The experience of stress in adolescents living in low-income communities in the Western Cape: The role of self-esteem, coping and perceived social support

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DECLARATION

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the authorship owner thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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ABSTRACT

Contextual stressors that are associated with living in low-income communities have an adverse impact on the mental health of adolescents. International studies indicate that this outcome is influenced by the presence of factors that may buffer the impact of stressors, or which may increase adolescents' vulnerability to experiencing stress. The present study was aimed at exploring the factors that influence the mental health of 173 school-going adolescents residing in low-income communities in the Western Cape.

By using a quantitative method with a correlational design, the research explored the relationship between depression (measured on the Beck Depression Inventory – Second Edition) and the following factors respectively: self-esteem (measured on the Rosenberg Self-Esteem Scale), coping strategies (measured on the Coping Strategies Indicator), perceived social support (measured on the Social Support Appraisals Scale) and resilience (measured on the Resilience Scale for Adolescents).

Results of the correlational analyses indicated that high self-esteem, higher use of the problem-solving coping strategy, stronger perceived social support and higher resilience were significantly related to decreased levels of depression. In contrast, higher use of the avoidant coping strategy was significantly related to higher levels of depression. These results indicate that while some factors may buffer the impact of perceived contextual stressors on adolescents' mental health (for example, problem-solving coping, stronger perceived social support and resilience), other factors may increase adolescents' vulnerability to experiencing depression (for example, avoidant coping). These results may inform interventions focused on promoting mental health or preventing incidence of depression in adolescents living in low-income communities.

OPSOMMING

Kontekstuele stressors wat geassosieer word met ’n bestaan in lae-inkomstegemeenskappe het ’n nadelige impak op die geestesgesondheid van adolessente. Internasionale studies dui daarop dat hierdie resultaat beïnvloed word deur die teenwoordigheid van faktore wat die impak van stressors kan versag of adolessente se kwesbaarheid vir stres kan verhoog. Die huidige studie is daarop gemik om ondersoek in te stel na die faktore wat die geestesgesondheid van 173 skoolgaande adolessente, wat in lae-inkomstegemeenskappe in die Wes-Kaap woon, beïnvloed.

Deur ’n kwantitatiewe metode met ’n korrelasionele ontwerp te gebruik, het die studie ondersoek ingestel na die verhouding tussen depressie (bepaal volgens die Beck-depressie-inventaris-Tweede uitgawe [*Beck Depression Inventory – Second Edition*]) en die volgende faktore: selfagting (bepaal volgens die Rosenberg-selfagtingskaal [*Rosenberg Self-Esteem Scale*]), hanteringstrategieë (bepaal volgens die hanteringstrategie-aanduider [*Coping Strategies Indicator*]), waarneembare sosiale ondersteuning (bepaal volgens die sosiale-ondersteuningstakseringskaal [*Social Support Appraisals Scale*]) en geeskragtigheid (bepaal volgens die geesteskragtigheidskaal vir adolessente [*Resilience Scale for Adolescents*]).

Die resultate van die korrelasionele ontleding dui daarop dat hoë selfagtingsvlakke, ’n toename in die gebruik van probleemoplossingstrategieë vir die hantering van situasies, beter waarneembare sosiale steun en hoër geeskragtigheidsvlakke ’n beduidende verwantskap toon met ’n afname in depressievlakke. In teenstelling hiermee was daar ’n opvallende verband tussen vermydingsgedragstrategieë en hoër depressievlakke. Hierdie resultate dui daarop dat hoewel sommige faktore die impak van waarneembare kontekstuele stressors op die geestesgesondheid van adolessente kan versag (byvoorbeeld probleemoplossingstrategieë vir die hantering van situasies, beter waarneembare sosiale steun en geeskragtigheid), ander

faktore die adolessente se kwesbaarheid vir depressie kan verhoog (byvoorbeeld vermydingsgedragstrategieë). Hierdie resultate kan moontlik ’n bydrae lewer tot ingrypings wat gemik is op die verbetering van geestesgesondheid of op die voorkoming van die voorkoms van depressie by adolessente wat in lae-inkomstegemeenskappe leef.

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DEDICATION

This thesis is dedicated to my mother, *Muriel*, for teaching me about perseverance, dedication and resilience.

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[1] In order to abide by potential copyright laws, the measuring instruments (except for the demographic questionnaire) were not included in the list of appendices. However, all measuring instruments have been referenced in the study.

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CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1. Introduction

Stress associated with living in low-income communities has been found to have an adverse effect on the psychological, physical, social and educational well-being of adolescents (Wadsworth & Berger, 2006; Wadsworth et al., 2008). Stress ensues when an individual experiences certain demands that are taxing and exceed the resources that they use to cope with difficulties (Lazarus & Folkman, 1984). Therefore, when adolescents need to cope with the contextual risk factors associated with poverty, some may possess the resources to adapt to the circumstances, while others may not, resulting in the experience of stress.

Individuals residing in low-income communities are affected by various contextual risk factors that include exposure to violence, emotional, physical and sexual abuse, and inadequate health care (Landis et al., 2007). These risk factors may be associated with experiences of stress in adolescents, which may manifest in symptoms of depression (Najman et al., 2010; Wadsworth & Berger, 2006), hopelessness (Bolland, 2003; Xue, Leventhal, Brooks-Gunn, & Earls, 2005) and anxiety (Gutman, McLoyd, & Tokoyawa, 2005). Moreover, a review of the literature reveals that the impact of depression on adolescents is a cause for concern to mental health professionals, as it may adversely affect the adolescents' overall well-being. In this regard, depression is associated with antisocial behaviour (Nebbit & Lombe, 2008) and is associated with an increased risk for suicide (Thapar, Collishaw,

Pine, & Thapar, 2012). Evidently, these results emphasize the risks associated with the failure to adapt and cope in light of socio-economic challenges.

It is worth noting that residing in low-income communities does not always impede the mental health of all adolescents. Even in the context of numerous risk factors, economically disadvantaged adolescents have been found to cope effectively, adapt to their circumstances, and remain resilient (Rutter, 1985). Protective factors are resources or assets (Zimmerman & Brenner, 2010) that aid in the adolescents' adaptation in light of stressors (Saxena, Jané-Llopis, & Hosman, 2006). Such adaptation is possibly due to the potential of the resources to ameliorate or modify the impact of risk factors on the adolescents' well-being (Saxena et al., 2006).

It appears that while some adolescents residing in low-income communities may experience stress, others may be able to remain resilient. It is therefore important to investigate factors that may hinder, as well as those that aid the coping process. Through such an enquiry, it will be possible to determine which factors may be related to increased resilience in the face of adversity, and which factors may increase susceptibility to adverse mental health outcomes, such as symptoms of depression. Given that numerous South Africans (including adolescents) are affected by poverty (Statistics South Africa, 2012) and international researchers have outlined poverty as associated with adverse mental health outcomes (Wadsworth et al., 2008), an enquiry into the factors that may influence adolescent mental health is necessary and will be the focus of the present study.

This chapter provides the background to the research problem and the rationale. Thereafter, the operational definitions of the main concepts will be discussed. In the closing of Chapter 1, the scope of the study will be discussed followed by a brief overview of the thesis.

1.2. Background to the research problem and rationale

Researchers have made enquiries into those resources that serve to aid adolescents in their coping process, and thereby assist in preventing the experience of stress. International studies have outlined factors that may reduce experiences of stress in adolescents (Kaynak, Lepore, & Kliewer, 2011). This enquiry reveals that social support in times of need emerges as a protective resource against experiencing stress (Kaynak et al., 2011). Perceptions of social support in difficult circumstances may also result in adolescents seeking support from others as a means of solving their problems, and this support is related to diminished stress (Kaynak et al., 2011).

Evidence from literature has also pointed to self-esteem as another resource that may act as a buffer against the experience of stress. Due to it being related to adolescents' view of their competence (Rosenberg, 1979), self-esteem influences their perceived ability to manage or cope with difficulties. High self-esteem has been associated with increased problem-solving coping as well as diminished symptoms of depression (Behnke, Plunkett, Sands, & Bámaca-Colbert, 2011). High self-esteem and stronger perceptions of social support may foster effective coping in adolescents, which may potentially protect them from experiencing the harmful effect of stress. Moreover, coping itself has been viewed as a resource that assists adolescents in regulating their response to problems. In this regard, problem-solving and social support-seeking coping strategies are involved with the effective management of stressors (Wadsworth & Compas, 2002). According to Seiffge-Krenke, Aunola and Nurmi (2009), "…stress is indicative of an imbalance between the individual and his or her environment …" (p. 259). Moreover, Lazarus (1976) affirmed that coping "…specifically refers to what the person does to handle stressful or emotionally charged demands…" (p. 74). In this case, coping is a central resource in the context of socio-economic disadvantage and has the potential to act as a buffer against stress.

In comparison to the aforementioned protective resources, maladaptive coping strategies (avoidant coping), low self-esteem as well as weakened perceptions of social support received from significant others, have been found to be potential risk factors that increase the likelihood of adolescents experiencing the detrimental effects of stress.. In this regard, Evans and Kim (2013) noted that the experience of childhood socio-economic disadvantage is related to ineffective coping strategies such as the avoidant coping strategy, which has been outlined as a risk factor for depression (Cicognani, 2011; Seiffge-Krenke, 2000). Instead of attempting to solve a problem or seeking social support from others, adolescents may be inclined to avoid managing the stressor or engage in emotional disengagement with the problem at hand. This outcome was reported by Seiffge-Krenke et al. (2009) who noted that adolescents withdraw in stressful circumstances.

A review of the literature revealed that low self-esteem (Orth, Robins, Trzesniewski, Maes, & Schmitt, 2009) and a lack of social support (Pettit, Roberts, Lewinsohn, Seeley, & Yaroslavsky, 2011) are risk factors for outcomes of depression. With maladaptive coping strategies representing a risk factor for disadvantaged adolescents, researchers also found low self-esteem to be associated with the avoidance of managing a stressor (Hammen, 2005; Orth, Robins, Trzesniewski, et al., 2009). This could be due to adolescents with low self-esteem having a deflated view of their competence and hence problem-solving capabilities. In this case, low self-esteem acts as a risk factor for symptoms of depression (Orth, Robins, Trzesniewski, et al., 2009). Similarly, diminished perceptions of social support may be a risk factor for depression given that it is associated with adolescents thinking that they may not have support in difficult circumstances. Related to this, low social support has been found to be associated with depressive symptomology (Pettit et al., 2011). It is evident that while some factors or resources (high self-esteem, problem-solving coping, social support-seeking coping and strong perceived social support) may aid adolescents in dealing with stressful socio-

economic circumstances, other factors (low self-esteem, avoidant coping and a lack of social support) may prevent them from coping adequately and adapting in light of such stressors. Several researchers have focussed on identifying factors that may assist adolescents in adapting to their circumstances (for example: Hjemdal, Aune, Reinfjell, Stiles, & Friborg, 2007; Tandon & Solomon, 2009), and the results of these studies may inform interventions aimed at preventing the incidence of depression in adolescents experiencing contextual stress as well as enhancing resilience in light of stressors.

While the subject of living in low-income communities has received considerable attention from international researchers, it seems that this remains an under-researched field in the South African context. To date, no particular study was found that focussed on the potential role of coping, self-esteem and perceived social support on the mental health of adolescents facing economic hardship. This is concerning considering that many South Africans are affected by poverty and could potentially be affected by poverty-related stress.

In South Africa, a large amount of individuals and communities experience and are largely affected by the socio-economic challenges and face the difficulties associated with poverty. To this effect, the Living Conditions Survey conducted from 2008 to 2009, reveals that 26.3 % of the South African population was living below the food poverty line of R305 per month (Statistics South Africa, 2012). Moreover, 10.7 % of South Africans were living below the poverty line of $ 1.25, and 36.4 % were living with under $ 2.50 per day (Statistics South Africa, 2012). It is evident that poverty is experienced by many people across the provinces of South Africa. Notably, in the Western Cape province, the town of Stellenbosch, where the schools in the present study were used, has 8,961 households that have reportedly no income per month and 13,282 have an income of under R2,300 per month (Statistics South Africa, 2011a).

The stressors of living in low-income communities have also been documented in South African literature. There is evidence that stressors associated with low income-communities may act as barriers to learning, which could manifest in school dropout and subsequent unemployment (Mampane & Bouwer, 2006). Moreover, adolescents may also feel the need to aid their families financially, but because they are attending school they are unable to do so, which may make them feel hopeless and possibly lead to school dropout as well.

Furthermore, numerous South African studies have focused on factors that may make adolescents resilient irrespective of adversity. For example, Kruger and Prinsloo (2008) report that social support from friends and family and scholastic success may help some adolescents remain resilient, while other adolescents rely on substance use and physical violence to adapt to their circumstances. Although the latter study and others (for example: Pillay & Nesengani, 2006; van Rensburg & Barnard, 2005) emphasize that South African research has explored resilience in adolescents, no particular study was found that investigated the relationship between self-esteem, coping strategies, perceived social support and depression, in school-going adolescents. In addition, no South African study was found that outlines the relationship between resilience and depression, in adolescents living in low-income communities. Considering the lack of research on the topic of stress (of which depression is an indicator) in adolescents living in low-income communities in South Africa, research on this theme is warranted.

South African literature emphasise that school-going adolescents may be at risk for mental health problems. For example, Morojele et al. (2013) investigated the risk for mental health problems amongst school-going adolescents in the Western Cape and reported that 41.4% of adolescents are at medium risk for mental health problems, while 14.9% of adolescents are at high risk. Given these figures, it is evident that many adolescents in the Western Cape are at risk for developing or experiencing stress. Considering the risks

associated with experiencing stress it is therefore important to investigate the subject of stress in school-going adolescents that experience socio-economic difficulties in the Western Cape.

As already indicated, certain factors may protect or hinder the coping process for adolescents who experience socio-economic disadvantage, which may either result in experiences of stress (which may manifest as symptoms of depression) or resilience. In South Africa, there is a lack of research on the subject of stress affecting adolescents living in low-income communities, and the present study aimed to contribute to this topic through two broad research aims. This study aimed to investigate the presence of depression (given that depression is a marker for stress) in school-going adolescents living in low-income communities. Secondly, this study aimed to investigate factors that influenced depression in school-going adolescents living in low-income communities in the Stellenbosch area of the Western Cape province of South Africa, particularly focussing on the role of self-esteem, coping, perceived social support and resilience. Insight into the factors that have an impact on depression can inform interventions aimed at preventing ill-being and enhancing protective factors in school-going adolescents, which may reduce outcomes related to depression, such as school dropout (Shilubane et al., 2012).

1.3. Operational definitions of main concepts

In acknowledgement of the idea that the psychological functioning of school-going adolescents living in low-income communities is shaped by a range of internal (intra-individual) and external (environmental) factors, the sections below outline the central concepts that are pertinent for the study. These concepts include stress, depression, coping, resilience, self-esteem, perceived social support and the low-income community.

1.3.1. Stress.

While the term 'stress' has attained general, everyday use – even in non-academic environments, it is worth noting that it has also gained prominence in literature as some research is dedicated towards understanding it in the social sciences, and particularly in the psychology discipline. Lazarus and Folkman (1984) describe stress as circumstances that the individual perceives or experiences as threatening. The authors propose that there is a transaction between the individual and the environment, which implies that the individual can affect the impact of a stressor on their well-being, through the active management thereof (Lazarus & Folkman, 1984). A prominent point made is that the individual first makes a judgement of whether an event in his or her environment is harmful or not (primary appraisal). Thereafter, if the individual perceives the event as threatening, he or she will revise the internal or external resources available that can assist him or her in coping with the stressor (secondary appraisal) (Lazarus & Folkman, 1984). The present study used this transactional model of stress because it accounted for the dynamic interaction between the individual and the environment that affects the individual's psychological well-being.

1.3.2. Depression as an indicator of stress.

In light of Lazarus and Folkman's (1984) definition of stress, an outcome of depression may indicate that the adolescent viewed their relationship with the environment as exceeding their resources to cope, or as threatening to their well-being. Therefore depression may be viewed as an indicator of stress in adolescents. According to Beck (1970) individuals with depression are likely to hold negative views of themselves, the world, as well as the future. In this regard, experiences of depression may result in a pessimistic outlook on an adolescents' environment and their future prospects.

While adolescents may experience temporary depressive symptoms in the absence of major problems, persistent experiences of depression may be related to a diagnosable disorder such as major depressive disorder (MDD) (Mash & Wolfe, 2010). MDD is associated with a range of symptoms that persist for two or more weeks and is characterised by a change in the usual functioning of the adolescent (American Psychiatric Association, 2000). Some of the characteristic symptoms include a persistent depressed mood, a distinct loss of pleasure in activities, a loss of energy, feelings of worthlessness, the inability to concentrate as well as suicide ideation (American Psychiatric Association, 2000). Hammen (2009) notes that depression often presents as an outcome or response to stressful circumstances and in the context of this study, depression will be viewed as a significant marker of stress in adolescents.

1.3.3. Coping.

The understanding of how school-going adolescents manage and withstand challenges associated with living in adverse socio-economic conditions informed the consideration of the construct of coping for the study of the psychological well-being of people living in low-income communities. Lazarus and Folkman (1984) define coping as the "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). This definition emphasizes that coping relates to an individual's management of a stressful situation.

By using strategies to practically solve a problem, the individual gains a sense of mastery and accomplishment from successfully performing tasks at hand, has their confidence boosted, and is therefore able to experience a reduced impact of the stressor, which constitutes functional coping (Öngen, 2006; Seiffge-Krenke & Shulman, 1990). The social support-seeking coping strategy has been conceptualised as representing the primitive

need for human contact when faced with stressful situations (Amirkhan, 1990). By seeking social support, the individual tries to address the stressor directly and this makes it functional (Folkman & Lazarus, cited in Lim, Bogossian, & Ahern, 2010).

Avoidant coping involves an emotionally disengaged, detached interaction with a stressor and the denial of a problem (Gaylord-Harden, Cunningham, Holmbeck, & Grant, 2010; Moos & Schaefer, 1993). It would seem that the dysfunctional nature of avoidance stems from the idea that, instead of confronting the problem at hand (as a way of finding a solution to it) the individual somehow "postpones" dealing with the problem, and emotions surrounding it linger for some time – thus making this particular coping strategy maladaptive in the long term.

From the distinction outlined above, functional coping (problem-solving coping and social support-seeking coping) might protect an individual from negative outcomes while dysfunctional coping (avoidant coping) might magnify the impact of the stressor – a view that has gained resonance from stress-coping research to date (for example: Jose & Huntsinger, 2005; Kort-Butler, 2009; Seiffge-Krenke & Stemmler, 2002). The taxonomy of coping acknowledges the role of social support-seeking coping, problem-solving coping and avoidant coping as relevant strategies used to manage problems (Amirkhan, 1990; 1994). Given that the taxonomy of coping (Amirkhan, 1990; 1994) incorporates the aforementioned three coping strategies, it was used to investigate the coping strategies used by adolescents living in low-income communities.

1.3.4. Resilience.

Although economic stressors are associated with negative psychological health outcomes, some children are able to adapt to their circumstances (Masten et al., 2004). Garmezy (1991) refers to the ability to adapt despite adversity as resilience, which is the "adaptation in the

face of some type of stress, threat or adversity" (p. 462), a definition conventionally accepted in many studies (notably, Fergus & Zimmerman, 2005; Luthar, Cicchetti, & Becker, 2000), and which will be used in the study. Protective factors modify the impact of stressors on the individual and contribute to their adaptation to a stressful encounter (Saxena et al., 2006).

International researchers (Tandon & Solomon, 2009) and local researchers (Mampane & Bouwer, 2006) emphasize that protective factors are central in fostering resilience in school-going adolescents that reside in low-income communities. In the present study, it would be of interest to note the extent to which some factors in the social milieu serve to help the participants adapt, thrive and withstand the challenges that come with the socio-economic deprivation inherent in their communities.

1.3.5. Self-esteem.

Self-esteem refers to an individual's perception of their self-worth, competence (Rosenberg, 1965) and personal evaluation (Tesser, 2004). Feedback from friends, family and teachers informs an individuals' view on their competence, which relates to their self-esteem (Jordon & Cole, cited in Mash & Wolfe, 2010). When individuals have high self-esteem, they may utilise effective coping strategies that may protect them from experiencing depression (Orth, Robins, & Meier, 2009). In contrast, adolescents with low self-esteem may perceive a stressor as unmanageable, which affects their ability to cope with it, making low self-esteem a risk factor for distress (Lee-Flynn, Pomaki, DeLongis, Biesanz, & Puterman, 2011). The present study aimed to attain insight into the role of self-esteem in adolescents living in low-income communities. In the context of this study, self-esteem refers to the perceived competence and self-worth held by an adolescent.

1.3.6. Perceptions of social support.

Perceived social support received from significant others in the wake of a stressful encounter, has a positive impact on the mental well-being of adolescents (Dunkel-Schetter & Bennet, 1990). When adolescents perceive the availability of social support, they believe that significant others may be available to help them cope with a stressor. Social support is associated with the reduction of distress and vulnerability and enhanced feelings of control and self-efficacy (Kaynak et al., 2011). If perceptions of social support received are stronger, this may lead to the individual seeking support to deal with the stressor at hand, and this would help him or her reflect on its severity and devise solutions to the problem. In the present study, perceived social support refers to an individual's subjective appraisals of support received from friends, family members and others.

1.3.7. The low-income community.

Many low-income communities in South Africa have been affected by the Group Areas Act of 1950 (as part of the apartheid regime), under which black people were forced to relocate to underdeveloped areas. People living in farming communities that include Stellenbosch are also affected by poverty (Holtman, Shelmerdine, London, & Flisher, 2011). The levels of poverty in these communities range from relative poverty, where the basic standards of living are not met, and they experience severe disadvantages (Swanepoel & de Beer, 2006), to absolute poverty that is marked by great difficulty in satisfying their basic needs (food, shelter and health care).

Noble, Wright and Cluver (2006) propose a "multidimensional model of child poverty for South Africa" (p. 45). This model emphasizes that irrespective of the level of poverty (relative or absolute), eight domains indicate the experience of poverty in children, which

include a lack of physical safety, material deprivation, and access to quality services (Noble et al., 2006).

