General self-efficacy as a moderator between stress and positive mental health in an African context

Jonathan Redelinghuys
Hons B.A. (Psychology)

Mini-dissertation (article format) submitted in partial fulfilment of the requirements for the degree Master of Arts in Clinical Psychology at the North-West University (Potchefstroom Campus)

Supervisor: **Mr. I.P. Khumalo**
Co-Supervisors: **Prof. Q. M. Temane**
Prof. M. P. Wissing

Potchefstroom
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1. Acknowledgments

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- My brother, Dean, and my Grandmother, Iris, for your support in trying times.
- Catrine Louw, because of your love and strength I could never give up!

2. Solemn Declaration

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3. Summary

General Self-Efficacy as a Moderator between Stress and Positive Mental Health in an African Context

Keywords: Self-Efficacy, Stress, Mental Health, Psychological well-being, Mental Health Continuum, General Health Questionnaire.

The aim of this study was to explore whether general self-efficacy would moderate the relationship between stress and positive mental health in participants from an African context. Literature supported the concept that stress has a negative influence on mental health and that this interaction may be moderated by cognitive resources. General self-efficacy is a cognitive resource that may act as a moderator in the negative association between stress and positive mental health. Although general self-efficacy is thought to be a universal construct, little empirical research on it has been conducted in an African context. An African socio-cultural context is often described as more collectivistic and characterised by social harmony and interdependence.
A sample of 1050 participants from both urban (n=451) and rural (n=599) settings completed Setswana versions of the four relevant questionnaires, i.e. the Mental Health Continuum – Short Form (MHC-SF, Keyes, 2006), used to measure positive mental health, the General Health Questionnaire (GHQ, Goldberg & Hillier, 1979), used to measure the experience of stress, the Generalized Self-Efficacy Scale (GSE, Jerusalem & Schwarzer, 1992) and the New General Self-Efficacy Scale (NGSE, Chen, Gully & Eden, 2001), both measuring general self-efficacy. Data were collected in a quantitative cross-sectional survey design with the aid of 16 trained bilingual (English and Setswana speaking) fieldworkers. Results showed negative correlations between the GHQ (SS, AS, SD, and DS) and MHC-SF (EWB, PWB, and SWB). Results indicated that general self-efficacy moderated the negative effect of manifestation of stress as shown by indices of psychological distress on emotional, psychological and social well-being. Thus, it is found that higher levels of self-efficacy are beneficial for the well-being of individuals in this African sample.

4. Opsomming

Algemene self-effektiwiteit as 'n Moderator tussen stres en positiewe Geestesgesondheid in 'n Afrika Konteks

Sleutelwoorde: Self-effektiwiteit, Stres, Geestesgesondheid, psigologiese welstand, Mental Health Continuum, General Health Questionnaire.

Die doel van hierdie studie was om te verken of algemene self-effektiwiteit die verhouding tussen stres en positiewe geestesgesondheid in deelnemers uit 'n Afrika konteks modereer. Literatuur dui aan dat stres 'n negatiewe invloed op geestesgesondheid het en dat die interaksie tussen stres en geestesgesondheid gemodereer kan word deur kognitiewe hulpbronne. Algemene self-effektiwiteit is 'n kognitiewe hulpbron wat kan optree as 'n moderator in die negatiewe assosiasie tussen stres en positiewe geestesgesondheid. Alhoewel aanvaar word dat algemene self-effektiwiteit 'n universeel-geldige konstruk is, is min empiriese navorsing daaroor gedoen in 'n Afrika konteks. 'n Afrika sosio-kulturele konteks word dikwels beskryf as relatief kollektivisties en dat dit gekenmerk word deur sosiale harmonie en interafhanklikheid. 'n Steekproef van 1050 deelnemers uit beide stedelike (n = 451) en landelike (n = 599) gebiede het die Setswana weergawes van die volgende meetinstrumente voltooi: die “Mental Health Continuum-Short Form” (MHC-SF, Keyes, 2006) wat gebruik word om positiewe geestesgesondheid te meet, die “General Health Questionnaire” (GHQ, Goldberg & Hillier, 1979), wat gebruik word om die ervaring van stres mee te meet, asook die “Generalized Self-Efficacy Scale” (GSE, Jerusalem & Schwarzer, 1992) en die “New General Self-Efficacy Scale” (NGSE, Chen, Gully & Eden, 2001), wat beide algemene self-effektiwiteit meet. Data is ingesamel met 'n kwantitatiewe deursnee-opname-ontwerp met behulp van 16 opgeleide tweetalige (Engels en Setswana spreukende) veldwerkers. Daar is gevind dat algemene self-effektiwiteit, oor die algemeen die negatiewe effek van die impak wat die manifestering van stres, aangetoon deur indekse van psigologiese distres, op emosionele, psigologiese en sosiale welstand het, modereer. Dus, is daar gevind dat hoër vlakke van self-effektiwiteit voordelig is vir die welsyn van individue in hierdie steekproef.

5. PREFACE

5.1 Article format

For purposes of this mini-dissertation, which is part of the requirements for a professional master's degree, the article format as described by General Regulation A13.7 of the North-West University was chosen.

5.2 Selected journal

The target journal for submission of the current manuscript is the *Journal of Psychology in Africa (JPA).*

5.3 Letter of consent

The letter of consent from the co-authors in which they grant permission that the manuscript *General Self-Efficacy as a Moderator between Stress and Positive Mental Health in an African Context* may be submitted for purposes of a mini-dissertation by the first author, Jonathan Redelinghuys, appears on the next page.

5.4 Page numbering

In the mini-dissertation page numbers run through the whole document. For submission to the above-mentioned journal, manuscript numbering will be according to the requirements of said journal and will start on the title page of the manuscript.

Letter of consent

We, the undersigned, hereby give consent that Jonathan Redelinghuys may submit the manuscript *General Self-Efficacy as a Moderator between Stress and Positive Mental Health in an African Context* for purposes of a mini-dissertation in partial fulfilment for a master's degree.

_____

Mr. I. P. Khumalo
Supervisor

_____

Prof. Q.M. Temane
Co-Supervisor

_____

Prof. M.P. Wissing
Co-Supervisor

6. Manuscript

General Self-Efficacy as a Moderator between Stress and Positive Mental Health in an African Context

J. Redelinghuys, I. P. Khumalo, Q. M. Temane, & M. P. Wissing

School for Psychosocial Behavioural Sciences, North West University (Potchefstroom campus), South Africa.

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Running head: General self-efficacy, Stress & Psychological Well-Being.

