelessLink, 2021) found that 43% of councils and support services reported seeing an increase in rough sleeping amongst non UK-nationals, with 30% of respondents offering specific support for non UK-nationals. This is important to consider within the limitations of this study and the direction of future research within all people experiencing homelessness because English may not be their first language. Having data collection methods only available in English may therefore create a further barrier to engaging young people experiencing homelessness in research and propose that future research overcome this limitation by offering where needed data collection tools or questions in other languages.

Finally, although the flexible approach to implementing diary rooms in this study was essential to foster engagement, there are some limitations to consider. For example, as participants could select which questions to answer they could choose not to answer questions which might provide important insights when evaluating the programme. Additionally, the researcher may not be able to probe responses or provide support for any misinterpretations (e.g., rewording or reframing a question to support the participant's understanding) where the participant chooses to engage in the diary room alone. Although this particular study uses only diary room entries, the wider evaluation of MST4Life™ has

benefited from implementing other data collection methods alongside diary rooms (e.g., focus groups, interviews, and questionnaires). Despite these limitations, this study provides a unique and valuable insight into delivering and evaluating a sport psychology intervention in a complex community setting.

Recommendations

This novel study highlights the value in 'thinking outside the box' of traditional data collection methods through the use of diary rooms to overcome illiteracy and challenges around power dynamics. The diary room approach is also flexible, offering choice (and therefore supporting participants to feel a sense of autonomy (Deci & Ryan, 2000)) which enabled participants to engage in a way that was comfortable and accessible for them. Research has often described marginalised participants as hard to reach, but it is important to consider that it is perhaps researchers who are not always accessible. We therefore recommend the implementation of a flexible approach to data collection that gives participants autonomy over how they engage with the data collection in a way that is needs supportive and fosters a sense of ownership meets participants' needs and provides a platform where they feel able to express their opinions. Diary rooms are therefore suitable for capturing reflection-in-action (Yanow & Tsoukas, 2009)during interventions that take place in the field, including MST with athletes.

Except for MST4Life™, there are few studies within the field of youth homelessness that have included participants in evaluating the process of programme delivery (Parry et al., 2021). However, one study exploring effectiveness of services from the perspective of young people experiencing homelessness in the USA reported that young people wanted to be more involved in programme governance (Gwadz et al., 2018). There are also few process evaluations within sport and exercise psychology, despite interventions approaches being

core to the discipline. The current evaluation of an MST programme provides insight into accessible research methods that researchers and sport and exercise psychologists can potentially use to better understand their participants' experiences of an intervention. Conducting process evaluations that include intervention recipients in sport and exercise psychology is essential to understanding the relationship between intervention effectiveness and implementation (Liu et al., 2016b). We recommend that future sport and exercise psychology programmes include research components that evaluate the implementation of a programme from the outset (i.e., programme design), and that recipients of the programme be considered key stakeholders in programme evaluations.

Beyond the broader recommendations highlighted above for the field of sport and exercise psychology in general, there are also recommendations for researchers and frontline services working with at-risk youth. As the progression from deficit-based models to strengths-based models of support in services for individuals experiencing homelessness continues, this study provides further evidence of the key ingredients that researchers and services need to consider when designing and implementing programmes and services. It is therefore recommended that those designing programmes to support young people experiencing homelessness need to consider implementing a strengths-based delivery style (that aims to support autonomy, competence, and relatedness needs) combined with meaningful and transferrable content.

Conclusion

In sum, through implementing an innovative and flexible data collection, we have supported young people experiencing homelessness to engage in evaluating MST4Life™ and directly contribute to the understanding of processes that support their engagement in the programme. Results indicate that implementing a strengths-based delivery style in addition to

content that is meaningful and provides opportunities to develop transferrable skills, are key

components that future research and service providers should consider when designing

programmes for young people experiencing homelessness. Finally, this study also provides

evidence of how non-traditional research methods can be used to make engaging in research

more accessible and provide marginalised groups with a platform to express their opinions.

Study four: Exploring processes and outcomes of an online training day for frontline staff delivering a mental skills curriculum in a new frontline service: A feasibility study of a protocol

COVID-19 Disruption

Please note as highlighted in the COVID-19 disruption statement submitted alongside this thesis, the study protocol described in this chapter was intended to be carried out in full prior to the COVID-19 pandemic. Ethical approval was received from the University of Birmingham (ERN_20-0073). The full scale study was to include University of Birmingham researchers who deliver the MST4Life™ programme and training to frontline staff (n=2-4). Frontline staff from St Basils charity who receive champions and/or co-delivery training would also have been participants in the study (n=80-100). Due to the pandemic this study could not be implemented as planned. Following easing of lockdown restrictions in August 2021, an online training day was delivered by one member of university staff to frontline staff (n=9) who would be working in a new provision (Transition Hub) aimed at supporting young people with the most complex needs.

The original study included the plan to conduct individual interviews with frontline service staff; for the feasibility study, it was not possible to conduct these interviews due to time constraints of staff related to setting up the Transition Hub during the COVID-19 pandemic. The original data analysis plan was more complex and consistent with the larger sample size (e.g., t-tests and thematic analysis). However, the analyses for the feasibility study is descriptive in nature due to the small sample size of the feasibility study. To conclude, in response to the variety of changes to the original study design due to COVID-19, this thesis chapter reports the results from a feasibility study of a protocol designed to explore processes and outcomes of training frontline staff to deliver a mental skills curriculum.

Introduction

As highlighted within the systematic review and fidelity chapters of this thesis (Chapters 3 and 5, respectively), most evaluation research focuses on the outcomes of a programme or intervention (i.e., whether or not it was successful). However, there is increasing recognition of the importance of process evaluations to examine the mechanisms related to un/successful programme outcomes. Understanding the extent to which programmes are delivered as designed is vital to correctly attributing outcomes to what is actually delivered rather than what was intended. Developing a nuanced and in-depth understanding of how to effectively deliver programmes in complex community settings is essential for enabling engagement in appropriate, successful, and sustainable programmes, and inform the training of staff to deliver such programmes.

MST4Life™ is a collaborative community-based research project between the University of Birmingham and St Basils Charity, focused on supporting youth experiencing homelessness (Cumming et al., 2022). As the number and frequency of community-based research studies involving universities and community organisations increase, it is important that successful programmes can be independently sustained over time, and not only within the period of time of university involvement (Savan & Sider, 2003). As reported in Chapter 3, the sustainability model used in MST4Life™ was planned from the outset. MST4Life™ was initially delivered by experienced university staff with psychology training to postgraduate level. Over time, frontline service staff were trained for a shared delivery approach, and eventually the programme was delivered entirely by this staff. In the context of the present thesis, sustainability refers to the extent to which programme continuity is planned from the beginning, the extent to which the programme becomes embedded within the organisation, and the extent to which the programme can continue supporting positive outcomes in recipients over time (Shediac-Rizkallah & Bone, 1998; Whitley et al., 2015).

There are many challenges to creating sustainable programmes in complex community settings, including those highlighted in the systemic review (Chapter 4) such as building strong relationships from the outset with local communities and key stakeholders, and expertise of delivery staff. In a realist evaluation of community-based participatory research in public health settings, Jagosh et al. (2015) reported that building good relationships with community partners based upon trust and a commitment to co-governance are key to supporting successful community-based research partnerships. Similarly, Whitley et al. (2015) describe a number of challenges to delivering a sustainable sport, and physical activity, PYD programme for underserved Canadian youth including: inability to build strong relationships with community partners, issues with knowledge translation, and securing funding. The feasibility study of a protocol presented in this chapter focuses on addressing the challenges around delivery staff expertise and knowledge translation, through exploring the training provided to frontline service staff at St Basils.

Training staff to deliver programmes is an integral part of many programme designs. Training can be delivered in numerous active and passive forms, e.g., self-directed, workshops, online, and face-to-face (Bluestone et al., 2013). Training can be delivered internally to existing organisation staff or by external deliverers. There is a paucity of research within process evaluations exploring the fidelity of training delivered; this is especially the case within complex community programmes such as MST4Life™. Within health, education and PYD studies, the type and duration of staff training delivered have been briefly reported, e.g., staff received 3 days training in person on programme content (Teri et al., 2010; Tingey et al., 2016; Weiss & Westerhof, 2020). A small number of health-related studies reported the content of training delivered to staff as part of evaluating outcomes of a programme or training delivered (Bosco et al., 2019; McNicholas et al., 2019; Mueser et al., 2019), but did not evaluate the process of delivering training.

Following recommendations from the systematic review in Chapter 4 (Tidmarsh et al., 2021), this feasibility study of a protocol aimed to address the lack of process evaluations on staff training by conducting fidelity assessments of the training provided to St Basils' staff, which forms part of the long-term sustainability plan for the MST4Life™ programme. A feasibility study is designed to answer the overarching research question 'can it work' and through assessing aspects such as acceptability of an intervention and study procedures as well as preliminary evaluation of participant responses (Orsmond & Cohn, 2015). A feasibility study was appropriate for this stage of research whereby a newly designed training day for frontline staff had been developed. This feasibility study of a protocol builds on previous ethics applications and other evaluation studies of MST4Life™ (Cooley et al., 2019; Parry et al., 2021; Quinton et al., 2021; Tidmarsh et al., 2021). It specifically examined the implementation of MST training delivered to frontline-service staff of St Basils' newest service, the Transition Hub, and includes a fidelity assessment using observations of training, reflection forms and questionnaires to answer the following research questions:

Research questions:

1. To what extent is staff training delivered with fidelity?
2. What are the perceptions of frontline staff related to the effectiveness of the mental skills training delivery?
3. To what extent is it feasible to implement an evaluation of staff training within a frontline housing service supporting young people experiencing homelessness?

Research Design

A mixed methods research design was used to address the above research questions and was underpinned by a critical realist philosophy. The context of this study, in line with a

critical realist perspective, is that each individual engaging with the training and delivery will experience the reality of that training differently, despite all individuals receiving the same training.

Participants

There were three participant groups in this study (training observer, training facilitator, training recipients; see appendix 16-23 for consent and information forms and demographic questionnaires) who completed various forms/online questionnaires prior, to during and following a one day online MST training course (see Figure 6.1). The training day was comprised of multiple individual sessions, of which two sessions were observed and self-reflection forms completed (further details in 'The training' section). Any decision to not take part in the research had no impact on job role; these individuals were still able to deliver and

Figure 6.1

Schematic demonstrating each participant group and their role within the research
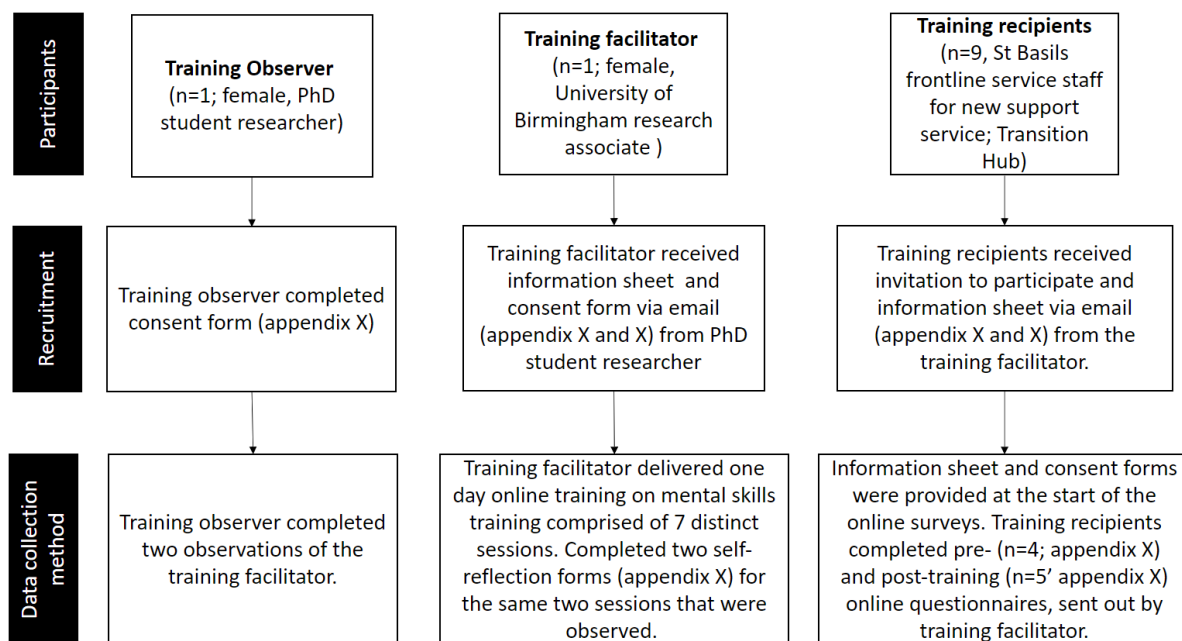
receive training without taking part in this research (44.4%).

Ethical considerations

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Each participant's data were pseudo-anonymised with a number (date of birth –
ddmmyy- and number of siblings e.g., 05108301). An information key was kept in a separate
password protected document allowing the researcher to identify a participant's name and
contact information data if needed e.g., in the event of withdrawal and to send out the synopsis
of results. Data were pseudo-anonymised for use in this chapter and any other publications or
dissemination e.g., T1 for trainer and FL1 for frontline service staff.

The training

The training was delivered using a hybrid approach through Microsoft Teams. The
training facilitator and training observer joined from separate locations online whilst the
training recipients were together at the programme delivery site. Training recipients were
frontline service staff working in the services new Transition Hub (see footnotes for further
details om the Transition Hub[3]), which aimed to provide for young people with the most
complex support needs before transitioning into other services available within St Basils.

An outline of the one-day training course delivered to training recipients is reported in
Table 6.1. Training content is consistent with the content the frontline service staff are expected
to implement when working with young people, including, the CARES model, mental skills
curriculum, and evaluation (Tidmarsh et al., 2021, Cumming et al., 2021, Parry et al., 2021;
Quinton et al., 2021).

