

# Social Work/Maatskaplike Werk

## A professional journal for the social worker

w: <https://socialwork.journals.ac.za/pub> e: [socialwork@sun.ac.za](mailto:socialwork@sun.ac.za) eISSN: 2312-7198 (online)



Vol. 60, No. 3, 2024

DOI: <https://doi.org/10.15270/60-3-1348>



### THE EFFECT OF A MULTIDISCIPLINARY PSYCHOSOCIAL SUPPORT PROGRAMME ON THE RESILIENCE OF FEMALE ADOLESCENT RECIPIENTS IN JOHANNESBURG

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Article received: 25/05/2023; Article accepted: 10/09/2023; Article published: 10/09/2024

#### ABSTRACT

The Ruth First Jeppe Memorial Trust (RFJM Trust) provides scholarships to deserving female secondary school learners in Johannesburg and offers a pilot multidisciplinary psychosocial support programme (MPSP) developed by a social worker to enhance their resilience and to facilitate the achievement of their potential. South African female adolescents are challenged daily by their social, economic, cultural, political and historical environments, which in combination threaten their development and functioning. Therefore, female adolescents require high levels of resilience to thrive. Through the pre-test/post-test measurement of the individual, relational and contextual protective resources of Grade 8 recipients of the RFJM Trust, a paired-samples *t*-test and correlation analysis determined that two aspects of the MPSP have moderate to large correlations with resilience. This quantitative, quasi-experimental, evaluative study will assist in improving the MPSP and contribute towards evidence-based practice in school social work.

**Keywords:** evidence-based practice; female adolescents; resilience

#### INTRODUCTION

Resilience is an essential skill for South African adolescents who need to overcome challenges, as it allows them to adapt and cope in adverse circumstances (Scoloveno, 2016). The concept of resilience has evolved, and resilience is now considered dynamic and can be improved through interventions aimed at different areas of an individual's life system (Cassidy, 2015; Jacobs, 2015; Van Rensburg, Theron & Rothmann, 2015). Resilient individuals can use internal and external

resources to succeed despite challenges and risk factors, and these resources include individual, relational and contextual protective factors (Harms, Pooley & Cohen, 2017; Ungar & Liebenberg, 2009) which can be applied to adolescents as well (Cassidy, 2015; Mampane, 2014; Van Breda & Theron, 2018).

A pilot multidisciplinary psychosocial support programme (MPSP) provided by the Ruth First Jeppe Memorial Trust (RFJM Trust) aims to enhance the resilience of its female adolescent recipients through individual therapy, mentorship, skills development, cultural and sporting experiences, and academic lessons. The MPSP aims to provide resources and interventions to increase individual abilities, supportive relationships and access to community resources, in line with research which shows that such interventions can enhance resilience (Ungar & Liebenberg, 2009). This article will evaluate the effectiveness of the MPSP.

## **BACKGROUND ON THE RUTH FIRST JEPPE MEMORIAL TRUST**

The RFJM Trust provides scholarships for female adolescents at Jeppe High School for Girls, which is a high-quality English-medium government high school situated in Kensington, Johannesburg. The recipients are awarded the scholarship based on their display of excellence in leadership, high academic ability, perseverance, bravery and determination (Ruth First Jeppe Memorial Trust, 2020). Candidates for the scholarship are nominated by their principal in Grade 7 because they have displayed these qualities in primary school. Female learners in Grade 7 of any race and nationality, living within Gauteng, may be nominated for intake into the scholarship in Grade 8. All candidates are screened according to their academic results, motivation from their principal and their financial means. Candidates must qualify for a 100% exemption of school fees in terms of government school fee exemption regulations.

## **PROBLEM FORMULATION AND RATIONALE**

The importance of resilience research, particularly in relation to female adolescents facing various challenges in their development process, has not waned (Mould, 2014). South African adolescents face a range of societal challenges, including economic disparities, limited access to basic services, abuse, violence, gender inequality, crime, HIV/AIDS, early sexualisation and substance abuse, which disproportionately affect historically disadvantaged communities (Petersen, 2013; Van Breda & Theron, 2018). Female adolescents face additional challenges including gender discrimination, gender-based violence and contradictory societal messaging on sexuality and femininity standards (Petersen, 2013). Approximately 62.2% of South African youths live below the poverty line, 34.8% have experienced physical abuse from an adult and 35.4% have been sexually abused (Toska *et al.*, 2019). Adolescents who are not South African, or who do not have South African parents, are potentially exposed to an additional societal challenge – xenophobia. This is relevant as several of the RFJM Trust's female adolescent recipients fall into this category. Xenophobia is the hatred or fear of foreigners, who are believed to pose a threat to the livelihoods, individual rights and economic achievement of South African nationals or South African national safety (Malesela, 2017). In South Africa xenophobia is considered to be one of the most pervasive

and dangerous elements that African foreign nationals experience and it has resulted in mass violence against foreign nationals and individual experiences of abuse and hatred (Olofinbiyi, 2022). Foreign nationals are also plagued by restrictive bureaucracy and corruption, which makes it challenging for them to obtain and maintain documentation (Moyo & Zanker, 2022).

Considering the reality of the threats highlighted, social workers who are working with female adolescents must understand and address the context of the risks to which their clients are exposed. The Children's Act 38 of 2005 (Republic of South Africa, 2006) also emphasises the role of professionals in empowering and enabling resilient adolescents; moreover, the National Development Plan recognises the importance of investing in the youth to address societal problems in South Africa (Maluleke, 2020). Without capable, resilient female adolescents, the abject South African social, political and economic environment will deteriorate even further. Therefore, studies aimed at understanding factors that promote resilience processes within this population are important to the social work profession. Ungar and Liebenberg (2009) agree and assert that professionals who work with adolescents are mandated to intervene in a manner that improves their resilience, and there has been a call for the creation of formal services which target the social ecologies of adolescents to promote their positive adjustment to adverse circumstances (Theron & Theron, 2014; Van Breda & Theron, 2018).