The present study acknowledged that the level of income for each household is not the sole indicator of social disadvantage and noted that multiple factors of indigence (for example: a lack of physical safety, material deprivation, and access to quality services) may be used to indicate that communities are disadvantaged.

1.4. Brief outline of the thesis

The present chapter (Chapter 1) has described the background to the research problem, rationale of the study as well as the operational definitions of the main concepts used. This will be followed by an overview of the literature that pertains to the research problem (Chapter 2). Chapter 3 will commence with a discussion of the research aims, objectives and hypotheses, followed by a description of the research methodology that was used to conduct the study. The results of the present study will be outlined in Chapter 4. The results of the study as well as the concluding remarks, recommendations for future research and limitations of the study will be discussed in Chapter 5.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

Prior to discussing the research aims, objectives and hypotheses of the present study, it is necessary to outline the past and present literature on the topic of stress associated with living in low-income communities, globally and in South Africa (particularly relating to school-going adolescents). The present chapter (Chapter 2) sheds light on the aforementioned topic by highlighting previous international and local studies. The researcher hopes that the studies outlined in this section will emphasize which factors may act as either protective or risk factors to socio-economically disadvantaged adolescents. In conclusion of the literature review, the theoretical framework that will be used in the study will be discussed, which is the transactional theory of stress and coping by Lazarus and Folkman (1984).

2.2. The impact of poverty globally and locally: Implications for mental health

2.2.1. Conceptualising poverty.

When viewing the set international and local poverty lines often reported in research reports, it is evident that poverty is predominantly classified and defined according to individuals' level of income and further conceptualised as either absolute or relative. Statistics South Africa (2008) reports that: "In brief, absolute poverty lines define the poor on the basis of an absolute standard applied to income or expenditure, whereas relative poverty lines define poverty according to the prevailing relative situation in society" (p. 9).

Absolute poverty lines indicate those individuals whose income, or lack thereof may not be at a standard that is conducive to living. Noble et al. (2006) suggest that such views of absolute poverty are focussed on income, expenditure as well as the minimum amounts

required for daily living. The poverty line of $1.25 per day (R12.57, in accordance with the September 2013 currency equivalent) is seen as the international poverty line for those people who experience extreme poverty (World Bank, 2010) and who thus cannot afford to meet their basic needs. In addition to this line, the World Bank (2010) also provides a poverty line of $2 (R20.12) per day, which is set at a slightly higher point than the $1.25 poverty line.

In contrast to absolute poverty, many authors acknowledge that poverty can also be relative (Noble et al., 2006). In this case, it should be noted that definitions and ideas surrounding poverty are generated within specific contexts. Within the model of child poverty, Noble and associates suggest that relative poverty relates to the inability for a child to fully participate in their society, rendering them excluded. It is evident that poverty is either described in terms of absolute (typically indicated by the international poverty lines) or relative terms, however regardless of perceived differences between the construct and their associated characteristics, poverty not only has multiple facets, but is experienced in varied ways globally.

Although the level of income is often used as a criterion to measure and define poverty globally, researchers have noted that the experience of poverty cannot be reduced to only the level of income of individuals. This point is captured by Soubbotina (2004), who indicates that:

> Traditionally poverty was understood primarily as material deprivation, as living with low income and low consumption, characterized primarily by poor nutrition and poor living conditions…Income and human poverty also tend to be accompanied by such social deprivations as high vulnerability to adverse events (for example, disease, economic crisis, or natural disaster), voicelessness in most of society's institutions, and powerlessness to improve one's living circumstances. (p. 30)

Although Soubbotina (2004) emphasises the centrality of income level in classifying and understanding poverty, they also highlight the other forms of social deprivation that is related to poverty. In this regard, it is evident that social deprivation is not only linked to individuals' level of income, instead, there are other forms of deprivation that may adversely impact individuals in the context of poverty.

Different indicators of deprivation (such as the deprivation of safety) should be acknowledged as they contribute to understanding poverty as a multidimensional concept. In this regard, Noble et al. (2006) developed a model for childhood poverty in South Africa which includes different levels of deprivation that are associated with childhood poverty. The authors indicate that there are eight factors (domains) that characterize both absolute and relative poverty. These domains include abuse and deprivation of the following: health, material, human capital, social capital, living environment, adequate care and physical safety (Noble et al., 2006). The authors note that the accessibility to quality services is relevant to both forms of poverty as well. It appears that each domain is related to a certain form of deprivation experienced by socio-economically disadvantaged children. Moreover, the domains are also relevant within the South African context. For example, Noble and associates note that *living environment deprivation* relates to the deprivation of basic adequate shelter, rendering individuals only able to stay in informal settlements and overcrowded spaces, in which they may not have access to other basic services (water, sanitation and electricity) (Noble et al., 2006). This point is clarified by Statistics South Africa (2012), which found that 13.6% of South Africans were living in informal settlements over the period of 2008/2009. In addition, only 51.8% of people experiencing poverty had access to running water (Statistics South Africa, 2012). Of those people who did not have access to running water, 49.5% of people cited that they could not afford running water

(Statistics South Africa, 2012). These results indicate that many South Africans may be living in adverse conditions, where they have difficulty satisfying their basic needs.

Also included in the model for childhood poverty, is the deprivation of *physical safety*, *human capital* (which is particularly related to the acquisition of materials and attire for school) and *material deprivation* (which relates to those in absolute poverty needing to acquire clothes and food, while those experiencing relative poverty, may seek to have a television at home and wear certain types of clothing). It is evident that this model accounts for numerous aspects of the experience of poverty for those children or adolescents experiencing poverty locally. It is thus pivotal to acknowledge that there are numerous risk factors associated with the experience of poverty, which go beyond economic disadvantage. The present study therefore recognizes that poverty is a multidimensional concept, defined by multiple indicators of risk.

2.2.2. The prevalence of poverty internationally and locally.

The prevalence of poverty globally, especially in developing countries, has resulted in several development initiatives, of which the Millennium Development Goals are a prominent example. Part of the Millennium Development Goals is the aim to reduce the amount of individuals experiencing poverty (Statistics South Africa, 2010). The World Bank (2010) reports that this goal has already been attained as the amount of people who experienced extreme poverty ($1.25 per day) has decreased from 43% in 1990 to 21% in 2010. Fundamentally, 1.22 billion individuals in the developing world lived with $1.25 (R12.57) per day in 2010 when compared to the 1.91 billion in 1990 (World Bank, 2010). Although these statistics allude to the positive changes that have occurred thus far, poverty is still especially prevalent in the developing world.

While the impact of poverty is experienced by many individuals globally it is especially prevalent in sub-Saharan Africa. Statistics from the World Bank (2010) illustrate that approximately 48.5% of individuals in sub-Saharan Africa live with under $1.25 (R12.57) per day, whereas 69.9% of individuals live with under $2 (R20.12) per day. These concerning results allude to the large amount of African families that are still affected by daily poverty-related risk factors.

In South Africa, a large number of families experience poverty. Statistics South Africa (2012) summarises some statistics related to poverty in the living conditions survey, which was conducted over the period of 2008 and 2009. In this survey, it is reported that approximately 26.3 % of South Africans were living below the food poverty line of R 305 per person, per month (based on March 2009 figures). The food poverty line makes reference to "the amount of money that an individual will need to consume the required energy intake" (Statistics South Africa, 2012, p. 5). In addition, specific lower-bound and upper-bound poverty lines are also defined. In this case, the lower-bound poverty line is set at R416 per person per month (based on March 2009 figures), and refers to "…the food poverty line (R305) plus the average amount derived from non-food items of households whose total food expenditure is equal to the food poverty line" (Statistics South Africa, 2012, p. 5). In addition, the upper-bound poverty line is set at R577 (based on March 2009 figures), and "…refers to the food poverty line (R305) plus the average amount derived from non-food items of households whose total food expenditure is equal to the food poverty line" (Statistics South Africa, 2012, p. 5). Moreover, in terms of the international poverty lines, Statistics South Africa (2012) reports that 10.7% of individuals are living below $1.25 per day and 36.4% of people below $2.50 per day. These results indicate that there are numerous South African citizens that may be affected by the daily stressors associated with poverty.

As mentioned previously, poverty is typically associated with a range of other risk factors. For example, individuals face the challenge of satisfying their basic needs (such as food and clothing), but they are simultaneously disadvantaged by a lack of their basic necessities, such as electricity. Moreover, in South Africa, there are other factors that indicate concerning social challenges related to experiencing poverty. In this regard, many individuals are HIV positive, with the national prevalence of the HI virus being 5.26 million (Statistics South Africa, 2013). Therefore, many South Africans may not only be experiencing poverty-related challenges, but may also be affected by HIV/AIDS.

Considering the high prevalence of poverty in South Africa, it is concerning that many young children and adolescents may be affected by a generational cycle of poverty. Poverty is typically characterised by a cycle that has persisted from one generation to the next. A large number of black people (a group that includes people from the African, Coloured and Indian communities) are experiencing poverty nationally. Statistics South Africa (2012) report that during the period between September 2008 and August 2009, those living below the upper-bound poverty line were as follows: 61.9% of the black African individuals, 32.9% of Coloured individuals, 7.3% of the Indian/Asian population and 1.2% of the White population. These statistics confirm that quite a large number of black individuals are experiencing poverty, and in this regard it is important to acknowledge the social factors that may have influenced such results.

Today, the effects of the Group Areas Act of 1950[2] under the Apartheid regime can still be seen, as many black individuals are still residing in conditions of poverty. Under the

[2] It was under the Group Areas Act black that people were forcibly removed from their homes to relocate to different areas, with the resultant chronic unemployment, limited resources and perpetual and inter-generational cycle of poverty from which it has proved difficult to escape.

Group Areas Act, many black individuals were forcibly relocated to designated areas, of which many today are still characterised by poverty and other risk factors (such as crime and violence). In one of the provinces of the country, the Western Cape, the effects of such relocations are evident. In the rural areas in the Western Cape, poverty, alcohol dependence, poor education, unemployment and a lack of social support adversely affect many farming communities (Holtman et al., 2011). Subsequently, many of the laws imposed by the Apartheid regime have contributed to the structural and socio-economic inequality still experienced by many South Africans, including those living in the low-income communities of the Western Cape. Supporting statistics were reported by Statistics South Africa (2011b), which found that in Cape Town in the Western Cape 405 989 individuals were unemployed, whereas 146 517 did not have an income, and a large amount of 323 719 individuals had an income of R2300 per month or less (Statistics South Africa, 2011a). Moreover, in the town of Stellenbosch, 10 178 individuals were unemployed (Statistics South Africa, 2011b), 8961 had no income and 13 282 had an income of R2300 per month or less (Statistics South Africa, 2011a). These results emphasize that the Western Cape has many families that are affected by low-income, no income and unemployment, possibly rendering them unable to meet their basic needs. This particular study is focused on one sub-set of the Western Cape population, that being adolescents living in low-income communities in Stellenbosch. For this reason, it was necessary to outline the prevalence and impact of poverty and poverty-related risk factors of not only South Africa, but also for the Western Cape.

Considering the statistics, it is possible to see the link between the generational cycle of poverty and the injustices of the Apartheid regime, such as the Group Areas act. That being said, it is concerning that many adolescents are affected by a generational cycle of poverty that has persisted over time. It is therefore important to investigate which factors may help or hinder their coping process, in the context of socio-economic disadvantage. Insight

into such factors may help to promote health or prevent incidence of stress, which may possibly assist adolescents in coping adequately, completing their schooling and escaping the poverty trap.

From a mental health perspective, stress associated with experiencing poverty, has been outlined to have a negative impact on the mental health of adolescents. In this regard, Najman et al. (2010) report that experiencing poverty in adolescence, is associated with increased levels of anxiety and depression (poverty is a predictor of high levels of depression and anxiety). If adolescents are affected by the generational cycle of poverty, and are the future adults of the country, it is important to outline how poverty-related risk factors impact their health and particularly their mental health. The following section is dedicated to outlining the latter.

2.3. The impact of poverty on adolescent well-being

2.3.1. Adverse outcomes related to poverty-related stress.

Adolescence is a stage of development, particularly characterised by a transition from childhood to adulthood. During this stage of development, adolescents are usually confronted by physical changes brought about by puberty as well as various development tasks, which include seeking and maintaining friendships with their peers, while gaining a degree of independence from their caregivers (Meyer, 2005). Authors also note that adolescence is associated with risk taking behaviour, such as substance abuse and unprotected sex, due to some adolescents often falsely believing that potential negative consequences will not affect them (Meyer, 2005).

Alongside these factors typically associated with this period of development, adolescents who experience poverty are expected to cope with a wide range of psychosocial

stressors (Evans & Kim, 2013). While some of these stressors are directly associated with their socio-economic position at home (for example, having less financial resources to satisfy basic needs), there may also be stressors in the broader environment, which includes the neighbourhood (Evans & Kim, 2013). Some of the neighbourhood risk factors may include exposure to violence and abuse (Wadsworth, Raviv, Santiago, & Etter, 2011), crime and less access to recreational activities in the community. In this regard, Wadsworth et al. (2008) state that: "poverty creates a context of stress in which stressors build on one another and contribute to further stress" (p. 157). This point emphasises the importance of viewing a collective of factors, which may contribute to negative mental health outcomes in adolescents, in the context of poverty.

A variety of stressors may adversely impact adolescents' psychological, physical and educational well-being (Wadsworth et al., 2008). International researchers have noticed the relationship between socio-economic stressors and outcomes of risk in adolescence. In this regard, Wadsworth et al. (2008) conducted a study on 164 children and adolescents. The study focused on poverty-related stress associated with socio-economic status, as a factor that influences outcomes of mental disorders. The results of the latter study indicated that the stress associated with living in conditions of poverty has an adverse effect on the holistic well-being of adolescents, as it affected their physical and psychological health. Wadsworth and associates reported a particular relationship between poverty-related stress and deviant behaviours, teenage sexual practices, school drop-out and substance use (Wadsworth et al., 2008). Moreover, poverty-related stress was also found to be associated with mental disorders, which include MDD and dysthymic disorder (Wadsworth et al., 2008).

It is important to delve into the implications residing in conditions of poverty has on adolescents, as researchers outline a link between poverty and elevated levels of stress (Evans & Kim, 2013). This is also reflected by statistics from the WHO (2010), who report that

socio-economic disadvantage is a risk factor for mental health challenges globally. The following section of the literature review will be focused on delineating the various international and local studies focused on stress related to adolescents experiencing socio-economic difficulties.

2.3.2. Mental health outcomes related to experiencing poverty.

International research conducted by Najman et al. (2010) has focused on the relationship between the experience of family poverty and outcomes of anxiety and depression in adolescents and young adults. In this study, it was found that poverty predicts incidence of depression and anxiety in adolescents and young adults. Moreover, the authors discern that a cumulative exposure to poverty increased the risk for experiencing anxiety or depression in adolescence and young adulthood (Najman et al., 2010). Other authors have also noted that experiencing family poverty in childhood predicts incidence of posttraumatic stress disorder (PTSD) and MDD (Nikulina, Widom & Czaja, 2010). In addition to the incidence of stress in adolescents residing in conditions of poverty, Dupéré, Leventhal and Lacourse (2009) reported a relationship between poverty and suicide. It was found that residing in disadvantaged communities is a risk factor for suicide (Dupéré et al., 2009). Moreover, the chances of attempting suicide were four times higher in disadvantaged communities (Dupéré et al., 2009). These results collectively underscore the relationship between experiencing poverty and adverse mental health outcomes.

A review of the literature reveals that symptoms of depression are consistent mental health outcomes in adolescents experiencing poverty (Najman et al., 2010; Wadsworth & Berger, 2006). In this case, Wadsworth and Berger (2006) explored the relationship between stress (related to living in conditions of poverty) and mental health outcomes. In this study, which included 79 adolescents who resided in low-income communities, it was found that

family stress, which relates to a disadvantaged socio-economic position, acts as a predictor for outcomes of anxiety, depression and aggression in adolescents at an 8 month follow-up (Wadsworth & Berger, 2006).

Najman et al. (2010) examined the effects that family poverty (during early childhood) has on outcomes of anxiety and depression in adolescence and young adulthood. Adolescents were part of a follow up at age 14 and 21 respectively. The results of the study indicated that recurrent exposure to family poverty was associated with an increased risk for anxiety and depression at both ages of the follow up (14 and 21 years) (Najman et al., 2010). The results of the latter study, as well as that of Wadsworth and Berger (2008) emphasize that anxiety and depression are prominent mental health outcomes possibly associated with poverty-related stress. Hammen (2009) notes that depression "…is most often a response to stressful events and circumstances…" (p. 200). This may be one reason why adolescents experiencing socio-economic hardship are susceptible to experiencing depression.

Depression is characterised by a disturbance in the mood of individuals. Sadock and Sadock (2007), indicate that *mood* refers to an internal feeling that has an impact on an individual's behaviour as well as their view of the world. Moreover, when there is a disturbance in the mood of individuals, this may result in depression (Mash & Wolfe, 2010).

Given that there are a number of risk factors associated with depression itself, it is important to briefly conceptualise outcomes of depression in adolescents, which is a topic that has been explored by different theorists. Beck (1970) suggested that depression is associated with cognitive distortions, which are cognitive errors that inform the way events are interpreted by an individual. 'Arbitrary inference', is an example of a cognitive distortion, whereby individuals may make certain conclusions about their experiences that are not founded by evidence (Beck, 1970) (for example: a depressed adolescent may conclude that their peers may dislike them- without any evidence to this regard). Other individuals may

selectively focus on certain aspects of events while ignoring other aspects thereof, which is termed 'selective abstraction' (Beck, 1970). Moreover, individuals might use single events to inform their overall views of themselves (for example, an adolescent may not be chosen to be in the schools hockey team, and may conclude that they cannot play any sport well). It is also likely that individuals may have a deflated view of their abilities and competence ('minimization'), while holding an exaggerated view of their stressors ('magnification') (Beck, 1970).

Beck (1970) suggested that depression is associated with cognitive patterns that shape an individuals' outlook on life in a negative way. These views are summarised in the cognitive triad of depression. The individual may perceive and interpret their experiences in the world in a negative manner. In addition, the individual may hold negative views on their self-concept, personal worth and desirability while simultaneously continuing to view their future in pessimistic manner (Beck, 1970). The cognitive triad of depression is thus characterised by the following:

1. A negative view of **oneself**
2. A negative view of the **world**
3. A negative view of the **future** (Beck, 1970)

When adolescents hold negative views of themselves, the world as well as their future, this may impact their mood (Mash & Wolfe, 2010), which has an impact on their behaviour. In the context of such negative views, depression may result in feelings of hopelessness in at-risk adolescents, which in conjunction with low self-esteem may interfere with school performance and attendance. The latter may also impede upon the adolescents' ability to escape the poverty trap, for which hopelessness is a salient risk factor.

Considering the various negative views held by depressed adolescents, as captured in the cognitive theory of depression as well as the characteristic symptomology of depression,

it is evident that the disorder may interfere with their functioning at school, their social lives and in the home context. This establishes a relationship between experiences of depression and psychosocial risk factors. The routine of most adolescents include attending school, where they interact with their peers and close friends. In the case of an adolescent who is depressed, marked disturbances may be experienced in the school context, in terms of their academic functioning, as well as disruptions in their social relationships (Mash & Wolfe, 2010). In addition, a relationship between depression and low self-esteem is also noted by researchers, who also find that low self-esteem is a risk factor for depression (Orth, Robins, Trzesniewski, et al., 2009). This result could also impact adolescents' functioning at school, as self-esteem is related to the perceived competence (Rosenberg, 1979), necessary to tackle tasks at school, interact with peers and solve their challenges.

In terms of the social risk factors, Keenan-Miller, Hammen, & Brennan (2007) report that there is a relationship between depression and alcohol and drug abuse, while Miller-Johnston, Lochman, Coie, Terry and Hyman (1998) found depression to be a risk factor for antisocial behaviour. It is noticeable that depression may manifest in a host of profound psychosocial risk factors in adolescence. Moreover, in the context of economically disadvantaged adolescents already experiencing several other stressors, this is a risk factor. In this regard, a cumulative amount of contextual stressors may result in adolescents not being able to cope effectively, feeling overwhelmed and perhaps attempting suicide. Suicide ideation is possibly the most concerning risk factor in the context of adolescents living in low-income communities, as these adolescents are more susceptible to experiencing suicide ideation (Dupéré et al., 2009).

The WHO (1978) states that health is defined by an overall state of well-being (physically, mentally and socially), and is not solely defined by a lack of illness (WHO, 1978). Based on this definition, mental health is an important aspect of overall well-being.

Experiencing poverty or residing in low-income communities, have been found to be related to experiencing stress in adolescents. Lau (2002) indicates that those children who experience poverty are more likely to have severe health challenges, compared to other children residing in less adverse circumstances. Adverse mental health outcomes, such as experiencing stress, may be seen as an imbalance between the adolescent and their environment (Seiffge-Krenke et al., 2009), as adolescents may be unable to cope in light of numerous socio-economic stressors. This point is illustrated in the literature, which states that experiencing childhood poverty may be related to maladaptive coping (Evans & Kim, 2013), which may manifest in symptoms of depression in adolescence. The latter has been found to be an outcome relating to residing in low-income communities (Wadsworth et al., 2008; Wadsworth et al., 2011).

From the international literature reviewed thus far, it appears that adolescents living in low-income communities are:

1. At risk for experiencing a range of contextual stressors that may result in symptoms of depression.
2. Depression itself is related to various negative psychosocial outcomes, which may interfere with adolescents' social, educational and especially their mental well-being.

It would appear that although the subject of stress in adolescents experiencing poverty is well documented in the international literature, it is still a theme that warrants additional research in the South African context. That being said, the relationship between mental health disorders and adverse outcomes has been noted in the South African context as well, with authors such as Morojele et al. (2013) noting that some school going learners in the Western Cape are at medium and high risk for mental health problems.