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[3] The Transition Hub was a new support service within St Basils commissioned and implemented during 2021.
The Transition Hub implemented a comprehensive, multi-disciplinary approach to provide specialist support
for the young people accessing this service. The pathway through the transition hub included: assessment, a
stabilisation period of around six weeks, intervention delivery 1-6 months and finally a transition period into
other support services within St Basils of approximately 3-6 months. Young people accessing this support
service were those with the most complex needs, often with presenting with co-morbidities such as
alcoholism, drug use, ill-mental health and additional learning needs.

Table 6.1

Outline of training content delivered to frontline service staff

Session number and title	Duration	Content
1.Welcome and Opening	30 minutes	Icebreakers and introducing ourselves. Setting ground rules. Sharing best hopes and wishes for the day.
2. Delivery style	45 minutes	Brief introduction to key theories behind MST delivery and focussing the session on the CARES model. Overview of the practicalities of how MST is delivered. Mental Skills Training Delivery Guide used as a training manual for reference. Staff provided with a workbook to work through during the session. Categorise behaviours activity: brainstorming and group discussion around 'What are pro- and anti- MST behaviours?'. Quality assurance: outlining the importance of the self-reflection tool for staff to complete after delivering a session.
3. Mental skills curriculum (part 1)	1hr 15minutes	Overview of each evidence-based interactive tool. Equipping staff with improved understanding of how to use these resources to support young people. Brainstorming activities and interactive discussion: how to keep track of activities and evidence them; and how to make activities fun and engaging. Breakout activity: have a go at completing the interactive Coping tool/categorising

		coping skills into different boxes using post-it notes. Outlining the importance of gathering young people's signatures on paperwork.
4. Mental skills curriculum (part 2)	1hr 30 minutes	Begin with a short energiser activity. Continue session as outlined above (session 3). Breakout activity: have a go at completing the interactive Strengths Profile Tool.
5. Evaluation	1hour	Why is evaluation important? What this looks like in practice. Commissioning & Evaluation Toolkit used as a training manual. Process of going through the questionnaire pack with young people. Workbook activity: addressing FAQ's from young people. Identifying barriers for young people, e.g., use of certain terminology. Being prepared for answering questions, e.g., 'What will happen with my data?'. Breakout discussion: how to facilitate trust and rapport with young people. Top Tips for engaging young people in the data collection process.
6. Reflection and closing the day	15 minutes	Applying learning: what's one thing from today that you're going to apply going forward? Staff can share their answers via Teams, to be followed-up. Return to best hopes and wishes for the session. Identifying barriers and how to overcome these, i.e., areas for further support. Reminder and thanks in advance to staff to complete the post-training evaluation form.

Procedures

Data Collection

1. **Pre- and Post-training questionnaires** were sent out via email and included demographic information, as well as responses to Likert-type scale and open-ended questions (see appendix 27 and 28).

2. **Training facilitator self-reflection** forms (see appendix 26) were based on the observation forms. The forms provided an opportunity for facilitators to reflect on their own delivery of training, encompassing both delivery style and content covered. Additionally, the self-reflection forms allowed for comparisons to be made around perceived and actual delivery of training. This also follows the same format used in chapter 3 for the observation of MST4Life™ delivery (Tidmarsh et al., 2021).

3. **Observations** conducted by the training observer monitored adherence levels relating to content and delivery style of the training facilitator (see appendix 25). 50% of the training sessions were observed. The training observer provided feedback based to the training facilitator who once they had completed their reflection form, this approach is consistent with other evaluation programmes (Hardeman et al., 2008; Schlosser, 2002; Tidmarsh et al., 2021).

Data analysis

All quantitative data were analysed using descriptive statistics (mean ± standard deviation, range). Fidelity scores were calculated for delivery style by converting the total score out of 33 into a percentage. To ensure consistency throughout evaluation of this community-based programme, thresholds for fidelity level achieved were the same as those used in Chapter 3 (Tidmarsh et al., 2021) of the thesis. These were set a-priori based on

discussion amongst the research team and the housing service and were defined as follows: low = ≤ 59%, medium = 60-79%, high = ≥ 80%.

Qualitative data were analysed using directed content analysis, whereby existing theory and research was used to identify key concepts to be explored (Hsieh & Shannon, 2005; Potter & Levine-Donnerstein, 1999), therefore informing the questions included in the pre- and post-training questionnaires, as well as the open-ended questions included in the observation and self-reflection forms. The pre-planned directives for analysis were informed by the study aims and questions included across all data collection tools. Initial codes were therefore identified as: factors which acted as enablers to delivering the training sessions and factors which acted as barriers. The same codes were applied for understanding the implementation of observations of sessions included in an online training day. Despite the potential for an informed bias when using directed content analysis (Hsieh & Shannon, 2005) this approach was most suitable to understanding the feasibility of implementing and evaluating an online training day in a complex community setting.

Results

Observation and self-reflection of training delivery

Results indicate that the training was delivered with medium to high fidelity to the intended style (see Table 6.2). Observation scores indicate that the programme was delivered with medium levels of fidelity whilst the facilitator self-reflection scores report high levels of fidelity to the intended delivery style.

Within the self-reflection forms, the training facilitator reported that they did not feel impacted by the presence of the observer, and that with the camera being turned off in Teams that observations did not feel intrusive of the training. They reported that delivery of the

training online was good; however, due to all frontline service staff being in one room and the poor camera quality, they highlighted that it was sometimes difficult to interpret the body language of frontline staff and identify who was talking. Similarly, the observer also found this was challenging when observing the facilitator's interactions with frontline service staff.

Table 6.2

Implementation fidelity results from the observations and training facilitators self-reflection forms

Observer	Facilitator	Observation / Self-reflection	Session	Total Score (out of 33)	Percentage
1	1	Observation	Intro to delivery style	25	75.8%
1	1	Self-reflection	Intro to delivery style	27	81.8%
1	1	Observation	Engaging YP in evaluation	24	72.7.8%
1	1	Self-reflection	Engaging YP in evaluation	28	84.8%

Training recipient questionnaires

Pre-training questionnaires were completed by four out of nine staff (44%); post-training questionnaires were completed by five out of nine staff (55%). Responses from those who completed the questionnaires were mixed and not all respondents answered every question. For example, following the training 80% of respondents stated they could understand how MST is beneficial for young people; however, only 40% felt more confident in supporting young people using MST. Furthermore, 40% of respondents were not pleased with the time and location of the training and felt they could not get actively involved. 60% of respondents did not find the sessions enjoyable and engaging and would have preferred the training to be face-to-face (in person) and to include more practical exercises. Frontline staff reported finding the online resource tool kits as helpful but would have preferred to spend

more time learning about them and practicing using them during the training. Respondents also stated that the CARES model was something they planned to use in the future.

Discussion

This feasibility study examined the feasibility of a study protocol designed to evaluate the training delivered to frontline service staff supporting young people experiencing homelessness. Two key factors impacting feasibility were evident within the results: completion of pre- and post-training questionnaires, and quality of technological equipment.

Fidelity of training to intended delivery style

Results show that there is a difference between training observer score and training facilitator self-reflection score which is consistent with findings from Chapter 3 (Tidmarsh et al., 2021) where on average there was a 6% difference between observed and self-reported scores. This is not unexpected as a previously documented limitation of self-report scores in the context of process evaluations has been the tendency of the individual to overmark themselves (Borrelli, 2011). However, by combining multiple methods and data sources (e.g., collecting observation scores from an independent observer) it is possible to overcome the limitations of self-reported data.

Feasibility

Compliance of frontline service staff in completing the questionnaires was lower than expected. Previously when training was delivered face-to-face staff typically completed all questionnaires at the training session. Within this format training recipients from the frontline service were required to complete the questionnaires outside of the time allocated to training. We know staff in frontline services have an exceptionally high workload already so having to take additional time to fill out questionnaires outside of allocated time for training presents as a challenge.

Additionally, online questionnaire design likely contributed to incomplete responses and missing data in the pre- and post-training questionnaires completed by training recipients. Forced responses were not used in the survey design; as such, some respondents did not answer all questions. Despite arguments for and against the use of forced responses in online questionnaires they do reduce the likelihood of unanswered/missed questions (Albaum et al., 2010; Albaum et al., 2011; Décieux et al., 2015). Research has highlighted that the use of 'prefer not to say' and 'I don't know' provides respondents with an option when they don't want to answer a question and if they don't know what to answer (Albaum et al., 2010). This is important when using forced response settings in an online questionnaire to ensure participants still have the option to only provide information they want to. Furthermore, when designing surveys using Likert scale type questions, the use of 'I don't know' and 'prefer not to answer' can prevent the improper use of the 'neutral' option within the scale which respondents sometimes select when they do not know or do not want to answer a question (Chyung et al., 2017; Joshi et al., 2015; Taherdoost, 2018).

Unlike advances in online survey design which aim to overcome challenges to missing and incomplete data, there is minimal research in relation to observing training that is delivered online. This is not a surprising given the paucity of research within the field of fidelity assessments and training implementation overall (Tidmarsh et al., 2021). In a study exploring innovative strategies and technology in remote observation of trainee teachers, Heafner and Petty (2010) found that the use of online technologies did not inhibit higher education observers. Technology within the study was of good quality and is likely to therefore have supported observers to conduct high quality observations due to availability of high quality audio and visual input. In contrast to Heafner and Petty's work, the technology available within the context of MST4Life™ was of much lower quality. Both the training facilitator and observer reported that the lower quality technology impacted the ability to

deliver training in the desired style, prevented the ability to detect more subtle communication amongst training recipients, and impacted the observation of the facilitator. In relation to the feasibility of conducting online observations of remote training, the above challenges highlight the essential need to consider the availability of good quality technology, which has the potential to enhance the training itself and as well as the observations carried out. Therefore, highlighting the importance of considering programme and training evaluation from the outset. Availability of such equipment in complex community settings, especially those supporting disadvantaged youth cannot be assumed. Therefore, if necessary, equipment costs should be integrated into funding applications.

Conducting evaluations of training delivered to staff is essential to continually improve training, as well as helping to better understand and meet further training needs for frontline service staff (Tidmarsh et al., 2021; Bluestone et al., 2013). In turn, this knowledge supports programmes to be effective and sustainable, meeting the needs of their participants. Therefore, understanding feasibility factors (e.g., response rates, missing data, training delivery and evaluation format) when evaluating training is essential to enhance knowledge around the extent to which evaluations can be carried out in practice, thus informing future programme design and implementation.

Strengths and limitations

This study has a number of strengths such as the inclusion of multiple data sources (training observer, training facilitator and training recipients), who offered different perspectives on the delivery of the MST training day, enabling a more holistic and in-depth understanding of the effectiveness of training and adherence to training design, as well as factors impacting feasibility of evaluating the training. Despite the strengths highlighted, there were also a number of limitations to the study.

As aforementioned missing data was a limitation of this study. Forced response settings (combined with response options 'prefer not to answer' and 'I don't know') were not used within the study and could have improved data completeness. This is particularly important where response rate is lower than expected as this then meant that in some cases only three training recipients responded to questions. Therefore, it is recommended that future online questionnaires should include the use of forced answers that include 'prefer not to say' and 'I don't know' as options within questionnaires to improve data completeness as well as reduce improper use of the neutral option within the Likert scale type questions. The low response rate was also a limitation of this study due to staff not wanting to complete this outside of allocated training time. It is therefore recommended that when designing training it incorporates an appropriate amount of time (in relation to questionnaire duration) at the beginning and end of the training for respondents to complete the survey.

Conclusion

This feasibility study of a protocol evaluating the training delivered to frontline staff engaged in delivering mental skills curriculum in the Transition Hub raises a number of important considerations for evaluation and delivery of future staff training. These include the use of forced responses in survey design, communication (through reminders) to support response rate for pre- and post-training surveys, as well as the requirement for high quality audio and visual technology to support training delivery and observation. Ensuring that evaluations are feasible to conduct supports researchers and organisations to understand and evaluate the extent to which training is delivered as designed and identify factors that may act as barriers and enablers to delivering as intended as well as future training needs for both attendees and training facilitators. Evaluation of training is essential in delivering effective and relevant staff training to support the delivery of successful and sustainable programmes

in complex community-based programmes and should therefore be considered from the outset of programme design.

General Discussion

General Discussion

The overall aim of this PhD thesis was to investigate the implementation of MST4Life™ delivered within St Basils frontline service supporting young people experiencing homelessness. Within this overarching aim, mixed methods research was used to understand the extent to which MST4Life™ was delivered as intended, identify factors that acted as barriers and enablers when delivering sport and exercise psychology programmes in complex community settings, and examine the extent to which it is possible to train frontline service staff to delivery psychologically informed programmes. The paucity of process evaluations of PYD programmes delivered to disadvantaged young people was highlighted in the systematic review (Chapter 4) along with barriers and enablers to delivering such programmes as designed. These findings from the systematic review informed the overall aims of this thesis through demonstrating the need for high-quality process evaluations across both programme delivery and staff training. The research questions were addressed within Chapters 3,4,5, and 6, and an overview of thesis aims was provided in Table 1.2.

The applied implications, strengths and limitations, and future research recommendations specific to each study are discussed within their respective chapters. The present chapter considers the implications of the thesis findings for delivering and evaluating PYD interventions to marginalised youth, as well as how these lessons may apply in mental skills training interventions in sport. This chapter begins with a summary of results from Chapters 3,4,5, and 6, followed by discussing the applied implications of the thesis findings before going on to discuss the strengths and limitations of this thesis, concluding with future research directions.