The RFJM Trust is aware that some of its recipients have not achieved their potential within the secondary school environment and that many of the recipients are living in adverse circumstances. In response to this, a comprehensive MPSP to facilitate interventions and provide an enabling environment for its recipients was developed. The purpose of this study is to determine whether the MPSP has had the envisioned effect on the resilience of the recipients of the Trust. While the concept of resilience and the context of the factors underpinning resilience have been the subject of many social work studies in South Africa (Jacobs, 2015; Mampane, 2014; Petersen, 2013; Theron & Theron, 2014; Van Rensburg, 2014), very few social work intervention studies have been undertaken here. This study appears to be the first of its kind in South Africa; it is a study to evaluate a programme that attempts to intervene in the entire social ecology and resilience processes of adolescents through multidisciplinary coordination. The study is an important step in the assessment and improvement of the MPSP and can be used to contribute to evidence-based practice within the social work field.

## **THEORETICAL FRAMEWORK**

The scientific evolution of the understanding of resilience has led to the development of several theoretical frameworks for resilience research. For the purposes of this study, a social ecology of resilience framework was used, which Michael Ungar has enhanced through years of application (Ungar, 2011; Ungar, 2012; Ungar, Ghazinour & Richter, 2013). This framework was chosen because it is viewed as being credible by respected resilience researchers and has been effectively utilised for multiple quantitative studies (Van Rensburg, 2014); it also correlates with the definition of resilience that underpins this research (Ungar, 2011), as well as with the measuring

instrument used in this study – the Child and Youth Resilience Measure-28 (CYRM-28), which was designed within this framework (Ungar & Liebenberg, 2009). The social ecology of the resilience framework takes into account the real-world context and culture of the adolescent and its impact on their resilience (Theron, 2016). It investigates the opportunities within a social ecology for individuals when they are under stress, and the meaning ascribed to those opportunities within a cultural context (Ungar, 2012). It also asserts that social ecologies should actively engage adolescents in processes geared toward promoting resilience (Theron, 2016).

This framework theorises that resilient at-risk individuals will move towards accessing the resources available to them in their environments (social ecologies) when under stress, and that their social ecologies will reciprocate and provide opportunities for utilising resources within a transactional process (Van Rensburg, 2014). Four principles underlie the social-ecological understanding of resilience: decentrality, complexity, atypicality and cultural relativity (Ungar, 2011).

Decentrality indicates that resilience is displayed when individuals use the resources and opportunities available to them, and that resilience interventions should therefore focus on enhancing the facilitative nature of an individual's physical and social environments in meaningful ways, rather than changing the individual themselves (Ungar, 2012). Complexity implies that causality cannot be predicted because multiple factors interact, facilitate or integrate interchangeably in a complex process of interactions and transactions between individuals and their social ecologies; therefore, individuals cannot be classified as being persistently vulnerable or consistently resilient over time and in different contexts (Ungar, 2011). Atypicality means that resilience may be expressed in undesirable behaviours because of the environments individuals find themselves in, and the expectation is that if those environments are improved, then more desirable behaviours will manifest (Ungar, 2011). As far as cultural relativity is concerned, resilience processes in individuals should be understood within their context and culture as well as within a historical perspective, because culture determines whether or not a resource is considered protective and meaningful (Ungar, 2011; Ungar, 2012).

The concepts within this theoretical framework are integral to the development of the research hypothesis, goal and objectives.

## **RESEARCH HYPOTHESIS, GOAL AND OBJECTIVES**

Based on the literature on resilience and embedded within the context of the social-ecological understanding of resilience, the hypothesis of this study is that the RFJM Trust multidisciplinary psychosocial support programme (MPSP) has had a positive effect on the levels of resilience of its recipients. The goal of this study was to determine if the pilot MPSP has had an effect on the resilience of the recipients of the RFJM Trust. This was achieved through pursuing the following objectives:

- To determine whether the MPSP has a positive effect on the levels of the individual protective resources of the recipients;
- To determine whether the MPSP has had a positive effect on the levels of the relational protective resources of the recipients;
- To determine whether the MPSP has a positive effect on the levels of the contextual protective resources of the recipients.

## LITERATURE REVIEW

Reviewing the literature provided the necessary background and context to the research.

### Positive outcomes related to resilience

Resilient adolescents who are subjected to adverse circumstances can overcome and thrive within these circumstances despite the adversities faced, even if they are severe. This is because they have the ability to identify and access their internal and external resources to adapt in any situation (Liebenberg & Joubert, 2019). There are lower levels of mental illness in those who self-report higher resilience, and considering the prevalence of mental illness among teenagers (8-20%), the value of resilience when addressing the issue cannot be ignored (Henje Blom, Duncan, Ho, Connolly, LeWinn *et al.*, 2014; Joyce *et al.*, 2018).

Resilience is one of the key factors in the learning process for students, with higher resilience indicating greater adaptability and skills development (Román-Mata, Puertas-Molero, Ubago-Jiménez & González-Valero, 2020), which impacts positively on long-term school and employment outcomes (Mwangi, Okatcha, Kinai & Ileri, 2015). Therefore, resilience promotes short- and long-term physical wellbeing, healthy psychological and social functioning, and development (Govender *et al.*, 2017). These are the factors that play a protective role in preventing maladaptive behaviours that put students' physical and emotional wellbeing at risk. Considering the outcomes of sound resilience, the initial cost of implementing effective intervention programmes is small when compared to the programme's later benefit of enabling high-risk adolescents to become functional, law-abiding and caring adults who can make a contribution to society (Levine, 2003).

### Enhancing an individual's resilience

A central theme in this study is that the RFJM Trust seeks to promote resilience through the MPSP, but the question of whether resilience be enhanced remains. An ecological, transactional view of resilience speaks to the possibility of the development of resilience in adolescents because of the understanding (from previous studies) that there are pathways and protective factors which promote resilience (Theron & Van Rensburg, 2018). If internal and external resources promoting resilience are improved, then people can more capably utilise these resources and navigate adverse circumstances (Joyce *et al.*, 2018).

Protective resources identified in research include individual, relational and contextual aspects which entail the following dimensions (Métais *et al.*, 2022; Theron & Van Rensburg, 2018; Wang, Liu & Zhao, 2014):

- Individual – conscientiousness; empathy; self-regulation; internal locus of control; optimism; intelligence; self-confidence; self-awareness; impulse control; having goals and aspirations; a sense of responsibility; and the ability to problem-solve;
- Relational – supportive, engaged, functional caregivers and healthy attachments; peer relationships which facilitate social acceptance, positive values and self-identities; the presence of positive mentors and role models; perceived social support; social competence; and engagements with adults who respect and promote youth success;
- Contextual – community structures which promote safety and provide access to education; a variety of sporting and cultural activities; recreational and competence-promoting resources; physical and mental health support; perceived social equity; tolerance of different beliefs; spiritual and cultural connectedness; and traditions with appropriate rites of passage.

