EVALUATING THE EFFECT OF A PSYCHOSOCIAL WELL-BEING PROGRAMME FOR STUDENTS AT A TANZANIAN UNIVERSITY

J. RUGIRA[1], A. W. NIENABER[1], M. P. WISSING[1,2]

[1]School of Psychosocial Behavioural Sciences,
Faculty of Health Sciences
North-West University, Republic of South Africa
[2]Africa Unit for Transdisciplinary Health Research (AUTHeR)
Faculty of Health Sciences,
North West University,
Republic of South Africa

Please address correspondence to

Dr J Rugira
Optentia Research Focus Area
P.O. Box 1174
North-West University
Vanderbijlpark, 1900
South Africa
E-mail: janrugira@yahoo.com

ABSTRACT

This study investigated the efficacy of a new psychosocial well-being promoting programme for university students in Tanzania. Participants were adult university students (N = 82; 42 married and 40 single; 46 females and 36 males) of 19 to 40 years of age with a mean age of 29.5. Four standardised scales (the Mental Health Continuum-Short Form MHC-SF; the Coping Self-Efficacy Scale – CSE; the Trait Hope Scale (THS); and The Patient Health Questionnaire: Depression Symptoms -PHQ-9); were administered before and after the programme to determine the effect thereof. Quantitative findings indicated that the programme had a significant positive effect on problem-focused coping, social well-being and hope. Married participants were more effective in suppression of unpleasant emotions in the experimental group than in the control group. Gender-based differences were noted on emotional well-being scores, where an increase in the experimental group is noted for females on areas such as problem-focused coping, suppression of unpleasant emotions, total self-efficacy, and social well-being. The programme was specifically effective on suppressing unpleasant emotions to married participants in the experimental group.

Keywords: *Tanzania, well-being, university students, positive psychology, promotion, programme evaluation.*

INTRODUCTION

In line with the recent focus on strengths and positive human functioning in the rapidly developing domain of positive psychology (cf. Caffo, Belaise, & Foresi, 2008; Kelley, 2003; Hart & Sasso, 2011; Seligman & Csikszentmihalyi, 2000; Wong, 2011) the present study will focus on enhancement of well-being in a group of Tanzanian students. Several intervention programmes had already been developed and evaluated in different contexts (e.g., Lyubomirsky, & Layous, 2013; Proctor, Tsukayama, Wood, Maltby, Eades, & Linley, 2011; Proyer, Ruch, & Buschor, 2013; Seligman, Steen, Park, & Peterson, 2005). However, most of these interventions were conducted in a Western context with Caucasian participants and their applicability in an African context cannot be assumed. Research has also shown that it is of particular importance to focus on interventions for the promotion or protection of well-being in the youth, as well-being seems to decline in adulthood (Keyes, 2006; 2007). An important and promising context to enhance well-being in youth is the educational context (Parks, 2011; Makolo, 2013; Seligman, Ernst, Gillham, Reivich, & Linkins, 2009; Snowden, Dhingra, Keyes, & Anderson, 2010; Van Schalkwyk, 2009). Thus far most studies had been conducted in a school context rather than in a tertiary educational context and thus manifesting lacunae in this regard. Therefore the present study will explore the effect of a programme to enhance well-being in a group of university students in an African context.

This study acknowledges that there are some well-being interventions that have been proposed and validated in a school setting such as the Paths (Promoting Alternative Thinking Strategies) curriculum (Kam, Greenberg, & Walls, 2003) for the promotion of social competence and the prevention of aggressive behaviour to a group of inner-city public schools that had very low academic performance and high rates of poverty; the Gatehouse project (Patton, Bond, Butler, & Glover, 2003), for increasing the attachment and the sense of belonging to a school in students; the Bounce Back Programme (Mc Grath & Noble, 2003) and the Bright Ideas (Brandon & Cunningham, 1999), for promotion of resilience and coping skills for children in the age group 10 to 13 years within the school setting. Bright Ideas was directly modelled on the cognitive attribution component of the Penn Prevention Programme (PPP) (Jaycox, Reivich, Gillham & Seligman,, 1994); the Penn Resiliency Programme (Gilham, Reivich, Freres, Chaplin, Shatte, Samuels 2007; Gilham, Reivich, Jaycoz, & Seligman, 1995) for promotion optimism and preventing depression in middle school children in the United States; the Stress Inoculation Training (Meichenbaum & Deffenbacher, 1998) or the Coping Cat (Kendal, 1994), for preventing anxiety in children and adolescents. Ruini, Belaise, Brombin, Caffo and Fava (2006) report a school intervention that consisted of four sessions to be performed directly in the class, and involved psycho-education, cognitive-behavioural techniques, and Ryff's model of psychological well-being. The results of this study showed that this new school programme was associated with decreased anxiety and increased well-being in the children. These programmes focused on children and adolescents. There seems to be a gap in the research on programmes designed for the young adult and student populations in an African context, as will be the target in the present study. The university environment is different from school, and all students face many challenges of adaptation, academic work, making friends, and coping on their own. Some students are at a higher risk in adaptation, for example students who are from dysfunctional families, who experience financial difficulties or even struggle with mental health problems (Kuldas, Hashim, & Ismail, 2014). Enhancement of student's well-being may foster health and flourishing, and even contribute to positive communities (Marujo & Neto, 2014). Research has shown that well-being may be influenced in some regards by various socio-demographic

factors such as gender, age, marital status and socio-economic level (e.g., Kruger, Wissing, Towers & Doak, 2012; Oishi & Diener, 2014; Roothman, Kirsten, & Wissing, 2003; Shapiro & Keyes, 2008; Steger, Oishi, & Kashdan, 2009). It is not known whether such factors also play a role in the susceptibility for growth during interventions. Therefore this study will also explore whether there are differences in outcomes for gender and marital status.