Summary of results

   Chapter 3. Using a mixed methods design, Chapter 3 examined the extent to which MST4Life™ was delivered with fidelity to the intended delivery style (CARES model) as

well as barriers and enablers to implementing the programme in line with the CARES model (Cumming et al., 2022). Observations of programme delivery were conducted, and the delivery team (University and frontline service staff) completed self-reflection forms. Forms included a 27-item rating scale measuring delivery style behaviours, followed by open-ended reflective questions exploring barriers and enablers to delivering the session as well as questions exploring improvements for future sessions. The observation and self-reflection forms measured the same quantitative and qualitative components, thus enabling comparison between observed and self-report scores.

Quantitative results indicated that MST4Life™ was delivered with high fidelity to the intended delivery style. Although the observed and self-report scores were lower for frontline service staff than University staff with extensive psychology training, the programme was still delivered with high fidelity overall. Frontline service staff had a variety of previous education and training experiences within the field of social work. This study therefore provided evidence that it is possible to train frontline service staff with variable previous training experiences to deliver psychologically informed programmes. Qualitative results indicated that some barriers and enablers were relevant to only Phase 1. Barriers included poor communication, practical challenges, and participant behaviour. High support needs and inconsistencies in frontline service staff in maintaining a strengths-based psychologically informed approach were barriers across both phases of MST4Life™. Factors which enabled fidelity of delivery style across both phases of the programme were teamwork, communication, and positive participant behaviour. Support from OAE instructors was an enabling factor distinct to Phase 2 of programme delivery. Results from this study highlighted the importance of conducting process evaluations to support the development of knowledge around causal mechanisms that either enable or act as barriers to delivering a programme as intended, and their capacity to provide insight into the training needs of those delivering

programmes. Overall, Chapter 3 provides evidence that MST4Life™ was delivered with high fidelity to the intended delivery style.

Chapter 4. Informed by Chapter 3, Chapter 4 presented the results of a systematic review of process evaluations of PYD programmes delivered to disadvantaged young people. The systematic review followed PRISMA guidelines (Moher et al., 2009) and aimed to develop a broader understanding of other process evaluations conducted within complex community settings for disadvantaged young people, exploring the methods used to collect data, the quality of studies and develop further understanding of barriers and enablers to delivering programmes as intended. The systematic review included 10 studies which met the inclusion criteria as described in the PICO-D statement and included studies within Ireland, the United States, and Canada.

Results showed that both the methods used, and quality of the included studies, were highly variable. Some studies, for example, did not include details on qualitative data analysis or descriptions of rating scales or tools used. Data collection methods included interviews, focus groups, observations, self-reflection forms, questionnaires, and feedback forms; some of which were either adapted or designed to ensure suitability within complex community settings. Themes relating to barriers and enablers of delivering programmes were developed. Barriers included sessions feeling too much like school, difficulties related to meeting high level support needs and behaviour management, lack of funding, logistical challenges, variance in quality of staff, and lack of clarity and communication. These barriers are similar to those identified in Chapter 3 such as practical challenges and inconsistencies in staff adherence to intended delivery style. Similar to enablers highlighted in Chapter 3 (e.g., teamwork and communication), enablers in Chapter 4 included continuous communication and collaboration in the community, meeting young people's needs, and communication within the programme delivery team.

Results suggested that flexible, yet rigorous data collection methods are needed for use within complex community settings to support the collection of data that provide depth and breadth of information. The barriers to implementing programmes as planned, such as staff experience and skill level, suggest that the training provided to staff delivering these programmes is essential and should cover a variety of delivery aspects including programme content and how to manage challenging behaviour in a way that meets participants' psychological needs. Thus, the systematic review provided further evidence to suggest that more knowledge is needed on the extent to which training provided to delivery staff meets their needs as well as evaluating the implementation of staff training itself. Results also demonstrated that when delivering programmes in complex community settings, this should be done collaboratively throughout the design, delivery, and evaluation of a programme to ensure that programmes are meaningful, accessible, sustainable, and meet the needs of participants.

Chapter 5. Using an instrumental case study design, programme participants ($n = 44$) engaged in reflection-in-action through participating in diary rooms across three time points: weeks 3,8, and 10 of programme delivery. Following reflexive thematic analysis (Braun & Clarke, 2019) themes were developed reflecting participant experiences and thoughts on the delivery of MST4Life™. Higher order themes included: "Programme content: A move towards meaningful and engaging activities"; "Key ingredients for a strengths-based delivery style: Fostering young people to feel empowered and promoting positive development"; and "Understanding and meeting the complex needs of programme participants". Themes contributed to developing a deeper understanding of factors that act as barriers and enablers to delivering programmes as intended, as well as providing further evidence that MST4Life™ can be delivered with fidelity to the intended delivery style. For example, we know from Chapter 3 that observations and self-report data provided evidence that MST4Life

was delivered with the intended delivery style. Quotes from the participants and themes presented in Chapter 5 provide evidence that participants perceived the delivery style as it was intended e.g., supportive of their basic psychological needs.

This novel study highlighted the importance of using a data collection method (diary rooms) that moves beyond traditional methods to be more accessible to participants and can be applied in a flexible yet rigorous way to support participants to continue positive development beyond the programme itself. Diary rooms supported the collection of rich data and provided a platform whereby an often marginalised group could share their experiences and opinions. Results also identified key components of programme design that promoted engagement, including hands-on activities with transferable skills and the supportive, strengths-based approach from programme facilitators. As such, front line services, and more broadly sport and exercise psychologists, should aim to include these key components when designing and implementing interventions.

Chapter 6. Informed from findings in Chapters 3 and 4, Chapter 6 aimed to explore the feasibility of evaluating training delivered to frontline service staff who would be delivering MST4Life™ within the Transition Hub. Due to Covid-19, the original plans for this study were scaled back and the training day was delivered using a hybrid approach (training recipients together in person, observer and training facilitator joined via Microsoft Teams). Two, one-hour sessions were observed within the training day and the training facilitator completed the self-reflection form for the same two sessions. The forms were adapted from those used in Chapter 3. The forms measured delivery style, adherence to content and included open-ended reflective questions exploring implementation as well as thoughts about the observations. Training recipients completed pre- and post-training questionnaires measuring a number of implementation aspects including delivery style, content, delivery methods. Questionnaires also explored perceived effectiveness of the training through Likert

scale questions exploring understanding of approaches and confidence to apply them pre- and post-training.

Similar to Chapter 3, results demonstrated that training was delivered with fidelity to the intended style and there were again differences in the observed and self-reflection scores. This study highlights challenges to conducting evaluations of training and delivering training using hybrid methods, and researchers must consider the extent to which services have access to high quality audio-visual technology. Additionally, results indicated that training recipients would have preferred to receive the training in person. This suggests that the feasibility of delivering online training that aims to develop theoretical and practical knowledge of psychological theories and mental skills training activity in this context may not be acceptable or sustainable.

Questionnaire results demonstrated the importance of evaluating training to understand the development needs of recipients, and whether the training meets their needs in terms of theoretical understanding, practical application, and modes of delivery (e.g., online, or in-person training). Combined with evaluating the implementation of training for frontline staff, this approach can support the development of meaningful, engaging, and effective training. In summary, Chapter 6 provided further evidence of ways that MST programmes can be evaluated and emphasised the significance of high-quality staff training on the overall implementation of a programme.

Applied Implications

This section focuses on the important contributions this thesis makes with regards to meeting the needs of young people experiencing homelessness, and to the field of sport and exercise psychology more broadly with regards to the use of process evaluations and the implementation of strengths-based interventions.

Process evaluations enable results to be correctly attributed to what is delivered, not necessarily what is briefly described in the methods (Evans et al., 2015; Walton et al., 2017). Importantly, this supports the uptake, implementation, and funding of successful interventions (Borrelli, 2011; Evans et al., 2015; Moore et al., 2015; Skivington et al., 2021) and as such it is recommend that those working within the field of sport and exercise psychology include process evaluations from the beginning of programme or research design. Interventions such as MST4Life™ and those in sport, exercise, and health settings are often delivered in dynamic and complex settings where components cannot be controlled to the same extent as research conducted in laboratories. Process evaluations have been successfully implemented in projects within public health (Borrelli, 2011; Bosco et al., 2019; Jumbe et al., 2019) and coaching in sport (Hägglund et al., 2021).

Through conducting process evaluations of the delivery of MST4Life ™ and its training to facilitators, results from Chapters 3 and 5 provide evidence that MST4Life™ was delivered with high fidelity to delivery style. Therefore, findings from this thesis indicate there was high fidelity to how the MST4Life™ programme was delivered to young people experiencing homelessness. Although the present results suggest that the process model is likely to be supported, further testing would be required. This is significant following the publication of the *International Society of Sport Psychology* (ISSP) Position Stand arguing that sport and exercise psychology has the potential for the betterment of people in communities, countries and regions through contributing to missions such as social justice, health and wellbeing, and peace (Schinke et al., 2016). Importantly, this thesis and MST4Life™ overall provide evidence that MST can be successfully implemented beyond sport in complex community settings supporting young people at-risk of or experiencing homelessness to overcome the stigmas associated with experiencing homelessness and achieve positive outcomes.

This thesis also provides evidence of key components to be considered by those designing strengths-based programmes to support participants to achieve positive outcomes. The strengths-based delivery style and environment intentionally created by the MST4Life™ delivery team (i.e., CARES model) was identified as one of the key components within Chapters 3 and 5 promoting participant engagement, meeting their basic psychological needs enabling participants to feel a sense of empowerment. Similarly, the systematic review in Chapter 4 also highlighted the environment created in other PYD programmes as an important factor that had the capacity to either promote or thwart participant engagement. These findings add to the evidence from sport and education settings on the implications of autonomy supportive, controlling, and socially supportive coach and teacher behaviours on individual's need satisfaction, reasons for engagement, as well as their well-being and likelihood of continued participation (Adie et al., 2008; Duda, 2013; Haerens et al., 2013; Tidmarsh et al., 2020). We know that when individuals feel their basic psychological needs for autonomy are supported, they are more likely to develop intrinsic motivation (Deci, 2000) and achieve set goals. This is important for young people at risk of or experiencing homelessness, as achieving goals such as engaging in employment, education and training can help young people to break the cycle of experiencing recurring crises and instead achieve positive outcomes such as sustained independent living.

For example, the *Empowering Coaching*™ training programme (and the questionnaire-based and observation measures used to assess the motivational climate) pulls from both SDT (Deci & Ryan, 2000) and achievement goal theory[4] (AGT; Ames, 1992; Nicholls, 1989). The

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[4] AGT proposes that when performing achievement-related tasks individuals can tend towards either task-based goals or ego-based goals and that these individuals orientation can vary depending on the motivational climate created by those within in it (Ames, 1992; Chezen et al., 2021). A mastery-based climate reflects an individualistic reward structure (personal improvement through effort and promote task-orientation over time) and is characterised by task-based goals and rewards as well as learning and improvement. A performance-based climate is said to reflect competitive reward

Empowering Coaching™ training programme focuses on what coaches can do to create an empowering motivational climate (Duda, 2013). Key components of the training include what coaches can emphasise (e.g., prominence placed on intrinsic goals), the reasons for children's engagement in sport (e.g., motives behind goals with autonomous motivation considered as key to more empowered participation) and finally, how coaches influence their athletes (e.g., the extent to which basic needs are either supported or thwarted) (Duda, 2013; Sheldon et al., 2004; Smith et al., 2016). The *Empowering Coaching™* approach further highlights the importance of the environment intentionally created in fostering engagement and positive development. Research on the *Empowering Coaching™* programme is one of few interventions in sport that has engaged in conducting process evaluations through the use of a validated questionnaire to support self-report and observational assessment of the motivational climate created by coaches (Duda & Appleton, 2016; Smith et al., 2016). As such, key components that those developing programmes should consider is the implementation of a strengths-based approach and including meaningful and transferrable content.

Previously, researchers have argued there is a greater need for more theory-based and evidence-based practice to support coaches and practitioners to use behaviours to intentionally create motivational climates that are supportive of basic psychological needs (Duda & Appleton, 2016). Understanding the extent to which those delivering programmes adhere to programme design is essential to bridging the gap between research and supporting applied practice to become evidence-based (Evans et al., 2015; Skivington et al., 2021). Results from this thesis suggest that it is possible to train frontline service staff to deliver a

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structures (comparison of performance to others and fosters ego-orientation over time), emphasise social comparison, and reward people for out-performing others. Where coaches or those delivering interventions create a mastery climate, intrinsic and self-determined forms of motivation are more likely to develop (Standage et al., 2003, Standage et al., 2006; Duda et al., 2013).

psychologically informed MST programme. It is important to establish whether frontline staff are able to deliver programmes such as MST4Life™ to ensure sustainability of the programme beyond the research project. Despite the significant differences highlighted in both observation and self-reported fidelity scores between university staff with extensive psychological training compared to frontline service staff, both groups delivered MST4Life™ with high fidelity to delivery style. These findings provide evidence that it is possible to train those delivering programmes to intentionally create an environment that supports participants' psychological needs (Deci, 2000). This is important for frontline services and those commissioning funding when considering the sustainability of programmes. Services are experiencing decreased funding whilst simultaneously experiencing increased overall demand as well as the need to work with young people who have higher support needs (HomelessLink, 2021). Having internal staff who are able to deliver high quality, theory-informed and evidence-based programmes is key to meeting the needs of service users.

Process evaluations play an essential role in investigating the extent to which it is possible to train frontline service staff to deliver psychologically informed interventions with fidelity through developing understanding of adherence levels and causal mechanisms. Additionally, as highlighted within the wider MST4Life™ programme, conducting process evaluations provides a baseline from which ongoing fidelity monitoring can be maintained alongside top-up training that can be designed to meet the needs of delivery instead of being based on assuming needs (Cumming et al., 2022). However, there are numerous challenges to implementing process evaluations and delivering programmes in complex community settings as highlighted throughout the discussion various chapters in this thesis. Researchers' understanding of what is feasible, appropriate, and accessible for different groups and settings can be limited by their own experiences (or lack of). Therefore, involving key stakeholders

such as programme participants and members of the local community is crucial to implementing programmes and evaluations that are culturally sensitive, accessible, and feasible to implement (Kenyon et al., 2019; Tingey et al., 2016).