The risk behaviour, substance use and mental health risks amongst South African adolescents have also been explored. In this regard, Morojele et al. (2013) investigated the

prevalence of these risk factors amongst school-going adolescents residing in the Western Cape, South Africa. In their study, the authors found that 66% of learners reported using alcohol, 47.4% used tobacco while 23.6% used cannabis. The results of Morojele et al.'s study also show that the use of substances extended beyond these, to substances such as methamphetamine (2%), mandrax (2.1%) and cocaine (1%). Additional results reveal that school-going adolescents are exposed to a range of psychosocial stressors in their communities, such as witnessing assault in the community (someone being attacked), witnessing drug use (as reported by 61% participants in the Morojele et al.'s study), 46.6% witnessing illegal substances being sold (as reported by 46.6% of the participants), witnessing stabbing (40.4%) and witnessing shooting in the community (21.4%) (Morojele et al., 2013). These results illustrate that school-going adolescents in the Western Cape, may be experiencing a range of stressors in their communities.

The prominence of school drop-out is also reported in South African research. A study conducted by Hunter and May (2011), investigated the relationship between experiences of poverty and school disruption (school drop-out) in South African adolescents, residing in KwaZulu-Natal. The study emphasised that failure to attain a Grade 12 certificate (completing secondary education), limits future prospects. The authors report a relationship between experiences of poverty and school drop-out in a group of South African adolescents. Of the group of participating adolescents, (4987 adolescents), 16% had discontinued attending school (18% were female and 14% male). Among the dominant reasons for this school drop-out, it was reported that 38% of the female adolescents discontinued their schooling because of pregnancy (these participants were either pregnant at the time of the study or pregnant prior to the study being conducted). In addition, 30% of female and 27% of male adolescents discontinued school because of the prohibitively high costs of school fees. Other reasons cited for school drop-out, was the need to start working as well as not being

interested in attending school. Mampane & Bouwer (2006) report that poverty-related stressors may contribute to school drop-out amongst adolescents and eventual unemployment.

A range of studies make reference to the mental health of South African adolescents. Morojele et al. (2013), outlines that school-going adolescents are indeed at risk for mental health problems. As reported previously, Morojele et al. (2013) noted that school-going adolescents in the Western Cape are at medium and high risk for experiencing mental health problems. More specifically, they note that 41.4% of adolescents are at medium risk for mental health problems, while 14.9% of adolescents are at high risk (Morojele et al., 2013). Moreover, Saban, Flisher and Distiller (2010) suggest that there is a relationship between mental health outcomes such as depression, anxiety and substance use. In addition, a relationship between experiencing poverty and suicide in both children and adolescents has been reported (Meehan, Peirson, & Fridjon, 2007; Shilubane et al., 2012).

South African research alludes to the prominence of mental health challenges, risk taking behaviour as well as suicide amongst South African adolescents. However, there is a lack of research focusing on the presence of stress in adolescents residing in low-income communities. From the literature reviewed it is evident that there are not only risk factors associated with living in conditions of poverty, but also many risk factors associated with experiencing poverty-related stress (i.e. depression). As a result, it is crucial to explore this theme further.

Although experiencing poverty may result in adverse mental health outcomes, some children may be able to adapt to their circumstances (Masten et al., 2004) and remain resilient. International and local researchers emphasise that protective factors are central in fostering resilience in school-going adolescents that reside in low-income communities. In this regard, international researchers Tandon and Solomon (2009) emphasize the need for

research to investigate factors that could possibly protect school-going adolescents that experience contextual risk, from depressive symptoms. Similarly, South African researchers, such as Mampane and Bouwer (2006) suggest that protective factors need to be identified as they assist school-going adolescents with coping with stressors and with remaining resilient.

It is evident that there are certain factors that may either adversely affect adolescents, while other factors may protect them in the context of risk. A review of the literature indicates that social support, self-esteem and coping strategies are either risk factors for adolescents experiencing poverty, or essential protective resources. In the following section of the literature review, the impact of self-esteem, perceived social support and coping strategies on the mental health of adolescents will be discussed. The relationship between these factors and depression or resilience will also be outlined.

2.4. The impact of self-esteem, coping and perceived social support on the mental health of adolescents: outcomes of resilience or depression

2.4.1. Self-esteem.

In light of perceived stressors, self-esteem may provide adolescents with the confidence necessary to cope effectively. This is due to self-esteem being tied to the perceived competence of the adolescent (Rosenberg, 1979), which may influence their ability to cope with perceived stressors. A review of the literature reveals that while low self-esteem may make individuals more susceptible to developing symptoms of depression (Metalsky, Joiner, Hardin, & Abramson, 1993; Nezlek & Plesko, 2003; Orth, Robins, Trzesniewski, et al., 2009), those who possess high self-esteem, and consequently a higher perceived competence, may be more likely to cope with perceived stressors, which may decrease their susceptibility to developing depression (Orth, Robins, & Meier, 2009).

Orth, Robins and Roberts (2008) conducted a study to assess the relationship between self-esteem and depression. The study examined the effects that self-esteem exerts on outcomes of depression, as well as the effect of depression on self-esteem. Orth and associates intended to assess two hypotheses based on the effects of self-esteem. Firstly, they assessed whether low self-esteem acts as a risk factor for outcomes of depression (vulnerability model) and secondly, they assessed whether low self-esteem is an outcome of depression (scar model). This was done through the use of two longitudinal data sets, through which adolescents were assessed at the ages of 15 and 21 (study 1) and 18 and 21 (study 2) respectively. The results of the studies revealed that while low self-esteem acted as a predictor of levels of depression, depression itself was not a predictor of levels of low self-esteem. These results therefore supported the vulnerability model, which affirms that low self-esteem is a risk factor for depression, instead of the scar model (Orth et al., 2008).

A study conducted by Orth, Robins, and Meier (2009), explored the hypothesis presented by the self-esteem buffering hypothesis. The latter hypothesis states that when individuals experience difficult circumstances, those with low self-esteem are expected to have fewer coping resources and are thus more susceptible to experiencing depression. Moreover, those adolescents who possess high self-esteem are more likely to cope effectively and are less susceptible to developing depression. The study used data from three longitudinal studies that assessed adolescents and young adults at multiple stages. The results from the studies indicated that while low self-esteem and stressful events independently predicted depression, they did not interact in this prediction (Orth, Robins, & Meier, 2009). The results of the study thus do not support the self-esteem buffering hypothesis, although Orth and associates do posit that low self-esteem and stressful events operated as independent risk factors for outcomes of depression (Orth, Robins, & Meier, 2009).

It is evident from the studies outlined previously that various theories attempt to account for the relationship or impact that self-esteem exerts on an individuals' mental health, particularly relating to outcomes of depression. In this regard, the *self-esteem buffering hypothesis* indicates that when the individual experiences challenging circumstances, low self-esteem would increase their susceptibility to developing depression, whereas adolescents with high self-esteem may be protected from symptoms of depression, because they have the coping resources necessary to deal with the stressors (Orth, Robins, & Meier, 2009). The *vulnerability model* is also used to conceptualise this relationship. This model indicates that low self-esteem acts as a risk factor for incidence of depression, as it has an influence on outcomes of depression (Orth et al., 2008). While the self-esteem buffering hypothesis indicates that high self-esteem buffers the impact of stressors on outcomes of depression (Orth, Robins, & Meier, 2009) the vulnerability hypothesis indicates that self-esteem influences outcomes of depression through both interpersonal and intrapersonal pathways (Orth et al., 2008). Orth et al. (2008) offers a review of these pathways.

Hammen (2009) argues that: "...any negative event or circumstance that an individual believes will result in a depletion of his or her sense of being worthwhile, desirable, competent, or successful could trigger a depressive reaction in a vulnerable person" (p. 201). When adolescents perceive certain events as being detrimental to their overall health, they may apply certain strategies in an attempt to minimise the impact of the stressor on their health (Lazarus & Folkman, 1984). A study conducted by Behnke et al. (2011) was focused on examining the roles of reported discrimination, neighbourhood risk, parent-child conflict over culture and parental support in relation to self-esteem and depression. A total of 383 adolescents in Grade 9 were included in the study. A prominent finding of the latter study was that adolescents' self-esteem was negatively related to depressive symptoms. This means that the higher the level of self-esteem in adolescents, the less symptoms of depression was

experienced (Behnke et al., 2011). This finding corroborates with that of Orth et al. (2009), who also noted the centrality of high self-esteem as a protective resource to adolescents, as Orth and associates suggest that high self-esteem is related to individuals having more perceived resources to cope with stressors.

Given that self-esteem indicates the perceived competence of adolescents, high self-esteem may be an essential resource for those who experience poverty-related stressors. Orth et al. (2008) reviewed the different interpersonal and intrapersonal pathways through which self-esteem impacts depression. These views are conceptualised as part of the vulnerability model, and are described below:

1. The intrapersonal pathway: individuals with low self-esteem may ruminate about the negative traits relating to themselves.
2. The interpersonal pathway: those with low self-esteem may look toward their social relationships for cues about their worth. They are also likely to look for negative feedback to reinforce negative views of their competence. Individuals with low self-esteem may also be inclined to avoid social situations, which may hinder possible social support from others (Orth et al., 2008).

Considering these factors, it is evident that those adolescents with low self-esteem may have a tendency to not only have a negative view about their competence, but they may look for negative information about themselves from others. Self-esteem develops in adolescents' contexts of interaction, which include the home and school context. At school, adolescents gain a sense of accomplishment when completing challenging tasks and interacting with peers and teachers (Plotnik, 1999). When adolescents do not receive support or positive feedback about their achievements at home, the school context should provide the needed support and reinforcement. South African researchers (Mampane & Bouwer, 2011) support this view and indicate that: "In the absence of constructive and supportive conditions in the

home environment, the school is logically the next resource inline" (p. 115). The study conducted by Mampane and Bouwer (2011), was focused on investigating the impact of schools situated in townships, on the resilience of school-going adolescents. The study included Grade 9 learners identified as resilient and less resilient. It was concluded that learners viewed the school as being central to their future aspirations. In the study, the authors argued that school-going adolescents living in low-income communities need protective resources and resilience in order to persevere in their disadvantaged context. Moreover, it is suggested that adolescents who are able to remain resilient often possess at least social support from a person or certain resources in their immediate environment (Mampane & Bouwer, 2011). In the case of the present study, the school system also conforms to an immediate environment for the adolescents. In the school environment, the self-esteem of adolescents may be cultivated. Adolescents are at school for many hours in the week and interact with their peers and school teachers as well as complete different tasks. The school system is thus a vital platform in which adolescents may receive reinforcement about their competence and capabilities.

In the context of multiple risk factors, school going adolescents with low self-esteem may not believe that they have the capacity to effectively manage stressors or that they may overcome their circumstances. Such outcomes may be associated with negative outcomes and infringe upon the well-being of adolescents. Research in the South African context alludes to the relationship between low self-esteem and negative outcomes, such as suicide ideation. A study conducted by Wild, Flisher and Lombard (2004) investigated the impact of self-esteem and depression on suicidal behaviour. This study was conducted amongst 939 school-going adolescents residing in the Western Cape (Cape Town), South Africa. Results indicate that low self-esteem in the family context and depression were independently related to suicide ideation and attempts (Wild et al., 2004).

Although existing studies contribute to our understanding of the role of self-esteem, no particular South African study has focused on the self-esteem of adolescents living in socio-economically deprived communities. Given that previous studies outline an association between self-esteem and stress, it is essential to investigate this relationship in the South African context.

2.4.2. Perceived social support.

Social support from family, peers and friends may emerge as an essential protective resource for adolescents who experience socio-economic stressors. When adolescents experience stressful circumstances, they may share their feelings with someone as part of seeking support or they may seek advice from others to help solve their problems (Frydenberg, 1997). In the context of multiple potential stressors, social support may foster effective coping in adolescents, such as social support-seeking as well as problem-solving coping. It is for this reason that social support may be essential in preventing adolescents from being distressed.

A review of the literature indicates that social support functions as a key resource that protects adolescents from stress (Dubow, Edwards, & Ippolito, 1997; Kaynak et al., 2011; Ozer & Weinstein, 2004; Xue et al., 2005). A study conducted by Ozer and Weinstein (2004) found that when adolescents witnessed community violence or have been victims of violence themselves, social support from family protects them from symptoms of depression. Other studies also indicate the protective role of social support as they indicate that strong perceptions of social support from significant others have a positive impact on the psychological well-being of adolescents (Dunkel-Schetter & Bennet, 1990; Weber, Puskar, & Ren, 2010). When an adolescent perceives the availability of support, they are aware that they can ask others to assist with solving problems, which may lead to effective coping and consequently diminished distress (Kaynak et al., 2011).

While the prominence of social support may be a central resource, low social support acts as a risk factor for depression (Pettit et al., 2011). Similarly, Ozer and Weinstein (2004) found that in the context of witnessing or experiencing community violence, a lack of social support has an adverse effect on the well-being of adolescents. These results emphasise that a lack of social support or a low appraisal of social support may be a risk factor for adolescents experiencing contextual stress. When adolescents do not appraise support, they may not perceive others as being able to assist them with managing a stressor. Consequently, this may interfere with their ability to effectively manage a stressor and adapt in the context of risk.

South African research highlights social support to be essential to adolescents (Pillay & Nesengani, 2006; Shilubane et al., 2012; van Rensberg & Barnard, 2005). According to the literature, peer support is essential to sexually abused girls (van Rensberg & Barnard, 2005) and adolescents who head households (Pillay & Nesengani, 2006). Support received from parents and peers assists adolescents to cope with stress. In this regard, Shilubane et al. (2012) highlight that a lack of support can be a risk factor for suicide in adolescents.

No particular South African study has explored the relationship between perceptions of social support and depression in adolescents living in low-income communities. It is for this reason that the study wishes to investigate this relationship, especially considering that a lack of social support is associated with depression.

2.4.3. Coping.

Researchers note that experiencing poverty may impede on the individuals' regulatory systems that are used to manage the various psychosocial stressors relating to poverty (Evans & Kim, 2013). These regulatory systems refer to the coping strategies that an adolescent may use in the context of risk. Coping strategies are conceptualised as being an essential resource in the context of stressors. Frydenberg (1997) suggests that coping is associated with

thoughts, feelings and actions that are used to manage stressors or challenging events. The ways in which adolescents may respond to stressors, may impact their mental health in various ways. Research indicates that this is due to coping strategies often either being harmful or helpful in challenging circumstances.

Lazarus and Folkman (1984) conceptualise coping as either problem-focused or emotion-focused. Problem-focused coping involves efforts at conceptualising the perceived problem or stressor as well as finding a potential solution to this problem. While problem-solving coping is one form of problem-focused coping, it is not limited to problem-solving alone, and may include self-reflective strategies (Lazarus & Folkman, 1984). Emotion-focused coping refers to processes aimed at decreasing the distress experienced and includes avoidant coping as well as distancing oneself from the stressor (Lazarus & Folkman, 1984). While Lazarus and Folkman (1984) have conceptualised coping strategies in terms of either problem-focused or emotion focused strategies, Seiffge-Krenke (1995) classifies coping as either active, internal or withdrawal coping. Gelhaar et al. (2007) offers an account of Seiffge-Krenke's (1995) conceptualisation of coping. Firstly, individuals may either attempt to actively solve a problem (active coping), secondly they may think about their problem and revise different solutions (internal coping) and lastly they may avoid dealing with the problem, by withdrawing from it (withdrawal coping) (Seiffge-Krenke, cited in Gelhaar et al., 2007). Seiffge-Krenke et al. (2009), report that active coping includes support-seeking coping, whereby adolescents may seek support or advice from peers, friends or family as a way to possibly solve their problem. Internal coping includes reflective cognitive ways of solving a problem, as the adolescent would revise the different solutions to the problem. Lastly, when adolescents use withdrawal coping, it involves them avoiding dealing with the stressor.

Different coping strategies may either help or hinder the stress-coping process of adolescents. In this regard, social support-seeking coping (Chan, 2012) and problem-solving coping (Wadsworth & Compas, 2002) have been found to be associated with the effective management of stressors. Moreover, Wadsworth et al. (2011) reported that primary control coping (problem-solving and emotional regulation) and secondary control coping (positive thinking, distraction and cognitive restructuring), act as protective resources against experiencing internalised symptoms in individuals that experience socio-economic challenges. Therefore, there are certain ways of coping that may be essential resources for adolescents experiencing stressful circumstances as it may protect them from experiencing stress.

When an adolescent uses the avoidant coping strategy, they may avoid confronting the problem (Gaylord-Harden et al., 2010; Moos & Schaefer, 1993), which may not necessarily be harmful to them, as not facing a problem may protect them from experiences of stress. However, international research on adolescent coping generally indicates that avoidant coping is a risk factor for depression (Cicognani, 2011; Seiffge-Krenke & Klessinger, 2000), which may be due to adolescents not addressing the cause of distress (Gaylord-Harden et al., 2010). Other researchers also illustrate the negative association between avoidant coping and adverse outcomes. For instance, Seiffge-Krenke (2000) investigated the relationship between various stressors, coping strategies and symptoms that may indicate emotional and behavioural problems in adolescents. It was found that withdrawal coping predicted symptomology that indicate possible emotional and behavioural problems in adolescents (Seiffge-Krenke, 2000). Moreover, Calvete, Camara, Estevez, and Villardon (2011) examined the role of coping with stressors in the manifestation of depressive symptoms. At a six month follow up, it was found that increased levels of disengagement coping predicted an increase in depressive symptoms. These results illustrate

the relationship between avoidant coping and adverse outcomes. In addition, in a study conducted by Cicognani (2011) which included 342 adolescents between the ages of 14 and 19, it was found that decreased use of withdrawal coping (avoidant coping), was associated with an increase in the well-being of the adolescent.

In the context of socio-economic risk, adolescents may experience symptoms of depression or they may cope effectively with perceived stressors and be protected from such outcomes. From the literature reviewed thus far, it is evident that various coping strategies may have differing influences on the mental health of adolescents. This point is emphasised by Horwitz, Hill and King (2011), who suggest that the different coping behaviours that adolescents use to manage stressors, may have repercussions for depression and suicide ideation. These outcomes not only have implications for the mental health of adolescents, but may result in fatal consequences, given the relationship between coping and suicide ideation. A South African study conducted by Shilubane et al. (2012) illustrates this concern, as it was found that adolescents who are not able to cope with stressors may be prone to attempt suicide. In this study, 14 adolescents who had attempted suicide were included in a qualitative investigation. Adolescents mentioned that they needed support from their friends and family when they were attempting to solve their problems. Shilubane and associates noted that the adolescents' inability to manage stressors may have been precipitating factors for their suicide attempts (Shilubane et al., 2012). Although these results offer some insight on the coping processes of adolescents, no South African study was found that investigated the relationship between coping strategies and stress (particularly depression) in adolescents living in low-income communities.

2.5. Theoretical framework: The transactional theory of stress and coping

Various authors have acknowledged that there is interplay between the individual and their environment, which has a dynamic impact on mental health outcomes. For example, Bronfenbrenner (1979) suggests that an individual's environment may contain multiple different risk factors that may either increase an individuals' susceptibility to experiencing depressive symptoms (risk factors) or factors that may prevent incidence of experiencing depression (protective factors). This theory therefore emphasises the interdependent relationship between the individual, their environment and mental health. Lazarus and Folkman's (1984) transactional theory of stress also clarifies the relationship and transaction between the individual and the environment, and the concepts of stress and coping used in this theory have been consistently referenced in literature that investigates stress and coping in adolescence (for example: Cicognani, 2011; Gelhaar et al., 2007; Seiffge-Krenke et al**.,** 2009).

The concepts of stress, appraisal and coping are central in the transactional theory of stress and coping. In this theory, Lazarus and Folkman (1984) stipulate that stress ensues when the adolescent perceives the relationship between themselves and the environment as "taxing or exceeding their resources" or threatening their health (p. 21). Depending on the person and their individual traits and resources as well as the perceived stressor in the environment, the adolescent is likely to apply certain coping strategies as an attempt to manage the impact of the stressor on their health. This process is characterised by appraisal whereby the adolescent will determine what the impact of the stressor is on their well-being. Appraisal is further categorised into primary and secondary appraisal.

During the process of primary appraisal, the adolescent would estimate what the impact of the stressor is on their well-being. In other words, they would determine if it is harmful to their well-being or not. Primary appraisal is categorised into three types, firstly,

irrelevant appraisal, which indicates that the individual did not see the event as threatening to their health. Secondly, benign-positive appraisal indicates that an event is seen as positive and may have a protective effect on the adolescents' well-being. Lastly, the "harm/ loss, threat, and challenge" experienced or perceived by the adolescent refers to stress appraisal. In this regard, the adolescent may view certain events as challenging or threatening to their well-being, which will evoke certain coping reactions (Lazarus & Folkman, 1984).

During the process of secondary appraisal, the adolescent would review the specific actions that they may take to decrease the impact of the perceived challenge or threat on their well-being. During this process, the individual would review the specific coping resources relevant to the event. Lazarus and Folkman (1984) state that "coping serves two overriding functions: managing or altering the problem with the environment causing distress (problem-focused coping), and regulating the emotional response to the problem (emotion-focused coping)" (p. 179). There are numerous factors that may influence this stress-coping process, and Lazarus and Folkman (1984) suggest that these include beliefs, health, problem-solving skills, social support, beliefs surrounding control and available resources. In addition, they postulate that the stress-coping process may be hindered by high levels of perceived threat, as it may render the individual unable to cope effectively (Lazarus & Folkman, 1984).

The transactional theory notes that both the individual and the environment may potentially impact the stress-coping process. The individual has their own traits and resources that may influence their ability to manage stressors, such as self-esteem, coping strategies, perceptions of social support as well as high levels of resilience. These factors may all act as protective resources that either promote the mental health of adolescents, or protect them from experiencing symptoms of depression in the context of adversity. In contrast, a lack of self-esteem, effective coping strategies, low appraisals of social support and less resilience may be strongly associated with symptoms of depression in adolescents.