The present study will evaluate the efficacy of a psychosocial well-being programme for university students, which has the purpose of promoting psychological well-being. This programme builds on Ryff and Keyes' (1995) eudaimonic perspective. Keyes, Ryff and Shmotkin (2002), indicated that psychological well-being (PWB) is greatly informed by the formulations of human development and existential challenges of life with interest in growth and development. The six dimensions of Ryff's theory (Ryff, 1989) are (i) self-acceptance, people attempt to feel good about themselves even while they are aware of their own limitations; (ii) positive relations with others, seeking to develop and maintain warm and trusting interpersonal relationship; (iii) environmental mastery, shape their environment so as to meet personal needs and desires; (iv) autonomy, sustaining individuality with a larger context, people also seek a sense of self-determination and personal growth; (v) purpose in life, a vital endeavour to find meaning in one's efforts and challenges; and (vi) personal growth, making the most of one's talents and capabilities is the essence of this. In addition to these dimensions, Keyes (2009) presents social well-being facets in his Mental Health Continuum, namely (i) social coherence: focusing on life based on whether the social life is meaningful and understandable; (ii) social actualisation: viewing the society as possessing potential for one to grow; (iii) social integration: making one feel the sense of belonging to and be accepted by his/her community; (iv) social acceptance: the feeling of accepting other people; and (v) social contribution: seeing oneself as having something worthwhile to contribute to the society. Under this umbrella, concepts such as fully functioning person, meaningfulness, self-actualisation and vitality can be understood. This orientation appears to be particularly relevant in developmental settings, as it underlies the realisation of human potential and individual strengths (Ryan & Deci, 2001; Ryff 1989).

In addition to Keyes and Ryff's (1995) eudaimonic perspective, the psychosocial well-being programme implemented for purposes of this study incorporated the concept of coping self-efficacy (Chesney, Neilands, Chambers, Taylor & Folkman, 2006; Snyder's, 1991) view and importance of hope. The role of coping in maintaining psychological well-being cannot be over emphasised. Kim, Greenberg, Seltzer and Krauss (2003) assert that effective coping strategies are used by individuals in avoiding psychological distress. Snyder, Fieldman, Shorey and Rand (2002) characterise hope not as a passive emotional phenomenon that occurs only in the dark moments, but as a process through which individuals actively pursue their goals. Lopez, Rose, Robinson, Marques and Pais-Ribeiro (2009) describe hope as a human strength manifested in capacities to: (i) clearly conceptualise goals (goals thinking); (ii) develop the specific strategies to reach those goals (pathway thinking); and (iii) initiate and sustain the motivation for using those strategies (agency thinking). Considering many socio-economic and other challenges that university students experience, the prevalence of depression in this population group cannot be overlooked. Therefore the Patient Health Questionnaire (PHQ) (Kroenke, Spitzer & William, 2001), is also used in the present empirical study to measure the extent of symptoms of major depression, as conceptualised in the DSM-IV criteria. The PHQ was selected due to many socio-economic challenges that university students face. The specific university students involved in the present study sometimes live in poverty and have to rely on scarce

bursaries to be able to study which may increase stress and affect their well-being. The research question is what the effect would be of the present programme on the well-being of university students.

The aim of the present study is to determine the effect of a programme to facilitate well-being in a group of Tanzanian students and to determine whether gender and marital status played a role.

METHOD

Design

This study consists of a two-group pre-post testing design. Rumrill and Dimitrov (2003) argue that pretest/post-test designs are the best for studies comparing groups and/or measuring changes resulting from experimental treatments. They further state that pretest/post-test measurement of changes provide a vehicle for assessing the impact of services, as well as the effects of specific counselling and allied health interventions.

Participants

Participants were full-time undergraduate students at a Tanzanian university. Due to class schedule and other students' activities, a non-randomly selected sample of first-year university students formed the experimental group, while the second years formed the control group. The difference in year groups is not an optimal situation, but was determined by practicalities, and will be considered further in the discussion of the limitations of this study. Participants of the two groups were between the ages of 19 and 40 years of age. The mean age for the control group was 31, and 27 for the experimental group respectively. Both can thus be considered to be in the young adult or emerging adult category (cf. Steger, Oishi, & Kashdan, 2009). Members of the experimental group included 25 females (17 were single and 8 married); and 19 members of the experimental group were males (9 married and 10 single). The control group had 17 males (15 married and 2 single) and 21 females of which 10 were married and 11 were single.