When designing interventions for resilience, there are several opportunities for a positive impact through the purposeful creation of supportive environments (Kumpfer, 1999). Interventions that adolescents can access, and which are coordinated and managed effectively, are able to improve their resilience (Sanders *et al.*, 2015), as long as there is a focus on providing social-ecological support and developing individual resources (Graber, Pichon & Carabine, 2015). A South African study found that positive social support at school, home, with peers and within the community, combined with clear expectations and boundaries maintained at school and home, a sense of belonging and interpersonal relationships that were nurturing and empowering, were vital to developing resilience (Sui, Massar, Reddy & Ruiter, 2022). Resilience is enhanced when opportunities for positive relationship development are provided in meaningful ways, where adolescents are encouraged to explore and develop their own talents and skills (Sanders *et al.*, 2015). Programmes which help with maintaining and improving self-esteem, prosocial values, communication skills, perseverance, a sense of purpose, problem-solving skills, empathy, life skills, positive frames of mind, emotional skills, physical talents, planning skills, family involvement, a sense of identity and an internal locus of control will contribute towards building resilience (Courtwright, Makic & Jones, 2020; Theron & Van Rensburg, 2018; Wang *et al.*, 2014). Targeting these protective resources is helpful, as they will give beneficiaries continued benefits over the long-term, and are skills that can be learned as critical for adolescent functioning (Graber *et al.*, 2015).

A meta-analysis of training programmes and interventions, with a focus on enhancing resilience, revealed that interventions which particularly involved mindfulness training and/or cognitive and behavioural skills increased levels of resilience (Joyce *et al.*, 2018). Another key factor is the presence of a nurturing individual or mentor (adult and peer mentorship), who is able to advise,

facilitate and help correct behaviours, in combination with a programme that can facilitate the cultivation of social skills, motivation, a sense of trust, belonging and initiative (Graber *et al.*, 2015; Levine, 2003).

### **Psychosocial interventions and resilience**

As the MPSP is a multidisciplinary psychosocial support programme, it can benefit from the findings of existing psychosocial intervention studies. Psychosocial support involves addressing psychological facets such as emotions, behaviours and ways of thinking in combination with social aspects such as culture, relationships and traditions (Pacheco *et al.*, 2021). Psychosocial support plays a large role in assisting people to overcome traumatic and adverse circumstances (Pacheco *et al.*, 2021). In research that evaluated multiple global psychosocial support programmes, it was determined that psychosocial programmes in communities provide stability, predictability, engagement and cohesion, when other protective resources may be missing from these vulnerable groups (Henley, 2010). It found that psychosocial programmes were able to promote a sense of hope, manage feelings and responses to challenging circumstances, enhance self-esteem and communication skills, and increase prosocial behaviours and inter-personal trust (Henley, 2010). Psychosocial programmes could have significant and long-lasting benefits for resilience, as they promote a sense of hope, manage feelings and responses to challenging circumstances, enhance self-esteem and communication skills, and evince an increase in prosocial behaviours along with interpersonal trust (Henley, 2010; Pacheco *et al.*, 2021). An integrated, holistic and coordinated approach to psychosocial and physical support resource provision within the community and schooling system includes education, therapeutic intervention, relaxation techniques, development of problem-solving skills and healthy social connections as well as extracurricular informal education opportunities through sport and cultural activities (Henley, 2010; Pacheco *et al.*, 2021).

### **RESEARCH METHODOLOGY**

The research paradigm and approach used in the study are positivist and quantitative, which allowed for the use of standardised instruments and procedures to empirically measure and observe the phenomena in a way that ensures validity and reliability (Creswell, 2018; Rehman & Khalid, 2016; Yegidis, Weinbach & Myers, 2017). Therefore, the positivist paradigm is ideally suited for this study; its principles guided the collection of the archival and primary data through the standardised CYRM-28 questionnaire. The cause-and-effect relational aspect of positivism was also appropriate for the interpretation of the findings (Rehman & Khalid 2016). The research design was a quasi-experimental evaluative design, using a one-group pre-test/post-test to assess the impact of the MPSP on the resilience of recipients, who are beneficiaries and alumnae of the RFJM Trust identified through admission lists from 2011 to 2021. The study was conducted at the Jeppe High School for Girls, in an urban area near the Johannesburg CBD, and aims to contribute towards evidence-based practice for improving supportive social work interventions (Yegidis *et al.*, 2017). Permission to use personal information was obtained in writing from the RFJM Trust and the recipients, and ethical clearance was received from NHREC (REC-240816-052).

The sampling approach used was purposive sampling. As it was a pre-test/post-test designed study, the steps taken in implementing the purposive sampling were that the entire intake of sixteen Grade 8 recipients aged 13 to 15 years in 2021 at the Jeppe High School for Girls were invited to participate in the study by the researcher. They all met the inclusion criteria, which were that respondents be RFJM Trust scholarship holders; have not yet been exposed to the MPSP; and are assenting learners for whom parental consent to participate had been granted. Participation was voluntary and it was expressed verbally and in writing that there is no penalty for non-participation. There was no equivalent experimental or control group, and the pre-existing variable in the study eliminated the random assignment of participants to the group, because the MPSP is provided only to Trust recipients, while the Grade 8 group (in 2021) was the only group that had not yet benefitted from these services prior to the year of research (Privitera & Ahlgrim-Delzell, 2019).

Data were collected to test the hypothesis of this study via two sources, namely archival data which had been collected and stored for a different purpose (Brough, 2018), and primary data. The Grade 8 recipients' levels of resilience (dependent variable) were measured prior to the implementation of the MPSP, and again after one year's implementation once they started Grade 9. The post-test measurement was then compared with the pre-test measurement to determine whether any change had occurred, and if so, the degree of change which occurred during the time that the MPSP was implemented (Yegidis *et al.*, 2017).