In the context of the present study, the school-going adolescents were all residents of low-income communities that are associated with their own unique stressors. Each adolescent will firstly perceive whether stressors associated with living in a low-income community are detrimental to their well-being or not. In light of the transactional theory of stress and coping (Lazarus & Folkman, 1984), this is termed primary appraisal. In the case that adolescents view living in low-income communities and its related risk factors as challenging or detrimental to their well-being, this refers to stress-appraisal (Lazarus & Folkman, 1984). In the present study, it is argued that problem-solving coping, social support-seeking coping and avoidant coping are coping strategies that may be used by the adolescents, in an attempt to either regulate their emotional response or manage the impact of a stressor on their well-being. Moreover it is argued that the self-esteem possessed by the adolescent would also influence their perceived competence and ability to manage a stressor. In addition, another resource which may be used to cope in light of social adversity is social support, received from others (family members, friends and teachers). The adolescents' appraisal of social support may thus also influence their ability to cope with stressors.

It is evident that there are many resources or individual traits that may be helpful during the stress-coping process. As mentioned, these include self-esteem, coping strategies and perceived social support. In the wake of certain stressors associated with living in adverse socio-economic contexts, the aforementioned resources may promote the adolescents' resilience.

2.6. Conclusion

From the literature reviewed, it is evident that the outcomes of risk and resilience are dependent not only on the stressors perceived in the environment, but also the unique traits and resources available to the adolescent, which includes self-esteem, coping strategies and

perceived social support. To date, no South African study of note has investigated the relationship between self-esteem, coping, perceived social support and outcomes of risk (depression) or resilience respectively, in a group of adolescents that reside in adverse socio-economic circumstances. The present study was thus aimed at 'filling' this research gap in knowledge in South Africa, and it is hoped that such an enquiry would shed light on the stress-coping processes of school-going adolescents who experience contextual stress, as well as the relationships between depression and self-esteem, coping and perceived social support.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. Introduction

The primary research focus was to examine the presence of depression (which is an indicator of stress) in school-going adolescents that reside in low-income communities, as well as to investigate the relationships between various factors (self-esteem, perceived social support, coping and resilience) and depression. In the following Chapter, the specific research aims objectives and hypotheses of the study will be outlined. Thereafter, the description of the research methodology used for the present study will be outlined. This chapter incorporates information on the research methodology and design, sampling procedures, participant demographics, measuring instruments, procedure, data analyses and the ethical guidelines of the research.

3.2. Research Questions

As discussed in the literature review (Chapter 2), adolescents that reside in low-income communities are susceptible to experiencing stress, as manifested in symptoms of depression. Moreover, such outcomes are affected by different factors, including self-esteem, coping and perceived social support. In South Africa, no particular study was found that investigated the presence of depression in school-going adolescents living in low-income communities or the factors that influence adverse mental health outcomes. In light of this research gap, the present study was guided by the following research questions:

3.2.1. Are symptoms of depression (which indicate stress) experienced by school-going adolescents living in low-income communities in the Western Cape?

3.2.2. What is the nature of the relationship between depression and the following variables respectively: self-esteem, coping strategies, perceived social support and resilience?

3.3. Research aims and objectives

The primary aims of the present study were to investigate the presence of depression in school-going adolescents living in low-income communities in the Western Cape. Secondly, the study sought to explore the relationship between depression and the following variables: self-esteem, coping strategies, perceived social support and resilience. In order to attain the research aims, the objectives below were used to guide the study. These objectives were attained through using the quantitative research paradigm.

3.3.1. Firstly, the study aimed to investigate the presence of symptoms of depression in school-going adolescents living in low-income communities in the Western Cape.

3.3.2. Secondly, the study aimed to investigate the relationship between self-esteem, coping strategies, perceived social support and depression in adolescents living in low-income communities. This was done in order to determine whether self-esteem, coping strategies and perceived social support affect adolescents' level of depression.

3.3.3. Thirdly, the study aimed to investigate the relationship between resilience and depression in adolescents living in low-income communities. This was done in order to ascertain whether adolescents' resilience affected their level of depression.

3.4. Research hypotheses

The research hypotheses outlined in the following section were intended to assist with fulfilling the aims and objectives of the present study as well as answering the research questions. A quantitative research paradigm was used to answer the hypotheses below:

3.4.1. There will be a significant negative correlation between depression and self-esteem.

3.4.2. There will be a significant negative correlation between depression and perceived social support.

3.4.3. There will be a significant negative correlation between depression and the problem-solving coping strategy.

3.4.4. There will be a significant positive correlation between the avoidant coping strategy and depression.

3.4.5. Resilience will emerge as a significant negative predictor of depression.

3.4.6. Self-esteem and problem-solving coping will emerge as significant positive predictors of resilience.

3.4.7. The avoidant coping strategy will emerge as a significant negative predictor of perceived social support.

3.5. Research method and design

The present study was guided by the quantitative research paradigm. By using the quantitative research paradigm, the researcher was able to compute descriptive statistics, which provided a summary of the specific data set (McBride, 2013), as well as inferential statistics, which guided the researcher in terms of accepting or rejecting hypotheses for the study (Nestor & Schutt, 2012).

The choice of using the quantitative research paradigm was influenced by the two primary research questions that guided the study, which were descriptive in nature and specifically asked about the presence of depression (as an indicator of stress) in the specific sample, as well as the relationships between different variables and depression. The quantitative research paradigm was useful in answering the research questions as it assisted in providing a summary of the variables in the data set and it could assist the researcher in estimating the nature of the relationship between variables (McBride, 2013; Nestor & Schutt, 2012).

Due to the nature of the research questions and the consequent research hypotheses and objectives, the quantitative paradigm was advantageous, as it not only enabled the researcher to estimate the prevalence of depression in the sample, but it also helped the researcher to determine the nature of the relationship between the variables, through correlational analyses. The researcher thus chose the correlational design, which facilitated an enquiry into the relationships between variables (McBride, 2013). An advantage of the latter research design is that it enabled the researcher to estimate how closely related variables were at a certain point in time, without manipulating any variables (Nestor & Schutt, 2012). This was particularly useful in the present study, given that no variables were directly manipulated by the researcher.

By obtaining an estimate of the nature and strength of the relationship between variables, the researcher may be able to make certain predictions which assist in answering the research hypotheses, which was done in this study through the use of regression and multiple regression analyses (McBride, 2013). For example, it may be possible to conclude that coping strategies significantly predict symptoms of depression in adolescents. Considering the latter, it is important to note that although predictions can be made from the relationship between variables, correlational studies do not enable the researcher to determine whether one variable caused another (McBride, 2013). According to McBride (2013), this is

because a correlational design does not allow the control of extraneous variables such as what would be possible in an experiment. Consequently, the third variable problem could arise, which refers to "a problem in describing the relationship between two variables, when a third variable that is extraneous to the two variables may account for the observed relationship" (Nestor & Schutt, 2012, p. 475). In relation to the aforementioned example, the researcher cannot conclude that coping strategies used *caused* symptoms of depression in adolescents, as another variable (i.e. the number of friends an adolescent has) may have affected this outcome as well.

Although international studies (for example: Najman et al., 2010; Tandon & Solomon, 2009) which employ quantitative methods have focussed on estimating the experience of stress in school-going adolescents affected by poverty, in South Africa research of this nature is limited. A South African study conducted by Morojele et al (2013) sought to estimate the prevalence of mental health problems in learners attending public schools in the Western Cape. The study found that 41.4% of learners had a medium risk for mental health problems, while 14.9% were classified as having a high risk for mental health problems (Morojele et al., 2013). The latter study, which used a quantitative research paradigm, emphasized the value of using this approach as it provided valuable information about the prevalence of mental health problems in young learners in the Western Cape. The current study aimed to contribute to this finding, as it reported on the presence of depression in learners who resided in low-income communities in the Western Cape, given the lack of research in South Africa that investigated the influence of self-esteem, coping strategies and perceptions of social support on depression in adolescents. Therefore, it was necessary to quantify the relationships between these variables in order to estimate the impact of depression on school-going adolescents in South Africa.

It is worth noting that a qualitative approach would have arguably been useful in gathering information about the subjective experiences of adolescents (Fossey, Harvey, McDermott, & Davidson, 2002). However, qualitative methods would not allow for the estimation of the nature and strength of the relationship between the variables of interest – which related to a primary research question and objective of the present study. The latter was achieved through the chosen quantitative method.

3.6. Sampling method

The present study aimed to understand the experiences of stress – as manifested in symptoms of depression – in school-going adolescents that resided in low-income communities in the Western Cape (particularly the Stellenbosch area). Given the aforementioned criteria, the researcher needed to ensure that participants met both these conditions and therefore the convenience sampling method was used to recruit participants. The convenience sampling method refers to the process of recruiting participants to volunteer to be part of the study, from a population which the researcher had access to (Waltermaurer, 2008).

In the present study, convenience sampling was appropriate due to the selection criteria of the participants, that being that they must reside in a low-income community in the Western Cape and secondly, that they should be school-going. This was a sample of adolescents that would be challenging to select randomly from the entire population of Western Cape school-going learners who reside in low-income communities. This is due to there being a large number of schools in the Western Cape that are attended by learners who reside in low-income communities and it would be difficult to access this entire target population. The researcher thus gained access to the schools attended by learners from low-income communities in the Stellenbosch area, at which learners were asked to volunteer as participants. It should be noted that four schools that were attended by mostly leaners from

low-income communities, were originally envisaged for the present study. While two of these schools were attended by mostly Afrikaans speaking learners, the other two schools were attended by mostly isiXhosa speaking learners. At the time of data collection, only one school attended by Afrikaans learners was able to participate, while the other two schools attended by isiXhosa speaking learners both participated.

3.7. Participants

The final sample of the study comprised 173 school-going adolescents who reside in low-income communities in Stellenbosch and its surrounding areas. The sample was recruited from three of the four proposed schools that are attended mostly by learners from low-income communities. Initially, the sample comprised 224 participants. From this initial sample, 8 participants declined participation (thus yielding a refusal rate of 3.57%) while a further 30 participants were excluded from the study due to their consent or assent forms being incomplete. In addition, 13 participants were excluded from the study due to substantial information that was missing in their respective questionnaires. Thus, the final sample for the study was 173 school-going adolescents (N = 173).

Of the 173 participants, 64 adolescents (37%) were male, while 109 adolescents (63%) were female, who were the large majority of the sample. The ages of the participants ranged from 12 to 21 years ($\bar{x}$ = 15.9 years, *SD* = 2). These participants were all in grades 8, 9, 10 or 11 (see Figure 1). The majority of the participants were in grade 8, namely 59 participants (34%), while 30 participants (17%) were in grade 9, 53 participants (31%) were in grade 10 and 31 participants (18%) were in grade 11.

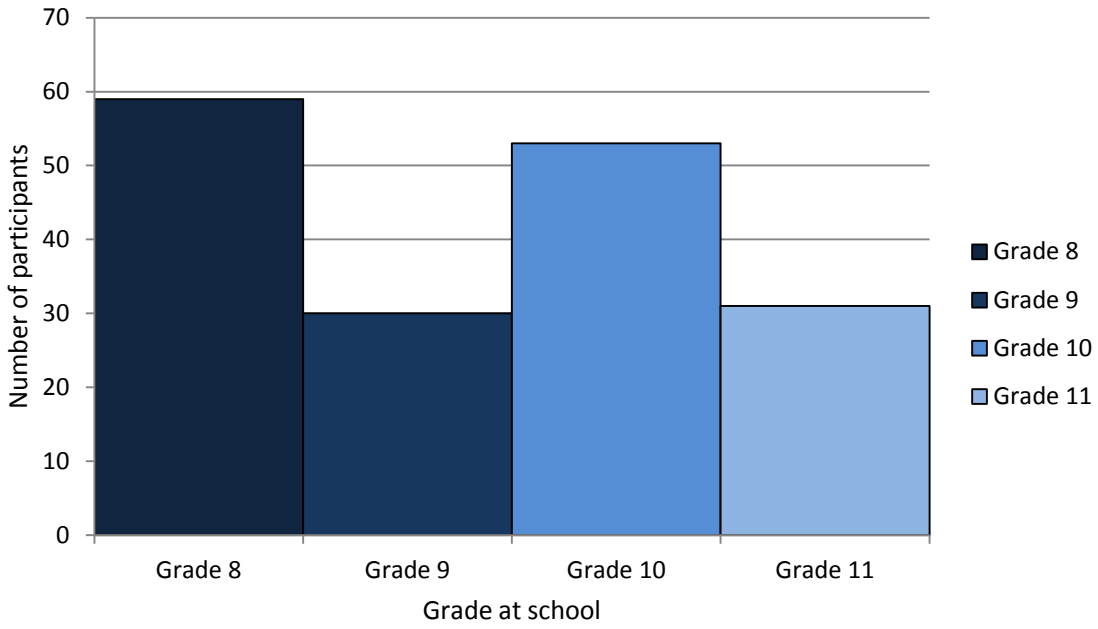

Figure 1. A histogram depicting participants' grade at school (N = 173)

Regarding the participants' home language (N = 171), it is evident that the majority of the participants were isiXhosa speaking (see Figure 2), as 106 participants (62%) indicated this language as their home language. Secondly, 54 participants (32%) were Afrikaans speaking, while 1 participant (6%) indicated English as their home language. A further 10 participants (6%) were classified as other, as 3 of them indicated that they spoke Sesotho and the remaining 7 participants were bilingual. It should be noted that two participants were excluded from the analyses due to not indicating their home language.

The results of the demographic questionnaire indicated that 67 participants (39%) resided with both of their parents (N = 173). A further 59 participants (34%) resided with only their mother, while 10 participants (6%) resided with only their father. It was found that 6 participants (3%) noted that they resided with a grandparent(s) and 31 participants (18%) expressed that they lived with another family member. These results are captured in Figure 3 (N = 173). The participants also indicated that the number of people that resided at their homes ranged from 1 person to 19 people ($\bar{x}$ = 5 people, *SD* = 2.12).

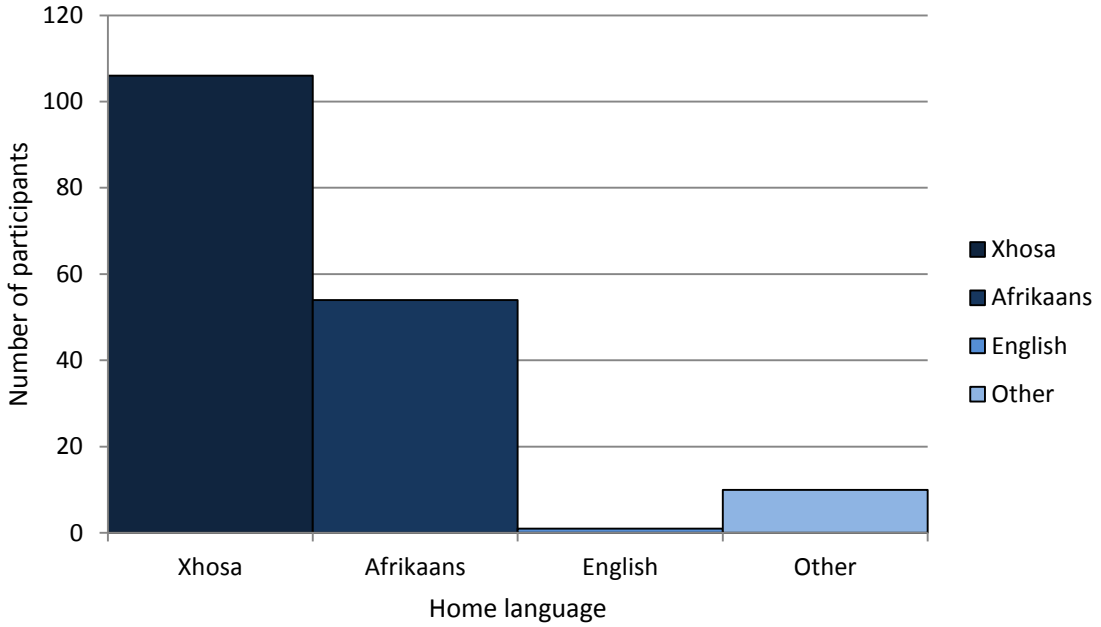

Figure 2. A histogram depicting participants' home language (N = 171)

An enquiry into the number of siblings revealed that participants' number of brothers ranged from 0 brothers to 13 brothers ($\bar{x}$ = 1.58, *SD* = 1.41) and the participants' number of sisters ranged from 0 sisters to 8 sisters ($\bar{x}$ = 1.66, *SD* = 1.45).

Participants were asked to indicate whether they were the first, second (or middle) or last child born (N = 168). Results indicated that while 54 participants (32%) expressed that they were the eldest child (first born), 35 participants (21%) indicated that they were the second or middle child, while a further 79 participants (47%) were the youngest child (last born).

When asked to specifically provide the subjective ratings of their respective neighbourhoods' safety (see Figure 4), 64 participants (37%) viewed safety in their neighbourhood as a problem and 57 participants (33%) viewed safety as a problem but not a serious one (N = 171). In addition, 33 participants (19%) did not view safety as a problem in

their communities, while a further 17 participants (10%) did not view safety as a problem at all.

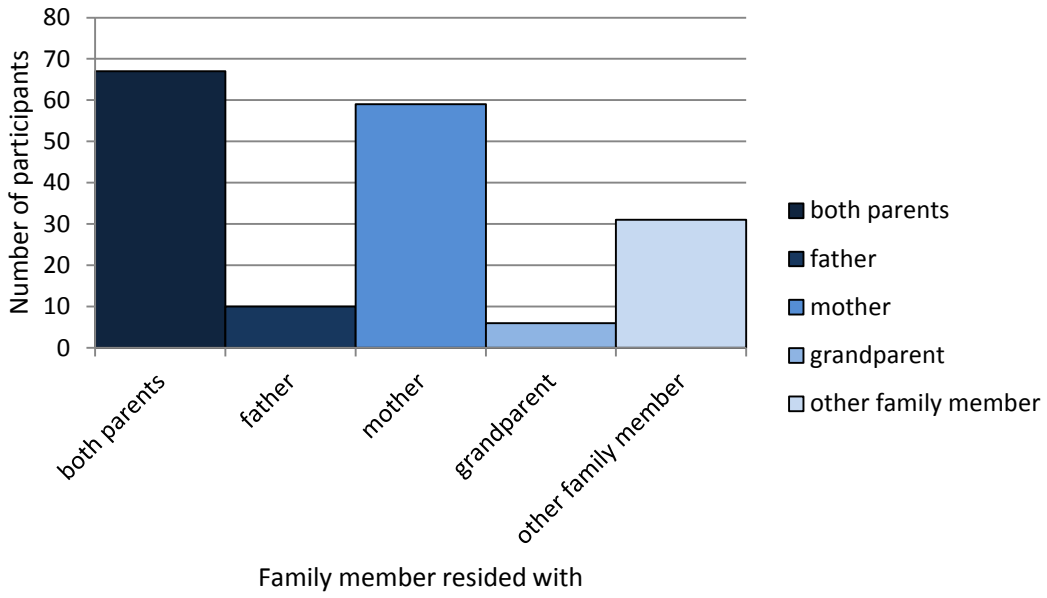

Figure 3. A histogram depicting the family member resided with (N= 173)

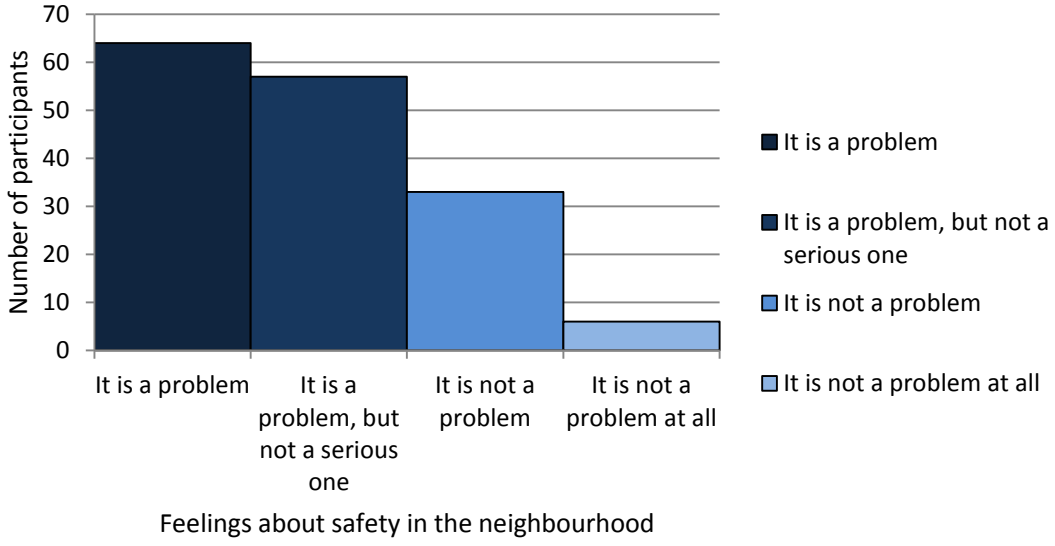

Figure 4. A histogram depicting participants' feelings of safety in their neighbourhood (N = 171)

When asked about their subjective experiences regarding their respective families' financial circumstances (see Figure 5), 90 participants (54%) expressed that their family sometimes struggled to pay their bills, while 27 participants (16%) indicated that their family always struggled to pay their bills. Moreover, 39 participants (23%) reported that the family did not experience any financial problems, while 12 participants (7%) indicated that that the family did not have financial problems at all (N = 168).