Data collection

The following measures were administered to evaluate psychosocial well-being before and after programme implementation:

The Mental Health Continuum-Short Form (MHC-SF), Keyes (2006; 2009). The 14-item MHC-SF was administered, as it measures various levels of mental health on the upper end of well-being. It has three sub-scales: a) Emotional Well-Being (EWB), defined in terms of positive affect and satisfaction with life; b) Social Well-Being (SWB), described in terms of social acceptance, social actualisation, social contribution, social coherence and social integration; and c) Psychological Well-Being (PWB), described in terms of autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance. Respondents rate the frequency of each statement occurring in the past month on a 6-point Likert scale ranging from "never" (0) to "almost every day" (5). Scores on the scale as a whole may also be used to categorise an individual as languishing, moderate

mentally healthy, or flourishing. Keyes, Wissing, Potgieter, Temane, Kruger, and Van Rooy (2008) validated a Setswana version of this scale for a Setswana-speaking population and found sufficient reliability (alpha = 0.72), as well as good construct, convergent and discriminant validity for this scale in an African context. The Cronbach alpha reliability index in the current study was 0.78.

The Coping Self-efficacy Scale (CSE), Chesney et al. (2006). This 26-item scale measures individuals' evaluations of their confidence (perceived self-efficacy) with respect to engaging in coping strategies in dealing with challenges or threats, and not only coping strategies *per se.* Participants rated each statement on a 10 point scale, from “cannot do at all” (0) to “certain can do” (10). The CSE thus provides a measure of a person's perceived ability to cope effectively with life challenges, and has also previously been implemented to assess changes in coping efficacy over time in intervention research cf (Chesney et al., 2006). The CSE has three sub-scales: Problem-focused coping (PFC), stop unpleasant emotions and thoughts (SUE), and support from friends and family (SFF). The authors provided evidence of good reliability and validity. Wissing et al. (2011) reported good reliability indices for the CSE scale (from 0.86 - 0.90) in various South African groups. The Cronbach alpha reliability index in the current study was 0.80.

The Patient Health Questionnaire: Depression Symptoms (PHQ-9), Kroenke, Spitzer and William (2001). The 9-item PHQ measures the extent of symptoms of major depression, as conceptualised in the DSM-IV criteria. Respondents rate whether each symptom occurred “not at all” (0) to “nearly every day” (3) over the past two weeks. The Patient Health Questionnaire was selected, since it is designed to recognise the symptoms of major depression, which are on the lower end of the mental health continuum. Kroenke et al. (2001) reported Cronbach alpha reliability values of 0.86 and 0.89 for the PHQ-9 in a Western sample. The PHQ-9 was reported to have good validity in Nigerian students (Adewuya, Ola & Afolabi, 2006). The Cronbach alpha in the current study was 0.57.

The Trait Hope Scale (THS); Snyder et al. (1991). The THS is a 12-item self-report scale offering a brief but specific character trait that is typical of highly hopeful individuals. The scale has two subscales: Pathways (P) and Agency (A) with 4 items each, and 4 distracter items. Responses were given on an 8-point scale from 1=definitely false, to 8=definitely true. The scale offers a measure of one’s level of hope and optimism. The Agency subscale was not reliable, and was not used in the analyses.

Intervention

The programme consisted of eight sessions of 50 minutes duration, conducted over eight weeks. Each session was structured and comprised mini-lectures, demonstrations, brief exercises, and focused group discussion. As part of the programme’s educational nature, facilities such as whiteboards, power point presentations, and other course materials were used. Following the mini-lecture, specific exercises were undertaken to provide the participants with hands-on experience on the topics discussed. At the end of each session, participants were encouraged to do some brief homework assignments for the following session, which in total could take about 30 minutes of the participant's time. The homework content was described in the participant manual.

The content of the well-being programme comprised of the following themes and sessions: Session 1: Self-knowledge, covering continual process of developing one's potential. Session 2: Perspective and meaning, focusing on having a clear comprehension of life's purpose. Session 3: Hope, with a special focus on the development of internal locus of control and control over one's environment; Sessions 4 & 5: Relationship focusing on the development of preventives measure to build strength and resilience in families today and in future. Sessions 6 & 7: Physical exercise, aiming at educating participants on the usefulness of physical exercise in self-treatment and prevention of depressive illness; Session 8: Coping, addressing the process of managing taxing circumstances; this session also summarised the content of all the previous sessions.

Procedure

The research was conducted as part of the FORT3 project with ethically clearance by the North-West University. Then permission was obtained from the university authorities in Tanzania where the study was to be conducted. After inviting participants and providing information on the research project, the participants gave written informed consent to participate in the study. Before presenting the programme, participants' levels of well-being were pre-tested by use of the selected scales. The well-being promoting programme was presented over eight weeks to the experimental group while the control group had no intervention. Four weeks after the presentation of the well-being promoting programme, all study participants were asked to complete the questionnaires again. At every stage of the research, participants were fully informed about the voluntary nature of this study and that they could withdraw from the study at any stage.

Data analysis

Descriptive statistics and reliability indices for measures were determined, as well as whether significant differences exist between the experimental and control groups at pre-testing, with t-test and comparatively after programme implementation within each group. The STATISTICA analytic software programme (Marques de Sa, 2003) was used, and analyses conducted by the North-West University's Statistical Consultation Services. Because there was no random allocation to groups, statistical significance is reported for completeness, but more emphasis is given to effect sizes in the interpretation.