The primary data for the study consisted of a post-test CYRM-28 and RFJM Trust MPSP questionnaire, with the latter being designed by the researcher to assess the respondents' experience of the MPSP. For consistency and familiarity, the questionnaire had a Likert-type structure with 28 items. This was designed to reveal whether the respondents experienced the different facets of the MPSP as being helpful. The language in the RFJM Trust MPSP questionnaire was simple, clear, easy to understand for adolescents, and in their preferred language of learning. This questionnaire was administered only post-test. The biographical details questionnaire and CYRM-28 pre-test results were collected, with permission, from the RFJM Trust's management and from its archival data that were recorded as part of the scholarship application process for the Grade 8 recipients. The respondents were not prepared in advance for the study when they first completed the CYRM-28 pre-test during their scholarship application, as the study did not yet exist in 2020. This meant that neither these questionnaires nor the RFJM Trust MPSP questionnaire was piloted for the study. The questionnaire was reviewed by the data analyst used for this study and by facilitators of the MPSP; it was not piloted with female adolescent recipients as doing this could have contaminated the sample and introduced bias (Lancaster 2015).

After the value of the study was determined to outweigh the potential risk to the respondents, they and their parents were informed both verbally and in writing of the research purpose and process. Confidentiality and the choice to participate without penalty were explained. Informed consent and assent were received, and the primary data were collected in school hours during a free period after one year's intervention. These arrangements did not disadvantage the respondents physically or financially. Both questionnaires were completed within 30 minutes and no respondent requested



interpretation services. A counselling psychologist was made available for debriefing, but no respondent requested debriefing. All COVID-19 protocols in place in January 2022, in terms of Regulation 50A of the Disaster Management Act: Regulations relating to COVID-19 Amendment, 2021 (Republic of South Africa, 2021), were followed. Both the archival and primary collection of data, its storage, usage, sharing and destruction were undertaken within the requirements of the Protection of Personal Information (POPI), Act, No. 4 of 2013 (Republic of South Africa; 2013).

Once the data were collected, the analysis for this study, which consisted of a statistical analysis (Yegidis *et al.*, 2017) to test the study's hypothesis, began. Demographical, socioeconomic and additional risk factors were analysed, and a reliability coefficient was used to determine whether the CYRM-28 was a trustworthy instrument to be used for this study. The paired-samples *t*-test was used to compare the pre-intervention and post-intervention means of the same group, and the determination of the significance of the results when comparing the two was if  $p < .05$  (Pallant, 2016). The magnitude of the MPSP's effect on the sample was investigated by calculating the effect size statistic in the form of eta-squared (Pallant, 2016). A correlation analysis was undertaken to determine if there is a correlation between the aspects of the MPSP and resilience. Finally, deeper individual comparisons of the pre- and post-test scores were undertaken, as the small sample size limited the types of statistical analysis tests that could be run, such as factor analysis and linear regression.

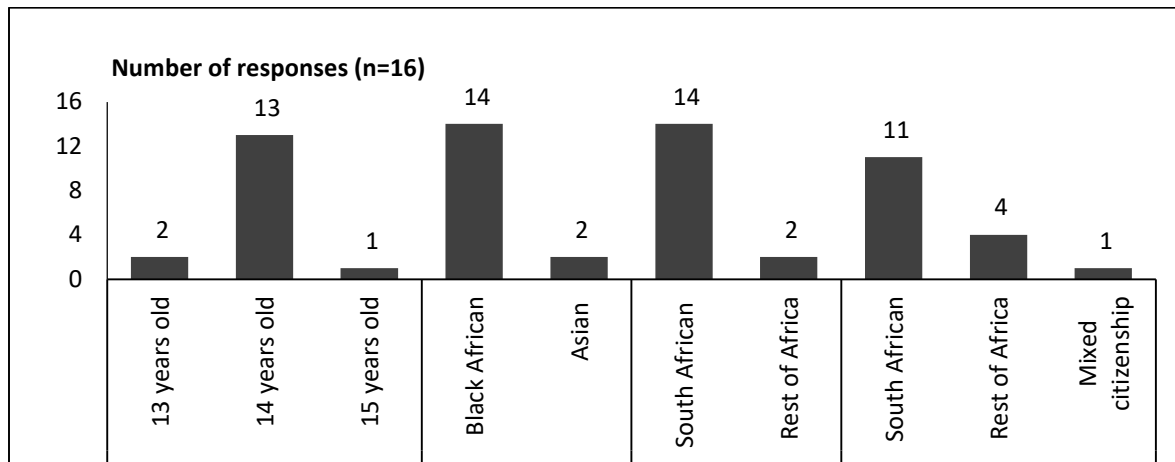
The study acknowledges threats to internal validity and reliability, such as nonstationary trends, cycles of patterns, lack of causation, a small sample size, and the lack of an equivalent experimental or control group (Faulkner & Faulkner, 2018; Hudson, Fielding & Ramsay, 2019). To mitigate these threats, the researcher used a reliable and valid instrument (CYRM-28) that has been validated for measuring resilience in adolescents in South Africa and internationally (Govender *et al.*, 2017; Van Rensburg, Theron & Ungar, 2019). The instrument has established reliability coefficients for the three scales measuring the individual (0.82), relational (0.71), and contextual (0.70) scales (Govender *et al.*, 2017).

To determine if there was a positive relationship between the variables, the MPSP intervention occurred prior to the post-test measurement and attempted to intervene in each of the three identified resilience areas (individual, relational and contextual). Furthermore, the RFJM Trust MPSP questionnaire used for primary data collection helped to mitigate the correlation being explained by another variable by facilitating the collection of evidence based on test contact. This approach ensured temporal ordering and correlation between variables (Faulkner & Faulkner, 2018).

## RESULTS AND DISCUSSIONS

The data analysis, as described in the methodology section, was undertaken in the light of the goal, hypothesis and objectives of the study. This section presents the findings and interpretation.