General Self-Efficacy as a Moderator between Stress and Positive Mental Health in an African Context

Jonathan Redelinghuys*, Itumaleng P. Khumalo, Q. Michael Temane and Marié P. Wissing

School for Psychosocial Behavioural Sciences, North-West University (Potchefstroom Campus), South Africa

*Correspondence to:

Mr. J. Redelinghuys
p/a Mr. I.P. Khumalo
School for Psychosocial Behavioural Sciences
North-West University (Potchefstroom Campus)
Private Bag X6001
Potchefstroom
2520
South Africa

jono.rede@gmail.com
Tumi.Khumalo@nwu.ac.za
Tel: +2718 2991388 / Fax: +27182991730

ABSTRACT

The aim of this study was to investigate whether general self-efficacy moderated the relationship between stress and positive mental health in an African context. The experience of stress negatively influences mental health. Intrapersonal characteristics such as general self-efficacy can moderate this negative influence. A sample of 1050 participants completed the Mental Health Continuum-Short Form, the General Health Questionnaire and two indices of general self-efficacy. Step-wise multiple regression analyses were used to investigate interactions. Results indicate that general self-efficacy moderates the effect of stress related indices of psychological distress on emotional, psychological and social well-being. The general belief in one's abilities is thus a significant resource in lessening the negative effect of stress on well-being.

Keywords: Self-Efficacy, Stress, Mental Health, Psychological Well-being, Mental Health Continuum, General Health Questionnaire.

General Self-Efficacy as a Moderator between Stress and Positive Mental Health in an African Context

Stress is often a consistent causal factor in illness (DeLongis, Folkman & Lazarus, 1988). The experience of stress has negative implications for psychological well-being and physical health (Lazarus & Folkman, 1984; Moeini, Shaffii, Hidarnia, Babaii, Birashk, & Allahverdipour, 2008). DeLongis et al. (1988) found a decline in health and mood with increasing daily hassles and intrapersonal manifestations of stress. Among a group of Iranian male adolescents Moeni et al. (2008) found that greater levels of stress were associated with lower mental health. This inverse relationship between stress and positive (mental) health as indicated in the literature is supported by empirical evidence (eg. Treharne, Lyons, Booth & Kitas, 2007; Streisand, Mackey & Herge, 2010). Furthermore, it has been argued that the association between stress and psychosocial well-being and health may be buffered by intrapersonal and interpersonal characteristics such as, mindfulness (Bränström, Kvillemo, Brandberg, Moskowitz & Tedlie, 2010), social support (Cohen & Wills, 1985) and active coping strategies (Treharne et al., 2007). The current study is concerned with general self-efficacy, which is one of the psychosocial assets that influence the interaction between the experience of stress and mental health (Jerusalem & Schwarzer, 1992; Moeni, et al., 2008). Efficacy beliefs have been shown to have a promotional effect on psychological well-being (Salanova, 2004).

Bandura (1997) describes perceived self-efficacy as "beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments" (p.3). Self-efficacy is an intricately constructed sense of personal agency that relies on the individual's cognitive processing of sources that include social, physiological, and enacted and vicarious experiences of efficacy (Bandura, 1992; 1997). A distinction is made between general self-efficacy and domain-specific or state self-efficacy (Chen, Gully & Eden, 2001; Luszczynska, Gutiérrez-Doná, & Schwarzer, 2005; Luszczynska, Scholz, & Schwarzer, 2005). While general self-efficacy represents a belief in one's competence to deal with all kinds of broad ranging stressful and challenging demands, state self-efficacy is constricted to a particular task, domain or behaviour (Luszczynska, et al., 2005; Chen, Gulley & Eden, 2001). Both constructs share the same basic elements in terms of individuals' perceptions of their ability to meet situational demands, but differ in key areas. Domain-specific self-efficacy is often conceptualised as a state-like construct, while general self-efficacy is conceptualised as a

trait-like construct. General self-efficacy, therefore, reflects a generalisation across various domains when context is less specific (Luszcynska et al., 2005).

In addition to Bandura's (1997) view that general self-efficacy is universal and inherent in all individuals, cross-cultural studies involving self-efficacy are encouraged and recommended (Chen, Gully& Eden, 2001; Schwarzer & Jerusalem, 1993).The current study is concerned with general self-efficacy as a moderator between stress and positive mental health in an African context. Efficacy beliefs influence the regulation of emotional states by affecting individual interpretation of demands (Maddux, 2002). Through efficacy beliefs, demands of an otherwise threatening situation can be interpreted as manageable, thereby reducing negative thinking (Carr, 2004; Maddux, 2002). Self-efficacy is in fact a prime factor in influencing behaviour due to its being competence-based, prospective and action related (Luszczysnka, et al., 2005). Those with greater perceived self-efficacy are more likely to adopt healthy behaviours and are more inclined to stop unhealthy behaviours and maintain behavioural change (Maddux, 2002). Self-efficacy may also enhance functioning of the immune system, lead to better physical health, enhanced work engagement and productivity, sports performance, and positive mental health outcomes (Carr, 2004). Self-efficacy has shown high correlations with self-esteem, self-regulation and optimism, as well as being inversely correlated with depression, anxiety (Luszczysnka, et al., 2005) and lower mental health status (Moeini, et al., 2008).

Maddux (2002) encourages the approach that self-efficacy research and theory should be more concerned with the understanding of positive aspects of psychological functioning and promotion of human potential. Previous research on self-efficacy had been primarily concerned with psychopathology (Maddux, 2002). In line with the psychofortological paradigm (cf. Strumpfer, 2006), the current study focuses on aspects related to psychological well-being. Positive mental health is conceptualised according to the Mental Health Continuum model of Keyes (2002; 2007) and Keyes et al. (2008), where mental health is described as the positive experience of emotional well-being, psychological well-being and social well-being. According to this model, mental health is not at the opposite end of the same spectrum as mental illness, but rather it is a separate dimension of a positive state ranging from incomplete (languishing) to complete (flourishing) mental health (Keyes, 2005). Flourishing refers to being filled with positive emotions and functioning well psychologically and socially, while languishing is described as a sense of emptiness and stagnation (Keyes, 2002). When one is neither languishing nor flourishing, he/she is said to be moderately mentally healthy. The Mental Health Continuum model advocates the need to study positive

aspects of human functioning, focusing not only on the absence of illness, but rather on the presence of well-being factors that inspire resilience and growth (Keyes, 2002). Both eudaimonic and hedonic well-being dimensions are included in the mental health continuum model (Keyes, 2007; Keyes, et al., 2008).