In addition to documenting evidence related to training frontline staff, this thesis also raises essentials considerations for the training of researchers and applied sport and exercise psychologists. Reports suggest that elite athletes have comparable prevalence rates for the most common mental health disorders when compared to non-athletic peers (Åkesdotter et al., 2020; Moesch et al., 2018; Schinke et al., 2018). As such, it is important to ensure that sport and exercise psychologists, and those conducting research in areas where disclosure of trauma is likely, are provided with additional training to safeguard those involved and prevent secondary trauma occurring in those delivering interventions or support (Hesse, 2002). For example, within MST4Life™ the research team delivering the programme received a variety of additional training and support as highlighted in Chapter 3, such as mental health first aid training, PIE training, and supervised reflective practice with a clinical psychologist. The training aimed to equip the researchers with the necessary practical skills and knowledge to handle any disclosures in a sensitive and supportive manner, whilst the reflective practice with a clinical psychologist provided a safe space whereby the researchers could discuss any distressing disclosures or situations. Implementing this additional training and support meant that researchers were supported to process and cope with such disclosures and reduce the likelihood of secondary trauma (Hesse, 2002). As sport psychology enters new territories within sport settings (e.g., athlete and coach mental health) and settings beyond sport where research and programmes aim to contribute to important social missions, it is essential that those people receive high-quality training and support that enables them to support athletes and programme participants in an appropriate way, but that also safeguards the health and wellbeing of those working in such settings.

When working with marginalised groups and adapting sport and exercise psychology to complex community settings, it is important that data collection methods are accessible. For example, within a sample of 246 MST4Life™ participants, 11.6% reported having a disability, 41.8% identified as BAME, and 19.5% of participants were unable to work, demonstrating the diverse demographic range of young people who experience homelessness (Quinton et al., 2021). Lengthy forms and questionnaires are not always feasible to complete and often result in low response rates as demonstrated in Chapters 4 and 6 (Collins et al., 2013; Kuosmanen et al., 2017). In addition, staff working in frontline services already have high caseloads and a large quantity of forms and paperwork within their standard workload. Additionally, we know from collecting pre- and post-programme data that young people do not like completing lengthy questionnaires; other studies conducted with disadvantaged report similar results (Collins et al., 2013; Kuosmanen et al., 2017). This finding is further supported from chapters 4 and 5 where young people expressed that they did not want to engage in sessions when there was too much writing or in activities felt too much like school. However, as demonstrated through the use of diary rooms, it is possible to use flexible yet rigorous methods that are accessible to those they are designed for. For example, the diary rooms were adaptable to different formats, including brief responses and audio recording instead of video recording, making it more appealing to the young people compared to longer 1:1 or group interviews. Other studies within education research exploring learning experiences have also successfully implemented diary room or video diary approaches (Cooley et al., 2014; Larkin & Jorgensen, 2016).

Using accessible methods is an important implication across sport and exercise psychology, particularly within youth sport and athletes or exercisers with disabilities. In the current context, accessible methods refers to methods that meet a participant's needs, enabling them to engage, and findings from this thesis illustrate that a single method such as

the diary room (Chapter 5) can be adapted to meet different people's needs. For methods to be accessible, they need to meet programme participants where they are at. Additionally, sport and exercise psychologists are not constrained to working with athletes whose first language is English, even when working within the UK. They also work with athletes with disabilities, or are neurodiverse, or come from varying cultural backgrounds. As discussed in Chapter 5, it is recommended that appropriate support or translation of forms be considered by those designing evaluations or by sport psychologists working with athletes and sports teams.

In summary, high quality process evaluations are an underused but critical component in applied and research settings within sport and exercise and psychology. Process evaluations are vital to enable a better understanding of whether programmes are delivered as designed and of the causal mechanisms that either enable or inhibit delivering programmes or interventions with fidelity. This is important in the field of sport and exercise psychology, especially in research considering behaviour change interventions, sport psychology interventions for performance, physical activity interventions, and rehabilitation programmes.

Strengths and Limitations

It is important to consider the results and applied implications within the context of the strengths and limitations of this thesis. The strengths and limitations discussed within this section build on those discussed within Chapters, 3, 4, 5 and 6.

The use of a mixed method research design is a strength of this thesis. Mixed methods research has been encouraged within sport and exercise psychology, and within research underpinned by a critical realist philosophy (Gorski, 2013; Wiltshire, 2018). The mixed methods design supported the collection of data that provided breadth and depth of information on the implementation of MST4Life™ from the perspective of different

stakeholders (e.g., observers, MST4Life™ delivery team, training recipients and programme participants). This is important, as the experience of each individual in relation to delivering, observing, and receiving MST4Life will differ considerably, yet all experiences are equally valid. By combining methods and including a variety of stakeholders within the process evaluation of MST4Life™, triangulation of data was possible (Ronkainen & Wiltshire, 2019). For example, observation and self-reflection scores provided evidence that the delivery team were implementing MST4Life™ in the intended strengths-based style. Qualitative data from participant engagement in the diary rooms provided further evidence that the programme was delivered in the intended style from the perspective of the young people.

The collection of data throughout programme delivery, across different sites, and with multiple facilitators was another strength of this thesis. In the study reported in Chapter 3, data were collected from across four programmes and nine sites over the course of two years. In the study reported in Chapter 5, data were collected over three years from over 14 programmes, with data reported in Chapter 6 collected from one training session of the newly formed Transition Hub. Data collection within the various chapters has therefore spanned across six years of MST4Life™. As this thesis aimed to explore the implementation of MST4Life™ by collecting and analysing data throughout the implementation of the programme, this means that data (and results) reflect the whole programme rather than a cross-sectional snapshot (Kitzman-Ulrich et al., 2009). Over this time period, the delivery of MST4Life™ transitioned from the programme delivery team being exclusively comprised of University research staff, into a delivery team consisting of frontline service staff; this progression demonstrates that the programme is sustainable. This is important because it aligns with the community-based participatory research approach within MST4Life, as well

as meeting the requirements of commissioners and policy makers who are looking to identify programmes that are sustainable over time.

By design, this thesis was designed to be a focussed, in-depth process evaluation of a specific programme to meet the needs of the frontline service; as such, it meets the aims of the thesis outlined in Chapter 1. Consequently, the results from Chapters 3, 5 and 6 may not be representative of other young people experiencing homelessness within the UK and internationally. Encouragingly, however, a strengths-based programme for Dutch young people experiencing homelessness has found similar results to those presented in this thesis, including positive outcomes achieved for young people who received the Houvast model compared to usual care (Krabbenborg et al., 2013; Krabbenborg, Boersma, van der Veld, van Hulst, et al., 2017). To my knowledge there are no published process evaluations of this intervention, so it is known whether this intervention was implemented as described in the methods of these studies. Moreover, the systematic review reported in Chapter 4 included studies from Ireland, the United States and Canada and reported similar barriers and enablers across studies to those reported in Chapters 3 and 5, including logistical challenges, training staff and behavioural management. As such, further research on the implementation fidelity (i.e., process evaluations) of strengths-based PYD programme is needed within and beyond the UK.

A further limitation of this thesis is that whilst there were numerous benefits to the flexible approach used in diary rooms, there were incomplete data from diary rooms, some questionnaires and self-reflection forms. Therefore, some participants (young people) and respondents (frontline service staff) did not answer questions regarding evaluation of delivery style and certain open-ended questions in the survey. As facilitators were not always present during the diary rooms, they were not able to re-frame questions if a participant was stuck, or able to ask probing questions of participants. Similarly, frontline service staff completing the

self-reflection forms initially found them challenging to complete and did not always have time to complete forms following every session despite encouragement from myself and the University delivery team members. The use of videos has been recommended for training observers to measure behaviours (Yoder et al., 2018) to support knowledge development, familiarity with data collection tools and prevent observer drift. As such, videos could also be used in the training of frontline-service staff to enable them to practice completing the self-reflection form, improving familiarity, and providing the opportunity to ask questions and improve understanding of the tool, overcoming some of the initial challenges raised in completing the self-reflection forms.

Despite the limitations discussed above and specifically within Chapters 3, 4, 5 and 6, this thesis provides unique and valuable contributions to understanding the implementation and evaluation of mental skills training programmes within the fields of youth homelessness and sport and exercise psychology. Based upon both the strengths and limitations discussed, a number of future research directions are outlined in the next section.

Future directions

The future directions for research discussed below consider research within the context of youth homelessness and sport and exercise psychology.

Future research that involves the delivery of a sport and exercise psychology programmes or interventions should include process evaluation components. Sport settings can often be complex and dynamic, and as such the use of process evaluations is essential to understand causal mechanisms that impact whether programmes and interventions are delivered as designed. These are essential to enable the development of further knowledge around causal mechanisms regarding implementation fidelity across different sport and exercise psychology contexts. Future research should also include programme participants as

key stakeholders in designing and completing process evaluations of programmes designed for them. Sport and exercise interventions that aim to improve important lifestyle factors such as engagement in physical activity, are similar to are similar to public health research where public and patient involvement has been widely used (Cockcroft, 2020). People have different individual experiences, and it is important that future research explores these to develop greater knowledge around what works for whom and why. By involving relevant groups in programme design and decision making processes, it can improve participant recruitment and retention (Cockcroft, 2020).

This thesis has also highlighted the importance of including evaluations of the implementation of training received by staff delivering programmes or interventions. If we are to understand implementation fidelity, then it is vital that more is known about the implementation and effectiveness of training delivery that staff receive. This thesis had planned to conduct a full-scale study examining the implementation of staff training; however, this was not possible due to Covid-19. The adaptations made for this study such as conducting the feasibility study using online observations and online forms has provided important insights into the challenges of delivering and evaluating training delivered in online and hybrid formats. Future research should therefore further investigate the implementation of training and programmes that are delivered online.

The use of a mixed methods research design combined with accessible and novel data collection methods adapted to meet the needs of the complex community setting has provided evidence that the use of flexible approaches can be done whilst maintaining rigour. It is therefore recommended that future research should investigate the feasibility of data collection methods beyond traditional approaches such as questionnaires and interviews. Visual methods and diary rooms have been successfully used in alternative settings (Larkin & Jorgensen, 2016) but more research is needed to understand whether such methods are

feasible in both research with disadvantaged young people and within sports and exercise psychology. In line with future research recommendations from the systematic review (Chapter 4), research exploring learning environments has used visual methods such as images and maps; however it has been recommended that such methods are not sufficient on their own (Woolner et al., 2010). Therefore, future research implementing process evaluations should use a mixed method research design where possible to increase the scope of the research in understanding the extent to which programmes are delivered as intended and the factors which impact implementation.

Conclusion

In conclusion, this thesis aimed to explore the implementation of a psychologically informed mental skills training programme for young people experiencing homelessness. This aim was achieved through a mixed method research design consisting of mixed method studies, a systematic review, and a qualitative, instrumental case study. These studies investigated the extent to which MST4Life™ was delivered as designed and barriers and enablers to delivering the programme in the intended style from the perspective of observers, programme delivery team and programme participants. Through this approach, there were a number of novel contributions to both applied settings supporting youth experiencing homelessness and, in the sport, and exercise psychology literature.

Chapters 3 and 5 demonstrated that MST4Life™ was delivered with high fidelity to the intended strengths based style, suggesting that it is possible to train frontline service staff to deliver a strengths-based, mental skills training programme to support positive outcomes in young people at-risk of or experiencing homelessness. Furthermore, through confirming that

MST4Life™ was delivered in the intended delivery style, these chapters also provide evidence to support the results from the outcome evaluations of MST4Life™ (Cooley et al., 2019; Parry et al., 2021; Parry et al., 2022; Quinton et al., 2021).

Chapter 4 demonstrated that a common barrier for implementing PYD programmes for disadvantaged young people as designed were challenges surrounding delivery staff. These included retaining staff, staff knowledge of programme content and their ability to manage participant behaviour and meet complex needs. These results combined with findings that frontline staff had lower observation and self-reflection scores in Chapter 3 demonstrate that staff training is a key part of programme design and implementation and should also be evaluated. Further evidence to support this important finding and take steps to bridge the gap between research and practice was the findings that it is feasible to conduct process evaluations of training that programme delivery staff receive. Finally, Chapters 3 and 5 demonstrated that implementing flexible, and novel data collection methods (e.g., observer engagement with young people and the use of diary rooms) were key to conducting research on the implementation of a mental skills training programme in complex community settings. Sport settings can often be complex and dynamic and as such the use of process evaluations is essential to understand causal mechanisms that impact whether programmes and interventions are delivered as designed. Although more research is required to understand whether the novel methods used within the context of this thesis are feasible within wider sport and exercise psychology settings, their use here highlights the importance of accessible methods to foster engagement in data collection. Further research within the UK and internationally is also needed to determine whether it is possible to train frontline service staff to deliver a psychologically informed mental skills training programme with high fidelity, and whether barriers and enablers to achieving this are representative of youth homelessness more broadly.

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Mental Skills Training for St Basils
Participant Consent Form

The following information regarding your birthdate and number siblings will be used to form a unique and easy to remember study ID code for you. This will help us to keep your contribution to the research anonymous.