## Demographical findings

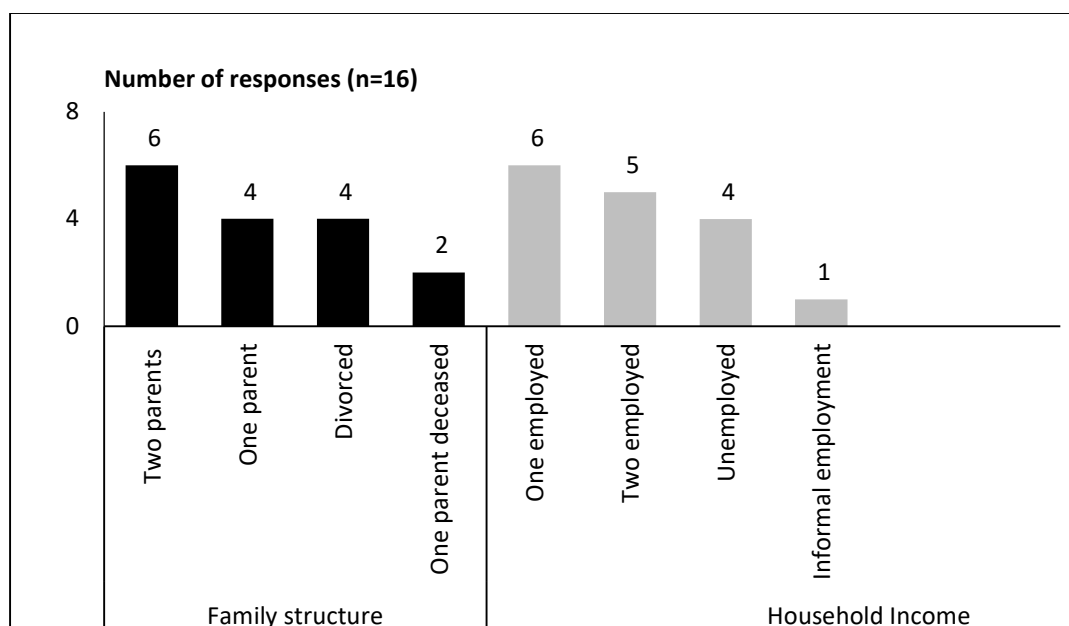


**Figure 1: Demographics**

Figure 1 indicates that at the time of the study, thirteen respondents were 14 years of age, two were 13 years of age and one was 15 years of age. Therefore, the respondents were considered adolescents, according to global definitions (Curtis, 2015; Toska *et al.*, 2019; UNICEF, 2011). The study's respondents were drawn primarily from two racial groups: 14 Black Africans and two Asians. All South African respondents belonged to historically disadvantaged groups because of past discrimination against their families on the basis of race (Republic of South Africa, 2019). Fourteen have South African citizenship and 11 have South African parents. The remaining two respondents have parents who are citizens of other African countries and may be exposed to the risk of xenophobia, restrictive legislation and bureaucratic corruption (Moyo & Zanker, 2022; Olofinbiyi, 2022). These factors increase the likelihood of socioeconomic risks for historically disadvantaged groups (Olofinbiyi, 2022; Theron & Theron, 2014).

## Socioeconomic findings

To determine the risk that the respondents experienced, socioeconomic risk factors were measured. The family information of respondents, including family structure and household income, is shown in Figure 2.

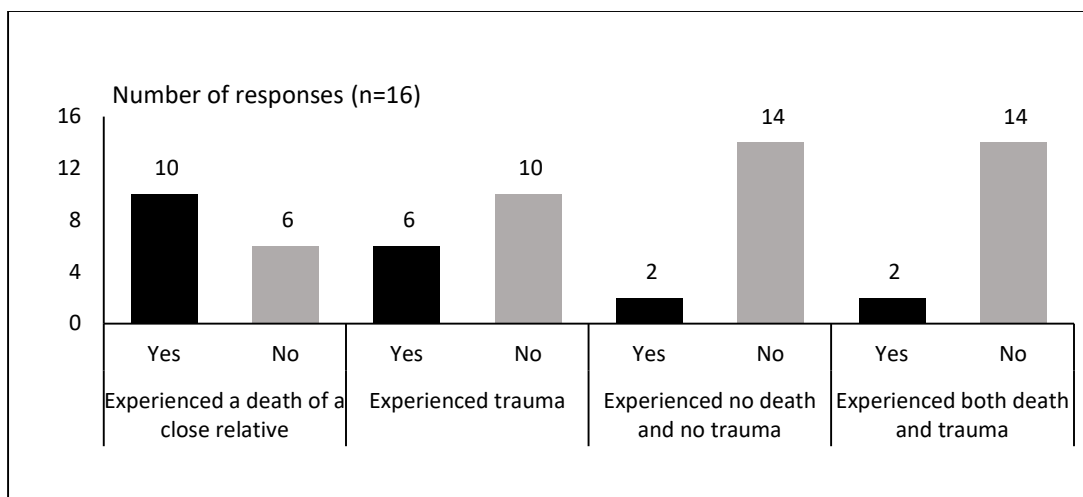


**Figure 2: Family information**

The data in Figure 2 show that six of the respondents live in two-parent households, four live with one parent, four are from divorced households with access to both parents, and two have experienced the death of one parent. This means that 10 respondents lived in single-parent households. Studies suggest that adolescents from single-parent households may be more susceptible to delinquency as a result of poor emotional regulation, stress, behavioural issues, and a lack of parental and social support (Kroese, Bernasco, Liefbroer & Rouwendal, 2021). These households are also more likely to experience lower social and economic functioning and wellbeing (Nieuwenhuis & Maldonado, 2018). The nature of the RFJM Trust predetermines that the respondents are from households that qualify for school fee exemptions, indicating that none of them live in high-income conditions. Eleven of respondents experience precarious economic circumstances, with four having unemployed parents, and one having a parent engaged in informal employment. Poverty and low incomes are risk factors for poor mental health in adolescents (Das-Munshi *et al.*, 2016).

### **Additional risk factors**

Two additional risk factors reported by some respondents are the experience of trauma and the death of a close family member, as shown in Figure 3.



**Figure 3: Female adolescent recipients – additional risk factors**

Ten of the respondents experienced the death of a close family member. Six respondents have experienced trauma in their lifetimes, while 10 have not. Only two respondents have not experienced death or trauma, and another two have experienced both death and trauma.

The death of a loved one is a traumatic, stressful event as close relationships are responsible for an adolescent's sense of belonging; sound emotional, cognitive and physical processes; and a healthy sense of the self (Keyes *et al.*, 2014:864). As a result, anxiety, depression, the abuse of substances and psychiatric disorders commonly occur under these circumstances (Keyes *et al.*, 2014). A familial crisis of this magnitude exposes adolescents to complex negative emotions at a time when they are developing their independence, but still may not have the skills to cope, and therefore may not seek the much-needed emotional support, but instead may turn to negative risky behaviours and develop a lower sense of wellbeing (Ronen, Hamama, Rosenbaum & Mishely-Yarlap, 2016).

Traumatic events may also result in post-traumatic stress disorder (PTSD) in one out of six adolescents. This is characterised by intrusive thoughts, nightmares, flashbacks, hyperawareness and functional impairment that may result in an increased possibility of the substance abuse and suicide ideation (Hoogsteder, ten Thijs, Schippers & Stams, 2022). There are more psychological reactions to traumatic life events in childhood and adolescence other than PTSD; these include depression, anxiety, mood disorders, poor self-image and violence in relationships (Hoogsteder *et al.*, 2022; Jeon & Bae, 2022).