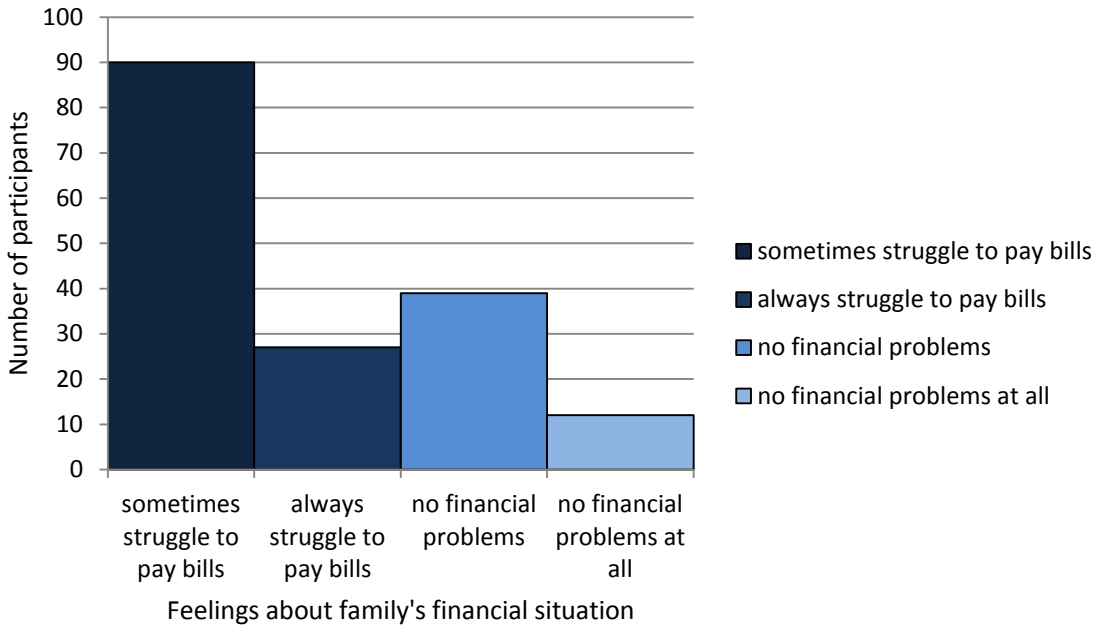

Figure 5. A histogram depicting participants' feelings about their family's financial situation (N = 168)

Regarding friendships, 4 participants (2%) indicated that they had no friends, while 41 participants (24%) noted that they had 'a couple of friends' and 31 participants (18%) stated that they had 'very few friends' (N = 171). A further 30 participants (18%) noted that they had friends, but were not close to them, while 65 participants (38%) suggested that they had many best friends, who they were close to. These results are summarised in Figure 6.

Those participants, who indicated that they had friends, were asked about the influence of their friends on their decisions and their lifestyle choices. This enquiry revealed that 33 participants (20%) viewed their friends to have a lot of influence on their lives (in terms of activities they participate in, choices they made and places they went to), while, 44 participants (27%) revealed that their friends were not influential at all (N = 166).

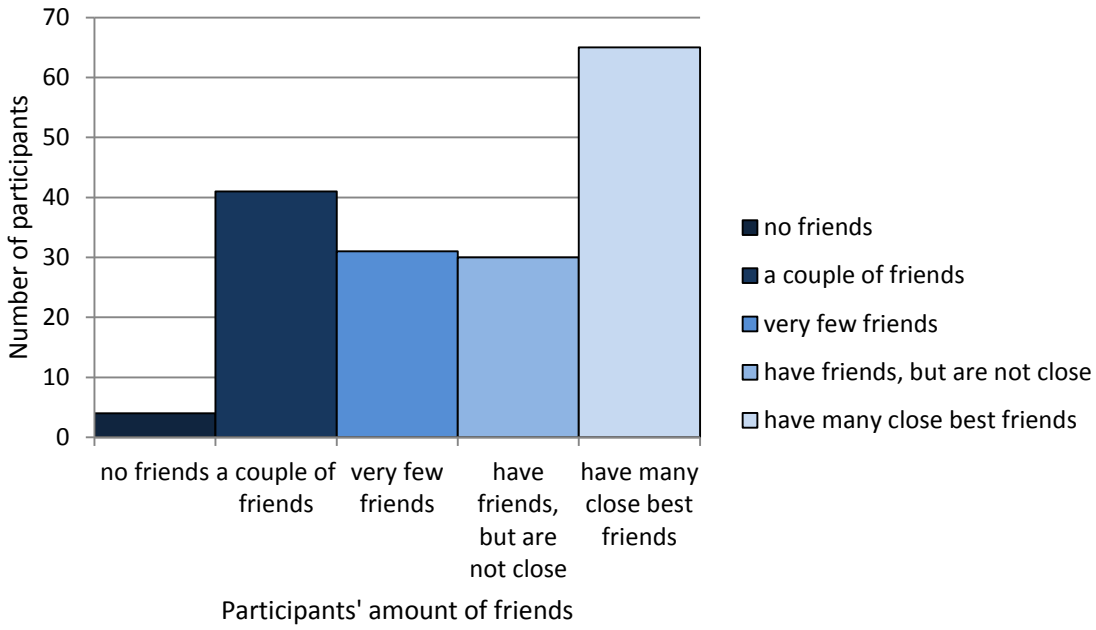

Figure 6. A histogram depicting participants' number of friends (N = 171)

Participants were asked to subjectively evaluate their overall mental health (N = 168). It was worth noting that subjective appraisal of overall mental instability was reported by significantly fewer participants when compared to those whose subjective ratings of overall mental health were described as mentally stable. As depicted in Figure 7, 9 participants (5%) indicated feeling 'mentally unstable' and 7 participants (4%) experienced themselves to be 'a little mentally unstable'. Comparably, 52 participants (31%) reported being unsure about their overall mental health, whereas 30 participants (18%) reported feeling 'a little mentally stable' and a substantial 70 participants (42%) stated that they felt 'very mentally stable'.

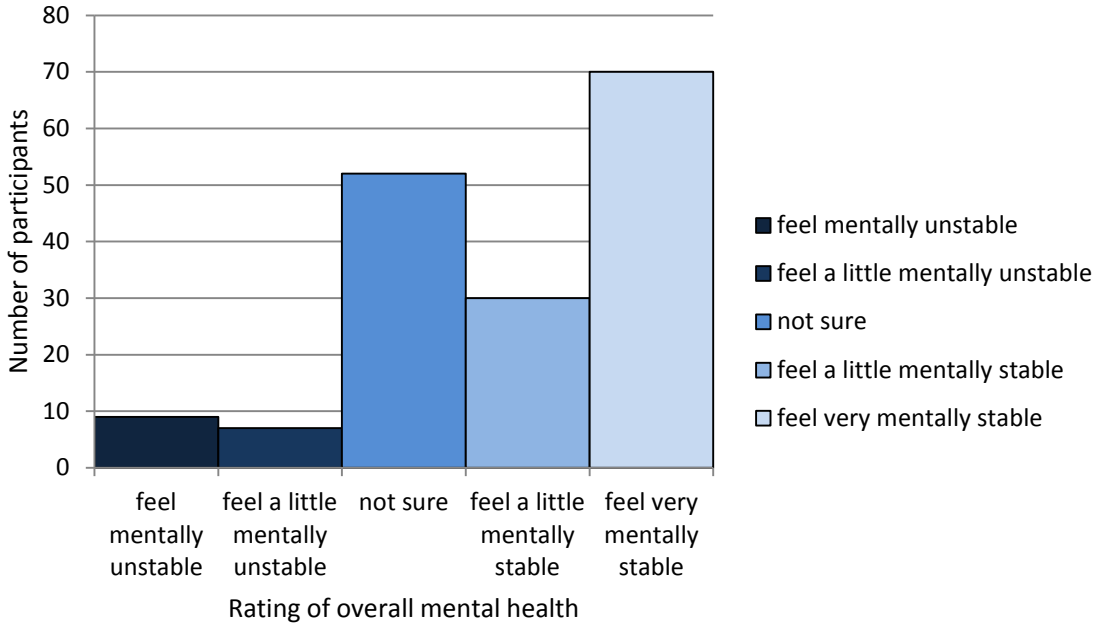

Figure 7. A histogram depicting participants' views of their mental health (N = 168)

3.8. Measuring instruments

Specific measuring instruments were used to assist in answering the research questions and aims of the study, as well as to test the set hypotheses. The following measuring instruments were included in the questionnaire: the demographic questionnaire (see Appendix A), the Beck Depression Inventory – Second Edition (BDI-II), the Coping Strategy Indicator (CSI), the Rosenberg Self-Esteem Scale (RSE), the Resilience Scale for Adolescents (READ) and the Social Support Appraisals Scale (SSA). The measuring instruments will be discussed in the following section.

It should be noted that the consent and assent forms (see Appendix B) as well as the questionnaires, were translated from English to Afrikaans and isiXhosa (except for the READ that was only available in English due to permission to use the translated versions in isiXhosa and Afrikaans having not been approved at the time of the study). The READ was only available in English, however, each participant was asked to indicate whether they were

comfortable with the language and encouraged to ask the researcher for assistance when needed.

3.8.1. Demographic questionnaire

A demographic questionnaire was used to gather basic information about the participants. This includes questions about their age, gender, grade at school, grades they have repeated, home language, number of siblings, area in which they reside, number of people living at their home and the parent(s) they live with. Moreover, questions were included regarding their subjective evaluations of their own mental health, perceived neighbourhood safety, financial circumstances as well as their number of friends and their influence on the adolescent.

3.8.2. The Beck Depression Inventory – Second Edition (BDI-II) (Beck, Steer, & Brown, 1996).

To measure symptoms of depression, the BDI-II was used (Beck et al., 1996). The BDI-II is a 21-item self-report instrument that is rated on a 4-point scale ranging from 0 (absence of a symptom) to 3 (severe depressive symptom) (Beck et al., cited in Somhlaba & Wait, 2008). The BDI-II has the following cut off scores: 14 or less (minimal depression), between 14 and 19 (mild depression), between 20 and 28 (moderate depression) and 29 and above (severe depression) (Beck et al., 1996). The BDI-II has good internal validity, and has a reliability coefficient of .92 (Beck et al., 1996). When used in the South African context, the BDI-II appeared to have good internal consistency of .88 as reported by Nel and Kagee (2013).

Contextual stress associated with living in low-income communities is related to symptoms of depression (Wadsworth & Berger, 2006; Wadsworth et al., 2011). Therefore, it was important to investigate symptoms of depression in adolescents living in low-income

communities in South Africa, to gain insight into their experiences of stress. For this reason, the BDI-II was used in this study.

3.8.3. The Coping Strategy Indicator (CSI) (Amirkhan, 1990, 1994).

To measure the coping strategies used by adolescents, the CSI was used. This is a 33-item, self-report measure that is used to measure whether adolescents utilise the problem-solving (scale 1), social support-seeking (scale 2) or the avoidant coping strategy (scale 3) (Amirkhan, 1990, 1994). The items are rated on a 3-point scale that includes a lot (3), a little (2) and not at all (1). The CSI has high internal consistency and has alpha coefficients of .92 for problem-solving coping, .89 for social support-seeking coping and .83 for the avoidant coping strategy (Amirkhan, 1990, 1994). The measure has external reliability with a mean test-retest coefficient of .82 (Amirkhan, 1990, 1994). When used in the South African context, the CSI appeared to have a good internal consistency, as Le Roux and Kagee (2008) found Cronbach alpha coefficients of .88 for problem-solving coping, .87 for social support-seeking coping and .70 for avoidant coping.

It was important to investigate which coping strategies are related to diminished symptoms or increased symptoms of distress in adolescents living in low-income communities. This is because the coping strategies adolescents use to deal with stress have an impact on their psychological well-being (Okwumabua, Wong, & Duryea, 2003). It was for this reason that the CSI was used to investigate coping strategies used.

3.8.4. The Rosenberg Self-Esteem Scale (RSE) (Rosenberg, cited in Fischer & Corcoran, 2007).

The RSE was used to measure self-esteem (Rosenberg, cited in Fischer & Corcoran, 2007). This 10-item, 4-point scale assesses self-esteem, and its items range from 1 (strongly agree)

to 4 (strongly disagree) (Rosenberg, cited in Fischer & Corcoran, 2007). The RSE has excellent internal consistency, with a reproducibility coefficient of .92 (Rosenberg, cited in Fischer & Corcoran, 2007). The test-retest reliability for the scale over a two-week period is .85 and .88 and it has good concurrent, predictive and construct validity (Rosenberg, cited in Fischer & Corcoran, 2007). Schmitt and Allik (2005) administered the RSE to participants from 53 countries and reported a mean internal reliability coefficient of .81. Westaway, Jordaan and Tsai (2013) administered the RSE to five groups of South African residents in the Pretoria region and reported high Cronbach alpha coefficients that range from .93 to .97, which indicates good internal consistency.

Since self-esteem is either a risk or protective factor for developing symptoms of depression (Nezlek & Plesko, 2003), measuring self-esteem was important for the study, hence the use of the RSE to measure self-esteem in this sample of school-going learners in the low-income Stellenbosch communities.

3.8.5. The Resilience Scale for Adolescents (READ) (Hjemdal, Friborg, Stiles, Martinussen, & Rosenvinge, 2006).

The READ was used to measure resilience in adolescents. This 28-item, self-report scale has a 5-point Likert scale that ranges from 1 (totally disagree) to 5 (totally agree) (Hjemdal, Friborg, Stiles, Martinussen, & Rosenvinge, 2006). Higher scores on the READ indicate more resilience. The READ consists of five factors, namely: personal competence, social competence, structured style, family cohesion, and social resources (Hjemdal, Friborg, Stiles, Martinussen, & Rosenvinge, 2006), with the respective Cronbach's alpha values of .85, .82, .69, .85, and .78. The measure has good reliability with a total Cronbach's alpha value of .94 and has construct validity (Friborg, Barlaug, Martinussen, Rosenvinge, & Hjemdal, 2005) as well as predictive validity (Hjemdal, Friborg, Stiles, Rosenvinge, & Martinussen, 2006). No

South African study was found that used this measure to measure resilience. The READ was found to be useful in measuring resilience in adolescents as well as with predicting symptoms of depression and was thus used in the study (Hjemdal et al., 2007).

3.8.6. The Social Support Appraisals Scale (SSA) (Vaux et al., 1986).

To measure the participants' perceived social support, the SSA was used. The SSA is a 23-item scale that measures the degree to which the individual feels loved and supported by their family, peers and others (Vaux et al., 1986). The items of the SSA are rated on a 4-point scale ranging from 1 (strongly agree) to 4 (strongly disagree). Lower scores on the SSA indicate higher appraisals of social support, whereas higher scores on the SSA indicate lower appraisals of social support. While the SSA has three sub-scales (the family, friends and others sub-scales), the current study will only use the total score obtained on the SSA. The SSA shows good internal consistency, with alpha coefficients ranging from .81 to .90, making it a reliable measure (Vaux et al., 1986). Moreover, it has good concurrent, predictive and construct validity (Vaux et al., 1986). When the SSA was used in the South African context, Basedau (2004) found that the total score for the SSA as well as each sub-scale had a Cronbach alpha coefficient of .89, indicating that the scale has good internal consistency.

Studies indicate that perceived social support has a protective effect on the psychological well-being of adolescents (Dunkel-Schetter & Bennet, 1990; Weber et al., 2010) and a decrease in symptoms of depression (Hammack, Richards, Luo, Edlynn, & Roy, 2004). Therefore, it was important to investigate the impact of perceived social support on the well-being of adolescents living in low-income communities and therefore the SSA was used in this study.

3.9. Procedure

The researcher requested and obtained permission from the Western Cape Education Department (WCED) (see Appendix C) and school principals of each of the schools for the study to be conducted in the schools. After permission from the WCED was obtained, the researcher consulted with the principals and the teachers selected by the principals, about the avenues for communicating with the parents or legal guardians, in order to obtain parental consent for the learners to participate in the study.

The parental consent forms were distributed in the following ways: Firstly, at two of the schools, the teachers distributed the parental consent forms (and information sheet) to one class per grade. At the third school, the researcher distributed the parental consent forms to the learners in one class per grade. The completed parental consent forms were returned to the school by the learners and collected by the teachers.

Once the parental consent process was concluded, the researcher liaised with the school representatives about appropriate times to collect the data. Each school identified one specific class from each Grade (Grade 8, 9, 10 and 11), from which learners were asked to volunteer to participate in the study. During the data collection process, the researcher informed the learners about the purpose, aims and procedures of the study, as well as their rights as research participants, as a way of recruiting them to give their assent to voluntarily participate in the study. The researcher emphasized that, even if learners' parents have given consent for them to participate, the learners still had the right and option to decline their participation. All learners who were under the age of 18 and who were interested in voluntarily participating were provided with assent forms, whereas learners who indicated that they were 18 years old and older, and who volunteered to participate were given a consent form to sign. After this process was completed, the researcher distributed the

questionnaire in participants' language of choice[3] and explained each section to the participants. The researcher was present throughout the research process to ensure that participants' questions were answered.

Contingency plans were made for learners who experienced unforeseen acute discomfort during or after the research process to the extent that it merits referral. Learners would be referred to available psychological services both at the Unit for Psychological Services, Department of Psychology, Stellenbosch University and at the Stellenbosch Provincial Hospital's psychological services free of charge, should the need arise. However, it should be noted that, at the time of submitting this thesis, no learner had needed (or was deemed as requiring) referral for psychological support.

The WCED will receive feedback in the form of a copy of the thesis on completion of the study. A copy of the thesis will also be given to the National Research Foundation (NRF), as they have provided funding to the researcher for the Masters study.

3.10. Ethical considerations

3.10.1. Institutional permission.

Before initiating the data collection stage, the researcher first sought institutional permission from various sources. In order to conduct research at schools in the Western Cape, permission was obtained by the Western Cape Education Department (WCED) as well as the principals of the respective schools. The resilience scale for adolescents (READ), which was used for this research, was not available in the public domain. Permission was thus obtained from the authors.

[3] It should be noted that the READ was not available in isiXhosa and Afrikaans, but the learners were encouraged to ask questions and the researcher or a teacher would be available to help them.

As part of adhering to the ethical standards for research, the researcher obtained approval from the Departmental Ethics Screening Committee (DESC) as well as the Research Ethics Committee (REC): Human Research at Stellenbosch University (see Appendix D).

3.10.2. Ethical procedures during data collection.

For participants under the age of 18 years, parental consent to participate in the study, was obtained from their parents. To ensure the principles of voluntary participation, participants were informed that, even when their parents have given consent, participants could still decline participation and withdraw from the study at any time, without any consequences. In the case that learners were already age 18, they were provided a consent form, which they signed to indicate their voluntary participation in the study.

To ensure the principle of confidentiality, all gathered information was kept confidential, with only the researcher and her supervisor having access to it, thereby ensuring that no particular response could be tied to a participant or their school. The researcher did not ask the participants to identify their names on the questionnaire and no identifying information was captured in the data analyses and in the study, in line with the ethical principle of participant anonymity. The names of the schools will also remain anonymous in order to protect the schools as well as the learners. All questionnaires, consent and assent forms, following the completion of data collection, would be only available to the researcher and her supervisor and were safely stored at the Psychology Department of Stellenbosch University. These data sets will be kept for three years after the completion of the study and thereafter they will be destroyed.

3.11. Data analyses

In keeping with the chosen quantitative research paradigm and correlational research design, the researcher consulted with a statistician from the Department of Statistics at Stellenbosch University for advice regarding the data analyses for the study. The quantitative data analyses were conducted by means of the SPSS statistical computer package. SPSS enabled the computation of both descriptive and inferential statistics.

Descriptive statistics were computed to summarise the data. For instance, the measures of central tendency (the mode, mean and median) were computed. In addition, the variability of the distribution as well frequency distributions was also calculated as a means of summarizing the data. Inferential statistics were used to test the hypotheses of the study (McBride, 2013). The various inferential statistics that were computed all assisted in answering the research questions of the study through testing the hypotheses. To this extent, correlation analyses were used to determine the correlation coefficients between the following variables: self-esteem, coping strategies, perceived social support, resilience and depression. Moreover, multiple regression analyses were used to indicate which of the variables of self-esteem and coping strategies would emerge as significant predictors of symptoms of depression, perceived social support and resilience, respectively. Regression analyses were also computed to determine whether each of the coping strategies independently predicted perceived social support.

3.12. Conclusion

This chapter commenced with an overview of the aims, objectives and hypotheses that were used in the study. In this chapter it was emphasized that the quantitative research paradigm, employing the specific correlational design was used in the study as it was deemed appropriate to answer the research questions, aims and to test the hypotheses of the study.

Prior to the data collection, ethical procedures were followed which included obtaining institutional permission. After permission was obtained, the data collection process commenced with the target population of school-going adolescents, who were sampled through the use of the convenience sampling technique. Precise ethical guidelines relating to parental consent, consent and assent were followed and the rights of research participants, which relate to voluntary participation and the right to withdraw from the study at any point was also emphasized. It was mentioned that both descriptive and inferential statistics were computed by means of the SPSS statistical package, and with the guidance of a statistician. The results of the study are reported in chapter 4, and as clarified in the current chapter, no identifying information of participants or the school were included in the results.

CHAPTER 4: RESULTS

4.1. Introduction

The following chapter contains summaries of the descriptive and inferential statistics relevant to the present study. The data analyses were conducted through the use of the statistical package entitled SPSS. As part of the descriptive statistics, a description of the prevalence of depression and coping strategies is offered. The inferential statistics that were computed included correlational analyses, regression analyses and multiple regression analyses.

4.2. Prevalence of depression

The presence of depression was measured using the Beck Depression Inventory – Second Edition (BDI-II). A total of 173 participants' scores were included in this analysis, which is depicted in Figure 8. The total BDI-II scores ranged from 1 to 50 ($\bar{x}$ = 16.34, *SD* = 9.60). In terms of the different categories of depression (minimal, mild, moderate and severe), it was found that 75 participants (43%) had minimal levels of depression. In addition, 36 participants (21%) had mild levels of depression, 47 participants (27%) had moderate levels of depression and 15 participants (9%) had severe levels of depression. As results stand in Figure 8, this means that 57% of the participants were at least mildly depressed.