Your Study ID Code:

**** (VERY IMPORTANT) ****
Your date of birth: _____ / _____ / _____   Your number of siblings: _____
D   M   Y   #

Tick to consent

I confirm that I have read and understand the information sheet, and have had the opportunity to ask questions to my satisfaction. ☐

I understand that my participation is voluntary and that I am free to withdraw at any time before the deadline described on the information sheet without giving any reason or my rights being affected. ☐

I understand that I can choose not to answer a question if I wish without giving any reason or my rights being affected. ☐

I give consent for the data that I provide to be used for research purposes (e.g., my attendance, questionnaires, basic information about me). ☐

I give consent for the researchers to take a photo of my **Outcome Star collage** for it to be analysed, and understand that this photo will be kept securely and may be used in future reports/publications as long as my confidentiality is maintained. ☐

I give consent for the researchers to use my **strengths profile** for it to be analysed, and understand that it may be used in future reports/publications as long as my confidentiality is maintained. ☐

I give consent for me to be either video or audio recorded during the ***diary room*** to be analysed, and I understand that these recordings will be kept securely. ☐

I give consent for me to be audio recorded during the **_group interview_** to be analysed, and understand that these recordings will be kept securely. ☐

I give consent for the researchers to access my St Basils records for research purposes (e.g., the length of time I live at St Basils and the reasons I move on). ☐

I agree to take part in the above study. ☐

_____   _____   _____

Name of Participant   Date   Signature

Evaluation of My Strengths Training for St Basils
Participant information sheet – Observers

What is MST4Life™?

- We are the quality and evaluation team for the My Strengths Training for Life programme (MST4Life™) and would like to invite you to take part in a study evaluating the delivery of MST4Life™.
- Developed to support young people's aspirations for accessing education and employment opportunities.
- It is often used to help athletes to improve their competitive performance.
- Educates recipients about using different mental strengths (e.g., effective goal setting) to help them to realise their individual potential and develop well-being.

What is the purpose of our work?

- Evaluate the MST4Life™ programme to understand:
  - o Adherence to expected delivery style.
  - o Barriers and enablers of delivering to the expected style.
  - o The effectiveness of MST4Life™ for young people.
  - o Any needed improvements.

Why have I been invited, and do I have to take part?
- You are conducting observations of the University of Birmingham facilitators and St Basils co-deliverers during the MST4Life programme.
  - o After reading this information sheet, you can ask any questions about our work.
  - o If you agree to take part, we would like you to complete the consent form.
  - o You do not have to take part in this evaluation of MST4Life.

If I agree, what will I have to do?

- Conduct observations of facilitators and co-deliverers.
- Complete rating scale, adherence checklist and written reflection following each MST session you observe.
- Complete demographic questionnaire about your basic information (e.g., age, gender, experience, education).
- The possibility to take part in focus groups or one-to-one interviews to discuss in more depth any reflections.

There are no known risks associated with participation in this research.

How will my confidentiality be protected?

- The programme and its evaluation will operate under St Basils confidentiality and General Data Protection Regulation (2016) Policies (available on request).

- Anything you tell us will be in confidence and will not be shared with anyone else without your consent.
  - However, if you tell us anything which indicates that someone's health and safety is at risk, including your own, we may have to share this information. If this happens, we will keep you informed of any actions we are taking.

Who do I speak to if I have any concerns?

- Sometimes observing people can make you feel uncomfortable, and reflections can raise concerns if you feel something did not go well. Please speak to Dr Jennifer Cumming (details below).

Can I withdraw once we have has started?

- You may withdraw at any time during the programme, without any explanation or consequence. The deadline for withdrawal is 2 weeks after the study has been completed (end of Coniston; 31st March).
  - If you choose to withdraw, all your data will be destroyed and not included in our research.
- If you choose to withdraw please either tell one of the MST4Life™ facilitators, contact Dr Jennifer Cumming, the Project Director of MST4Life™ programme (contact details provided below), or your support worker.

What will happen to the results of the research?

- Aim to help further improve the delivery of MST4Life.
- Results (if consent is provided), may be used for scientific purposes, including publication in scientific journals, so long as your anonymity is maintained.
- Brief summary presenting the results and findings will be given to St Basils to distribute to participants at the end of the study.

In accordance with the General Data Protection Regulation (2016) raw and processed data from this investigation will be kept for ten years following completion of the study. Consent forms and computer files containing processed data will be kept securely in a locked filing cabinet and will only be accessed by the study investigators. After this period, all the data collected (including video and audio files) will be destroyed.

Further information and contact details
Dr Jennifer Cumming
School of Sport, Exercise, and Rehabilitation Sciences, University of Birmingham, B15 2TT

Evaluation of My Strengths Training for St Basils
Participant information sheet − St Basils Staff

What is MST4Life™?

- We are the quality and evaluation team for the My Strengths Training for Life programme (MST4Life™) and would like to invite you to take part in a study evaluating the delivery of MST4Life™.
- Developed to support young people's aspirations for accessing education and employment opportunities.
- It is often used to help athletes to improve their competitive performance.
- Educates recipients about using different mental strengths (e.g., effective goal setting) to help them to realise their individual potential and develop well-being.

What is the purpose of our work?

- Evaluate the MST4Life™ programme to understand:
  - Adherence to expected delivery style.
  - Barriers and enablers of delivering to the expected style.
  - The effectiveness of MST4Life™ for young people.
  - Any needed improvements.

Why have I been invited, and do I have to take part?
- You are co-delivering with the University of Birmingham facilitators.
  - After reading this information sheet, you can ask any questions about our work.
  - If you agree to take part, we would like you to complete the consent form.
  - You do not have to take part in this evaluation of MST4Life.

If I agree, what will I have to do?

- Be observed as part of the delivery team by a researcher from the University of Birmingham.
- Complete reflective rating scale following each session you co-deliver.
- Complete written reflective form on your thoughts about how the MST session went.
- Complete demographic questionnaire about your basic information (e.g. age, gender, experience, education).
- The possibility to take part in focus groups or one-to-one interviews to discuss in more depth any reflections.

There are no known risks associated with participation in this research.

How will my confidentiality be protected?

- The programme and its evaluation will operate under St Basils confidentiality and General Data Protection Regulation (2016) Policies (available on request).
- Anything you tell us will be in confidence and will not be shared with anyone else without your consent.

- o However, if you tell us anything which indicates that someone's health and safety is at risk, including your own, we may have to share this information. If this happens, we will keep you informed of any actions we are taking.

Who do I speak to if I have any concerns?

- Sometimes being observed can make you feel uncomfortable, and reflections can raise concerns if you feel something did not go well. Please speak to Dr Jennifer Cumming (details below).

Can I withdraw once we have has started?

- You may withdraw at any time during the programme, without any explanation or consequence. The deadline for withdrawal is 2 weeks after the study has been completed (end of Coniston; 31st March).
  - o If you choose to withdraw, all your data will be destroyed and not included in our research.
- If you choose to withdraw please either tell one of the MST4Life™ facilitators, contact Dr Jennifer Cumming, the Project Director of MST4Life™ programme (contact details provided below), or your support worker.

What will happen to the results of the research?

- Aim to help further improve the delivery of MST4Life.
- Results (if consent is provided), may be used for scientific purposes, including publication in scientific journals, so long as your anonymity is maintained.
- Brief summary presenting the results and findings will be given to St Basils to distribute to participants at the end of the study.

In accordance with the General Data Protection Regulation (2016) raw and processed data from this investigation will be kept for ten years following completion of the study. Consent forms and computer files containing processed data will be kept securely in a locked filing cabinet and will only be accessed by the study investigators. After this period, all the data collected (including video and audio files) will be destroyed.

Further information and contact details
Dr Jennifer Cumming
School of Sport, Exercise, and Rehabilitation Sciences, University of Birmingham, B15 2TT

Evaluation of My Strengths Training for St Basils
Participant information sheet – University of Birmingham staff

What is MST4Life™?

- We are the quality and evaluation team for the My Strengths Training for Life programme (MST4Life™) and would like to invite you to take part in a study evaluating the delivery of MST4Life™.
- Developed to support young people's aspirations for accessing education and employment opportunities.
- It is often used to help athletes to improve their competitive performance.
- Educates recipients about using different mental strengths (e.g., effective goal setting) to help them to realise their individual potential and develop well-being.

What is the purpose of our work?

- Evaluate the MST4Life™ programme to understand:
  o Adherence to expected delivery style.
  o Barriers and enablers of delivering to the expected style.
  o The effectiveness of MST4Life™ for young people.
  o Any needed improvements.

Why have I been invited, and do I have to take part?
- You are a University of Birmingham facilitator for the MST4Life™ programme
  o After reading this information sheet, you can ask any questions about our work.
  o If you agree to take part, we would like you to complete the consent form.
  o You do not have to take part in this evaluation of MST4Life™.

If I agree, what will I have to do?

- Be observed as part of the delivery team by a researcher from the University of Birmingham.
- Complete reflective rating scale following each session you co-deliver.
- Complete written reflective form on your thoughts about how the MST session went.
- Complete demographic questionnaire about your basic information (e.g., age, gender, experience, education).
- The possibility to take part in focus groups or one-to-one interviews to discuss in more depth any reflections.

There are no known risks associated with participation in this research.

How will my confidentiality be protected?

- The programme and its evaluation will operate under St Basils confidentiality and General Data Protection Regulation (2016) Policies (available on request).
- Anything you tell us will be in confidence and will not be shared with anyone else without your consent.

- o However, if you tell us anything which indicates that someone's health and safety is at risk, including your own, we may have to share this information. If this happens, we will keep you informed of any actions we are taking.

Who do I speak to if I have any concerns?

- Sometimes being observed can make you feel uncomfortable, and reflections can raise concerns if you feel something did not go well. Please speak to Dr Jennifer Cumming (details below).

Can I withdraw once we have has started?

- You may withdraw at any time during the programme, without any explanation or consequence. The deadline for withdrawal is 2 weeks after the study has been completed (end of Coniston; 31st March).
  - o If you choose to withdraw, all your data will be destroyed and not included in our research.
- If you choose to withdraw please either tell one of the MST4Life™ facilitators, contact Dr Jennifer Cumming, the Project Director of MST4Life™ programme (contact details provided below), or your support worker.

What will happen to the results of the research?

- Aim to help further improve the delivery of MST4Life.
- Results (if consent is provided), may be used for scientific purposes, including publication in scientific journals, so long as your anonymity is maintained.
- Brief summary presenting the results and findings will be given to St Basils to distribute to participants at the end of the study.

In accordance with the General Data Protection Regulation (2016) raw and processed data from this investigation will be kept for ten years following completion of the study. Consent forms and computer files containing processed data will be kept securely in a locked filing cabinet and will only be accessed by the study investigators. After this period, all the data collected (including video and audio files) will be destroyed.

Further information and contact details
Dr Jennifer Cumming
School of Sport, Exercise, and Rehabilitation Sciences, University of Birmingham, B15 2TT

My Strengths Training for St Basils
Consent Form

The following information regarding your birthdate and number siblings will be used to form a unique and easy to remember study ID code for you.

Your Study ID Code:

**** (VERY IMPORTANT) ****
Your date of birth: ____ / ____ / ____   Your number of siblings: _____
D   M   Y   #

Tick to consent

I confirm that I have read and understand the information sheet, and have had the opportunity to ask questions to my satisfaction. ☐

I understand that my participation is voluntary and that I can choose not to answer a question and am free to withdraw at any time until 2 weeks after MST without giving any reason or my rights being affected. ☐

I give consent for the data that I provide to be used for research purposes (e.g., my reflections and observed scores for delivery style and basic information about me). ☐

Photo, audio and video consent

I give consent for the researchers to use and take a photo of the materials I produce, for it to be analysed, and understand that these photos will be kept securely and may be used in future reports/publications as long as my confidentiality is maintained. ☐

I give consent to take part in a written, audio, or video recorded *diary room and/or focus group* and for it to be analysed, and I understand that these recordings will be kept securely. ☐

I give consent for photos and videos to be taken of me during the activities (e.g. at Cake Sale, Coniston) and understand they might be used on MST social media platforms (e.g. Twitter, private groups on Facebook, our project website) ☐

I agree to take part in the above study. ☐

_____ _____ _____
First and Surname   Date   Signature

Appendix 6: Demographic Questionnaire Observers (Chapter 3)

Demographic Questionnaire: Observers

Please provide your date of birth and number of siblings in the following format (07.10.1991/0). This will enable us to pseudo-anonymise your data and will now be your ID number.

__.__.____/__

1. **Name:** ……….

2. **Age (Yrs/Months):** ……………………………………………………………………………………………….

3. **Number of years' experience working with disadvantaged youth?** ……………………………….

4. **Have you received psychologically informed environments (PIE) training? If so, when?**

   ……..

5. **Did you attend the formal training from the MST4Life team (September/October 2018)?**

   ……..

6. **What is your area and level of formal education?**……

   ……

7. **Do you have any other experience of working with youth? (if yes, please briefly explain):**………

   ……

   ……

8. **Do you have any experience of conducting observations within programme delivery? (if yes, please provide brief details):**………………………………………………………………………………………

   ……

   ……

Demographic Questionnaire

Please provide your date of birth and number of siblings in the following format (07.10.1991/0). This will enable us to pseudo-anonymise your data and will now be your ID number.

__.__.____/__

1. **Name:** …….

2. **Age (Yrs/Months):** ……………………………………………………………………………………………….

3. **How long have you worked at St Basils? (years/months)** ………………………………………….

4. **Number of years' experience working with disadvantaged youth?** ……………………………….

5. **Have you received psychologically informed environments (PIE) training? If so, when?**

   ……..

6. **What is your area and level of formal education?**……

   ………

7. **Please could you tell us about any previous experience you have had in working with the MST4Life project?**

   ……

   ……

   ……

   ……

Demographic Questionnaire: University facilitators

Please provide your date of birth and number of siblings in the following format (07.10.1991/0). This will enable us to pseudo-anonymise your data and will now be your ID number.

__.__.____/__

1. **Initials (first and surname):**

2. **Gender:**

3. **Age (Yrs/Months):**

4. **How long have you been employed on the MST4life programme?**

5. **Number of sessions facilitated on MST pre wave 14? (please highlight relevant answer)**

   0-50   51-75   76-100   100-125   126-150   151-175   176-200   201+

6. **Number of years' experience working with disadvantaged youth? (years/months):**

7. **Do you have any other experience of working with youth? (if yes, please briefly explain):**

8. **Have you received psychologically informed environments (PIE) training? If so, when?**

9. **What is your area and level of formal education?**

Appendix 9: Observation form for delivery of MST4Life™

Observation Form

The form exists to facilitate the observation process and help observers conduct observations to the best of their ability and record information in a consistent manner.