Fourteen of the respondents experienced the death of a close relative and/or a traumatic event; however, the outlook of their wellbeing is not necessarily negative. Protective resources provide the opportunity for post-traumatic growth, which is a positive psychological change in response to adversity (Stikkelbroek *et al.*, 2016). While resilience is developed within and as a result of adversity, an accumulation of risk factors may inhibit the adolescent from effectively accessing and utilising protective resources (Cassidy, 2015; Métais *et al.*, 2022).

### Reliability coefficient

The reliability coefficients as a finding and factor in interpretation for this study are presented in Table 1. In foundational work on testing and reliability, Nunnally (1975:10) explains that reliability coefficients are used to measure whether an instrument utilised for research purposes is trustworthy and can be generalised across uses, circumstances and time.

**Table 1: Reliability statistics**

Variable	N of items	Pre-test $\alpha$	Post-test $\alpha$
CYRM-28 – Individual	11	.688	.821
CYRM-28 – Relational	7	.807	.683
CYRM-28 – Contextual	10	.747	.752
PSP – A	10	-	.938
PSP – B	9	-	.806
PSP – C	9	-	.654

Most of the scales showed acceptable internal consistency, with Cronbach's alpha coefficients ranging between .747 and .938. However, the reliability coefficients for the individual pre-test scale (0.688), relational post-test scale (0.683) and PSP-C scale (0.654) are fairly acceptable ( $\alpha < 0.70$ ), since they are marginally below Nunnally and Bernstein's (1994) ( $\alpha > .70$ ) recommendation for research purposes. This means that most of the scales in this study have acceptable reliability, and three of the scales are considered fairly acceptable in their relation to the group of test items.

### Paired-samples *t*-test

A paired-samples *t*-test was performed to assess the difference in the level of resilience prior to the intervention and after a year's participation in the MPSP. The pre- and post-test means for the individual, relational and contextual resource scales are presented in Table 2 below.

**Table 2: Results of paired-samples t-test**

	Pre-test			Post-test			<i>t</i>	<i>Df</i>	<i>Sig (2 tailed)</i>
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>N</i>			
	Cohen's d: .116								
CYRM-I	49.438	4.147	16	48.813	5.063	16	0.466	15	0.648
	Cohen's d: .122								
CYRM-R	30.625	4.288	16	30.125	3.594	16	0.488	15	0.633
	Cohen's d: .232								
CYRM-C	44.250	4.669	16	43.250	5.132	16	0.929	15	0.368

There were no statistically significant increases in the means of any of the resilience scales:

Individual Resources (*M* decrease = 0.625, *SD* increase = 5.365, *CI* = -2.233 – 3.483 )  $t(15) = 0.466$ ,  $p = 0.648$ ;

Relational Resources (*M* decrease = 0.500, *SD* increase = 4.098, *CI* = -1.684 – 2.684 )  $t(15) = 0.488$ ,  $p = 0.633$ ; and

Contextual Resources (*M* decrease = 1.000, *SD* increase = 4.305, *CI* = -1.293 – 3.293)  $t(15) = 0.929$ ,  $p = 0.368$ .

Cohen's *d* indicated that the changes were very small for all three scales (Individual = 0.116; Relational = 0.112; Contextual = 0.232) and this is indicative that the test was not sufficiently sensitive to the minimum effect size at 95% power to determine significant changes. This means that practically, the effect size is not large enough to be significant (Kim, 2015).

This does not necessarily mean that there is no relationship between the MPSP and the resilience of the recipients, as there may be other factors impacting on these results. This potential relationship and possible impact by other factors are explored below.

### Correlation analysis

The respondents engaged in three aspects of the MPSP, namely the individual therapy, a mentorship programme and extramural activities. These were listed as 'MPSP a,' 'MPSP b' and 'MPSP c' respectively in the RFJM Trust MPSP questionnaire post-test. Respondents answered these questions in relation to their experiences of the MPSP and its impact on their individual, relational and contextual resources.

**Table 3: Correlation**

		postCYRM- 28_I_score	postCYRM- 28_R_score	postCYRM- 28_C_score
MPSP_a	Pearson Correlation	-.084	.026	.101
	Sig. (2- tailed)	.758	.923	.709
	N	16	16	16
MPSP_b	Pearson Correlation	.793**	.749**	.814**
	Sig. (2- tailed)	.000	.001	.000
	N	16	16	16
MPSP_c	Pearson Correlation	.627**	.692**	.811**
	Sig. (2- tailed)	.009	.003	.000
	N	16	16	16

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

The outcomes of the correlation analysis are outlined below.

### ***Individual therapy ('MPSP a')***

The results of the correlation analysis (Table 3) indicate that individual therapy did not have a significant relationship with the resources of the recipients. This may be because not every recipient participated in individual therapy. Therefore, the participant responses could not reflect a perceived improvement or decline in individual, relational or contextual resources as a result of individual therapy. Therapy was made available to each recipient, who had a choice to request these services at any time during the year of the under study. Seven of the respondents did not participate in individual therapy (see Table 4). This resulted in a restricted range, which could be misleading regarding the potential relationship between individual therapy and resilience resources. A restriction of range occurs when a variable, direct or indirect, or even those that are not being studied in a research project, have reduced variability in the sample of research, and when the data are not present across the spectrum of the study (Frey, 2018; Salkind, 2012). This has implications for effect size estimates and validity coefficients, as a reduction in variability often results in a reduction in effect size and correlation (Allen, 2017; Frey, 2018). The changes in the resilience levels of respondents who attended individual therapy and in those who did not are depicted in Table 4 below.

**Table 4: Therapy and resilience levels**

Respondents	No.	Resilience increased	Resilience decreased
Attended therapy	9	5	4
Did not attend therapy	7	3	4

Table 4 indicates that nine respondents attended therapy and seven did not. Of those who attended therapy, five saw an increase in their resilience. In contrast, of those who did not attend therapy, three saw an increase in resilience. This suggests that there is a greater chance of respondents' resilience increasing if they attend therapy. However, these findings cannot be generalised as the sample size is very small and other factors (explored in the rest of this article) may have also played a role.