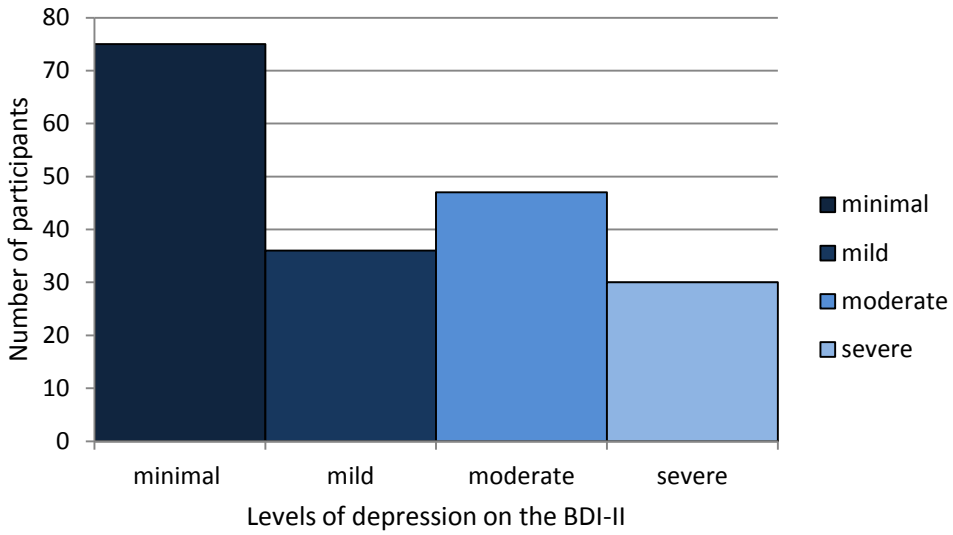

Figure 8. A histogram depicting participants' levels of depression on the BDI-II (N = 173)

4.3. Prevalence of coping strategies

The various coping strategies were measured on the Coping Strategy Indicator (CSI). A total number of 173 participants were included in the analysis of the problem-solving coping strategy, the social support-seeking coping strategy and avoidant coping strategy of the CSI. Regarding participants' use of coping strategies (see Figure 9), it was evident that 69 adolescents (39.9%) predominantly used the problem-solving coping strategy, while 52 adolescents (30.1%) predominantly used the social support-seeking coping strategy and a further 24 adolescents (13.9%) made predominant use of the avoidant coping strategy. It was also evident that 13 adolescents' (7.5%) use of coping strategies oscillated between the problem solving and social support-seeking coping strategies, while 9 adolescents' (5.2%) use of coping strategies oscillated between problem solving and avoidant coping strategies, while a further 4 participants (2.3%) use of coping strategies oscillated between the social support-seeking and avoidant coping strategies. It was also evident that 2 adolescents (1.2%) use of coping strategies oscillated between each of the three coping strategies of the CSI.

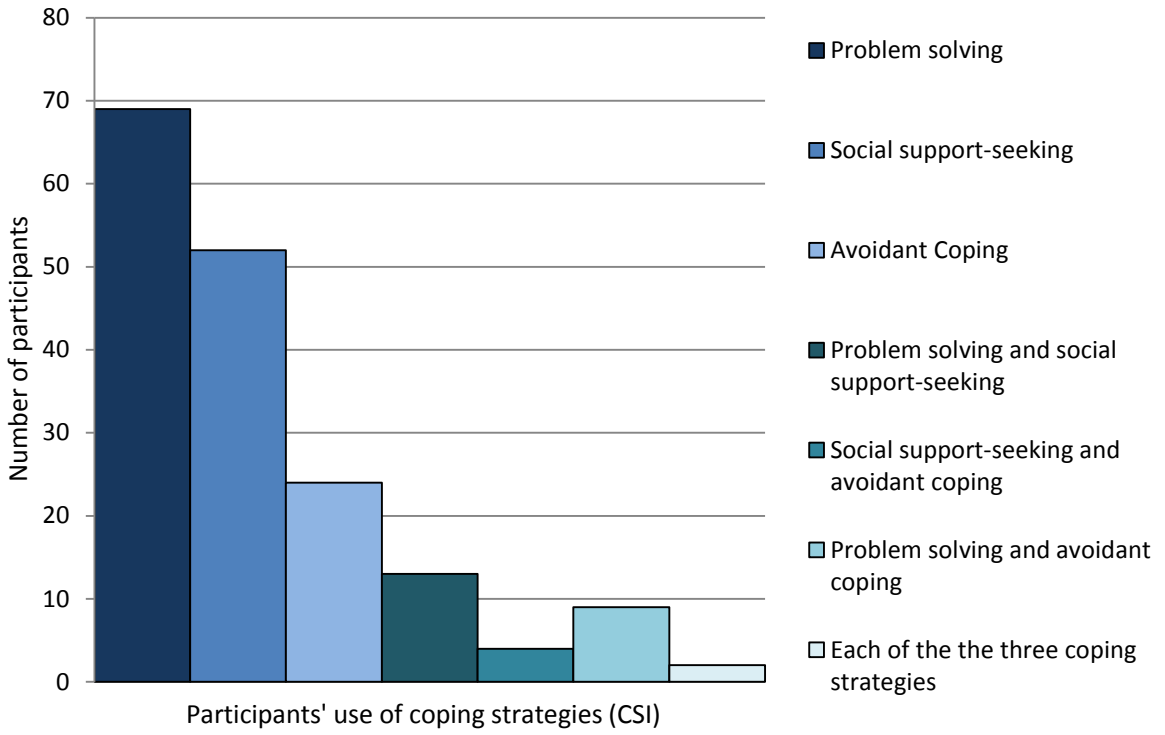

Figure 9. A histogram depicting participants' use of coping strategies (as measured by the CSI) (N = 173)

4.4. Correlational analyses

In order to estimate the magnitude and direction of the relationship between the different variables, the Pearson correlation coefficient was computed. Correlation coefficients were computed between the following variables: depression (BDI-II), self-esteem (RSE), coping strategies (CSI), perceived social support (SSA) and resilience (READ).

4.4.1. The correlation between depression and self-esteem.

As depicted in Table 1, the relationship between depression and self-esteem was computed by using the scores obtained on the BDI-II (depression) and RSE (self-esteem). The Pearson correlation coefficient revealed a significant negative correlation between depression and self-esteem (r = -.419, p < .001). This result implies that higher scores on the self-esteem

scale are associated with lower scores on the depression scale in the sample of school-going adolescents. The following hypotheses could thus be accepted:

There was a significant negative correlation between depression and self-esteem.

Table 1.

The Correlation between Depression (BDI-II) and Self-Esteem (RSE) (N = 173)

Depression	***r***	***p***
Self-esteem	-.419	.000***

****p < .001*

4.4.2. The correlation between depression and coping strategies.

The Pearson correlation coefficients were computed to determine the relationship between depression (BDI-II) and the various coping strategies (as measured on the CSI). The results are summarised in Table 2. A significant negative correlation between problem-solving coping and depression was found (r = -.188, p < .05). This implies that higher scores on the problem-solving coping strategy scale are associated with lower scores on the depression scale. The following hypothesis was thus accepted:

There was a significant negative correlation between depression and the problem-solving coping strategy.

Also shown in Table 2, a significant positive correlation was found between scores on the depression scale and scores on the avoidant coping strategy scale, (r = .160, p < .05). This implies that higher scores for the avoidant coping strategy were associated with higher scores of depression. The following hypothesis was thus accepted:

There was a significant positive correlation between the avoidant coping strategy and depression.

As also shown in Table 2, the positive correlation between scores on the support-seeking coping strategy scale and depression scores was not significant.

Table 2.

The Correlations between Depression (BDI-II) and the Coping Strategies (CSI) (N = 173)

Coping strategy	***r***	***p***
Problem-solving	-.188	.013*
Social support-seeking	.000	.995
Avoidance	.160	.035*

**p < .05*

4.4.3. The correlation between depression and perceptions of social support.

The Pearson correlation coefficient was computed to determine the relationship between depression scores on the BDI-II and scores on the perceptions of social support (measured by the SSA). The results are illustrated in Table 3. As shown in Table 3, a significant negative correlation was found between depression scores and scores on the perceptions of social support scale (r = -.290, p < .001). This result implies that higher scores on the perceptions of social support scale were associated with lower scores on the depression scale. The following hypothesis was thus accepted:

There was a significant negative correlation between depression and perceived social support.

Table 3.

The Correlation between Depression (BDI-II) and Perceptions of Social Support (SSA) (N = 173)

Depression	***r***	***p***
Perceived social support	-.290	.000***

****p < .001*

4.4.4. The correlation between depression and resilience.

The Pearson correlation coefficient was computed to determine the relationship between depression scores on the BDI-II and scores on the resilience scale (measured by the READ). The results are illustrated in Table 4. As results in Table 4 indicate, a significant negative correlation was found between scores on the resilience scale and depression scores (r = -.319, p < .001). These results imply that stronger levels of resilience in the group of school-going adolescents were associated with lower levels of depression.

Table 4.

The Correlation between Depression (BDI-II) and Resilience (READ) (N= 173)

Depression	***r***	***p***
Resilience	-.319	.000***

****p < .001*

4.4.5. The correlation between resilience and self-esteem.

The relationship between resilience and self-esteem was also investigated by means of a correlational analysis (see Table 5). The results indicated a significant positive correlation between self-esteem (as measured on the RSE) and resilience (as measured on the READ) (r

= 262, p <.01). This implies that the higher the self-esteem for this sample of school-going adolescents, the more resilient they were in light of possible stressors.

Table 5.

The Correlation between Resilience and the following Variables: Self-Esteem (RSE) and Perceived Social Support (SSA) (N = 173)

Resilience	***r***	***p***
Self-esteem	.262	.001**
Perceived social support	.362	.000***

***p < .01*

****p < .001*

4.4.6. The correlation between resilience and perceived social support.

The Pearson correlation coefficient was computed to estimate the relationship between resilience (as measured on the READ) and perceived social support (as measured on the SSA). As illustrated in Table 5, the results of the correlational analyses revealed a significant positive correlation between scores on the resilience scale and scores of perceived social support (r = .362, p <.001). These results imply that higher appraisals of social support in the group of school-going adolescents were associated with higher levels of resilience.

4.4.7. The correlation between resilience and coping strategies.

As depicted in Table 6, Pearson correlation coefficients were computed to investigate the relationship between scores on the resilience scale (as measured on the READ) and the different coping strategies (as measured on the CSI). Results indicated that a significant positive correlation was found between problem-solving coping and resilience (r = .300, p

<.001). This implies that the higher the use of problem solving coping by school-going adolescents, the higher the adolescents' scores of resilience.

Also shown in Table 6, there was a significant positive correlation between the scores on the social support-seeking coping strategy scale and resilience scale scores (r = .263, p <.001). This implies that the higher the use of the social support-seeking coping strategy, the higher were the scores of resilience in this sample of school-going adolescents.

Furthermore, the Pearson correlation coefficient was conducted to investigate the relationship between scores on the resilience scale and scores on the avoidant coping strategy scale. As revealed in Table 6, a significant positive correlation was found between the avoidant coping strategy and resilience (r = .199, p <.01). This implies that the higher the use of the avoidant coping strategy, the more resilient this sample of school-going adolescents was.

Table 6.

The Correlation between Resilience (READ) and Coping Strategies (CSI) (N = 173)

Resilience	***r***	***p***
Problem-solving coping	.300	.000***
Social support-seeking coping	.263	.000***
Avoidant coping	.199	.009**

***p < .01*

****p < .001*

4.4.8. The correlation between self-esteem and coping strategies.

The relationship between self-esteem and coping strategies was explored through correlational analyses. As illustrated in Table 7, the results indicated a significant positive correlation between self-esteem (as measured on the RSE) and the problem-solving coping strategy (as measured on the CSI) (r = .197, p <. 01). This result implies that the higher the self-esteem of the school-going adolescents, the higher their use of problem-solving coping strategy.

As shown in Table 7, the correlational analyses also revealed that the positive correlation between self-esteem and the social support-seeking coping strategy was not significant. In addition, the correlation between self-esteem and the avoidant coping strategy was not significant.

Table 7.

The Correlation between Self-Esteem (RSE) and Coping Strategies (CSI) (N = 173)

Self-Esteem	***r***	***p***
Problem-solving coping	.197	.009**
Social support-seeking coping	.082	.281
Avoidant coping	-.007	.924

***p < .01*

4.5. Multiple regression analyses

4.5.1. The role of self-esteem, coping, perceptions of social support and resilience in predicting depression.

Multiple regression analyses (using the forced entry method) were calculated to estimate whether self-esteem, the three coping strategies, perceived social support and resilience were significant predictors of depression (results are summarized in Table 8). When all the predictor variables that were entered into the multiple regression equation were considered together, they had a significant effect on the dependent variable (depression), F (6, 166) = 12,369, $p < .001$. Results further illustrate that the predictor variables (self-esteem, coping strategies, perceived social support and resilience) accounted for 31% of the variance in scores of depression.

As depicted in Table 8, self-esteem emerged as a significant negative predictor of scores of depression ($\beta = -.290$, $p < .001$). This implies that higher scores of self-esteem predicted lower scores of depression. Problem-solving coping emerged as a significant negative predictor of depression ($\beta = -.233$, $p < .01$). Therefore the high use of the problem-solving coping strategy was associated with diminished scores of depression.

The social support-seeking coping strategy emerged as a significant positive predictor of depression ($\beta = .173$, $p < .05$). Therefore, a high use of social support-seeking coping was related to an increase in scores of depression as well. The avoidant coping strategy was found to be a significant positive predictor of depression ($\beta = .259$, $p < .001$). This implies that the high use of avoidant coping was strongly associated with heightened levels of depression in this sample of school-going adolescents.

Resilience was found to be a significant negative predictor of depression ($\beta = -.238$, $p < .01$). Therefore increases in the levels of resilience were found to be associated with decreased levels of depression. The following hypothesis was thus accepted:

Resilience emerged as a significant negative predictor of depression.

Results in Table 8 also indicated that perceived social support emerged as a non-significant predictor of depression in adolescents, implying that perceived social support played no predictive role in the manifestation of depressive symptoms.

Table 8.

Multiple Regression Analysis of Depression (BDI-II) on Self-Esteem (RSE), Coping Strategies (CSI), Perceived Social Support (SSA) and Resilience (READ) (N = 173)

Predictor	**B**	**Std. Error**	**Beta (β)**	**t-ratio**	**p**
Constant	51.52	7.53		6.83	.000***
Self-esteem (RSE)	-.615	.150	-.290	-4.098	.000***
Problem-solving coping (CSI)	-.588	.211	-.233	-2.793	.006**
Social support-seeking coping (CSI)	.344	.155	.173	2.216	.028*
Avoidant coping (CSI)	.673	.183	.259	3.677	.000***
Perceived social support (SSA)	-.108	.086	-.091	-1.251	.213
Resilience (READ)	-.165	.051	-.238	-3.245	.001**

Note. BDI-II = Beck Depression Inventory – Second Edition. RSE = Rosenberg Self-Esteem Scale. CSI = Coping Strategy Indicator. SSA = Social Support Appraisals scale. READ = Resilience Scale for Adolescents.

F (6, 166) = 12,369 R = .556 R^2 = .309

R^2 adjusted = .284 $\underline{SE}$ = 8.12

*p < .05 **p < .01 ***p <.001

4.5.2. The role of self-esteem, coping and perceptions of social support in predicting resilience.

Multiple regression analyses (using the forced entry method) were calculated to estimate whether self-esteem, the three coping strategies and perceptions of social support were significant predictors of resilience. The results of the analyses are summarised in Table 9 and indicate that when all the predictor variables (self-esteem, coping strategies and perceived social support) were entered into the multiple regression equation they had a significant effect on predicting the dependent variable, F (5, 167) = 9.65, $p < .001$). As illustrated in Table 9, results further indicate that the predictor variables (self-esteem, coping and perceived social support) accounted for 22% of the variance in scores of resilience for the group of school-going adolescents.

Perceptions of social support emerged as a significant positive predictor of resilience in adolescents ($\beta = .273$, $p < .001$). This result indicates that the higher the adolescents' appraisals of social support, the higher their level of resilience as well.

It is also evident that none of the coping strategies (problem-solving coping, social support-seeking coping and avoidant coping) emerged as significant independent predictors of resilience. Considering the results outlined in this section, the following hypothesis was thus rejected:

Problem-solving coping emerged as a significant positive predictor of resilience.

While the results of the analyses indicated that self-esteem did not emerge as a significant predictor of resilience, when only self-esteem and perceived social support were considered as predictors of resilience in school-going adolescents, both variables emerged as significant predictors of resilience (see Table 10). In this case, self-esteem emerged as a significant

positive predictor of resilience, in the group of school-going adolescents (β = .151, $p < .05$). This implies that higher scores of self-esteem as measured on the RSE, were related to higher scores of resilience, as measured on the READ. The latter result thus led to the acceptance of the following hypothesis:

Self-esteem emerged as a significant positive predictor of resilience.

Table 9.

Multiple Regression Analysis of Resilience (READ) on Self-esteem (RSE), Coping Strategies (CSI) and Perceived Social Support (SSA) (N = 173)

Predictor	**B**	**Std. Error**	**Beta (β)**	**t-ratio**	**p**
Constant	38.13	11.06		3.44	.001**
Self-esteem (RSE)	.404	.226	.133	1.789	.075
Problem-solving coping (CSI)	.393	.319	.108	1.231	.220
Social support-seeking coping (CSI)	.367	.234	.128	1.570	.118
Avoidant coping (CSI)	.466	.276	.124	1.688	.093
Perceived social support (SSA)	.466	.126	.273	3.697	.000***

Note. RSE = Rosenberg Self-Esteem Scale. CSI = Coping Strategy Indicator. SSA = Social Support Appraisals scale. READ = Resilience Scale for Adolescents.

F (5, 167) = 9.65 $R = .474$ $R^2 = .224$

R^2 adjusted = .201 $\underline{SE} = 12.35$

**$p < .01$ ***$p < .001$

Table 10.

Multiple Regression Analysis of Resilience (READ) on Self-esteem (RSE) and Perceived Social Support (SSA) (N = 173)

Predictor	**B**	**Std. Error**	**Beta (β)**	**t-ratio**	**p**
Constant	62.22	9.32		6.67	.000***
Self-esteem (RSE)	.460	.231	.151	1.99	.048*
Perceived social support (SSA)	.526	.129	.308	4.06	.000***

Note. RSE = Rosenberg Self-Esteem Scale. SSA = Social Support Appraisals scale. READ = Resilience Scale for Adolescents.

F (2, 170) = 15.12 R = .389 R^2 = .151

R^2 adjusted = .141 SE = 12.80

*p < .05 ***p <.001

4.5.3. The role of coping strategies in predicting perceived social support.

Multiple regression analysis (using the forced entry method) was computed to determine whether the three coping strategies of the CSI are key variables that predict perceived social support (as measured on the SSA). The results of this analysis, as captured in table 11, indicated no significant relationship between the predictor variables (coping strategies) and perceived social support, F (3, 169) = 2.169, p > .05. In light of these findings, the following hypothesis was thus rejected:

The avoidant coping strategy emerged as a significant negative predictor of perceived social support.

Table 11.

Multiple Regression Analysis of Perceived Social Support (SSA) on Coping Strategies (CSI) (N = 173)

Predictor	**B**	**Std. Error**	**Beta (β)**	**t-ratio**	**p**
Constant	62.13	4.98		12.46	.000***
Problem-solving coping (CSI)	.344	.202	.161	1.701	.091
Social support-seeking coping (CSI)	.107	.151	.064	.705	.482
Avoidant coping (CSI)	-.089	.178	-.040	-.498	.619

Note. CSI = Coping Strategy Indicator. SSA = Social Support Appraisals scale.

F (3, 169) = 2.16 R = .193 R^2 = .037

R^2 adjusted = .020 SE = 8.00

***p < .001

Regression analyses were conducted to estimate whether each of the coping strategies independently predicted perceived social support, and results reveal that when each coping strategy at a time was entered into the equation, only the problem-solving coping strategy emerged as a significant positive predictor of perceived social support (β = .181, p < .05) (see Figure 12). This implies the increases in the scores of problem-solving coping, were associated with increases in the scores of perceived social support, in the group of school-going adolescents, who resided in low-income communities.

Table 12.

Regression Analysis of Perceived Social Support (SSA) on the Problem Solving Coping Strategy of the CSI (N = 173)

Predictor	**B**	**Std. Error**	**Beta (β)**	**t-ratio**	**p**
Constant	61.58	4.15		14.80	.000***
Problem-solving coping (CSI)	.386	.160	.181	2.41	.017*

Note. CSI = Coping Strategy Indicator. SSA = Social Support Appraisals scale.

F (1, 171) = 5.81 R = .181 R^2 = .033

R^2 adjusted = .027 SE = 7.97

*p < .05 ***p < .001

4.6. Conclusion

This section outlined the various descriptive statistics relevant to the study and summarised the results of the correlational, regression and multiple regression analyses. The implications of these results will be discussed in the next chapter (Chapter 5).

CHAPTER 5: DISCUSSION

5.1. Introduction

The present study aimed to investigate the presence of depression in school-going adolescents that resided in low-income communities in the Western Cape. In addition, the study sought to explore the relationship between depression and the following variables respectively: self-esteem, coping strategies, perceived social support and resilience. A review of the literature revealed that experiences of poverty could have adverse implications for the mental health of school-going adolescents. These outcomes could be influenced by the numerous protective factors or resources that are possessed by adolescents, which include self-esteem, coping strategies and perceptions of social support, which could help them stay resilient in light of stressors. Given that no South African study was found that particularly explored the relationship between these factors and depression in adolescents who reside in low-income communities, a key focus of the study was to investigate the relationships between the different variables (self-esteem, coping, perceived social support, resilience) and depression. The aim of this chapter is to evaluate and discuss the key research findings and discuss its relevance in terms of the theoretical framework. This chapter will include the implications for interventions and recommendations for future research.

5.2. The presence of depression as an indicator of stress

In line with the research aims, the present study investigated the presence of depression (as an indicator of stress) in adolescents who lived in low-income communities, by estimating their symptoms of depression (as measured on the BDI-II scale). As results stand in Figure 8, this means that 57% of the participants were at least mildly depressed. The present study also found that there were participants that experienced moderate and severe levels of depression.

A plausible explanation for the present finding is that the elevated levels of depression could be associated with stressors in adolescents' communities. Previous researchers have outlined the relationship between living in low-income communities and adolescents' symptoms of depression (Najman et al., 2010; Wadsworth & Berger, 2006). Living in low-income communities are related to financial stressors and adolescents who participated in the present study could have been aware of their families' financial difficulties or witnessed that their parents or caregivers were unemployed, causing them to experience distress relating to financial stressors. The latter finding is corroborated in the literature, as Statistics South Africa (2011b) previously reported that 10 178 individuals in Stellenbosch were unemployed and that many individuals (8961 people) in this region had no income (Statistics South Africa, 2011a).