Ethical aspects

Permission to conduct this research was obtained for the larger FORT 3 project from the Ethical Committee of the North-West University, Potchefstroom Campus (NWU- 00002-07-A2). Permission for administering the measurement scales was also obtained in the same process. Permission to conduct the research with university students was obtained from the relevant authorities. All participants gave written informed consent before taking part. Before commencing with the intervention, each participant was informed of the ethical considerations relevant to this type of research, as well as their right to withdraw at any time, should they so choose. The control group also had the opportunity to go through the programme when the project was completed.

RESULTS

Results are presented in tables focusing on the reliability of the scales used, the differences between the two groups before the intervention, and the significance of changes within and between the groups after the intervention.

Descriptive statistics for all the scales as combining experimental and control group are reported in Table 1.

Table 1
Descriptive statistics and reliability for all measuring instruments for the experimental and control groups

Variable	Mean	Standard Deviation	Range		Cronbach alpha (α)
			Minimum	Maximum	
CSE_PFC	78.68	12.88	43.00	120.00	0.64
CSE_SUE	55.55	12.59	33.00	90.00	0.71
CSE_SFF	34.49	7.29	15.00	50.00	0.55
CSE_Tot	168.83	25.64	116.48	260.00	0.80
THS-Pathways	27.64	4.16	10.66	32.00	0.55
THS-Total	52.66	6.83	29.66	63.00	0.58
MHCSF_EWB	9.80	2.91	3.00	14.00	0.64
MHCSF_SWB	16.35	4.73	5.00	24.00	0.64
MHCSF_PWB	25.03	3.06	17.00	30.00	0.57
MHCSF_Tot	51.30	8.61	28.00	66.50	0.78
PHQ_TT	6.56	3.74	0.00	15.75	0.57
PHQ_VI	0.89	0.62	0.00	3.00	N/A

*Note***:** CSE = Coping Self Efficacy scale, -PFC = Problem Focused Coping, -SUE = Suppressing Unpleasant Emotions and thoughts, -SFF = Support from Friends and Family; THS= The Trait Hope Scale, THS-P=The Trait Hope Scale Pathways, -Tot = Hope scale-Total; MHCSF – Mental Health Continuum Short Form, -EWB= Emotional Well-Being, SWB = Social Well-Being, PWB = Psychological Well-Being, -Tot=Total score; PHQ 9 TT= Patient Health Questionnaire Total score, PHQ-VI=Degree of difficulty experienced because of problems.

As depicted in Table 1, Cronbach alphas varied for the different scales from satisfactorily for the total scale scores of the MHC-SF and CSE, to very moderate for the PHQ-9, and moderate for sub-scales. Field (2009) notes that Chronbach's alpha should be applied separately to each scale if a questionnaire has them. He further says that even a d value of 0.7 can, realistically, be

expected because of the diversity of the constructs being measured when dealing with psychological constructs. The latter can be explained by the few items per sub-scale.

To determine whether these two groups were comparable before the intervention, t-tests were done. Table 2 reports this finding.

Table 2: *Differences between the experimental and control groups before the intervention*

Variable	Control group		Experimental group		T-test	Cohen's *d* value
	Mean	SD	Mean	SD	*p*	
CSE_PFC	80	11.32	77.3	14.2	0.3599	0.19
CSE_SUE	59.1	11.5	52	12.76	0.0126	0.56
CSE_SFF	34.1	6.98	34.8	7.66	0.6479	0.09
CSE_Tot	173.3	24.78	164.4	26.02	1.1292	0.34
THS-Pathways	28.1	3.77	27.2	4.47	0.3526	0.2
THS_Tot	54.5	5.41	50.9	7.57	0.0201	0.48
MHCSF_EWB	10.1	2.7	9.5	3.08	0.3481	0.19
MHCSF_SWB	17.5	3.89	15.3	5.16	0.0291	0.43
MHCSF_PWB	25.6	2.39	24.4	3.48	0.087	0.34
MHCSF_Tot	53.5	6.58	49.3	9.69	0.0272	0.43
PHQ_TT	6.6	4.07	6.4	3.38	0.7879	0.05
PHQ_VI	0.9	0.57	0.8	0.67	0.879	0.15

*Note***:** CSE = Coping Self Efficacy scale, -PFC = Problem Focused Coping, -SUE = Suppressing Unpleasant Emotions and thoughts, -SFF = Support from Friends and Family; THS= The Trait Hope Scale, THS-P=The Trait Hope Scale Pathways, -Tot = Hope scale-Total; MHCSF – Mental Health Continuum Short Form, -EWB= Emotional Well-Being, SWB = Social Well-Being, PWB = Psychological Well-Being, -Tot=Total score; PHQ 9 TT= Patient Health Questionnaire Total score, PHQ-VI=Degree of difficulty experienced because of problems.

SD – Standard Deviation. P <0.05, d=0.2 small effect, d = 0.5 medium effect, d= 0.8 large effect.

As seen in Table 2 from the t-test, the control group was already more inclined than the experimental group to high levels of hope and used suppression of unpleasant emotions as a way of coping before the intervention. Table 2 indicates that the control group had higher scores than the experimental group on all scales and subscales, except on CSE_SFF.