#### ***Mentorship programme ('MPSP b')***

Table 3 indicates that the mentorship programme ('MPSP b') has strong correlation with levels of resilience. The results show that there was an increase in the perception of programme effectiveness and a significant increase in the respondents' resilience scores. The mentorship programme encompasses adult and peer mentorship, and aims to provide a supportive group environment within which the recipient is enriched holistically. This includes capacity building in mindfulness, emotional intelligence, social skills, empathy, listening skills, leadership development and in seeking referral to resources. In a South African phenomenological study, Theron (2020) notes that when it comes to enabling resilience, mentorship is a strategy which has proven results, even when adolescents are experiencing disadvantages in their socio-economic and structural circumstances (Graber *et al.*, 2015; Theron, 2020).

#### ***Extramural activities ('MPSP c')***

There is a correlation between extramural participation and high resilience. An increase in extramural attendance also saw an increase in the CYRM-28 variables. The extramural activities included study skills training and a variety of sporting and cultural participation opportunities. It is within these extramural activities that recipients can explore their interests and talents; practise leadership skills; develop social skills; practise mediation and conflict resolution; develop their self-esteem, sense of belonging and mastery; form close relationships; and improve their time management. These outcomes have been linked to enhanced resilience in several studies in South Africa and internationally (Courtwright *et al.*, 2020; Sanders *et al.*, 2015; Sui *et al.*, 2022; Theron & Van Rensburg, 2018; Wang *et al.*, 2014). The correlation results reflect that the development of individual resources (such as social skills, talent development, confidence and planning skills) through contextual resources is more likely to facilitate a cyclical process whereby the adolescent with enhanced individual resources can more effectively access contextual resources (Liebenberg & Joubert, 2019).



The results indicate that the correlation between the ‘MPSP b’, ‘MPSP c’ and the CYRM-28 variables is significant at the 0.01 level. There is a 99% chance that this would manifest more broadly if repeated. Correlation, however, does not indicate causation; it is only able to indicate whether a relationship exists between variables, as other factors (or variables), which are not being observed, could have an impact on the results; furthermore, the small sample size in this study potentially leads to the instability of the findings (Hung, Bounsanga & Voss, 2017). As such, caution must be exercised when interpreting these outcomes. However, the findings are drawn from the respondents’ perceptions of the benefit of the mentorship and the extramural programmes made available to them.

### **Exploration of data and factors possibly influencing the resilience of female adolescent recipients**

The data and factors possibly influencing the resilience of female adolescent recipients are outlined below.

#### ***Comparisons between pre- and post-test scores***

The pre-test and post-test results for each respondent are shown in Table 5. The ‘Total Resilience’ outcomes are the combined accumulated results from the ‘Total Individual,’ ‘Total Relational’ and ‘Total Contextual’ data. Negative differences indicate a loss in scores in each category post-test, whilst the positive differences indicate an increase in the category post-test.

**Table 5: Comparisons between pre- and post-test scores**

Resp.	Total Resilience			Total Individual			Total Relational			Total Contextual		
	Pre-Test	Post-test	Diff.	Pre-Test	Post-test	Diff.	Pre-Test	Post-test	Diff.	Pre-Test	Post-test	Diff.
1	126	136	10	50	54	4	31	34	3	45	48	3
2	122	119	-3	48	47	-1	29	29	0	45	43	-2
3	132	139	7	51	54	3	34	35	1	47	50	3
4	122	129	7	51	49	-2	32	32	0	39	48	9
5	111	119	8	43	46	3	26	29	3	42	44	2
6	135	127	-8	54	54	0	31	26	-5	50	47	-3
7	127	116	-11	51	48	-3	33	29	-4	43	39	-4
8	130	115	-15	51	48	-3	33	29	-4	46	38	-8
9	136	110	-26	53	40	-13	35	29	-6	48	41	-7
10	122	130	8	47	53	6	32	32	0	43	45	2
11	132	114	-18	54	43	-11	31	29	-2	47	42	-5
12	125	134	9	47	54	7	30	33	3	48	47	-1
13	088	098	10	39	40	1	17	26	9	32	32	0
14	133	131	-2	51	51	0	34	35	1	48	45	-3
15	134	136	2	54	55	1	33	33	0	47	48	1
16	114	102	-12	47	45	-2	29	22	-7	38	35	-3

Resilience scores from the CYRM-28 are considered average for female adolescents with complex needs at a combined total of 106.99 (individual resources + relational resources + contextual resources) (Ungar & Liebenberg, 2009). The respondents are female adolescents with complex needs as they live in poor economic circumstances and have experienced one or more adverse circumstances. Fifteen respondents scored higher than average resilience scores pre-test on the self-reporting CYRM-28. At the post-test stage, fourteen respondents scored higher than average. Half scored a total higher resilience post-test and half were lower post-test.

Ungar (2011) explains the concept of complexity in the framework of the social ecology of resilience and suggests that resilience processes vary over time and context because of the complex interactions between individuals and their social ecologies. Multiple factors interact, facilitate or mitigate interchangeably, making it impossible to predict causality with certainty. Individuals cannot be classified as being persistently vulnerable or consistently resilient, as environments and personal attributes change. This study's results appear to be aligned with this understanding of complexity. The resilience of the respondents varied over time, with the resilience of some respondents increasing and others' resilience diminishing, despite being in similar contexts and having access to the same resources (Forbes & Fikretoglu, 2018). As other research has also found, the respondents with the highest risk (with the lowest scores pre-test) benefitted more than the low-risk respondents (Forbes & Fikretoglu, 2018). The findings of this study, where half of the respondents saw an increase in resilience and half saw a decrease, are consistent with broader resilience research, indicating that the MPSP cannot be considered wholly responsible for improvements or diminishing resilience. Other personal, social and environmental factors could have had an impact on these results, including a phenomenon called response bias.

### ***Potential impact of response bias***

Response bias is the occurrence of responses to questionnaire items, such as Likert questionnaires, based on other unrelated factors and not the actual content of the question (Wetzel, Böhnke & Brown, 2016). An example of this is social desirability responding, which involves participants responding by trying to present themselves, or their circumstances, in a way that may not reflect their reality (Ziegler, 2015). In this study, the pre-test was taken while the respondents were undergoing assessments to be awarded the RFJM Trust scholarship. It is possible that they may have self-reported more positively to increase their chances of being awarded the scholarship. This was a factor that potentially motivated answers with perceived desirability and may have contributed to the very high total resilience mean scores pre-test. At post-test, however, there was an emphasis on evaluating the MPSP for the respondents' own and for future recipients' benefit. The respondents themselves were not the focus. This may have encouraged a reduction in the response bias post-test. Response biases, and the limitations of self-reporting, have also been a consideration in other South African resilience studies (Govender *et al.*, 2017; Kruger & Prinsloo, 2008).