The maintenance of mental health is, however, often threatened by stress (Cox, 1991; Lazarus & Folkman, 1984). For the purposes of the current study, stress will be viewed as a function of a host of intrapersonal variables and manifest experiences that are cognitively appraised as overwhelming (Lazarus, 1974). Stress is largely dependent on internal factors and individual differences rather than simply being caused by external events (Lazarus, 1974). It is thus a complex system of multiple variables with many antecedents of both long-term and short-term nature (Gruen, Folkman & Lazarus, 1988). Furthermore, stress response is not caused by a manifest experience, but is rather the cognitive appraisal of experience (Gruen et al., 1988). Individual stress responses and the way in which individuals appraise and cope with stress can be regarded as a function of a host of different variables within each individual (Lazarus & Folkman, 1984). The experience of stress is a factor in diminished well-being and chronic diseases and it manifests in a wide range of psychological symptoms (Cox, 1991).

Stress can manifest in symptoms of depression, somatic problems, anxiety and social adaptation problems (DeLongis, et al., 1988; Menninger, 1977). These symptoms are inherent in the conceptualisation and operationalisation of psychological distress in Goldberg and Hillier's (1979) General Health Questionnaire (GHQ). The GHQ has been successfully used as a measure of the experience of stress (Moeni et al., 2008; Steptoe, O'Donnell, Marmot & Wardle, 2007).

Although general self-efficacy is reported to be a universal construct by Bandura (1997) and Wu (2009), its study across various cultural contexts, particularly African, is still minimal. Culture and context play a role in characterising positive human experience, the experience of stress, and ability to respond to challenges in their lives (Ryff & Singer, 1998; Sokoya, Mathukrishna & Collings, 2005; Wissing & Temane, 2008). The current study has taken place among a Setswana-speaking African community sample in the North West Province of South Africa. Traditional African societies have been found to be more interdependent and collectivistic as compared to western societies that are traditionally more independent and individualistic (Mbiti, 1990; Wissing & Temane, 2008). According to Ryff and Singer (1998), and Wissing, Wissing and Temane (2004), collectivistic cultures are generally characterised by sharing and interdependence, where meaning in life is obtained

through identification with the community, and where, by implication, community-efficacy may be more important than self-efficacy. Self-efficacy is a typical western individualistic notion. However, Wu (2009) showed that self-efficacy as a construct does not necessarily equate with individualism and as such can be similarly measured in eastern collectivistic societies. It is thus a question whether it will also be the case in an African relatively collectivistic context. It is, however, taken into account that terms such as "collectivistic" and "individualism" may be generalisations (Christopher, 1999), and should in any case be viewed as relative. As such, emphasis is placed on the contextual nature of human experience and cultural values that generate unique outcomes in the study of well-being (Wissing & Temane, 2008).

No studies were found to have investigated self-efficacy as a moderator between stress and psychological well-being in an African community context. Self-efficacy has, however, been shown to moderate the relationship between work contexts and psychological well-being and engagement (Williams, Wissing, Rothmann & Temane, 2010). This observation and the findings about the well-being enhancement role of self-efficacy warrant investigation into whether self-efficacy would indeed interact with stress to influence and enhance positive mental health, particularly among African communities. The possibility of self-efficacy moderating the negative effect of the experience of stress on mental health can be a significant factor in the promotion of positive mental health. Thus, the aim of the current study is to investigate whether self-efficacy moderates the relationship between stress and positive mental health in an African context.

METHOD

Design

This quantitative study took the form of secondary data analysis on data collected by means of a cross-sectional survey on the interface of two projects, namely the Prospective Urban and Rural Epidemiological Study – South Africa (PURE-SA; Kruger, 2005) and Understanding and Promoting Psychosocial Health, Resilience and Strengths in an African context (FORT2; Wissing, 2005) research projects.

Participants and Setting

A sample of 1050 Setswana speaking participants from an African socio-cultural background living in rural (n=599) and urban (n=451) settlements in the North-West Province of South Africa took part in the study. The sample participated in a survey that was a cross-cutter between PURE-SA (Kruger, 2005) and FORT2 (Wissing, 2005) research projects. Of the 1050 participants 392 were male and 649 were female. The age of participants ranged

between 31 and 87 with the majority of them being between 30 and 50 (n=644), and the mean age being 48.5 years. Consistent with Mbiti (1990), Wissing and Temane (2008) describe traditional African societies as more interdependent and collectivistic as compared to western societies that are traditionally more independent and individualistic.

Measuring instruments

The following self-report measures were included in the battery.

Generalized Self-Efficacy Scale (GSE, Jerusalem & Schwarzer, 1992). The GSE is a 10 item self-report questionnaire that measures the individual's perceived self-efficacy with regards to stressful circumstances as well as daily hassles. Schwarzer and Jerusalem (1992) described self-efficacy as the individual's perceived competence to deal with daily hassles and stressful circumstances. General self-efficacy reflects a generalisation across various domains of functioning and a broad range of stressful and challenging demands (Luczczynska, Scholz & Schwarzer, 2005). It is reported to be a universal construct (Luczczynska, et al., 2005). Among various samples, Schwarzer and Jerusalem (1992) had reported Cronbach alpha coefficients between 0.82 and 0.93. In the current study, the GSE yielded a Cronbach alpha of 0.66.

New General Self-Efficacy Scale (NGSE, Chen, Gully & Eden, 2001). Self- efficacy, as measured by the NGSE, is seen as the individual's perceived ability to deal with daily hassles and stressful circumstances in an array of different contexts (Chen et al., 2001). The NGSE is an 8 item self-report scale that is intended to measure the individual's perceived view of his/her general self-efficacy in a range of different contexts. Previous studies have found Cronbach alpha coefficients ranging between 0.85 and 0.90 (Scherbaum, Cohen-Charash & Kern, 2006). A Cronbach alpha of 0.74 was found in the current study.

Mental Health Continuum- Short Form (MHC-SF, Keyes, 2002; 2005). The MHC-SF measures positive mental health as a reflection of emotional, social and psychological well-being across a continuum (Keyes et al., 2008). The MHC-SF is a 14 item self-report questionnaire that consists of three subscales namely: emotional, social and psychological well-being. In a study by Keyes et al. (2008), the scale was found to be reliable and valid in an African context and a Cronbach alpha of 0.74 was found for the total scale, while subscales ranged between 0.59 and 0.74. The specific scores are referred to in Table 1.