This form is comprised of two parts:

1) A **rating** scale with space for comments for how well you think you did at delivering in **helpful** and **unhelpful** ways during the session.

2) **Reflective** questions

Please write comments, using examples/quotes where possible, and rate using the rating guide.

Comments should be completed after a session, and ratings made as soon as possible after a session. The items are based on frequency and conviction, or potency, with which you performed the different behaviours**.**

There are items representing both helpful and unhelpful behaviours in each of the five subsections, which make up the CARES acronym:

C – Competence supportive (vs. Competence thwarting)

A – Autonomy supportive (vs. Controlling)

R – Relatedness (vs. Relatedness thwarting)

E - Engagement through Communication (vs. Communication barriers)

S - Structure and Group Management (vs. Lack of structure and group management)

Ratings

Please rate to what extent the facilitator displayed the skills/behaviours, on a scale of 0 (Not at all) to 3 (Well).

0 = Not displayed at all

1 = Displayed, but in a limited way

2 = Displayed with moderate frequency or conviction

3 = Displayed frequently or with conviction

N/A = Not applicable to the session or circumstance

Score

Subtotal for each subcategory (Pro and Anti MST behaviours/skills)

Overall score number and percentage out of measures e.g. 35/45. If one measure was scored as N/A this would become 35/42 and the percentage should be worked out from this score.

MST4Life™ - Observation Form							
Sessi on date:		**Session # & title:**					
Start time:		**Project:**					
End time:		**Facilitator:**					
# of YPs:		**Observer:**					
Competence supportive			0	1	2	3	N/A
1. Provides positive reinforcement, recognises effort			☐	☐	☐	☐	☐
2. Brings attention to mental strengths			☐	☐	☐	☐	☐
Competence thwarting			0	1	2	3	N/A
3. Uses punishment, intimidation or threats			☐	☐	☐	☐	☐
4. Focuses on problems			☐	☐	☐	☐	☐
Comments:							
Autonomy supportive			0	1	2	3	N/A
5. Provides opportunities for input and choice			☐	☐	☐	☐	☐
6. Encourages initiative, provides guidance without taking over			☐	☐	☐	☐	☐
7. Provides rationale for activities/requests			☐	☐	☐	☐	☐
Controlling			0	1	2	3	N/A
8. Offers extrinsic/tangible rewards			☐	☐	☐	☐	☐
9. Offers solutions readily			☐	☐	☐	☐	☐
10. Uses controlling language (should, must etc.)			☐	☐	☐	☐	☐

	0	1	2	3	N/A
11. Interrupts inappropriately	☐	☐	☐	☐	☐
12. Devalues/rejects participants' perspectives	☐	☐	☐	☐	☐

Comments:

Relatedness supportive	0	1	2	3	N/A
13. Conveys friendliness and warmth	☐	☐	☐	☐	☐
14. Composure	☐	☐	☐	☐	☐
15. Engages in informal conversation	☐	☐	☐	☐	☐
16. Acceptance of perspectives, or normalises experience	☐	☐	☐	☐	☐
17. Tries to engage and include all participants	☐	☐	☐	☐	☐
Relatedness thwarting	0	1	2	3	N/A
18. Excludes participant(s) from discussion/activity	☐	☐	☐	☐	☐
19. Restricts opportunities for interaction and conversation	☐	☐	☐	☐	☐

Comments:

Effective communication	0	1	2	3	N/A
20. Future and present focused talk	☐	☐	☐	☐	☐
21. Asks open questions	☐	☐	☐	☐	☐
22. Understandability	☐	☐	☐	☐	☐
Barriers to effective communication	0	1	2	3	N/A
23. Inappropriate language or use of humour	☐	☐	☐	☐	☐

Comments:

Structure and group management	0	1	2	3	N/A
24. Is prepared and organised	☐	☐	☐	☐	☐
25. Group order/focus maintained	☐	☐	☐	☐	☐
Lack of structure and group management	0	1	2	3	N/A
26. Over-reliant on session plan	☐	☐	☐	☐	☐
27. Gets distracted from session	☐	☐	☐	☐	☐
28. Any significant interruptions (Yes/No)	Yes (please explain below.				No

Comments:

Scores	Other feedback and What could be improved for next time?:

P	A	
C:	C:	
A:	A:	
R:	R:	
E:	E:	
S:	S:	
/	/	

Total Score:

Reflective Questions

1. Can you tell me about any challenges you came across when conducting the observation today?

2. Can you tell me about anything that was beneficial /helpful in conducting the observation today?

3. Could anything be done better next time?

4. Please feel free to reflect on any other aspects of the observation that come to mind or that you think are important:

Reflection Form

The form exists to facilitate the understanding of the delivery of MST4Life™, and help delivers reflect to the best of their ability and record information in a consistent manner.

This form is comprised of two parts:

3) A **rating** scale with space for comments for how well you think you did at delivering in

   helpful and **unhelpful** ways during the session.

4) **Reflective** questions

Please write comments, using examples/quotes where possible, and rate using the rating guide.

Comments should be completed after a session, and ratings made as soon as possible after a session. The items are based on frequency and conviction, or potency, with which you performed the different behaviours**.**

There are items representing both helpful and unhelpful behaviours in each of the five subsections, which make up the CARES acronym:

C – Competence supportive (vs. Competence thwarting)

A – Autonomy supportive (vs. Controlling)

R – Relatedness (vs. Relatedness thwarting)

E - Engagement through Communication (vs. Communication barriers)

S - Structure and Group Management (vs. Lack of structure and group management)

Ratings

Please rate to what extent the facilitator displayed the skills/behaviours, on a scale of 0 (Not at all) to 3 (Well).

0 = Not displayed at all

1 = Displayed, but in a limited way

2 = Displayed with moderate frequency or conviction

3 = Displayed frequently or with conviction

N/A = Not applicable to the session or circumstance

Score

Subtotal for each subcategory (Pro and Anti MST behaviours/skills)

Overall score number and percentage out of measures e.g., 35/45. If one measure was scored as N/A this would become 35/42 and the percentage should be worked out from this score.

MST4Life™ - Reflection Form								
Session date:			**Session # & title:**					
Start time:			**Project:**					
End time:			**Facilitator:**					
# of YPs:			**Observer:**					
Competence supportive			**0**	**1**	**2**	**3**	**N/A**	
1. Provides positive reinforcement, recognises effort			☐	☐	☐	☐	☐	
2. Brings attention to mental strengths			☐	☐	☐	☐	☐	
Competence thwarting			**0**	**1**	**2**	**3**	**N/A**	
3. Uses punishment, intimidation or threats			☐	☐	☐	☐	☐	
4. Focuses on problems			☐	☐	☐	☐	☐	
Comments:								
Autonomy supportive			**0**	**1**	**2**	**3**	**N/A**	
5. Provides opportunities for input and choice			☐	☐	☐	☐	☐	
6. Encourages initiative, provides guidance without taking over			☐	☐	☐	☐	☐	
7. Provides rationale for activities/requests			☐	☐	☐	☐	☐	
Controlling			**0**	**1**	**2**	**3**	**N/A**	
8. Offers extrinsic/tangible rewards			☐	☐	☐	☐	☐	
9. Offers solutions readily			☐	☐	☐	☐	☐	
10. Uses controlling language (should, must etc.)			☐	☐	☐	☐	☐	
11. Interrupts inappropriately			☐	☐	☐	☐	☐	
12. Devalues/rejects participants' perspectives			☐	☐	☐	☐	☐	

Comments:

Relatedness supportive	0	1	2	3	N/A
13. Conveys friendliness and warmth	☐	☐	☐	☐	☐
14. Composure	☐	☐	☐	☐	☐
15. Engages in informal conversation	☐	☐	☐	☐	☐
16. Acceptance of perspectives, or normalises experience	☐	☐	☐	☐	☐
17. Tries to engage and include all participants	☐	☐	☐	☐	☐
Relatedness thwarting	0	1	2	3	N/A
18. Excludes participant(s) from discussion/activity	☐	☐	☐	☐	☐
19. Restricts opportunities for interaction and conversation	☐	☐	☐	☐	☐

Comments:

Effective communication	0	1	2	3	N/A
20. Future and present focused talk	☐	☐	☐	☐	☐
21. Asks open questions	☐	☐	☐	☐	☐
22. Understandability	☐	☐	☐	☐	☐
Barriers to effective communication	0	1	2	3	N/A
23. Inappropriate language or use of humour	☐	☐	☐	☐	☐

Comments:

Structure and group management	0	1	2	3	N/A
24. Is prepared and organised	☐	☐	☐	☐	☐
25. Group order/focus maintained	☐	☐	☐	☐	☐
Lack of structure and group management	0	1	2	3	N/A
26. Over-reliant on session plan	☐	☐	☐	☐	☐
27. Gets distracted from session	☐	☐	☐	☐	☐
28. Any significant interruptions (Yes/No)	Yes (please explain below.				No

Comments:

Scores	Other feedback and What could be improved for next time?:

P	A	
C:	C:	
A:	A:	
R:	R:	
E:	E:	
S:	S:	
/	/	

Total Score:

<u>Reflective Questions</u>

1. Can you tell me about any challenges you came across when delivering the session today?

2. Can you tell me about anything that went well when delivering the session today?

3. Could anything be done better next time?

4. Please feel free to reflect on any other aspects of the session that come to mind or that you think are important:

Systematic review: Data extraction Template

Process evaluations of PYD interventions in disadvantaged youth

Reviewer: Date:

DOI:

Author(s):

Year of publication:

Title:

Journal:

Volume/Issue: Pages:

1. Details of intervention evaluated

Intervention aim(s):

      Primary aim(s):

      Secondary aim(s):

Study design:

RCT ☐   Cross sectional ☐   Longitudinal/cohort ☐   Case study ☐   Cluster RC ☐

Participants:

Gender: M =   F =   Transgender =   Total sample size =   Age (years; range + mean±SD):

Ethnicity (where there are multiple ethnicities please indicate number for each):

      White: British ☐   English ☐   Welsh ☐   Scottish ☐   Northern Irish ☐   Irish ☐
      Gypsy/Traveller ☐   American ☐

      Asian: Pakistani ☐   Indian ☐   Bangladeshi ☐   Chinese ☐   Other ☐

      Black: African ☐   African American ☐   Caribbean ☐   Other ☐

      Other ethnic group: ☐   Ethnic group not reported: ☐

Duration of intervention (weeks):

How are participants described as being disadvantaged (if other please provide details below):

      Homelessness ☐   Alcohol abuse ☐   Substance abuse ☐

      Socio-economic background ☐   Geographical location ☐   Other ☐

      Additional details:

2. Process Evaluation

Process Evaluation aims (please tick/highlight the relevant boxes):

Aim	Fidelity of delivery style	Adherence to programme content	Dose delivered	Dose received	Engagement	Understand barriers and enablers to implementation	Other (please specify)
Primary							
Secondary							

Model used for evaluation (please state or write not described where appropriate):

Participants within process evaluation

Gender: M =   F =   Transgender =   Total sample size =   Age (years; range + mean±SD):

Ethnicity (where there are multiple ethnicities please indicate number for each):

White: British☐   English☐   Welsh☐   Scottish☐   Northern Irish☐   Irish☐   Gypsy/Traveller☐ American☐

Asian: Pakistani ☐   Indian ☐   Bangledeshi☐   Chinese☐   Other☐

Black: African☐   African American ☐   Caribbean☐   Other ☐

Other ethnic group:☐   Ethnic group not reported:☐

Data collection within process evaluation:

Data type: Qualitative ☐   Quantitative ☐   Mixed Methods ☐

Data collection method(s):

Data type	Collection Method								
	Questionnaire			Observation		Interview			Self-reflection
	Online	Paper	telephone	Face-to-face	Video recorded	Telephone	Face-to-face	Skype	Questionnaire
Quantitative									
Qualitative									

Timing of process evaluation data collection (Please indicate at which week/s data collection took place e.g. 2 weeks pre intervention or during week 3, 5 and 7):

Pre: ☐ Nweeks =   During:☐ Nweeks =   Post: ☐ Nweeks =

Continuous:☐

Data analysis used in the process evaluation

Where statistical analysis is used please make a note of the type of analysis conducted below:

Statistical analysis (please write in below) ☐   Thematic analysis☐   Narrative analysis☐

Content analysis:☐

Type of statistical analysis:

Other type of analysis (please state):

Results:

Did the study report enablers and barriers to delivering the programme (If yes please report below):

Yes ☐   No ☐

	Practical/Logistical				*Communication*		
	Travel (delivery staff or participant)	Multi-site delivery	Available space for programme delivery	Time	Behaviour management	Between facilitators	Between facilitators and organisation staff
Enabler							
Barrier							

	Communication (cont.)		*Participants*			*Programme delivery*	
	Between facilitator and participant	Between organisation staff and participant	Poor behaviour	Poor time keeping	Good behaviour	Poor time keeping	Lack of content knowledge
Enabler							
Barrier							

If <u>other barriers/enablers</u>, please state:

Reported scores (please include measurement e.g. %, 0/100, high, low etc):

Results	Fidelity of delivery style	Adherence to programme content	Dose delivered	Dose received	Engagement	Other (please specify)
Average/ mean score						

THE JOANNA BRIGGS INSTITUTE

JBI Critical Appraisal Checklist for Qualitative Research

Reviewer_____Date_____

Author _____Year_____Record Number_____.