### ***An environmental factor: the COVID-19 pandemic***

The COVID-19 pandemic may have had an impact on the respondents' resilience scores as they completed the pre-test during lockdown and the post-test 22 months into the pandemic. Adolescence is a complex process with challenges related to identity construction, independence and critical thinking skills (Grazzani *et al.*, 2022; Mould, 2014). The pandemic made this process more complex and increased the risk to adolescents' mental health because of fear, financial struggles, and education and social disruptions (Tal-Saban & Zaguri-Vittenberg, 2022). However, research found that resilient adolescents experienced growth during this time (Grazzani *et al.*, 2022; Tal-Saban & Zaguri-Vittenberg, 2022). There is some evidence of this in this study's respondent group. Despite the additional risks brought on by the pandemic, half of the respondents' resilience increased, and 14 out of 16 respondents' resilience remained above average, with the lowest-resilience respondents also showing an increase. This ties in with the concept of decentrality in the social ecology of the resilience framework (Ungar, 2012).

### **CONCLUSIONS**

Based on the results of the study, it can be concluded that there is a positive correlation between the MPSP and the levels of resilience in the female adolescent recipients. The respondents showed an increase in resilience, despite the additional risk brought about by the COVID-19 pandemic, and the two respondents who had the lowest scores pre-test saw significant improvements in their resilience. The overall positive results may cautiously be attributed to the opportunities and protective resources provided by the MPSP in their social ecology.

### **RECOMMENDATIONS**

Based on the research, the recommendations following are made.

#### **Recommendations for the RFJM Trust**

- The MPSP should be continued throughout the recipients' high school career to promote a consistent and reliable long-term intervention which has greater efficacy and benefit to resilience development (De Villiers, 2009; Mould, 2014).
- Reinforcement of the mentorship programme and extramural activities throughout the duration of participation should focus on the development of mindfulness, problem-solving, communication skills, emotional regulation, coping mechanisms, traditions and aspects that create trusting relationships and a sense of belonging (De Villiers, 2009; Joyce *et al.*, 2018; Mould, 2014; Pacheco *et al.*, 2021).
- More engagement with parents is needed to support the parent-adolescent relationship and that could promote relational resilience resources (De Villiers, 2009; Mould, 2014).
- The individual therapy aspect of the MPSP should be continued and programme content that increases the social acceptability of requesting therapeutic support should be

considered (Courtwright *et al.*, 2020; Joyce *et al.*, 2018; Pacheco *et al.*, 2021; Ronen *et al.*, 2016; Sanders *et al.*, 2015; Ungar, 2012).

- Providing interventions aimed at multiple aspects of the social ecology of the recipients creates a cycle of resilience (Liebenberg & Joubert, 2019; Sanders *et al.*, 2015; Ungar, 2012).
- The use of the CYRM-28 questionnaire in the scholarship application process should be reviewed, as the self-reporting questionnaire may not accurately convey the recipients' resilience (Ziegler, 2015).

### **Recommendations for evidence-based practice for social workers and other support programmes**

The recommendations for the RFJM Trust also apply to evidence-based practice and further support the claims of the social ecology of resilience framework; therefore the following are recommended in addition:

- Not only should resources promoting individual resilience be emphasised at interventions, the broader context of the adolescent should also be supported. This includes supportive programmes that enhance the parent-adolescent relationship, healthy peer relationships, and sporting and cultural extramural activities which enable the development of self-esteem, a sense of mastery, problem-solving skills, communication skills, and a sense of identity, belonging and hope;
- Opportunities to engage in psychological services which support mental health are also important, specifically those aimed at emotional regulation, mindfulness, behaviour regulation and addressing trauma. It is important for supportive interventions to be consistent, reliable and long-term, with content that is reinforced practically.

### **Opportunities for further research**

The RFJM Trust should continue evaluating the MPSP with current and future recipients to investigate its long-term efficacy and to improve the programme. To do this, the following aspects could be attended to:

- A larger sample size will increase the generalisability of findings and contribute to best practices;
- A longitudinal study could assess the achievement of the RFJM Trust's goal to facilitate an environment where young women thrive in society;
- Other scholars and practitioners could replicate this study to contribute to resilience intervention knowledge and elevate the stature of multidisciplinary psychosocial support programmes in South Africa.

## LIMITATIONS

Several limitations of the study were noted. A limitation negatively impacting on the ability to generalise findings was the small sample size and the lack of a control group. However, neither could be avoided as the respondents in the study were the only recipients who had not been exposed to the MPSP prior to the study and it was considered unethical to withhold intervention for some of the recipients for the purposes of the study. The small sample size also impacted on the ability to validate findings through statistical analysis tools such as factor analysis; furthermore, the archival data collection prevented the piloting of the biographical information questionnaire and the CYRM-28 form. The RFJM Trust MPSP questionnaire, while initially reviewed by a data analyst, was also unpiloted as using it may have contaminated the sample and introduced bias (Lancaster, 2015). There is also no long-term follow-up assessment, which means that the long-term impact of the MPSP has not been measured.

The data collection post-test did not include questions relating to the COVID-19 pandemic, or whether the additional risk factors that the respondents reported occurred prior to or during the pandemic, and within the timeframe of the intervention. Improvement was noted only through resilience scores, and did not include investigating the impact of adverse circumstances (Joyce *et al.*, 2018). While there was an attempt during the post-test data collection to eliminate reporting based on other unmeasured variables through the questionnaire being focused on the respondents' perception of the benefit of the different aspects of the MPSP on their resilience, the questionnaire did not allow for the identification of other variables that may have played a role in developing their resilience.

It became evident that the limitations inherent in self-reporting may have had an impact on the pre-test. The use of the pre-test archival data was not entirely beneficial, as these data were originally collected prior to the commencement of the study and the lens of programme evaluation, and hence may have been subject to response bias. Also, only one measure of resilience was used in this study. If more were used, there may have been greater accuracy with regards to the pre- and post-test scores, and more clarity about which parts of the MPSP benefitted the recipients the most and which parts were the least effective (Joyce *et al.*, 2018).

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