The participants of the present study could have experienced a range of stressors relating to their socio-economic circumstances, including not having access to basic necessities such as electricity or uniforms, while their physical safety might have also been threatened due to violence in the community. Noble et al. (2006) have incorporated many of the latter facets into their model of childhood poverty in South Africa, and given the results of the present finding (that some adolescents living in low-income communities do experience symptoms of depression), it is necessary to further explore the characteristics of South African communities that increase adolescents' susceptibility to experiencing depression.

Regarding subjective experiences of their overall mental health, it was also worth noting that 52 adolescents (31%) suggested that they were not sure, it was found that 9 participants (5%) indicated feeling mentally unstable and 7 participants (4%) felt a little mentally unstable. Therefore, a mere 16 participants indicated feelings of mental instability. In contrast, a large number of participants (100) indicated feelings of mental stability, as 30

participants (18%) noted that they felt a little mentally stable and a large amount of 70 participants (42%) stated that they felt very mentally stable.

5.3. The relationship between depression and self-esteem

Consistent with the hypothesis, findings from the present study indicated that a significant negative correlation existed between depression and self-esteem. Moreover, self-esteem emerged as a significant negative predictor of depression. The present finding was consistent with findings from previous research on the relationship between the variables of depression and self-esteem (Behnke et al., 2011; Orth et al., 2008). Orth et al. (2008) suggested that low self-esteem could act as a risk factor for outcomes of depression. It is possible, for the present sample of school-going adolescents, that the challenging or stressful circumstances experienced could be related to their living in disadvantaged areas. The relationship between low self-esteem and an increase in the level of depression that was found in the present study might indicate that low self-esteem is a risk factor for adolescents living in low-income communities in the Western Cape.

The vulnerability model could be used to conceptualise the role of low self-esteem as a risk factor for outcomes of depression (Orth et al., 2008). As described in the literature review, this model describes an intrapersonal and interpersonal pathway through which low self-esteem affects mental health, specifically depression (Orth et al., 2008). In the case of the present study, when school-going adolescents living in low-income communities had low self-esteem, they could have ruminated about negative aspects of themselves (Orth et al., 2008). In addition, the adolescents could have focussed on their social relationships for cues about their worth, and attended to negative feedback about their competence. As self-esteem is related to adolescents' perceived competence (Rosenberg, 1979), adolescents with low self-esteem might not believe in their ability to withstand the challenging circumstances. Low

perceptions of competence could have also affected these school-going adolescents' ability to recognize the coping resources that they had at their disposal. According to the self-esteem buffering hypothesis (Orth et al., 2009), individuals with low self-esteem might possess fewer coping resources when experiencing challenging circumstances, rendering them more susceptible to experiencing symptoms of depression. Living in low-income communities is associated with numerous stressors, which the adolescents in the present study need to cope with. When adolescents viewed these stressors as overwhelming, unmanageable and potentially damaging to their well-being, this could have resulted in experiences of depression (Hammen, 2009). Given that self-esteem influences adolescents' view of their perceived competence (Rosenberg, 1979), low self-esteem could have an adverse influence on their ability to cope with perceived stressors and thus having low self-esteem is considered a risk factor for outcomes of depression in the context of socio-economic risk.

The present findings might indicate that higher levels of self-esteem might be related to lower scores of depression amongst the group of adolescents, in which case self-esteem could act as a protective factor for adolescents in the context of socio-economic risk. Discussing the inverse relationship between the two variables, Orth et al. (2009) noted that individuals with high self-esteem are more likely to perceive the resources they have available to cope when they face difficult circumstances. It is important to understand the relationship between self-esteem and depression for adolescents living in low-income communities, as the results of such an enquiry could help researchers understand whether self-esteem could act as either a risk or protective factor for mental health outcomes. Considering the difficult socio-economic circumstances the participants in the present study experienced, it is essential to note which factors might hinder their stress-coping process and which factors could aid their coping. Interventions aimed at promoting mental health could be focused on improving the self-esteem of school-going adolescents. Cultivating the self-

esteem of adolescents could improve their view of their competence and capacity to manage perceived stressors, which hold multiple benefits for their functioning at school and their ability to cope effectively.

5.4. The relationship between depression and coping

Consistent with the hypothesis, the present study found that there was a significant negative correlation between problem-solving coping and levels of depression in the group of school-going adolescents. The present finding was consistent with findings from the previous research on the nature of the relationship between these two variables (Wadsworth & Compas, 2002; Wadsworth et al., 2011). In these two studies, problem-solving coping was found to be an effective resource that served to protect adolescents from experiencing stress. The results of the present study imply that problem-solving coping could be an essential resource for adolescents who are exposed to contextual stressors, as higher use of problem solving coping was associated with lower levels of depression. The present finding has important implications for interventions that are aimed at promoting mental health or preventing incidence of depression, as interventions could be focused on fostering the problem-solving skills of school-going adolescents.

Consistent with the hypothesis, the present study found a significant positive correlation between avoidant coping and depression, in the group of school-going adolescents. The present finding was consistent with literature which indicated avoidant coping to be associated with increases in adolescents' vulnerability to developing symptoms of depression (Cigognani, 2011; Seiffge-Krenke & Klessinger, 2000). The use of avoidant coping involves adolescents withdrawing from addressing a perceived threat or challenge and essentially avoiding to directly manage a stressor (Gaylord-Harden et al., 2010; Moos & Schaefer, 1993). By avoiding managing a perceived threat, the impact of such a stressor

could cause an adolescent significant distress. Research conducted by Calvete et al. (2011) corroborates this, as it found that at a six-month follow up, disengagement coping was related to an increase in depressive symptoms. The results of the present study thus indicated that the high use of avoidant coping by adolescents living in low-income communities could be related to adverse mental health outcomes. In terms of the present finding, it is plausible that when the adolescents experienced stressors, instead of attempting to solve potential difficulties or seeking social support from their family or friends, they rather avoided managing the stressors. Given that the stressors were not addressed by the adolescents, they could have experienced significant distress, which is explained by the increases in scores of depression, when the use of avoidant coping increased.

Although no significant correlation at the bivariate level, was found between depression and social support-seeking coping, multiple regression analyses revealed social support-seeking coping to be a significant positive predictor of depression. The present finding was inconsistent with results from previous research, which indicated social support-seeking to be an essential strategy for managing stressors (Chan, 2012). It is plausible that social support-seeking reflects the primitive need for human contact against distressing socio-economic strain that was experienced by the school-going adolescents (Amirkhan, 1990). Social support-seeking might thus have had an ameliorative effect on the distress experienced by adolescents in the present study, as higher use of the social support-seeking coping strategy was related to increases in levels of depression, in which case this coping strategy might not have protected them from experiencing stress.

The results of the relationships between coping strategies (problem-solving, social support-seeking and avoidant coping) and depression can be understood in terms of the transactional theory of stress and coping (Lazarus & Folkman, 1984). When adolescents living in low-income communities perceive certain stressors as harmful to their well-being,

they could attempt to regulate the impact of the stressors through certain coping strategies (Lazarus & Folkman, 1984). In the present study, the use of problem-solving coping acted as a protective resource against experiencing depression and in contrast, social support-seeking coping and avoidance acted as potential risk factors for increased levels of depression. These results shed light on the stress-coping process of adolescents who live in low-income communities, and interventions should focus on fostering the use of problem-solving coping in adolescents and solidification of social ties that would help mitigate the deleterious effects of depression on overall well-being.

5.5. The relationship between depression and perceived social support

Consistent with the hypothesis, results of the correlational analyses revealed that there was a significant negative correlation between depression and perceived social support. The present finding was consistent with findings from previous research that suggests that stronger appraisals of social support have a positive impact on psychological health (Dunkel- Scheter & Bennet, 1990; Weber et al., 2010). In addition, Pettit et al. (2011) reported that low social support could be a risk factor for experiencing symptoms of depression.

The current finding indicates that stronger appraisals of social support could act as a protective resource for school-going adolescents living in low-income communities. In the context of potential risk factors associated with living in socio-economically disadvantaged communities, higher appraisals of social support could be associated with the effective management of stressors. In terms of Lazarus and Folkman's (1984) transactional theory of stress and coping, when adolescents appraise certain stressors in their environment, the coping resources that they identify as being able to help manage their response to a stressor are instrumental. In the present study, having higher appraisals of social support could have helped adolescents recognise that others may help them solve their problems, which could be

related to their diminished stress. The latter finding was also reported by Kaynak et al. (2011).

As higher appraisals of social support were associated with lower levels of depression in the present sample of school-going adolescents, interventions should be focused on strengthening the social support networks of adolescents or helping adolescents to identify their support networks. The latter could be helpful in assisting adolescents with recognising that others might be able to comfort and support them in times of need.

5.6. The relationship between depression and resilience

Consistent with the hypothesis, results of the multiple regression analyses revealed that resilience emerged as a significant negative predictor of levels of depression in the sample of school-going adolescents. It is possible that irrespective of socio-economic challenges, some adolescents in the present sample remained resilient, and heightened scores of resilience were associated with diminished symptoms of depression. Researchers also note that certain factors that are associated with resilience were related to lower levels of depression in adolescents (Hjemdal et al., 2007). In addition, Tandon and Solomon (2009) have emphasised the importance of investigating the role of protective resources in protecting at-risk adolescents from depression. In the case of the present study, it is evident that higher levels of resilience might act as an essential resource to those adolescents experiencing contextual stressors. In the context of significant contextual stressors, those adolescents who have high levels of resilience could be less vulnerable to experiencing symptoms of depression, or might experience lower levels of depression. This result is in line with Masten et al. (2004), who note that regardless of adversity some adolescents might be able to successfully adapt in light of their circumstances.

It is evident that adolescents who are resilient might be able to cope more effectively with possible stressors and be less vulnerable to adverse mental health outcomes. The latter clarifies the need for interventions to be focused on fostering resilience in school-going adolescents who live in low-income communities.

5.7. The relationship between self-esteem and resilience

Consistent with the hypothesis, results of the multiple regression analysis indicated that self-esteem was a significant positive predictor of resilience. A plausible explanation of the present finding is that when adolescents who resided in challenging socio-economic circumstances had higher levels of self-esteem, they also had increased levels of resilience. In light of the present finding, it is possible that having high self-esteem increases the adolescents' likelihood of being able to persevere irrespective of their social stressors, and thus remain resilient. Higher self-esteem could also be related to higher perceived competence (Rosenberg, 1979), which could influence the adolescents' ability to cope with perceived stressors and consequently be related to higher resilience.

5.8. The relationship between coping and resilience

Inconsistent with the hypothesis, multiple regression analysis revealed that problem solving coping did not emerge as a significant positive predictor of resilience. A correlational analysis indicated that there was indeed a significant positive correlation between problem-solving coping and resilience. It is possible that when the adolescents in the present study employed problem solving strategies to manage potential stressors experienced in their communities, they were more likely to have increased levels of resilience. When adolescents perceive certain risk factors that pose a threat to their well-being, they might apply problem-solving coping strategies as a way of decreasing the impact of the stressor on their health

(Lazarus & Folkman, 1984). It is plausible that the use of problem-solving coping could therefore foster resilience in adolescents, which could make it a protective resource for adolescents facing socio-economic risk. When the adolescent manages the stressor effectively, they might be less likely to experience significant distress (Wadsworth et al., 2011) and instead they could be more resilient in the context of risk.

The results further indicated that there was a significant positive correlation between social support-seeking coping and resilience. It is plausible that when adolescents in the present study experienced stressors, they could have sought advice or comfort from others as a way to manage their distress. By seeking social support from others, adolescents might be aware that others could assist them in times of need, which might enable them to stay resilient regardless of socio-economic stressors. Researchers have identified the use of social support-seeking coping as a functional coping strategy (Chan, 2012) and therefore the increases in its use could be associated with resilience. These results might indicate that the social support-seeking coping strategy is a protective factor for the mental health of adolescents.

The correlation between avoidant coping and resilience revealed a significant positive correlation. The present finding suggested that the avoidant coping strategy might be a protective resource for adolescents, which is contradictory to previous research which indicated that avoidant coping was a risk factor for adverse mental health outcomes (Cicognani, 2011). This finding could suggest that by possibly disengaging with a stressor or not managing a problem, the adolescent does not need to experience the distress associated with it, which increases their perceived resilience.

5.9. The relationship between resilience and perceived social support

The present study revealed a significant positive correlation between perceived social support and resilience in the group of school-going adolescents. In addition, a multiple regression analysis indicated that perceived social support was a significant positive predictor of resilience. It is possible that when adolescents who experience socio-economic stressors appraise the social support of others, they are more likely to believe that they would have support when experiencing distress. The latter implies that having strong perceived social support could be related to increases in adolescents' resilience. Researchers have also noted that adolescents' awareness of support could increase the likelihood that they will be able to manage perceived stressors (Kaynak et al., 2011).

It is pivotal to identify which factors could be related to increased resilience in adolescents who live in low-income communities. This point is emphasised by international researchers (Tandon & Solomon, 2006) and South African researchers (Mampane & Bouwer, 2006). In the present study, self-esteem, coping strategies and perceived social support were related to increases in levels of resilience in adolescents. These protective factors might ameliorate or modify the impact of stressors on the mental health of adolescents (Saxena et al., 2006), which leads to increased resilience in the wake of stressors. The role of protective factors can be conceptualised in terms of the transactional theory of stress and coping (Lazarus & Folkman, 1984). In this case, self-esteem, coping strategies and perceived social support might be essential resources that can aid adolescents in their coping process, leading to increased resilience regardless of potential contextual stressors.

5.10. The relationship between self-esteem and coping strategies

While there was no significant relationship between self-esteem and social support-seeking or avoidant coping, a correlational analysis revealed that there was a significant positive

correlation between self-esteem and problem-solving coping. It is plausible that when adolescents who resided in low income communities had higher levels of self-esteem, they were more likely to employ problem solving coping strategies when managing stressors. It is possible that when adolescents had higher levels of self-esteem they believed that they had the capacity to manage perceived stressors, which might have informed their use of effective coping, such as problem-solving. In this regard, Behnke et al. (2011) found a relationship between high self-esteem and increased problem-solving coping, while Orth et al. (2009) also reported the relationship between high self-esteem and effective coping.

The relationship between high self-esteem and increased use of problem-solving coping, could suggest that high self-esteem is a protective resource that might foster effective coping in adolescents who live in low-income communities. The present finding can be conceptualised in terms of the transactional theory of stress and coping, which suggests that when stressors are appraised, adolescents could revise the coping resources that they have available in an attempt to manage the problem in the environment (Lazarus & Folkman, 1984). The present finding of the study therefore informs interventions aimed at promoting self-esteem in school-going adolescents.

5.11. The relationship between coping strategies and perceived social support

Inconsistent with the hypothesis, the present study did not reveal that avoidant coping is a significant negative predictor of perceived social support in a multiple regression analysis. Results of a regression analysis indicated that problem solving coping emerged as a significant positive predictor of perceived social support. It is possible that when adolescents in the present study used the problem solving coping strategy, they sought to assess ways in which they could manage distress. It is plausible that through employing the problem solving coping strategy, adolescents identified the central role of family or friends in assisting in

times of need. When adolescents experience challenges, perceiving social support available from others could help them manage a stressor effectively and could protect them from experiencing stress (Kaynak et al., 2011).

5.12. Implications for interventions

The results of the study indicated that there were multiple factors that influenced the mental health of adolescents that lived in low-income South African communities selected in the Western Cape province. In the context of numerous stressors that were associated with residing in such communities, the present study revealed that there were factors that could either contribute to positive outcomes, or increase adolescents' vulnerability to experiencing adverse mental health outcomes.

One of the primary research questions and aims of the present study was focused on investigating the nature of the relationship between stress (as manifested in symptoms of depression) and key variables (self-esteem, coping strategies, perceived social support and resilience). The present study revealed that high self-esteem, increased use of the problem-solving coping strategy, stronger perceived social support and higher levels of resilience were related to lower levels of depression in the group of adolescents. These results indicated that these key variables could act as protective factors for adolescents who live in low-income communities. When adolescents faced socio-economic risk factors, these resources (high self-esteem, problem solving coping, stronger perceived social support and higher levels of resilience) could ameliorate or modify the impact of certain stressors on adolescents' mental health (Saxena et al., 2006).

The protective effect of coping strategies were also evident in relation to resilience, as it was found that higher use of problem-solving, social support-seeking as well as avoidant coping was associated with higher levels of resilience. Therefore the use of either of these

coping strategies might be effective, as it could buffer the impact of stressors on the well-being of adolescents and consequently influence higher levels of resilience. This effect was also evident when noting that higher self-esteem and stronger perceived social support were related to stronger resilience. Results also revealed that higher self-esteem had a significant influence on the use of the problem-solving coping strategy. In addition, increased use of problem-solving coping was related to stronger perceived social support in the group of school-going adolescents. These results all shed light on the factors that could have a positive effect on the mental health of adolescents who live in challenging circumstances.

In terms of the transactional theory of stress and coping (Lazarus & Folkman, 1984), if adolescents perceive any stressors in their environment as threatening to their well-being, they might have evaluated the resources they possessed to manage the impact of such a stressor (secondary appraisal). The coping resources available to the adolescent would be unique and specific to their contexts of interaction. The results of the present study allude to the importance of intrapersonal characteristics in the stress-coping process, as each of the potential protective factors were related to adolescents' personal traits (self-esteem, resilience), views (perceived social support) and coping strategies (problem-solving coping). These results indicated the central role of the adolescent as being able to influence the impact of the stress-coping process, by noting that they had the competence to manage stress effectively, perceived the support of others in times of need, used effective coping strategies and consequently had stronger resilience.

The present study could inform interventions that are aimed at mental health promotion and the prevention of adverse mental health outcomes. Radebe (2007) notes that: "…the goal of community interventions is to facilitate change in community in order to improve the mental health in that community" (p. 134). Interventions aimed at fostering the mental health of school-going adolescents living in low-income communities could take a

mental health promotion approach or a preventative one. Mental health promotion strategies could be focused on improving the psychological health, competence and resilience (WHO, 2004) of adolescents who are exposed to potential contextual risk factors. Moreover, mental health promotion interventions could be focused on strengthening the interpersonal aspects of the adolescents' environment as a way to increase resilience (Petersen & Govender, 2007).

Prevention strategies could be aimed at preventing or reducing symptoms of depression in adolescents (Radebe, 2007; WHO, 2004). Prevention strategies could be at the primary, secondary or tertiary level. Primary level interventions could cater to the entire cohort of adolescents who live in low-income communities. These interventions could be focused on promoting mental well-being and decreasing incidence of depression (Lewis, Lewis, Daniels & D' Andrea, cited in Radebe, 2007). The latter can be achieved through strategies focused on strengthening the protective factors that were identified in this study, as a way to build adolescents' resilience in light of possible stressors. For example, interventions could be aimed at strengthening the self-esteem of adolescents and fostering effective coping strategies (such as problem-solving). Strategies could thus be focused on enhancing adolescents' perceived competence to manage stressors through reinforcing certain protective resources that could assist them in managing their stressors (high self-esteem, effective coping strategies, perceived social support and resilience) and thereby decreasing their susceptibility to experiencing stress. The latter prevention strategies incorporate health promotion principles, as they foster positive mental health. Examples of primary prevention strategies are psycho-educational programmes that might be offered as an extracurricular programme in schools located in low-income communities. These psycho-educational programmes could target a range of life skills necessary to foster adolescents' coping skills, enhance their self-esteem and confidence, promote their problem-solving skills and help identify, build and enhance social support networks. It is noteworthy, that the latter

intervention targets the specific protective factors identified in the present study and targets intrapersonal and interpersonal development in adolescents.

South African researchers have assessed the efficacy of a resilience programme for children, which focused on promoting emotional regulation, stress management, fostering interpersonal skills and problem-solving (de Villiers & van den Berg, 2012). De Villiers and van den Berg indicated that the programme was effective in increasing emotional regulation and self-appraisal, although the interpersonal skills and external resources did not increase after the programme was implemented. The authors also indicated the efficacy of resilience programmes at targeting intrapersonal facets of development (de Villiers & van den Berg, 2012). The present study recommends that primary prevention strategies should be focused on enhancing intrapersonal and interpersonal facets, which could be essential to promoting adolescents' resilience while living in challenging socio-economic circumstances. When developing interventions, mental health care workers should be cognisant of adolescence as a stage of development and should integrate key themes that affect adolescents into the programme (for example: development changes, risk-taking behaviour and the influence of peers).

In the present study it was found that 47 participants (27%) had moderate levels of depression and 15 participants (9%) had severe levels of depression (N = 173) on the BDI-II. This finding suggests that school-going adolescents living in low-income communities might be at high risk for mental health problems such as depression. It might thus be necessary for interventions to screen adolescents who live in low-income communities for common mental health disorders such as depression and anxiety, so that interventions at the secondary level can take place. Adolescents with high scores of depression could thus be referred for free psychological services at state hospitals in their communities, in order to take the necessary

precaution to prevent further harm to occur in adolescents who are at high-risk for depression (Lewis, cited in Radebe, 2007).

5.13. Strengths of the study

The study aimed to understand the role of various factors on the mental health of adolescents who reside in low-income communities in South Africa. Amongst these results, it was found that while certain factors could increase the resilience of adolescents in light of stressors, other factors might increase an adolescents' vulnerability to experiencing stress, as manifested in symptoms of depression.

A strength of the study was that it shed light on the relationship between many of the variables and depression, in a group of adolescents who live in low-income communities in South Africa. In the context of numerous risk factors (such as contextual stressors), it is essential to identify which factors might increase the resilience of adolescents, and which factors could hinder their coping process. The results of the study help to understand these factors, which might inform interventions aimed at protecting the well-being of adolescents and preventing the incidence of depression.

5.14. Limitations of the study and recommendations for future studies

The first drawback of the present study is that it was limited to the convenience sampling method. Due to the difficulty of obtaining a sample that is representative of the entire cohort of school-going adolescents living in low-income communities in the Western Cape, the study employed the convenience sampling technique and sampled learners who resided in the low-income communities of Stellenbosch. In contrast to probability sampling methods, convenience sampling (a nonprobability sampling method) might have increased sampling error, due to the sample not being selected randomly from the population (McBride, 2013;

Nestor & Schutt, 2012). This further poses a threat to the external validity of the study, as it decreases the researcher's ability to generalize the results to the population (McBride, 2013; Nestor & Schutt, 2012). It also affects the internal validity of the study, which refers to the extent to which the study offers causal information about the behaviour of the population (McBride, 2013).