General Health Questionnaire (GHQ-28, Goldberg & Hillier, 1979). The GHQ measures the effect of stress as experienced through indices of psychological distress, namely, anxiety and insomnia, somatic symptoms, social dysfunction and depression (Goldberg & Hillier, 1979; Moeini, 2008). This is a 28 item self-report questionnaire that measures aspects related to

psychological distress. Factor analyses have yielded a four-factor structure indicative of the theoretically intended indices of psychological distress. The scale has been found to be reliable and valid in an African context (Wissing et al., 1999). Cronbach alpha coefficients ranging between 0.82 and 0.86 were reported by Goldberg and Hillier (1979). In the current study Cronbach alphas for the subscales were found to range between 0.55 and 0.74. The Cronbach alpha for the total scale was found to be 0.89. Individual scores are reported in Table 1.

Procedure

A convenience sample (n=1050) was recruited within the PURE-FORT2 research project (Wissing, 2005) to participate in a multi-disciplinary data collection process within which a paper and pencil battery of questionnaires was administered by trained bilingual (Setswana and English speaking) fieldworkers. As reported in the study by Keyes' et al. (2008), the scales had been translated into Setswana using the guidelines of Brislin (1970) and Van de Vijver and Leung (1997). The Setswana versions of the scales were used. For the purposes of the current study, permission was obtained for secondary data analysis to explore the moderating role of self-efficacy in the relationship between stress and positive mental health. Data were analysed by using the Statistics Package for Social Sciences, version 16.

Ethical Aspects

Ethical Approval for the research projects PURE-SA (Ethics approval number = 04M10) and FORT2 (Ethics approval number = 05K10) was obtained from the North-West University Ethics Committee. Informed consent was obtained from participants and all individuals participated on a voluntary basis. Ethical aspects of informed consent and confidentiality were upheld during recruitment of participants and data collection. Permission from project leaders and researchers was also obtained for secondary data analysis.

Data Analysis

Data exploration and description. Descriptive statistics were computed to present the nature of the sample and distribution of the measured constructs. Inter-scale correlations, using Pearson correlation coefficients, were reported to indicate the associations and relationships between the constructs. In moderation analysis, it is expected and theoretically hypothesised that a relationship or correlation exists between the independent variable and the criterion variable. Inter-scale correlations report the direction and strength of these relationships.

Moderation. A moderator is a variable and its presence affects the direction or strength of a relationship between an independent and a dependent variable (Baron & Kenny, 1986; Frazier, Tix & Baron, 2004; Holmbeck, 1997). In the current study the moderator effect of

self-efficacy between stress (independent variable) and positive mental health (dependent variable) was determined. Step-wise multiple regression analysis was used as a method of choice to investigate moderation (cf. Baron & Kenny, 1986; Frazier, Tix & Baron, 2004).

In accordance with Frazier, Tix and Baron (2004), the following steps were followed in computing the moderation analysis when using the multiple regression approach: 1) transform independent and moderator variables by coding categorical variables and/or centering or standardising continuous variables, 2) compute product terms, that represent the interaction between independent and moderator variables, by multiplying the two, and 3) structure the equation by entering variables and then entering the product terms into the regression equation. Effect of stress on mental health and of self-efficacy on mental health were determined by means of regression coefficients, and the significance of self-efficacy effect was also computed.

RESULTS

The data were analysed to primarily investigate whether general self-efficacy moderated the relationship between the experience of stress and positive mental health. In a three step hierarchical order, simple and multiple regression analyses were performed involving the dependent (Mental Health Continuum subscales), independent (General Health Questionnaire subscales) and moderator variables (Generalized Self Efficacy Scale and New General Self Efficacy Scale). Prior to regression analyses, descriptive statistics, reliability indices and inter-scale correlations were computed. Means and standard deviations, Cronbach alpha and Pearson correlation coefficients are displayed in Table 1.

<Insert Table 1 approximately here>

Mean scores, standard deviations, Cronbach alpha reliability indices and inter-scale Pearson correlation co-efficients are reported in Table 1. In accordance with the guideline for the reliability of a scale being indicated by a Cronbach alpha of between 0.70 and 0.90 (Nunnally, 1978), most of the scales and subscales are reliable for use in this sample. The subscales MHC-SWB and GHQ-SD did, however, yield reliability indices of 0.59 and 0.55. Although these are below the recommended range, the reliability of the total scales are not affected by this and remain good at 0.75 for the MHC-SF and 0.89 for the GHQ. Clark and Watson (1995) have, however, suggested that reliability indices as low as 0.60 can be considered acceptable. Furthermore, according to John and Benet-Martínez (2000) the 0.70 guideline as set out by Nunnally(1978) is not necessarily a benchmark for every scale. It is also known that a Cronbach alpha coefficient is dependent on the number of items or the scale length, such that the less items a scale has, the lower Cronbach alpha it is likely to yield

(John & Benet-Martínez, 2000; Streiner, 2003). A Cronbach alpha that is too high, is indicative of redundancy of item content while a Cronbach alpha that is too low indicates a lack of cohesion (John & Benet-Martínez, 2000).

Correlation values above 0.1 are considered to reflect a small effect size, while values above 0.3 reflect a medium effect size and values above 0.5 reflect a large effect (Field, 2005). The Generalized Self-Efficacy Scale (GSE, Jerusalem & Schwarzer, 1992) correlated highly with the New Generalized Self-Efficacy Scale (NGSE, Chen, Gulley & Eden, 2001) with large effect. Both GSE and NGSE correlated positively with all subscales of the Mental Health Continuum-Short Form (MHC-SF, Keyes, 2002; 2005). Both correlated with the Psychological Well-Being (PWB) Scale of the MHC and yielded a medium effect size. Both GSE and NGSE scales, as well as emotional well-being (EWB) and psychological well-being (PWB) subscales of the MHC correlated negatively with all subscales of the General Health Questionnaire (GHQ). The nature of these correlations is a further indication of criterion related validity for the GHQ, GSE, NGSE and MHC.

The subsequent tables report results of hierarchical multiple regression analyses to test for the moderating effects of GSE and NGSE scores on the relationship between GHQ sub-scales (GHQ-SS, GHQ-AS, GHQ-SD and GHQ-DS) and positive mental well-being scores (MHC-EWB, MHC-PWB and MHC-SWB). In each table a step-wise regression process is reported for each dependent variable, namely: emotional, psychological and social well-being as measured by the MHC-SF. The first step shows in which way the independent variable, when entered into the equation alone, predicts the dependent variable. The second step constitutes a model with the independent and moderator variables having been simultaneously entered to predict the dependent variable. Step 3 yields the prediction of the dependent variable by the interaction effect of the independent and moderator variables as a product term. By following these steps it was possible to investigate general self-efficacy. The moderator effect could be reported by considering the values of the unadjusted regression coefficient (B), the coefficient of determination (R^2), change in the coefficient of determination (R^2 change), change in the F ratio (F change) and significance of the change in the F ratio (Sig. F change).