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	☐	☐	☐	☐
2. Is there congruity between the research methodology and the research question or objectives?	☐	☐	☐	☐
3. Is there congruity between the research methodology and the methods used to collect data?	☐	☐	☐	☐
4. Is there congruity between the research methodology and the representation and analysis of data?	☐	☐	☐	☐
5. Is there congruity between the research methodology and the interpretation of results?	☐	☐	☐	☐
6. Is there a statement locating the researcher culturally or theoretically?	☐	☐	☐	☐
7. Is the influence of the researcher on the research, and vice-versa, addressed?	☐	☐	☐	☐
8. Are participants, and their voices, adequately represented?	☐	☐	☐	☐
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☐	☐	☐	☐
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☐	☐	☐	☐

Overall appraisal: Include ☐   Exclude ☐   Seek further info ☐

Comments (Including reason for exclusion)

_____

_____

_____

Critical Appraisal Checklist for Qualitative Research | 3

JBI CRITICAL APPRAISAL CHECKLIST FOR ANALYTICAL CROSS SECTIONAL STUDIES

Reviewer_____Date_____

Author_____Year_____ Record Number_____

	Yes	No	Unclear	Not applicable
1. Were the criteria for inclusion in the sample clearly defined?	☐	☐	☐	☐
2. Were the study subjects and the setting described in detail?	☐	☐	☐	☐
3. Was the exposure measured in a valid and reliable way?	☐	☐	☐	☐
4. Were objective, standard criteria used for measurement of the condition?	☐	☐	☐	☐
5. Were confounding factors identified?	☐	☐	☐	☐
6. Were strategies to deal with confounding factors stated?	☐	☐	☐	☐
7. Were the outcomes measured in a valid and reliable way?	☐	☐	☐	☐
8. Was appropriate statistical analysis used?	☐	☐	☐	☐

Overall appraisal: Include ☐   Exclude ☐   Seek further info ☐

Comments (Including reason for exclusion)

_____
_____
_____

Part I: Mixed Methods Appraisal Tool (MMAT), version 2018

Category of study designs	Methodological quality criteria	Responses			
		Yes	No	Can't tell	Comments
Screening questions (for all types)	S1. Are there clear research questions?				
	S2. Do the collected data allow to address the research questions?				
	Further appraisal may not be feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.				
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question?				
	1.2. Are the qualitative data collection methods adequate to address the research question?				
	1.3. Are the findings adequately derived from the data?				
	1.4. Is the interpretation of results sufficiently substantiated by data?				
	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?				
2. Quantitative randomized controlled trials	2.1. Is randomization appropriately performed?				
	2.2. Are the groups comparable at baseline?				
	2.3. Are there complete outcome data?				
	2.4. Are outcome assessors blinded to the intervention provided?				
	2.5 Did the participants adhere to the assigned intervention?				
3. Quantitative non-randomized	3.1. Are the participants representative of the target population?				
	3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?				
	3.3. Are there complete outcome data?				
	3.4. Are the confounders accounted for in the design and analysis?				
	3.5. During the study period, is the intervention administered (or exposure occurred) as intended?				
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the research question?				
	4.2. Is the sample representative of the target population?				
	4.3. Are the measurements appropriate?				
	4.4. Is the risk of nonresponse bias low?				
	4.5. Is the statistical analysis appropriate to answer the research question?				
5. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?				
	5.2. Are the different components of the study effectively integrated to answer the research question?				
	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?				
	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?				
	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?				

Phase 1 timepoint 1 (first three MST4Life™ workshops)

Q1: What's one thing you do most days because you really want to do it? (For example, this could be a hobby, sport, job, music, art, caring for pets, family or friends, cooking, fashion etc.)

Q2: What are some of the difficulties you run into in keeping up this activity?

Q3: How do you overcome these difficulties and keep going with the activity?

Q4: What are your top three strengths and how could you use them in different parts of your life?

Q5: What were your reasons for getting involved in this programme?

Q6: What did you expect this programme to be about?

Q7: What did you hope to get out of attending this programme?

Q8: What are your thoughts about the programme so far?

Phase 1 timepoint 3 (last three MST4Life™ workshops)

Q1: What have you found most challenging during this programme?

Bringing in customers for the cake sale

Q1 follow up: Did you manage to overcome this challenge? How?

Q2: What has been your greatest achievement during the programme so far?

Q3: Have you discovered any new strengths in yourself through taking part in this programme? Please explain...

Q4: What are your views on the style and approach of the people who delivered this programme?

Q5: Would you recommend this programme to other young people at St Basils?

If 'YES' – why would you recommend this programme?

If 'NO' - why wouldn't you recommend this programme?

Q6: Do you think your day-to-day life will have improved in anyway as a result of attending this programme?

If 'YES' – what improvements to you expect to see?

If 'NO' – why don't you think there will be any improvements?

Q7: Are there any improvements we could make to the programme?

Q8: What advice would you give other young people who want to take part and succeed in this programme?

Evaluation of My Strengths Training
Observer *Consent Form*

The following information regarding your birthdate and number siblings will be used to form a unique and easy to remember study ID code for you.

Your Study ID Code:
**** (VERY IMPORTANT) ****
Your date of birth: ____ / ____ / ____   Your number of siblings: _____
                              D   M   Y   #

	Tick to consent
I confirm that I have read and understand the information sheet and have had the opportunity to as questions to my satisfaction.	☐
I understand that my information will be anonymised using the above study ID code.	☐
I understand that I will be invited to complete a demographic questionnaire. I understand that I do not have to provide any information that I do not wish to.	☐
I understand that if I have not already undergone observation training with the Quality and Evaluation team that I must take part in order to conduct observations for this study.	☐
I give consent for the data that I provide to be used for research purposes (e.g., my questionnaire responses, demographic information, and any interview responses I may give).	☐
I agree to take part in the above study.	☐

_____   _____   _____

First and Surname   Date   Signature

**Evaluation of My Strengths Training
St Basils staff *Consent Form***

The following information regarding your birthdate and number siblings will be used to form a unique and easy to remember study ID code for you.

Your Study ID Code:
**** (VERY IMPORTANT) ****
Your date of birth: ____ / ____ / ____   Your number of siblings: _____
                              D   M   Y   #

	Tick to consent
I confirm that I have read and understand the information sheet and have had the opportunity to as questions to my satisfaction.	☐
I understand that my information will be anonymised using the above study ID code.	☐
I understand that I will be invited to complete a demographic questionnaire. I understand that I do not have to provide any information that I do not wish to.	☐
I understand that I will be required to complete a pre- and post-training questionnaire as part of this study. I understand that I do not have to answer any questions I do not wish to.	☐
I understand that I may be invited to take part in a one-to-one interview. I understand that participation in the interview is voluntary and that I can choose not take part. I understand that the interview will be digitally recorded and transcribed verbatim (word-for-word).	☐
I give consent for the data that I provide to be used for research purposes (e.g., my questionnaire responses, demographic information, and any interview responses I may give).	☐
I agree to take part in the above study.	☐

_____   _____   _____
First and Surname   Date   Signature

Evaluation of My Strengths Training
University of Birmingham *Consent Form*

The following information regarding your birthdate and number siblings will be used to form a unique and easy to remember study ID code for you.

Your Study ID Code:
**** (VERY IMPORTANT) ****
Your date of birth: ____ / ____ / ____   Your number of siblings: _____
              D   M   Y   #

	Tick to consent
I confirm that I have read and understand the information sheet and have had the opportunity to as questions to my satisfaction.	☐
I understand that my information will be anonymised using the above study ID code.	☐
I understand that I will be invited to complete a demographic questionnaire. I understand that I do not have to provide any information that I do not wish to.	☐
I give consent for observation of training I deliver to St Basils staff to be observed by the quality and evaluation team.	☐
I understand that I may be invited to take part in a one-to-one interview. I understand that participation in the interview is voluntary and that I can choose not take part. I understand that the interview will be digitally recorded and transcribed verbatim (word-for-word).	☐
I give consent for the data that I provide to be used for research purposes (e.g., my questionnaire responses, demographic information, and any interview responses I may give).	☐
I agree to take part in the above study.	☐

_____   _____   _____
First and Surname   Date   Signature

Evaluation of My Strengths Training for St Basils
Observer Participant information sheet

What is MST4Life™?

- We are the quality and evaluation team for the My Strengths Training for Life programme (MST4Life™) and would like to invite you to take part in a study evaluating the training for St Basils staff.
- MST4Life™ was developed to support young people's aspirations for accessing education and employment opportunities.
- It is often used to help athletes to improve their competitive performance.
- We now know that this approach also educates young people about using different mental strengths (e.g., effective goal setting) to help them to realise their individual potential and develop well-being.

What is the purpose of our work?

- Evaluate the MST4Life™ programme to understand:
  - o Adherence to expected delivery style and content within staff training (champions or co-delivery training).
  - o The role and impact of the training on people's perceptions of MST4Life, and their confidence in utilising the MST style when communicating with young people.
  - o Any needed improvements.

Why have I been invited, and do I have to take part?

- You are a member of the quality and evaluation team for MST4Life who has been invited to observe either champions training, co-delivery training, or MST training for staff at St Basils.
  - o After reading this information sheet, you are encouraged to ask any questions about our work.
  - o If you agree to take part, we would like you to complete the consent form.
  - o You do not have to take part in this evaluation of MST4Life.

If I agree, what will I have to do?

- Complete a demographic questionnaire about your basic information (e.g., age, gender, work experience, education).
- Observe the training sessions completing an observation form which you will be trained on how to use prior to commencement of data collection.

There are no known risks associated with participation in this research.

How will my confidentiality be protected?

- The programme and its evaluation will operate under St Basils confidentiality and General Data Protection Regulation (2016) Policies (available on request).
- Anything you tell us will be in confidence and will not be shared with anyone else without your consent.

- However, if you tell us anything which indicates that someone's health and safety is at risk, including your own, we may have to share this information. If this happens, we will keep you informed of any actions we are taking.

Who do I speak to if I have any concerns?
- Sometimes observing others can make you feel uncomfortable or nervous. Please speak to Dr Jennifer Cumming if you have any concerns (details below).

Can I withdraw once we have has started?
- You may withdraw at any time prior to the training taking place and you will not have to take conduct the observation. This can be done without any explanation or consequence. You can also withdraw without any explanation or consequence after the training has taken place. The deadline for withdrawal is 3 weeks after training was received.
  - If you choose to withdraw, all your data will be destroyed and will not be included in our research.
- If you choose to withdraw, please either tell a member of the MST4Life™ Quality and Evaluation team, or contact Dr Jennifer Cumming, the Project Director of MST4Life™ programme (contact details below).

What will happen to the results of the research?
- The findings will be used to help further improve the delivery of MST4Life.
- The findings will be used to improve the training received by St Basils staff.
- The results of the study may be used for scientific purposes, including publication in scientific journals, and your anonymity is fully maintained.
- A brief summary presenting the results and findings of the programme will be given to each observer.

In accordance with the General Data Protection Regulation (2016) raw and processed data from this investigation will be kept for ten years following completion of the study. Consent forms and computer files containing processed data will be kept securely in a locked filing cabinet and will only be accessed by the study investigators. After this period, all the data collected (including video and audio files) will be destroyed.

Further information and contact details
Dr Jennifer Cumming
School of Sport, Exercise, and Rehabilitation Sciences, University of Birmingham, B15 2TT

Evaluation of My Strengths Training for St Basils
St Basils staff Participant information sheet

What is MST4Life™?

- We are the quality and evaluation team for the My Strengths Training for Life programme (MST4Life™) and would like to invite you to take part in a study evaluating the training for St Basils staff.
- MST4Life™ was developed to support young people's aspirations for accessing education and employment opportunities.
- It is often used to help athletes to improve their competitive performance.
- We now know that this approach also educates young people about using different mental strengths (e.g., effective goal setting) to help them to realise their individual potential and develop well-being.

What is the purpose of our work?

- Evaluate the MST4Life™ programme to understand:
  o Adherence to expected delivery style and content within staff training (champions or co-delivery training).
  o The role and impact of the training on people's perceptions of MST4Life, and their confidence in utilising the MST style when communicating with young people.
  o Any needed improvements.

Why have I been invited, and do I have to take part?

- You are a member of staff within St Basils who will be undergoing either champions training, co-delivery training, or MST training with the University of Birmingham MST4Life team.
  o After reading this information sheet, you are encouraged to ask any questions about our work.
  o If you agree to take part, we would like you to complete the consent form.
  o You do not have to take part in this evaluation of MST4Life.

If I agree, what will I have to do?

- Take part in the training as per normal. However, a member of the Quality and Evaluation team will be present to collect data using the questionnaires and also observe the University of Birmingham staff.
- Complete a pre-training questionnaire on your thoughts and understanding around MST4Life and your confidence in utilising an "MST style" of communication.
- Complete a post-training questionnaire on your thoughts and understanding around MST4Life and your confidence in utilising an "MST style" of communication, as well as your opinion on the training session.
- Complete a demographic questionnaire about your basic information (e.g. age, gender, work experience, education).
- The possibility to take part in one-to-one interviews to discuss in more depth any reflections you would like to share.

There are no known risks associated with participation in this research.

How will my confidentiality be protected?

- The programme and its evaluation will operate under St Basils confidentiality and General Data Protection Regulation (2016) Policies (available on request).
- Anything you tell us will be in confidence and will not be shared with anyone else without your consent.
    - However, if you tell us anything which indicates that someone's health and safety is at risk, including your own, we may have to share this information. If this happens, we will keep you informed of any actions we are taking.

Who do I speak to if I have any concerns?

- Sometimes being in a room where an observation is occurring can make you feel uncomfortable, and completing pre-post questionnaires can make you feel worried if you don't feel you have gained anything from the training. Please speak to Dr Jennifer Cumming if you have any concerns (details below).

Can I withdraw once we have has started?

- You may withdraw at any time prior to the training taking place and you will not be required to complete any questionnaires. This can be done without any explanation or consequence. You can also withdraw without any explanation or consequence after the training has taken place. The deadline for withdrawal is 3 weeks after training was received.
    - If you choose to withdraw, all your data will be destroyed and will not be included in our research.
- If you choose to withdraw please either tell a member of the MST4Life™ Quality and Evaluation team, or contact Dr Jennifer Cumming, the Project Director of MST4Life™ programme (contact details provided below), or your manager.