In Table 3, the differences within in the experimental and control groups are shown after intervention. This table indicates whether there are any significant changes in the groups after the intervention.

Table 3

With-in differences in the experimental and control groups after the intervention

Variable	Control group				Experimental group			
	Mean increase	SD increase	*P* Value	Effected size	Mean increase	SD increase	*p* value	Cohen's d value
CSE_PFC	6.59	12.2637	0.0047	0.54	4.79	14.6309	0.0505	0.33
CSE_SUE	0.84	10.8038	0.6606	0.08	2.36	14.2709	0.3138	0.17
CSE_SFF	1.37	6.8568	0.2653	0.20	0.92	8.08	0.4865	0.10
CSE_Tot	8.66	23.2939	0.0434	0.37	8.01	26.9664	0.0748	0.30
THS-Pathways	0.27	2.6766	0.5723	0.10	0.62	4.7306	0.3948	0.13
THS_Tot	0.33	4.8951	0.7072	0.07	1.8	8.1239	0.169	0.22
MHCSF_EWB	0.43	3.1205	0.4337	0.14	0.32	2.9274	0.4698	0.11
MHCSF_SWB	0.89	4.9403	0.3115	0.18	2.12	5.4596	0.0145	0.39
MHCSF_PWB	0	2.9512	1	0.00	-0.03	3.283	0.9705	0.01
MHCSF_Tot	1.21	8.2769	0.4114	0.15	2.46	7.24283	0.0353	0.34
PHQ_TT	0.15	4.2166	0.8353	0.04	0.03	4.3428	0.9608	0.01
PHQ_VI	0.03	0.5987	0.7459	0.05	-0.12	0.609	0.2545	0.20

*Note***:** CSE = Coping Self Efficacy scale, -PFC = Problem Focused Coping, -SUE = Suppressing Unpleasant Emotions and thoughts, -SFF = Support from Friends and Family; THS= The Trait Hope Scale, THS-P=The Trait Hope Scale Pathways, -Tot = Hope scale-Total; MHCSF – Mental Health Continuum Short Form, -

EWB= Emotional Well-Being, SWB = Social Well-Being, PWB = Psychological Well-Being, -Tot=Total score; PHQ 9 TT= Patient Health Questionnaire Total score, PHQ-VI=Degree of difficulty experienced because of problems.

SD – Standard Deviation. P <0.05, d=0.2 small effect, d = 0.5 medium effect, d= 0.8 large effect.

From the results of the dependent t-tests, it is noted that the experimental group marked an increase (medium effect) after the programme on CSE- PFC subscale, MHC_SWB subscale, and MHC Total (d = 0.33; 0.39 and 0.34 respectively). Small effect size changes are also noted in the same group on the THS (d=.22), CSE-tot (d= 0.30), and the PHQ (d = 0.20). Although there was no intervention to the control group, the post-test results noted that these participants were inclination to use problem-focused coping as a coping strategy increased (d = 0.54) at post-testing in comparison to pre-test. The other area that increased was CSE-Tot (0.37) which might indicate possibility of effect.

Table 4 reports the Analysis of Covariance (ANCOVA) between the experimental and control group. An ANCOVA was done on the post-test values to correct for differences in the pretest with adjustments of the means to determine whether a significant difference could be identified between the control and experimental groups after the programme intervention and, taking initial differences into account, it is noted that the control group had higher scores.

Table 4
ANCOVA done on post-test to correct for pretest differences

Variable	Adjusted mean Control	Adjusted mean Experimental	MSE	*p*	Effect size *d*
CSE_PFC	85.09	84.625	162.43	0.8913	0.04
CSE_SUE	57.48	57.836	133.221	0.9102	0.03
CSE_SFF	36.93	35.522	42.991	0.421	0.21
CSE_Tot	178.76	178.734	598.95	1	0.00
THS -Pathways	28.48	28.138	10.651	0.683	0.10
THS_Tot	54.56	53.6	35.264	0.5535	0.16
MHCSF_EWB	10.45	10.17	6.061	0.662	0.11
MHCSF_SWB	17.95	17.845	15.122	0.9183	0.03
MHCSF_PWB	25.48	24.626	8.681	0.2643	0.29
MHCSF_Tot	53.69	53.004	46.649	0.6988	0.10
PHQ_TT	6.66	6.365	18.11	0.8016	0.07
PHQ_VI	0.91	0.906	0.201	0.9852	0.00

*Note***:** CSE = Coping Self Efficacy scale, -PFC = Problem Focused Coping, -SUE = Suppressing Unpleasant Emotions and thoughts, -SFF = Support from Friends and Family; THS= The Trait Hope Scale, THS-P=The Trait Hope Scale Pathways, -Tot = Hope scale-Total; MHCSF – Mental Health Continuum Short Form, -EWB= Emotional Well-Being, SWB = Social Well-Being, PWB = Psychological Well-Being, -Tot=Total score; PHQ 9 TT= Patient Health Questionnaire Total score, PHQ-VI=Degree of difficulty experienced because of problems.

MSE= Mean Squared Error. p <0.05, d=0.2 small effect, d = 0.5 medium effect, d= 0.8 large effect

The adjustment of means was effected to ensure comparability of the groups for all the scales.