The first step as shown in Table 2 indicates how GHQ subscales, when entered alone, yield significant prediction of emotional well-being. As expected, all of their regression coefficients were negative. They range between -.41 and -.31. Somatic symptoms significantly predicted emotional well-being, $F (1, 1034) = 57.82$, $p=.000$, and explained 5% of the variance in EWB ($R^2=.05$). For both GSE and NGSE, product terms were computed in

which the two general self-efficacy scales interacted with indices of the manifestation of symptoms of stress (GHQ-SS, GHQ-AS, GHQ-DS, GHQ-SD). The results of the regression analyses between these product terms and EWB are shown in step 3. Significant change in the coefficients of determination (R^2) are shown in the following interactions: GSEXGHQ-SS, F(1,1032)=10.96, p=.001, and GSEXGHQ-AS, F(1,1032)=8.77, p=.003.The rest of the product terms for both GSE and NGSE yielded no significant changes in R^2 as indicated by a sig. F change value more than 0.05.

<Insert Table 2 approximately here>

The first step in table 3 shows in which way the symptomatic manifestation of the experience of stress influenced the level of psychological well-being in this sample. These indices also show significant prediction of psychological well-being. All regression coefficients are negative and range between -.63 and -.42. Depressive symptoms significantly predicted psychological well-being, F (1, 1034) = 60.481, p=.000, and explained 6% of the variance in PWB (R^2 = 0.06). Product terms for both GSE and NGSE were computed in which general self-efficacy indices interacted with the experience of stress. The results of the regression analyses between these product terms and PWB are shown in step 3. The only independent and moderator variable interaction that yielded significant change in the coefficient of determination was: NGSEXGHQ-SD, F (1, 1033) = 81.091, p= .000.

<Insert Table 3 approximately here>

Table 4 shows in which way the symptomatic manifestation of the experience of stress influences the level of social well-being in this sample. Regression coefficients ranged between -.15 and .03. The only index that shows significant prediction of social well-being is GHQ-SS, indicating that somatic symptoms significantly predict social well-being. Somatic Symptoms significantly predicted social well-being, F (1, 1034) = 4.706, p=.030, and explained 1% of the variance in SWB (R^2 = 0.01). Product terms for both GSE and NGSE were computed in which general self-efficacy. The results of the regression analyses between these product terms for both GSE and NGSE were computed in which general self-efficacy indices interacted with the experience of stress. The results of these analyses are shown in Step 3. Independent and moderator variable interactions yielding significant levels of change in the coefficient of determination were: GSEXGHQ-SS, F (1, 1032) = 16.207, p= .000; GSEXGHQ-AS, F (3, 1032) = 15.628, p = .000; NGSEXGHQ-SS, F (3, 1031) = 8.033; NGSEXGHQ-AS, F (3, 1031) = 10.409, p=.000; NGSEXGHQ-SD, F (3, 1033) = 4.187; NGSEXGHQ-DS, F = (3, 1031) = 5.009; p= .002. The rest of the product terms for both GSE and NGSE yielded no significant changes in R^2 as indicated by an F value greater than .05.

<Insert Table 4 approximately here>

DISCUSSION

The aim of the current study was to investigate whether general self-efficacy would moderate the relationship between the experience of stress and positive mental health in an African context. The findings provide support that general self-efficacy significantly moderates the relationship between certain aspects of mental health and the experience of manifest symptoms of stress. The ability of general self-efficacy to act as moderator may be engendered in its conceptualisation as a cognitive resource (Jerusalem & Schwarzer, 1992; Bandura, 1997), where it is theorised that cognitive appraisals may serve to moderate the experience of stress (Gruen et al., 1988).

As expected, there was an inverse correlation between the manifestation of symptoms of stress as measured by the GHQ (Goldberg & Hillier, 1979) and positive mental health as measured by the MHC-SF (Keyes, 2002; 2005). As found in other studies (e.g. Lazarus & Folkman, 1984; Moeini et al., 2008) symptoms of psychological distress have a devastating effect on positive mental health. The relationships that were significantly moderated by general self-efficacy were: somatic symptoms and anxiety symptoms with emotional well-being; the effect of social dysfunction with psychological well-being; and the four psychological distress indices (Anxiety symptoms, Depressive symptoms, Somatic symptoms and Social dysfunction) with social well-being. It therefore appears that general self-efficacy acts as a moderator in the relationship between the experience of stress and positive mental health, as represented by emotional, psychological and social well-being along a mental health continuum.

Emotional well-being. General self-efficacy significantly moderated the negative influence of the experience of stress as manifest in somatic symptoms and anxiety on emotional well-being of participants. This finding supports the assertion that cognitively appraising a situation as non-threatening or believing in one's ability to overcome certain difficulties, serves to lessen the effect that somatic symptoms and anxiety has on one's well-being (Bandura, 1997). Research into the field of depression among African populations has revealed that depressed individuals often complained of somatic symptoms and disturbances in cognitive processes (Louw, Calitz, Esterhuyse & Masoto, 1998; Uwakwe, 2005). Low moods and general feelings of sadness have been linked very closely to manifest symptoms of anxiety (Thomas, Cairney, Gunthorpe, Paradies, Sayers, 2010). Evidence also suggests that emotional well-being is negatively influenced by anxiety, and that an anxiety provoking situation is perceived as less threatening when the individual has the psychosocial means to

cope with the situation (Yeung, 2009). Anxiety and somatic symptoms have also been found to have a tightly interwoven relationship that may significantly affect a person's ability to manage chronic disease (Rietveld, van Beest & Prins, 2005). The finding in the current study therefore implies that if higher levels of general self-efficacy were to be present, the effect of these somatic and anxiety symptoms on emotional well-being might be reduced.

Psychological well-being. The negative influence of social dysfunction on psychological well-being was moderated by general self-efficacy. Deficits in social interaction negatively affect mental health (Segrin & Taylor, 2007). Deterioration in social functioning is often a precursor to a decline in psychological well-being (Ploubidis et al., 2007). Within an African socio-cultural context, the value of healthy social functioning is an integral part of a holistic life orientation (Ryff & Singer, 1998). Sokoya et al. (2005) argue that among Africans, mental health and well-being are socially and culturally constructed. The fact that social dysfunction thereby correlates negatively with psychological well-being is not surprising. This may be of special significance in a collectivistic culture, where social function and engagement are of high value (Mbiti, 1990; Wissing, Wissing & Temane, 2004; Ryff & Singer, 1998). General self-efficacy buffers this effect that social dysfunction has on psychological well-being by creating a sense that the person is able to generally control aspects that may influence his/her own social participation (Bandura, 1997).