What will happen to the results of the research?

- The findings will be used to help further improve the delivery of MST4Life.
- The findings will be used to improve the training received by St Basils staff.
- The results of the study may be used for scientific purposes, including publication in scientific journals, and your anonymity is fully maintained.
- A brief summary presenting the results and findings from this study will be given to St Basils to distribute to participants at the end of the study.

In accordance with the General Data Protection Regulation (2016) raw and processed data from this investigation will be kept for ten years following completion of the study. Consent forms and computer files containing processed data will be kept securely in a locked filing cabinet and will only be accessed by the study investigators. After this period, all the data collected (including video and audio files) will be destroyed.

Further information and contact details

Dr Jennifer Cumming

School of Sport, Exercise, and Rehabilitation Sciences, University of Birmingham, B15 2TT

Evaluation of My Strengths Training for St Basils
University of Birmingham Participant information sheet

What is MST4Life™?

- We are the quality and evaluation team for the My Strengths Training for Life programme (MST4Life™) and would like to invite you to take part in a study evaluating the training for St Basils staff.
- MST4Life™ was developed to support young people's aspirations for accessing education and employment opportunities.
- It is often used to help athletes to improve their competitive performance.
- We now know that this approach also educates young people about using different mental strengths (e.g., effective goal setting) to help them to realise their individual potential and develop well-being.

What is the purpose of our work?

- Evaluate the MST4Life™ programme to understand:
  - Adherence to expected delivery style and content within staff training (champions or co-delivery training).
  - The role and impact of the training on people's perceptions of MST4Life, and their confidence in utilising the MST style when communicating with young people.
  - Any needed improvements.

Why have I been invited, and do I have to take part?

- You are a member of the MST4Life delivery team who will be conducting either champions training, co-delivery training, or MST training for staff at St Basils.
  - After reading this information sheet, you are encouraged to ask any questions about our work.
  - If you agree to take part, we would like you to complete the consent form.
  - You do not have to take part in this evaluation of MST4Life.

If I agree, what will I have to do?

- Deliver the training as per normal. However, a member of the Quality and Evaluation team will be present to observe the training day paying attention to delivery style and content covered.
- Complete a demographic questionnaire about your basic information (e.g. age, gender, work experience, education).
- The possibility to take part in one-to-one interviews to discuss in more depth any reflections you would like to share.

There are no known risks associated with participation in this research.

How will my confidentiality be protected?

- The programme and its evaluation will operate under St Basils confidentiality and General Data Protection Regulation (2016) Policies (available on request).
- Anything you tell us will be in confidence and will not be shared with anyone else without your consent.
    - However, if you tell us anything which indicates that someone's health and safety is at risk, including your own, we may have to share this information. If this happens, we will keep you informed of any actions we are taking.

Who do I speak to if I have any concerns?
- Sometimes being observed can make you feel uncomfortable or nervous. Please speak to Dr Jennifer Cumming if you have any concerns (details below).

Can I withdraw once we have has started?
- You may withdraw at any time prior to the training taking place and you will not be observed. This can be done without any explanation or consequence. You can also withdraw without any explanation or consequence after the training has taken place. The deadline for withdrawal is 3 weeks after training was received.
    - If you choose to withdraw, all your data will be destroyed and will not be included in our research.
- If you choose to withdraw, please either tell a member of the MST4Life™ Quality and Evaluation team, or contact Dr Jennifer Cumming, the Project Director of MST4Life™ programme (contact details below).

What will happen to the results of the research?
- The findings will be used to help further improve the delivery of MST4Life.
- The findings will be used to improve the training received by St Basils staff.
- The results of the study may be used for scientific purposes, including publication in scientific journals, and your anonymity is fully maintained.
- A brief summary presenting the results and findings of the programme will be given to each training facilitator as well as real time feedback following the session.

In accordance with the General Data Protection Regulation (2016) raw and processed data from this investigation will be kept for ten years following completion of the study. Consent forms and computer files containing processed data will be kept securely in a locked filing cabinet and will only be accessed by the study investigators. After this period, all the data collected (including video and audio files) will be destroyed.

Further information and contact details
Dr Jennifer Cumming
School of Sport, Exercise, and Rehabilitation Sciences, University of Birmingham, B15 2TT

Demographic Questionnaire – Observers

Please provide your date of birth and number of siblings in the following format (07.10.1991/01). This will enable us to pseudo-anonymise your data and will now be your ID number.

__.__.____/__

1. **Name:**
   ………

2. **Age(Years/Months):**………………………………………………………………………………………………

3. **Number of MST4Life sessions previously observed?**
   …………………………………………………….

4. **Do you have any previous experience in conducting observations prior to MST4Life? If yes, please provide details:**
   ……
   ……
   ……
   ……
   ………

5. **Have you received psychologically informed environments (PIE) training? If so, when?**
   ……
   ……..

6. **What is your area and level of formal education?**………………………………………………………………………
   ………
   ………….

Demographic Questionnaire - St Basils Staff

Please provide your date of birth and number of siblings in the following format (07.10.1991/0). This will enable us to pseudo-anonymise your data and will now be your ID number.

__.__.____/__

1. **Name:**
……….

2. **Age (Years/Months):**……

3. **How long have you worked at St Basils? (years/months)**
…………………………………………………….

4. **Number of years' experience working with disadvantaged youth?**
…………………………………….

5. **Have you received psychologically informed environments (PIE) training? If so, when?**
………
……..

6. **What is your area and level of formal education?**……………………………………………………………………
………
…………..

7. **Please could you tell us about any previous experience you have had in working with the MST4Life project?**
………
………
………
………
……………………………………

Appendix 24: MST training evaluation – Demographic questionnaire for University training deliverers (Chapter 6)

Demographic Questionnaire – University of Birmingham Staff

Please provide your date of birth and number of siblings in the following format (07.10.1991/0). This will enable us to pseudo-anonymise your data and will now be your ID number.

__.__.____/__

1. **Name:**
   …….

2. **Age (Years/Months):**………

3. **How long have you worked at St Basils? (years/months)**
   …………………………………………………….

4. **Number of years' experience working with disadvantaged youth?**
   ………………………………….

5. **Have you received psychologically informed environments (PIE) training? If so, when?**
   ……
   ……..

6. **What is your area and level of formal education?**……………………………………………………………………………
   ……
   …………..

7. **Please could you tell us about any previous experience you have had in working with the MST4Life project?**
   ……
   ……
   ……
   ……
   …………………………………

Champions training observation form

Please fill out the observation form below completing all sections fully. There are four sections to complete. Each section will include a brief explanation of how to fill out each section as a reminder following training received.

1. Session details – basic information on the session (e.g., date)
2. Fidelity of delivery style – extent to which certain behaviours are displayed by training facilitator
3. Adherence to content – (e.g., introduction, session 1 etc.)
4. Reflections – six open ended questions section based on what went well, what could be improved etc.

Upon completion of this form please return to G7 for safe storage of this data.

Part one - session details	
(Please complete the following information in full)	
Date (dd/mm/yyyy):	Observer:
Training type:	Facilitator:
Start & end times: (please detail length of any breaks):	Number of attendees:

Part two – Fidelity of delivery style
(Please complete this section fully. Focus on the extent to which the training facilitator exhibits these behaviours using the 0-3 rating scale. Please write any specific examples or thoughts of times when this behaviour is or is not exhibited.)

0 = Not displayed at all
1 = Displayed, but in a limited way
2 = Displayed with moderate frequency or conviction
3 = Displayed frequently or with conviction

Behaviour:	0	1	2	3	Comments:
1a. Provides positive reinforcement/recognises effort					
2a. Provides opportunities for input and choice					
2b. Encourages initiative/provides guidance without taking over					
2c. Provides rationale for activities requests					
3a. Conveys friendliness and warmth					
3b. Acceptance of perspectives					

3c. Tries to engage and include all participants				
4a. Future and present focused talk				
4b. Asks open questions				
4c. Understandability				
4d. Maintains group focus/order				

Part three – Content fidelity
(Please complete this section fully. For each training component such as introduction and session 1 please place an X in the box which best describes the extent to which this section was covered based on the plan. Please write any comments as to why you chose yes, no or partly).

Yes = The component was covered completely
Partly = The component was covered to some extent but not completed as described in the plan
No = The component was not covered at all

Training component:	Yes	No	Partly	Comments:
1.				
2.				
3.				
4.				
5.				
6.				

Part four – Reflections
Please use the below six questions to reflect on the session. Think about things that went well and could be improved by the training facilitators and also in terms of conducting observations within this context.
Q1) In what ways do you think the training session went well in the training session today?

Q2) In what ways do you think the training session could have gone better and what could be done in the future to overcome this?

Q3) Please include any other reflections or thoughts you might have surrounding the delivery of the training:

Q4) In what ways do you think the observation went well?

Q5) In what ways do you feel the observation could have gone better and how might you suggest overcoming any challenges?

Q6) Please include any additional comments on observing in this context should you feel your thoughts have not been captured in the above questions.

Champions training facilitator reflection form

Please fill out the reflection form below completing all sections fully. There are four sections to complete. Each section will include a brief explanation of how to fill out each section as a reminder following training received.

1. Session details – basic information on the session (e.g., date)
2. Fidelity of delivery style – extent to which certain behaviours are displayed by training facilitator
3. Adherence to content (e.g., introduction, session 1 etc.)
4. Reflections – six open ended questions section based on what went well, what could be improved etc.

Upon completion of this form please send to Grace Tidmarsh

Part one - session details (Please complete the following information in full)	
Date (dd/mm/yyyy):	Observer:
Training type: Transition Hub – Delivery style session	Facilitator:
Start & end times: (please detail length of any breaks):	Number of attendees:

Part two – Fidelity of delivery style

(Please complete this section fully. Focus on the extent to which you feel you exhibited these behaviours using the 0-3 rating scale. Please write any specific examples or thoughts of times when this behaviour is or is not exhibited.)

0 = Not displayed at all
1 = Displayed, but in a limited way
2 = Displayed with moderate frequency or conviction
3 = Displayed frequently or with conviction

Behaviour:	0	1	2	3	Comments:
1a. Provides positive reinforcement/recognises effort					
2a. Provides opportunities for input and choice					
2b. Encourages initiative/provides guidance without taking over					
2c. Provides rationale for activities requests					
3a. Conveys friendliness and warmth					

3b. Acceptance of perspectives					
3c. Tries to engage and include all participants					
4a. Future and present focused talk					
4b. Asks open questions					
4c. Understandability					
4d. Maintains group focus/order					

Part three – Content fidelity
(Please complete this section fully. For each training component such as introduction and session 1 please place an X in the box which best describes the extent to which this section was covered based on the plan. Please write any comments as to why you chose yes, no or partly).

Yes = The component was covered completely
Partly = The component was covered to some extent but not completed as described in the plan
No = The component was not covered at all

Training component:	Yes	No	Partly	Comments:
1. Introduction to key theories behind MST delivery				
2. Introduction to CARES model				
3. Overview of practicalities of how MST is delivered				
4. Categorise behaviours activity				
5. Brainstorming and group discussion on "pro-MST" and "anti-MST" behaviours				
6. Closing/recap of things covered in session.				

Q1) In what ways do you think the training session went well today?

Q2) In what ways do you think the training session could have gone better and what could be done in the future to overcome this?

Q3) Please include any other reflections or thoughts you might have surrounding the delivery of the training:

Q4) How did you find having the session observed?

Q5) Please include any additional comments on about your experience of delivering the transition hub training session should you feel your thoughts have not been captured in the above questions.

MST TRAINING

Pre-training questionnaire (All questions are optional)

Please give us your feedback by circling the appropriate number.

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1. I understand the rationale of MST4Life (i.e., approach).	1	2	3	4	5
2. I understand what mental skills are (i.e., emotional control).	1	2	3	4	5
3. I feel confident in supporting young people through MST.	1	2	3	4	5
4. I believe MST is beneficial for young people.	1	2	3	4	5
5. I feel confident in supporting colleagues in their use of MST.	1	2	3	4	5
6. I understand how the MST4Life/You Can team will support me throughout the programme and how I can get in touch with them.	1	2	3	4	5

MST TRAINING

Training feedback

Part 1: Please give us your feedback by circling the appropriate number.

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1. I understood the aims of the training.	1	2	3	4	5
2. I have a better understanding of the rationale of MST4Life (i.e., approach).	1	2	3	4	5
3. I have a better understanding of what mental skills are.	1	2	3	4	5
4. I can understand how MST is beneficial for young people.	1	2	3	4	5
5. I found the course materials to be helpful.	1	2	3	4	5
6. It was easy for me to get actively involved in the sessions by asking questions or contributing to discussions.	1	2	3	4	5
7. I found the training facilitators to be friendly and knowledgeable.	1	2	3	4	5
8. I was pleased with the time and location of the workshop.	1	2	3	4	5

9. My expectations for this workshop have been fulfilled.	1	2	3	4	5
10. I found the sessions to be enjoyable and engaging.	1	2	3	4	5
11. I feel more confident in supporting young people through MST having attended this training.	1	2	3	4	5
12. I feel more confident in supporting colleagues in their use of MST.	1	2	3	4	5
13. I better understand how the MST4Life/You Can team will support me throughout the programme and how I can get in touch with them.	1	2	3	4	5
14. I would recommend this training to other staff members involved in MST4Life.	1	2	3	4	5
15. I would be interested in attending more training on MST4Life.	1	2	3	4	5

Part 3: Your comments

1. What, for you, were the **three most important things** you learned in this training?

2. Of the things you learnt, what do you plan to use in the future?

3. What, if anything, would you change to improve the training?

4. What other topics, related to MST4Life, would you like to be covered in future training?