Tables 5 and 6 present the results of the experimental and control groups after the intervention considering gender and marital status as variables.

Table 5

Dependent t-Test to determine differences between singles and married in the experimental and control groups

Variable	Control Group								Experimental Group							
	Married				Single				Married				Single			
	MI	SDI	*p* Value	*d* value	MI	SDI	*P* Value	d value	MI	SDI	*p* Value	*d* value	MI	SDI	*p* value	*d* value
CSE_PFCv	7.57	12.79	0.0133	0.59	5.22	12.12	0.2326	0.43	5.3	12.09	0.1395	0.44	1.92	12.91	0.5476	0.15
CSE_SUEv	2.28	10.58	0.333	0.22	0	11.55	1	0.00	9.67	12.20	0.0144	0.79	-1.84	14.96	0.6173	-0.12
CSE_SFFv	2.28	6.17	0.1048	0.37	-0.77	8.32	0.7862	-0.09	0	7.14	1	0.00	0.76	8.94	0.7289	0.09
CSE_Totv	11.92	23.63	0.0315	0.50	4.44	24.45	0.6003	0.18	14.76	23.77	0.0448	0.62	0.98	26.16	0.8781	0.04
THS-Pathways	0.03	3.04	0.9623	0.01	0.44	1.89	0.4995	0.23	0.83	5.55	0.5569	0.15	0.37	4.45	0.7285	0.08
THS_Tot	0.3	5.91	0.9805	0.05	1.08	1.37	0.0597	0.79	0.97	7.45	0.6322	0.13	3.39	8.81	0.132	0.38
MHCSF_EWB	0.8	2.84	0.2061	0.28	-1.33	2.83	0.195	-0.47	0.56	2.22	0.3269	0.25	0.63	3.83	0.4883	0.16
MHCSF_SWB	1.2	5.33	0.314	0.22	0.05	4.66	0.9723	0.01	1.1	3.89	0.2722	0.28	2.25	6.77	0.1762	0.33
MHCSF_PWB	0.14	3.2	0.8428	0.04	-0.55	2.07	0.4436	-0.27	-0.37	3.36	0.662	-0.11	0.33	3.50	0.691	0.09
MHCSF_Tot	2	8.40	0.2872	0.24	-1.88	7.48	0.4718	-0.25	1.28	6.98	0.4718	0.18	3.26	8.83	0.1348	0.37
PHQ_TT	0.52	4.54	0.6026	0.11	-0.06	3.69	0.9564	-0.02	-0.64	4.79	0.6662	-0.13	1.22	3.51	0.215	0.35
PHQ_VI	-0.05	0.56	0.6683	-0.09	0.28	0.49	0.1723	0.57	-0.11	0.93	0.7287	-0.12	0.12	0.34	0.1638	0.35

Note: CSE = Coping Self Efficacy scale, -PFC = Problem Focused Coping, -SUE = Suppressing Unpleasant Emotions and thoughts, -SFF = Support from Friends and Family; THS= The Trait Hope Scale, THS-P=The Trait Hope Scale Pathways, -Tot = Hope scale-Total; MHCSF = Mental Health Continuum Short Form, -EWB= Emotional Well-Being, SWB = Social Well-Being, PWB = Psychological Well-Being, -Tot=Total score; PHQ 9 TT= Patient Health Questionnaire Total score, PHQ-VI=Degree of difficulty experienced because of problems.

SDI – Standard Deviation Increase, MI – Mean Increase,. *p* <0.05, d=0.2 small effect, d = 0.5 medium effect, d= 0.8 large effect.

As observed in Table 5, change is also noticed within the experimental group among married participants on using of suppression of unpleasant emotions (d = 0.79) as a coping strategy, with both a large and medium effect on the CSE total (0.62). On the other hand, Table 5 shows that single participants in the experimental group had higher scores than the control group on MHCSF-SWB (d = 0.33), MHCSF tot (d = 0.37), and on PHQ TT (d = 0.35). Change is also observed in the married control group in the areas of problem-focused coping and general coping self-efficacy, while the unmarried participants in the control group register a relatively large effect on the THS of d = 0.79.

Table 6
Dependent t-Test to determine differences between males and females in the experimental and control groups