Social well-being. General self-efficacy was found to moderate the relationships between all indices of psychological distress and social well-being in this sample. The relationship between the experience of stress and social well-being has been reported and often found to be negative and limiting (Ploubidis et al., 2007). It is therefore encouraging that the negative influence can be moderated by general self-efficacy, particularly in an African sample. Social well-being is arguably the most important aspect of positive mental health (Keyes, 1998). The moderating role of general self-efficacy was evident in its interaction with all the indices of the experience of stress, namely somatic symptoms, depressive symptoms, anxiety and insomnia, and social dysfunction.

Psychosocial distress has been attributed to manifest mainly as bodily and somatic symptoms in African contexts where no associated mental disorder was found to be present, (Uwakwe, 2005). Findings show that higher levels of general self-efficacy cushion the negative effect that these somatic symptoms have on social well-being. The experience of anxiety symptoms, that are often closely related to somatic symptoms (Rietveld et al., 2005), also negatively influences one's ability to participate meaningfully on a social level (Nevid, Rathus & Greene, 2006). General self-efficacy was shown to moderate this effect and

therefore reduce the overwhelming impact that the experience of anxiety symptoms has on positive mental health.

The effect of social dysfunction, as a manifestation of stress that would affect the social well-being of an individual in this context is also greatly reduced by beliefs that he/she is able to overcome the situation. This finding may be supported by efficacious models of social change (Bandura, 1997), in which changes on social levels (where the individual may experience the manifestation of stress) are attributed to be manageable and/or changeable and concurrently do not affect the social participation and well-being of the person under stress to the same degree as in the person with lower self-efficacy.

Depressive symptoms are strongly associated with stressors that manifest on the greater social level, such as unemployment and economic hardship (Nevid et al., 2006), and which generally have a negative impact on individual social well-being. Individuals who then have higher levels of general self-efficacy, and who believe that they are able to overcome general difficulties, show a greater propensity for social well-being, despite factors that may ordinarily manifest as depressive symptoms.

Limitations. Some limitations of the study are acknowledged. Firstly, the study employed cross-sectional survey design which limits interpretation of the findings across time. Data for this study were gathered from only two specific communities, therefore rendering the generalisation of the findings to include other socio-cultural groups is impossible. The conceptualisation and operationalisation of well-being in the current study were in accordance with Keyes' (2002) Mental Health Continuum model. Other models of well-being were not included in studying the moderating role of self-efficacy between stress and well-being. At a methodological level, Baron and Kenny (1986) state the specific difference between moderation and mediation, and theoretically a case could be argued for anyone of these to apply in the exploration of the role of general self-efficacy in mental health. Through the current study, moderation was explored but not mediation. From the findings in the current study it cannot be concluded that self-efficacy *causes* the change in the relationship between stress and psychological well-being, as mediation analysis could have allowed.

This study made use of quantitative self-report measures, and thus other methods of investigation such as a qualitative account, physiological measures and behavioural observation were not part of the study. It is also possible that in addition to general self-efficacy, a wide variety of other variables, both internal and external, may interact with well-being and stress in a way that can influence their relationship. Stress in the current study was

examined in the form of its psychological outcomes as reported by the participants and not as measured using biological indices.

Conclusion and Recommendations. Findings demonstrate the inherent benefit of general self-efficacy in moderating the effect of the experience of stress on positive mental health in an African group. This finding supports the positive value of general self-efficacy even in African communities, and thereby contributes to new knowledge in the field. As flourishing is associated with enhanced general functioning (Keyes, 2006), research efforts towards the development and maintenance of healthy lifestyles and well-being in the South African context are crucial (Temane & Wissing, 2006). The current study contributes towards identifying and establishing antecedents and influences of psychological well-being. The value of a positive state of mental health is immense. Those who exhibit a positive state of mental health function better, are more resilient toward illness, have lower levels of helplessness and higher levels of positive close relations and intimacy (Keyes, 2002; Keyes, 2007).This study was based on the recommendation that the approach to dealing with stress should shift from merely treating illness to examining the factors that promote mental health in individuals (Seligman, 2002), such as self-efficacy (Siu-kau & Sun, 2000).

Following the findings of the current study and their implications, several recommendations are made. Longitudinal studies involving self-efficacy, stress and positive mental health will aid in the understanding of causality and in generating a more complete picture of the effects of the experience of chronic stress on positive mental health, as well as possible long-term benefits of increased self-efficacy in this relationship. Furthermore data analysis using structural equation modelling may in future be beneficial in exploring further the dynamics involved. Statistical analysis testing whether self-efficacy has a possible mediating effect will also add value to the extended exploration of this interaction.

Initiatives towards the development of self-efficacious beliefs such as community-based interventions, parenting training and individual therapy may benefit people by moderating the negative effects that manifestations of stress may have on positive mental health. Fostering this sense of control and general belief in ability to influence own coping behaviour may enhance mental health. Apart from facilitation of self-efficacy on an individual level, social-efficacy can be fostered on a community level through various social participation and engagement activities, which may thus serve enhance well-being. The currently found interactions imply that stress and positive mental health, although related, may be influenced by internal factors and implicate arguments for factors relating to resilience and well-being. Future research may be directed at exploring ways in which

general self-efficacy and other cognitive resources relate to resilience and the maintenance of well-being. Despite the need for future research into cognitive resources and mental health, it is evident that where individuals generally have belief in their own ability, despite evident stress, they exhibit higher levels of positive mental health.

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6.3. **Tables**

Table 1: Means and standards deviations and inter-scale correlations:

Variables	Mean	SD	Cronbach alpha	1	2	3	4	5	6	7	8	9
GSE	27.85	4.47	.66	1	.50**	.21**	.41**	.18**	-.16**	-.10**	.14**	-.12**
NGSE	28.11	5.29	.74		1	.17**	.41**	.07**	-.20**	-.16**	-.21**	-.19**
MHC-EWB	7.68	3.57	.74			1	.31**	.39**	-.23**	-.19**	-.15**	-.19**
MHC-PWB	19.49	4.98	.67				1	.16**	-.19**	-.16**	-.21**	-.24**
MHC-SWB	11.36	4.50	.59					1	-.07*	-.03	.00	.01
GHQ-SS	2.21	2.01	.74						1	.75**	.55**	.56**
GHQ-AS	2.42	2.07	.74							1	.54**	.60**
GHQ-SD	2.21	1.69	.55								1	.50**
GHQ-DS	1.70	1.87	.74									1