In contrast to using convenience sampling, future studies could use a probability sampling method. Through this method, participants are selected randomly and there is a likelihood of participants being chosen from the population (McBride, 2013). A great benefit of this sampling method is that there is likelihood that the resulting sample will be representative of the population (McBride, 2013). Moreover, this method also decreases the amount of sampling error. It is evident that an alternative sampling method – other than the one used in this study (convenience sampling) – could have significant benefits in terms of the generalizability and representativeness of the study. Therefore it is recommended that future studies could use the suggested sampling method.

A second limitation of the current study was that it was restricted by its 173 participants who were sampled from schools in Stellenbosch in the Western Cape, as this restricted the representativeness of the sample of adolescents. It is suggested that future studies that will be focused on investigating this topic should focus on broadening the sample scope to multiple areas within the Western Cape. Moreover, it would be beneficial for future studies to focus on investigating the topic across the provinces of South Africa, in order to increase the representativeness of the sample and consequently the generalizability of the results.

A third limitation of the study was that it was limited to the correlational design. Therefore, although the correlational analyses shed light on the relationships amongst variables, it could not be used to make causal inferences about the relationship between

variables. In this case, it could not be concluded that one variable caused another. According to McBride (2013), this is because the correlational design does not allow the control of extraneous variables such as what would be possible in an experiment. It would be useful to conduct a between-group study, which focuses on the differences between experiences of school-going adolescents living in low-income communities in comparison to those who reside in more favourable socio-economic contexts.

A fourth limitation of the study was its cross-sectional design and exploratory nature. Therefore data could be gathered at only one specific point in time and it was not possible to ascertain if the findings yielded on the constructs under investigation were limited to schooling, or that they were peculiar to the low-income communities in which the learners resided. It is suggested that research should employ a longitudinal research design when investigating the constructs in future and should make use of control groups of adolescents.

A final limitation of the study was that the study was limited by its quantitative nature and did not employ a qualitative enquiry and thus could not report on the subjective experiences of the adolescents. This enquiry could contribute to the understanding of the experiences of adolescents residing in low-income communities in South Africa. Future studies could investigate the subjective experiences of depression in school-going adolescents who reside in low-income communities in the Western Cape by conducting open-ended interviews individually or in focus groups.

5.15. Summary of main findings

The main focus of the study was to examine the relationships between numerous factors (self-esteem, coping, perceived social support, resilience) and depression in a group of school-going adolescents (N=173) who reside in low-income communities. This enquiry was guided by a quantitative research paradigm, and a correlational design. Results from the correlational

analyses indicated that high self-esteem, problem-solving coping, stronger appraisals of social support and increased resilience were associated with lower levels of depression, which indicates that these factors might protect adolescents from experiencing the detrimental effects of stress. Moreover, the avoidant coping strategy emerged as a risk factor for depression, as an increase in its use was related to an increase in the level of depression. Multiple regression analysis also revealed that self-esteem, coping strategies, perceived social support and resilience were significant predictors of depression. Results indicate that while some factors might protect adolescents from experiencing stress (depression), other factors could increase their susceptibility in the context of risk, as it is associated with increased levels of depression.

It was concluded that high levels of self-esteem, stronger appraisals of social support, problem-solving coping and higher resilience in adolescents, might buffer the impact of risk factors on adolescents' mental health, while low levels of these resources, could be a risk factor for depression. Results further indicated that increased use of the various coping strategies, higher self-esteem and stronger perceived social support were related to higher levels of resilience in the group of school-going adolescents.

The findings of the present study were conceptualised in terms of the transactional theory of stress and coping (Lazarus & Folkman, 1984). After the process of primary appraisal, whereby the adolescent evaluates whether an event or stressor may be detrimental to their health and well-being, they may evaluate and apply the resources they have available to manage the stressor (secondary appraisal) (Lazarus & Folkman, 1984). In this case, when the adolescent possessed high self-esteem, made high use of the problem-solving coping strategy, had strong appraisal of social support from others and possessed high resilience, this was related to lower levels of depression. This alludes to the role of the aforementioned resources (high self-esteem, stronger perceived social support, increased use of problem-

solving coping and strong resilience), as essential resources during the stress-coping process. This is further emphasized when noticing that high self-esteem, increased use of the different coping strategies, and stronger perceived social support were all related to higher levels of resilience for the group of adolescents. This result suggests that the aforementioned resources may have a protective effect on the well-being of adolescents as it is related to stronger resilience.

The results of the present study clarify the potential protective role of self-esteem, problem-solving coping, strong perceptions of social support and high resilience on the mental health of adolescents living in low-income communities in South Africa. Mental health promotion and prevention strategies could use the results of this study to inform interventions aimed at increasing problem-focused coping, enhancing self-esteem, building support networks and promoting resilience in school-going adolescents living in low-income communities, given that these factors were related to lower levels of depression in the group of adolescents.

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APPENDICES

Appendix A: Demographic questionnaire

Section A: Demographic Questionnaire

Use a cross (x) to indicate the answer that best describes you.

1. **Are you a male or female?**

MALE	FEMALE

2. **What grade are you in at school?**

Grade 8	Grade 9	Grade 10	Grade 11

3. **How old are you?** _____
4. **What is your home language?** _____
5. **How many brothers do you have?** _____
6. **How many sisters do you have?** _____
7. **Are you the first, second or last born child?** _____
8. **What is the name of the area in which you stay?** _____
9. **How many people live at your house?** _____
10. **Which parents do you live with?**

Use a cross (x) to indicate the answer that best describes you.

Both parents	Only father	Only mother	Grandmother/ Grandfather	Other family member.

11. Please write down all the grades that you have repeated at school. If you have not repeated any grade, you can leave this question blank.

12. How do you feel about safety in your neighbourhood?

Use a cross (x) to indicate the answer that best describes you.

It is a problem	
It is a problem, but not a serious one	
It is not a problem	
It is not a problem at all	

13. How do you feel about your family's financial situation?

Use a cross (x) to indicate the answer that best describes you.

We sometimes struggle to pay the bills	
We always struggle to pay the bills	
We don't have financial problems	
We don't have financial problems at all	

14. Do you have any friends?

Use a cross (x) to indicate the answer that best describes you.

I have no friends at all	
I have very few friends	
I have friends, but we are not very close	

I have a couple of friends	
I have many best friends who I consider very close	

15. If you indicated that you have friends in question 14 above, how influential would you say your friends are in your life (in terms of lifestyle choices you have, activities you do and places you go to)?

Use a cross (x) to indicate the answer that best describes you.

My friends are not influential at all	
My friends are hardly influential	
My friends are neither more nor less of an influence	
My friends are a little influential	
My friends are very influential	

16. How would you rate your overall mental health?

Use a cross (x) to indicate the answer that best describes you.

I feel very mentally unstable	
I feel a little mentally unstable	
I am not sure	
I feel a little mentally stable	
I feel very mentally stable	

Appendix B: Consent and assent forms

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PARENTAL/GUARDIAN CONSENT FOR CHILD PARTICIPATION IN RESEARCH

Title of the research: The experience of stress in school-going adolescents living in low-income communities in the Western Cape: The role of self-esteem, coping and perceived social support.

I would like to ask permission for your child to answer some questions for a study done by Ms Carmen Harrison (Masters student in Psychology at Stellenbosch University) under the supervision of Dr Nceba Z. Somhlaba. The results will add to an assignment for the Masters degree. Your child has been selected as a possible participant because s/he is a young person aged between 12 and 18 years, and is in Grades 8, 9, 10 or 11 in a school attended mostly by learners who come from communities with low income.

1.PURPOSE OF THE STUDY

This study would like to find out how support from friends and family, self-confidence and the way young people deal with problems affect the way they feel. If researchers know what helps young people deal with their problems, they can set up programmes that prevent them from experiencing stress.

2.PROCEDURES

If you give permission for your child to answer the questions they will do the following:

1. The child will get a series of questions to fill out, by using a pen. Some of the questions will ask about basic things like age and number of friends. Other questions will ask about support from friends and family, how young people deal with problems and stress.
2. The researcher will explain the instructions to them and they can ask questions if they do not understand. After this they can complete the set of questions. It will take about 25 to 40 minutes to complete the questions.
3. Your child can tell the researcher or their teacher if they would like feedback on their results.

3.POTENTIAL RISKS AND DISCOMFORTS

While I do not expect anything negative to come from this, if the child feels a strong sense of uneasiness while or after answering the questions (or after answering the questions), they can tell the researcher or teacher and I will arrange for them to speak to someone who is specially trained to help people deal with their problems through talking about the problems people have.

4.POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

By answering the questions, your child will help me understand how young people living in low-income communities feel and how they deal with problems. If researchers know what helps young people deal with their problems, they can set up programmes that prevent negative feelings like stress.

5.PAYMENT FOR PARTICIPATION

The child will not be paid for participating in this study.

6.CONFIDENTIALITY

All the answers given by your child will remain private and will be revealed only with their permission or if it is required by law. The guidelines below will be followed:

The answers your child gives will be kept in such a way that no one will know that it is their answers. They will not be asked to provide their name on the paper they used to answer questions and no one will know that they took part in answering the questions. The name of the school will also not be printed in the final assignment for the Masters degree. Only the researcher, Ms Harrison and her supervisor, Dr Somhlaba, will see the answer sheets and they will be safely stored in Dr Somhlaba's office, at Stellenbosch University. Three years after the study is completed the answer sheets will be destroyed.

7.PARTICIPATION AND WITHDRAWAL

Even if you give me permission to ask questions to your child, the child can still choose not to answer the questions if that is what she or he feels (no child will be forced to answer questions). If they agree to answer the questions at first, but do not want to do so anymore,

she or he can stop at any time. Your child can also choose not to answer some of the questions, but still be part of the study. The researcher may withdraw the child from this research if circumstances arise which call for doing so.

8.IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact:

Ms Carmen Harrison (Masters in Psychology student)

Phone number:

Email address: 15437450@sun.ac.za

Dr Nceba Z. Somhlaba (Supervisor of Ms Harrison)

Phone number: (021) 808-3552

Email address: nzs@sun.ac.za

9.RIGHTS OF RESEARCH PARTICIPANTS

If you give your permission at first, but do not want your child to participate anymore, they can stop participating at any time. You will also not have to pay if your child does not want to participate anymore. You are not giving up any legal claims, rights or remedies because of your child's participation in this research study. If you have questions about the rights of your child as a participant, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development, Stellenbosch University.

SIGNATURE OF PARTICIPANT OR LEGAL REPRESENTATIVE (PARENT OR GUARDIAN)

The information above was described to [*me/the subject/the participant]* by [*name of relevant person]* in [*Afrikaans/English/Xhosa/other]* and [*I am/the subject is/the participant is]* in command of this language or it was satisfactorily translated to [*me/him/her*]. [*I/the participant/the subject]* was given the opportunity to ask questions and these questions were answered to *[my/his/her]* satisfaction.

[I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study]. I have been given a copy of this form.

_____

Name of Subject/Participant

_____

Name of Legal Representative (parent or guardian) (if applicable)

_____

Signature of Subject/Participant or Legal Representative (parent or guardian)

_____

Date

SIGNATURE OF INVESTIGATOR

_____ _____

Signature of Investigator **Date**

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CONSENT TO PARTICIPATE IN RESEARCH

For adolescents aged 18 years

Title of the research: ***The experience of stress in school-going adolescents living in low-income communities in the Western Cape: The role of self-esteem, coping and perceived social support.***

I would like to invite or ask you to participate in this study by answering some questions. This study is done by Ms Carmen Harrison (Masters student in Psychology at Stellenbosch University) under the supervision of Dr Nceba Z. Somhlaba. The results will add to an assignment for the Masters degree. You have been selected as a possible participant because you are a young person aged between 12 and 18 years, and who is in Grades 8, 9, 10 or 11 in a school attended mostly by learners who come from communities with low income.

1. PURPOSE OF THE STUDY

This study would like to find out how support from friends and family, self-confidence and the way young people deal with problems affect the way they feel. If researchers know what helps young people deal with their problems, they can set up programmes that prevent them from experiencing stress.

2. PROCEDURES

If you agree to answer the questions, you will do the following:

1. You will get a series of questions to fill out, by using a pen. Some of the questions will ask about basic things like age and number of friends. Other questions will ask about support from friends and family, how you deal with problems and stress.
2. The researcher will explain the instructions to you and if you do not understand, you can ask questions. After this you can answer the questions. It will take about 25 to 40 minutes to complete the questions.
3. You can tell the researcher or your teacher if you would like feedback on your results

3. POTENTIAL RISKS AND DISCOMFORTS

While I do not expect anything negative to come from this, if you feel a strong sense of uneasiness while or after answering the questions (or after answering the questions), you can tell the researcher or teacher and I will arrange for you to speak to someone who is specially trained to help people deal with the problems through talking about the problems people have.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

By answering the questions, you will help me understand how young people living in low-income communities feel and how they deal with problems. If researchers know what helps young people deal with their problems, they can set up programmes that prevent negative feelings like stress.

5. PAYMENT FOR PARTICIPATION

You will not be paid for participating in this study.

6. CONFIDENTIALITY

All the answers you give will remain private and will be revealed only with your permission or if it is required by law. The guidelines below will be followed:

The answers you give will be kept in such a way that no one will know that it is your answers or even that you answered the questions. You will not be asked to provide your name on the paper you used to answer questions and no one will know that you took part in answering the questions. The name of the school will also not be printed in the final assignment for the Masters degree. Only the researcher, Ms Harrison and her supervisor, Dr Somhlaba, will see the answer sheets and they will be safely stored in Dr Somhlaba's office, at the University of Stellenbosch. Three years after the study is completed, the answer sheets will be destroyed.

7. PARTICIPATION AND WITHDRAWAL

If you agree to answer the questions at first, but do not want to do so anymore, you can stop at any time. You will not be in trouble if you do not want to participate anymore. The researcher may withdraw you from this research if circumstances arise which call for doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact:

Ms Carmen Harrison (Masters in Psychology student)

Phone number:

Email address: 15437450@sun.ac.za

Dr Nceba Z. Somhlaba (Supervisor of Ms Harrison)

Phone number: (021) 808-3552

Email address: nzs@sun.ac.za

9. RIGHTS OF RESEARCH SUBJECTS

If you give your permission at first, but then do not want to participate anymore you do not have to answer the questions. You are not giving up any legal claims, rights or remedies because of your

participation in this research study. If you have questions about your rights as a participant, contact MsMaléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to [*me/the subject/the participant]* by [*name of relevant person]* in [*Afrikaans/English/Xhosa/other]* and [*I am/the subject is/the participant is]* in command of this language or it was satisfactorily translated to [*me/him/her*]. [*I/the participant/the subject]* was given the opportunity to ask questions and these questions were answered to *[my/his/her]* satisfaction.

[I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.] I have been given a copy of this form.

_____

Name of Subject/Participant

_____

Name of Legal Representative (if applicable)

_____ _____

Signature of Subject/Participant or Legal Representative **Date**

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ [*name of the subject/participant]* and/or [his/her] representative _____ [*name of the representative]*. *[H*e/she] was encouraged and given ample time to ask me any questions. This

conversation was conducted in [*Afrikaans/*English/*Xhosa/*Other*] and [*no translator was used/this conversation was translated into* _____ by _____].

_____ _____

Signature of Investigator **Date**

	STELLENBOSCH UNIVERSITY

PARTICIPANT INFORMATION LEAFLET AND ASSENT FORM

TITLE OF THE RESEARCH PROJECT:

The experience of stress in school-going adolescents living in low-income communities in the Western Cape: The role of self-esteem, coping and perceived social support.

RESEARCHERS NAME(S):

Ms. Carmen Harrison (Masters in Psychology student)

Dr.Nceba. Z. Somhlaba (Supervisor of Ms. Harrison)

ADDRESS:

Psychology Department,

Stellenbosch University

Private Bag X1,

Matieland

Stellenbosch

7602

CONTACT NUMBER:

Ms. Carmen Harrison:

Dr. Nceba. Z. Somhlaba: 021-808 3552

What is RESEARCH?

Research is something we do to find new knowledge about the way things (and people) work. We use research projects or studies to help us find out more about disease or illness. Research also helps us to find better ways of helping, or treating children who are sick.

What is this research project all about?

This study would like to find out how support from friends and family, self-confidence and the way young people deal with problems affect the way they feel. If researchers know what helps young people deal with their problems, they can set up programmes that prevent them from experiencing stress.

Why have I been invited to take part in this research project?

The researcher would like you to participate in this study because you are a young person aged between 12 and 18 years, and who is in Grades 8, 9, 10 or 11 in a school attended mostly by learners who come from communities with low income.

Who is doing the research?

My name is Carmen Harrison and I am a Masters in psychology student at the University of Stellenbosch. I am doing this study as part of my Masters degree. I am interested in finding out how young people deal with their problems and how stress can be prevented.

What will happen to me in this study?

1. If you agree to participate in the study, you may give me your permission, by signing this form. If you are under the age of 18, your parent or guardian should give their permission as well, by signing a separate form.
2. You will get a series of questions to fill out, by using a pen. Some of the questions will ask about basic things like age and number of friends. Other questions will ask about support from friends and family, how you deal with problems and stress.
3. The researcher will explain the instructions to you and if you do not understand, you can ask questions. After this you can answer the questions. It will take about 25 to 40 minutes to complete the questions.
4. You can tell the researcher or your teacher if you would like feedback on your results.

Can anything bad happen to me?

While I do not expect anything negative to come from this, if you feel a strong sense of uneasiness while or after answering the questions (or after answering the questions), you can tell the researcher or teacher and I will arrange for you to speak to someone who is specially trained to help people deal with the problems through talking about the problems people have.

Can anything good happen to me?

By answering the questions, you will help me understand how young people living in low-income communities feel and how they deal with problems. If researchers know what helps young people deal with their problems, they can set up programmes that prevent negative feelings like stress.

Will anyone know I am in the study?

The answers you give will be kept in such a way that no one will know that it is your answers or even that you answered the questions. You will not be asked to provide your name on the paper you used to answer questions and no one will know that you took part in answering the questions.

The name of the school will also not be printed in the final assignment for the Masters degree. Only the researcher, Ms Harrison and her supervisor, Dr Somhlaba, will see the answer sheets and they will be safely stored in Dr Somhlaba's office, at Stellenbosch University. The answer sheets will be destroyed three years after the study is completed.

Who can I talk to about the study?

If you have any questions about the study, you can contact the researchers:

Ms Carmen Harrison

Cell phone number:

Email address: 15437450@sun.ac.za

Dr Nceba Z. Somhlaba

Phone number: (021) 808-3552

Email address: nzs@sun.ac.za

What if I do not want to do this?

If you do not want to answer the questions I have for you, you do not have to, even if your mother/father/guardian gives their permission. If you agree to answer the questions at first, but do not want to do so anymore, you can stop at any time. You will not be in trouble if you do not want to participate anymore.

Do you understand this research study and are you willing to take part in it?

YES	**NO**

Has the researcher answered all your questions?

YES	**NO**

Do you understand that you can pull out of the study at any time?

YES	NO

_____ _____

Signature of child Date

Appendix C: Letter of approval from the Western Cape Education Department (WCED)

REFERENCE: 20120620-0100

ENQUIRIES: Dr A T Wyngaard

Ms Carmen Harrison

Department of Psychology

Stellenbosch University

Dear Ms Carmen Harrison

RESEARCH PROPOSAL: THE EXPERIENCE OF STRESS IN SCHOOL-GOING ADOLESCENTS LIVING IN LOW-INCOME COMMUNITIES IN THE WESTERN CAPE: THE ROLE OF SELF-ESTEEM, COPING AND PERCIEVED SOCIAL SUPPORT

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Approval for projects should be conveyed to the District Director of the schools where the project will be conducted.
5. Educators' programmes are not to be interrupted.
6. The Study is to be conducted from **16 January 2013 till 30 June 2013**

7. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December).

8. Should you wish to extend the period of your survey, please contact Dr A.T Wyngaard at the contact numbers above quoting the reference number?

9. A photocopy of this letter is submitted to the principal where the intended research is to be conducted.

10. Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.

11. A brief summary of the content, findings and recommendations is provided to the Director: Research Services.

12. The Department receives a copy of the completed report/dissertation/thesis addressed to:

The Director: Research Services

Western Cape Education Department

Private Bag X9114

CAPE TOWN

8000

We wish you success in your research.

Kind regards.

Signed: Dr Audrey T Wyngaard

for: **HEAD: EDUCATION**

DATE: 22 November 2012

Appendix D: Letter of ethics clearance from the Research Ethics Committee (Human research)

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1 November 2012

Tel.: 021 - 808-9003
Enquiries: Mrs S. Oberholzer
Email: oberholzer@sun.ac.za

Reference No. HS868/2012

Ms C Harrison
Dept of Psychology

LETTER OF ETHICS CLEARANCE

With regard to your application, **HS 868/2012** I would like to inform you that the project, "*The experience of stress in school-going adolescents living in low-income communities in the Western Cape: The role of self-esteem, coping and perceived social support*", was approved on the following proviso's:

1. The researcher will remain within the procedures and protocols indicated in the proposal, particularly in terms of any undertakings made in terms of the confidentiality of the information gathered.
2. The research will again be submitted for ethical clearance if there is any substantial departure from the existing proposal.
3. The researcher will remain within the parameters of any applicable national legislation, institutional guidelines and scientific standards relevant to the specific field of research.
4. The researcher will consider and implement the foregoing suggestions to lower the ethical risk associated with the research.
5. This ethics clearance is valid for one year from **1 November 2012 – 31 October 2013**

We wish you success with your research activities.

Best regards

.....

MRS S. OBERHOLZER
REC Coordinator: Research Ethics Committee: Human Research (Humaniora)
Registered with the National Health Research Ethics Council (NHREC): REC-050411-032