Variable	Control Group								Experimental Group							
	Male				Female				Male				Female			
	MI	SDI	*p* Value	d	MI	SDI	*p* value	d	MI	SDI	*p* Value	d	MI	SDI	*p* value	d
CSE_PFC	9.77	8.88	0.0005	1.10	3.41	14.50	0.3609	0.24	1.56	13.10	0.6402	0.12	7.14	15.52	0.0423	0.46
CSE_SUE	3.18	9.52	0.2002	0.33	-1.49	11.79	0.6194	-0.13	-2.96	13.99	0.4092	-0.21	6.24	13.48	0.0414	0.46
CSE_SFF	0.93	4.99	0.4636	0.19	1.81	8.48	0.4059	0.21	1.31	6.85	0.4551	0.19	0.63	9.02	0.7438	0.07
CSE_Tot	13.84	14.38	0.0015	0.96	3.49	29.29	0.6397	0.12	-0.05	27.77	0.9935	0.00	13.89	25.38	0.0179	0.55
THS –Pathways	-0.5	3.04	0.5199	-0.16	1.04	2.08	0.0635	0.50	0.81	4.80	0.4811	0.17	0.48	4.77	0.6197	0.10
THS_Tot	--0.62	6.46	0.7146	0.01	1.22	2.69	0.0873	0.45	1.96	7.40	0.291	0.26	1.68	8.78	0.3684	0.19
MHCSF_EWB	1.75	2.77	0.0231	0.63	-0.87	2.96	0.256	-0.29	1.8	2.69	0.011	0.67	-0.74	2.66	0.1766	-0.28
MHCSF_SWB	1.18	5.93	0.4358	0.20	0.6	3.88	0.5393	0.15	0.22	5.19	0.8578	0.04	3.49	5.33	0.0032	0.65
MHCSF_PWB	-0.12	3.07	0.8729	-0.04	0.12	2.92	0.8662	0.04	-0.5	3.35	0.5347	-0.15	0.32	3.26	0.6194	0.10
MHCSF_Tot	2.36	8.46	0.2816	0.28	0.07	8.19	0.9719	0.01	1.43	8.35	0.4768	0.17	3.2	6.77	0.0261	0.47
PHQ_TT	0.28	4.97	0.819	0.06	0.02	3.47	0.9788	0.01	0.67	3.52	0.4561	0.19	-0.64	5.11	0.6348	-0.13
PHQ_VI	0.07	0.62	0.6713	0.11	0	0.60	1	0.00	0.07	0.73	0.7201	0.10	0.16	0.51	-0.0891	0.31

*Note***:** CSE = Coping Self Efficacy scale, -PFC = Problem Focused Coping, -SUE = Suppressing Unpleasant Emotions and thoughts, -SFF = Support from Friends and Family; THS= The Trait Hope Scale, THS-P=The Trait Hope Scale Pathways, -Tot = Hope scale-Total; MHCSF = Mental Health Continuum Short Form, -EWB= Emotional Well-Being, SWB = Social Well-Being, PWB = Psychological Well-Being, -Tot=Total score; PHQ 9 TT= Patient Health Questionnaire Total score, PHQ-VI=Degree of difficulty experienced because of problems.

SDI – Standard Deviation Increase, MI – Mean Increase,. p <0.05, d=0.2 small effect, d = 0.5 medium effect, d= 0.8 large effect**.**

Table 6 considers gender as the variable to compare both groups. An increase in the experimental group is noted with females on various subscales that is both the problem-focused coping and suppression of unpleasant emotion sub-scales showed a medium effect of 0.46 each; the total scores of the coping self-efficacy scale showed a d-value of 0.55; the social well-being sub-scale a d-value of 0.65 and the MHC total a d-value of 0.5. In the same group, males register an increase on hope (THS) (0.26) and MHCSF-EWB (d = 0.67). In the control group an effect is noted in males, especially on problem-focused coping (d = 1.1). The total scores of coping self-efficacy also showed a large effect of 0.96 males in the control group. The area of hope noted a large negative effect of = -0.96 and the emotional well-being sub-scale of the Mental Health Continuum with a medium effect of 0.63 on males in the same group. A medium effect of 0.50 is noted on the "pathways" subscale of the Hope Scale, while the females showed below medium effect on all scales.

Table 7

Prevalence of psychological well-being

	Pre-test			Post-test		
	FL	MMH	L	FL	MMH	L
Control group	81.58%	18.42%	0.0%	88.46%	11.54%	0.0%
Experimental group	68.18%	31.82%	0.0%	83.33%	16.67%	0.0%

Note: FL – Flourishing; MMH – Moderately Mentally Healthy; L – Languishing.

Table 7 considers the prevalence of levels of psychological well-being, as measured by the MHC_SF and categorized according to the criteria as suggested by Keyes (2006; 2007). Findings indicate the prevalence of flourishing in the experimental group as follows: 68.18% before the intervention and 83.33% afterward, while the moderately mentally healthy were 31.82% before the intervention and 16.67% after the intervention. No member was languishing in both the control and the experimental group before or after the intervention. In the control group, the level of flourishing was at 81.58% in the pre-test, then 88.46% in the post-test. Those moderately mentally healthy were 18.42% in the pre-test while the post-test was 11.54%. The findings thus show that the

percentage flourishing participants increased for the experimental group with 15.15%, whereas the increase over time for the control group was only 6.88%.

Discussion

The current study investigated the effect of a newly designed programme for promoting psychological well-being in university students in Tanzania as measured with the Mental Health Continuum-Short Form scale, Coping Self-Efficacy scale, The Trait Hope Scale, and Patient Health Questionnaire: Depression symptoms. Cronbach's alpha values larger than 0,70 are viewed as adequate (Nunnally, 1978). Measuring instruments displayed acceptable reliability indices, except for the PHQ-9, which had a very moderate reliability index.