Note: GSE: General Self-Efficacy scale; NGSE: New General Self-Efficacy Scale; MHC-EWB: Mental Health Continuum Emotional Well-being subscale; MHC-PWB: Mental Health Continuum Psychological Well-being subscale; MHC-SWB: Mental Health Continuum Social Well-being subscale; GHQ-SS: General Health Questionnaire Somatic Symptoms subscale; GHQ-AS: General Health Questionnaire Anxiety and Insomnia Symptoms subscale; General Health Questionnaire Social Dysfunction; GHQ-DS: General Health Questionnaire Depressive Symptoms subscale

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

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

Table 2: Testing moderator effects using Hierarchical multiple regression for GHQ (independent variable) and general self-efficacy (GSE and NGSE as moderator variables), predicting emotional well-being

	MHC-EWB								
	B	SE B	95% CI	Beta	R^2	ΔR^2	F	F change	Sig. F change
Step 1 GHQ-SS	-.41	.05	-.52 -.30	-.20	.05	.	57.824	.	.
Step 2 GHQ-SS	-.36	.05	-.47 -.25	-.20	.08	.	47.162	.	.
Step 2 GSE	.14	.02	.10 .19	.18	.08	.	47.162	.	.
GSEXGHQ-SS	-.04	.01	-.06 -.02	-.10	.09	.01	35.399	10.96	.001
Step 1 GHQ-AS	-.31	.05	-.43 -.23	-.19	.04	.	38.556	.	.
Step 2 GHQ-AS	-.30	.05	-.40 -.19	-.17	.07	.	40.647	.	.
Step 2 GSE	.15	.02	.11 .20	.19	.07	.	40.647	.	.
GSEXGHQ-AS	-.03	.01	-.05 -.01	-.09	.02	.01	30.226	8.77	.003
Step 1 GHQ-SD	-.32	.07	-.45 -.19	-.15	.02	.	24.464	.	.
Step 2 GHQ-SD	-.26	.06	-.39 -.14	-.13	.06	.	32.479	.	.
Step 2 GSE	.15	.02	.11 .20	.19	.06	.	32.479	.	.
GSEXGHQ-SD	-.02	.02	-.05 .01	-.03	.00	.00	22.022	1.10	.294
Step 1 GHQ-DS	-.36	.06	-.47 -.24	-.19	.03	.	37.392	.	.
Step 2 GHQ-DS	-.31	.06	-.43 -.20	-.16	.07	.	38.353	.	.
Step 2 GSE	.15	.02	.10 .02	.19	.07	.	38.353	.	.
GSEXGHQ-DS	-.01	.01	-.04 .02	-.02	.00	.00	25.723	.50	.480
Step 1 GHQ-SS	-.41	.05	-.52 -.30	-.20	.05	.	58.681	.	.
Step 2 GHQ-SS	-.37	.06	-.47 -.26	-.21	.07	.	38.904	.	.
Step 2 NGSE	.09	.02	.05 .13	.13	.07	.	38.904	.	.
NGSEXGHQ-SS	.02	.01	-.01 .04	.05	.00	.00	26.706	2.22	.137
Step 1 GHQ-AS	-.31	.05	-.43 -.23	-.19	.04	.	39.271	.	.
Step 2 GHQ-AS	-.29	.05	-.40 -.19	-.17	.06	.	31.318	.	.
Step 2 NGSE	.10	.02	.06 .14	.15	.06	.	31.318	.	.
NGSEXGHQ-AS	.02	.01	.00 .04	.05	.00	.00	21.904	2.96	.086
Step 1 GHQ-SD	-.32	.07	-.45 -.19	-.15	.02	.	24.294	.	.
Step 2 GHQ-SD	-.26	.07	-.39 -.13	-.12	.04	.	23.227	.	.

Step 2 NGSE	.10	.02	.06	.14	.14	.04	.	23.227	.	.
NGSEXGHQ-SD	-.01	.01	-.03	.02	-.02	.00	.00	15.576	.31	.581
Step 1 GHQ-DS	-.36	.06	-.47	-.24	-.19	.03	.	37.624	.	.
Step 2 GHQ-DS	-.31	.06	-.42	-.19	-.16	.05	.	28.947	.	.
Step 2 NGSE	.09	.02	.05	.13	.14	.05	.	28.947	.	.
NGSEXGHQ-DS	.00	.01	-.02	.03	.01	.00	.00	19.315	.10	.748

Note. CI = Confidence interval
GSE: General Self-Efficacy scale; NGSE: New General Self-Efficacy Scale; MHC-EWB: Mental Health Continuum Emotional Well-being subscale; MHC-PWB: Mental Health Continuum Psychological Well-being subscale; MHC-SWB: Mental Health Continuum Social Well-being subscale; GHQ-SS: General Health Questionnaire Somatic Symptoms subscale; GHQ-AS: General Health Questionnaire Anxiety and Insomnia Symptoms subscale; General Health Questionnaire Social Dysfunction; GHQ-DS: General Health Questionnaire Depressive Symptoms subscale

Table 3: Testing moderator effects using Hierarchical multiple regression for GHQ (independent variable) and general self-efficacy (GSE and NGSE as moderator variables), predicting psychological well-being

	MHC-PWB								
	B	SE B	95% CI	Beta	R^2	ΔR^2	F	F change	Sig. F change
Step 1 GHQ-SS	-.47	.08	-.62 -.32	-.19	.04	.	38.324	.	.
Step 2 GHQ-SS	-.31	.07	-.45 -.18	-.13	.19	.	117.426	.	.
Step 2 GSE	.44	.03	.37 .50	.39	.19	.	117.426	.	.
GSEXGHQ-SS	-.01	.02	-.04 .02	-.02	.19	.00	78.321	.40	.529
Step 1 GHQ-AS	-.42	.07	-.57 -.28	-.18	.03	.	32.756	.	.
Step 2 GHQ-AS	-.33	.07	-.47 -.20	-.14	.19	.	119.746	.	.
Step 2 GSE	.38	.03	.38 .51	.40	.19	.	119.746	.	.
GSEXGHQ-AS	.01	.01	-.02 .04	.02	.19	.00	79.996	.52	.472
Step 1 GHQ-SD	-.61	.09	-.79 -.44	-.21	.04	.	47.260	.	.
Step 2 GHQ-SD	-.45	.08	-.61 -.29	-.15	.19	.	123.487	.	.
Step 2 GSE	.44	.03	.37 .59	.40	.19	.	123.487	.	.
GSEXGHQ-SD	.00	.02	-.04 .04	.00	.19	.00	82.252	.02	.899
Step 1 GHQ-DS	-.63	.08	-.79 -.47	-.24	.06	.	60.481	.	.
Step 2 GHQ-DS	-.50	.08	-.65 -.35	-.19	.20	.	131.328	.	.
Step 2 GSE	.43	.03	.37 .49	.39	.20	.	131.328	.	.
GSEXGHQ-DS	-.14	.14	-.03 .03	-.03	.20	.00	87.468	.00	.978
Step 1 GHQ-SS	-.49	.08	-.62 -.32	-.19	.04	.	37.962	.	.
Step 2 GHQ-SS	-.28	.07	-.42 -.14	-.11	.18	.	111.538	.	.
Step 2 NGSE	.35	.03	.31 .41	.39	.18	.	111.538	.	.
NGSEXGHQ-SS	-.02	.01	-.05 .01	-.04	.18	.00	75.210	2.28	.132
Step 1 GHQ-AS	-.42	.74	-.57 -.28	-.18	.03	.	32.401	.	.
Step 2 GHQ-AS	-.27	.07	-.41 -.14	-.11	.18	.	112.057	.	.
Step 2 NGSE	.37	.03	.37 .03	.39	.18	.	112.057	.	.
NGSEXGHQ-AS	.00	.01	-.03 .02	-.01	.18	.00	74.660	.07	.795
Step 1 GHQ-SD	-.61	.09	-.79 -.44	-.21	.04	.	47.456	.	.