Results indicated that the developed psychosocial well-being programme had some positive effects on the participants of the experimental group. Results obtained with measures of Coping Self-Efficacy-problem focused coping, Mental Health Continuum-social well-being, Mental Health Continuum-Total scores, and the Trait Hope Scale showed psychosocial well-being was promoted in some respects and participants developed skills for building and maintaining psychological well-being. Berkel (2009) is of the opinion that problem-focused coping involves altering or managing the problem that is causing the stress and is highly action focused, as it provides individuals with a sense of control. Students have lower level of stress, anxiety and depression when they engage in problem-focused coping compared to other coping styles. Penland, Masten, Zelhart, Fournet and Callahan (2000) found that participants who engaged in problem-focused coping experienced a greater decrease in depression symptoms compared to participants who did not. Crockett, Iturbide, Torres, McGinley, Raffaelli and Carlo (2007) also found problem-focused coping to be the most adaptive coping style employed by university students. In a study with French students, Bouteyre, Maurel and Bernaud (2007) further demonstrate the negative association between problem-focused coping and psychological distress in university students.

Whereas the experimental group does not seem to have improved in the areas of suppression of unpleasant emotions, it is important to note that the control group was already inclined toward higher scores on this subscale than the experimental group before the intervention. After the presentation of the programme, a number of effects and increases were observed within the groups as well. Suppressing unpleasant emotions was observed to be more used by the married participants than their unmarried counterparts in the experimental group. Such scores suggest an increase of positive emotions. Although no studies to date have examined how marital status influences suppressing unpleasant emotions, the voluminous literature on the effects of marriage on physical and mental health yields some insights. This literature finds that married persons have greater psychological and physical well-being than their single counterparts (Shapiro and Keyes, 2008; Shapiro, 1996), which may be explained by the experience of greater support. Chesney, Darbes, Hoerster, Taylor, Chambers and Anderson (2005) suggest that the increase of positive emotions is often found to be associated with health-promoting conditions that may have lasting benefit to health and well-being. Xu and Roberts (2010) report that positive emotions and attitudes lead to reduced blood pressure, improved hormonal balance, resistance

against the common cold, and therefore increased longevity. The results on using problem-focused coping, which covers among others a sense of commitment, displays the great effect on married participants and is in line with (Salami's, 2008) findings, which state that older and married individuals have more commitment to their organisations and education than the younger and single workers.

A difference was also observed between married and unmarried participants of this study on the Coping Self-Efficacy total scores. Coping self-efficacy entails one's perceived level of confidence in performing coping behaviour when faced with life challenges (Chesney et al., 2006). By comparing the levels of psychological well-being of the married and single participants in this study, we gain an indication that marital status is another aspect that deserves consideration in well-being.

It is generally believed that people are equal but not the same. Gender differences in psychological well-being are of great importance in the contemporary society, as different scores of this research reveal. Roothman, Kirsten and Wissing (2003) found that gender difference does exist in specific facets of well-being, as was also found in some instances in the current study. Findings of this study are comparable to those of Walker (2009), where overall scores on well-being for women were higher than men. There was no significant difference in gender and marital status on the occurrence of depression, as measured by the Patient Health Questionnaire (PHQ-9). The low reliability index for the PHQ-9 obtained in this study needs to be taken into account in the interpretation of this finding.

The difference observed between the control group and experimental group in the pre-testing may be related to the natural composition of the two groups. For convenience of the schedule of participants, the control group was made up of predominantly second-year students, while the experimental group was mostly first-year students. The lower scores of the experimental group on suppressing unpleasant emotions before the programme is likely to be linked with significant problems associated with adjusting to university life. Such results are in line with Lowe and Cooke's (2003) conclusion that students' well-being in the first year is poorer than during the rest of their studies. The difference of social well-being between the two groups is assumed to have a connection with their newness on campus, where their social network (making friends) is still underdeveloped. Baker and Siryk (1984) found this reality stating that the first year of university is a year of adjustment where students' well-being is likely to have social challenges.

The prevalence of different levels of mental health of this group of university students was quite different from that found by previous studies conducted. Only 42% of South African youth were flourishing while 58% were not functioning optimally in a South African study (Van Schalkwyk, 2009). Keyes (2006) and Keyes (2007) noted that 38% of youth in the USA were flourishing, 56% were moderately mentally healthy, and 6% were languishing; whereas only 18% of USA adults were flourishing, 65% moderately mentally healthy, and 17% were languishing. Findings of this study on high levels of psychological well-being are comparable to those of Rugira, Nienaber and Wissing(2013), where the level of flourishing was found to be at 72.7% in a population of 277 university students in Tanzania. Findings showed that the percentage of flourishing increased noticeably for the experimental group after the intervention in comparison to the control group.

This study had limitations that need to be taken into account when findings are interpreted. Firstly, the experimental and control groups were from different year groups which may be a confounding variable, and may be responsible for the initial levels of well-being differing greatly between the experimental (first-year students) who might have struggled with adaptation to the university setting, and the control group (second-year students) who might be more at ease in that environment. Probably a Solomon 4 group design should have been used. Secondly, non-randomly selected groups were included which limits generalizations, and only self-report measures were used. Findings from this study can thus not be generalised to other groups or context.

Conclusion

The aim of this study was to evaluate the effect of a newly designed psychosocial well-being programme for university students. Although the two groups were not comparable at the beginning of the programme, it still seems that there was a positive change to the experimental group who followed the programme. The programme was specifically effective for suppressing unpleasant emotions in the case of married participants. The programme further increased problem-focused coping. It is hoped that this type of programme can form a natural part of the health promotion concept in universities in Tanzania and elsewhere.

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