Step 2 GHQ	-.39	.08	-.55	-.22	-.13	.18	.	114.829	.	.
Step 2 NGSE	.36	.03	.30	.40	.38	.18	.	114.829	.	.
NGSEXGHQ-SD	-.05	.02	-.08	-.02	-.09	.19	.01	81.091	11.32	.001
Step 1 GHQ-DS	-.63	.08	-.79	-.47	-.24	.06	.	60.302	.	.
Step 2 GHQ	-.43	.08	-.58	-.28	-.16	.19	.	120.991	.	.
Step 2 NGSE	.35	.03	.30	.41	.37	.19	.	120.991	.	.
NGSEXGHQ-DS	-.01	.01	-.04	.02	-.03	.19	.00	80.887	.74	.390

Note. CI = Confidence interval
GSE: General Self-Efficacy scale; NGSE: New General Self-Efficacy Scale; MHC-EWB: Mental Health Continuum Emotional Well-being subscale; MHC-PWB: Mental Health Continuum Psychological Well-being subscale; MHC-SWB: Mental Health Continuum Social Well-being subscale; GHQ-SS: General Health Questionnaire Somatic Symptoms subscale; GHQ-AS: General Health Questionnaire Anxiety and Insomnia Symptoms subscale; General Health

Table 4: Testing moderator effects using Hierarchical multiple regression for GHQ (independent variable) and general self-efficacy (GSE and NGSE as moderator variables), predicting social well-being

	MHC-SWB								
	B	SE B	95% CI	Beta	R^2	ΔR^2	F	F change	Sig. F change
Step 1 GHQ-SS	-.15	.07	-.29 -.01	-.08	.01	.	4.706	.	.
Step 2 GHQ-SS	-.09	.07	-.23 .05	-.04	.03	.	17.724	.	.
Step 2 GSE	.17	.03	.11 .23	.17	.03	.	17.724	.	.
GSEXGHQ-SS	-.05	.14	-.08 -.02	-.11	.05	.01	16.207	12.77	.000
Step 1 GHQ-AS	-.06	.07	-.19 .08	-.03	.00	.	0.692	.	.
Step 2 GHQ-AS	-.02	.07	-.15 .11	-.01	.03	.	16.905	.	.
Step 2 GSE	.18	.03	.12 .24	.18	.03	.	16.905	.	.
GSEXGHQ-AS	-.05	.01	-.08 -.02	-.11	.04	.01	15.628	12.69	.000
Step 1 GHQ-SD	.00	.08	-.16 .16	.00	.00	.	0.000	.	.
Step 2 GHQ-SD	.07	.08	-.09 .23	.03	.03	.	17.250	.	.
Step 2 GSE	.18	.03	.12 .24	.18	.03	.	17.250	.	.
GSEXGHQ-SD	-.01	.02	-.05 .03	-.02	.03	.00	11.573	.25	.620
Step 1 GHQ-DS	.03	.08	-.12 .18	.01	.00	.	0.176	.	.
Step 2 GHQ-DS	.09	.07	-.06 .23	.04	.03	.	17.004	.	.
Step 2 GSE	.18	.03	.12 .24	.18	.03	.	17.004	.	.
GSEXGHQ-DS	-.01	.02	-.04 .03	-.13	.03	.00	11.381	.16	.687
Step 1 GHQ-SS	-.15	.07	-.29 -.01	-.07	.01	.	4.856	.	.
Step 2 GHQ-SS	-.13	.07	-.27 .01	-.06	.01	.	4.318	.	.
Step 2 NGSE	.05	.03	.00 .11	.06	.01	.	4.318	.	.
NGSEXGHQ-SS	-.05	.01	-.08 -.03	-.12	.02	.02	8.033	15.34	.000
Step 1 GHQ-AS	-.06	.07	-.19 .08	-.03	.00	.	0.753	.	.
Step 2 GHQ-AS	-.04	.07	-.17 .10	-.07	.00	.	2.866	.	.
Step 2 NGSE	.06	.03	.01 .11	.07	.00	.	2.866	.	.
NGSEXGHQ-AS	-.07	.01	-.09 -.04	-.16	.03	.02	10.409	25.36	.000
Step 1 GHQ-SD	.00	.08	-.16 .16	.00	.00	.	0.001	.	.

Step 2 GHQ-SD	.04	.08	-.12	.21	.02	.01	.	2.833	.	.
Step 2 NGSE	.06	.03	.01	.12	.08	.01	.	2.833	.	.
NGSEXGHQ-SD	-.04	.02	-.07	-.01	-.08	.01	.01	4.187	6.86	.009
Step 1 GHQ-DS	.03	.08	-.12	.18	.01	.00	.	0.167	.	.
Step 2 GHQ-DS	.07	.08	-.08	.22	.03	.01	.	2.857	.	.
Step 2 NGSE	.06	.03	.01	.12	.08	.01	.	2.857	.	.
NGSEXGHQ-DS	-.04	.01	-.07	-.02	-.10	.01	.01	5.009	9.27	.002

Note. CI = Confidence interval
GSE: General Self-Efficacy scale; NGSE: New General Self-Efficacy Scale; MHC-EWB: Mental Health Continuum Emotional Well-being subscale; MHC-PWB: Mental Health Continuum Psychological Well-being subscale; MHC-SWB: Mental Health Continuum Social Well-being subscale; GHQ-SS: General Health Questionnaire Somatic Symptoms subscale; GHQ-AS: General Health Questionnaire Anxiety and Insomnia Symptoms subscale; General Health.