Chapter 4
The Prevalence of Levels of Well-Being Revisited in an African Context

Marié P. Wissing and Q. Michael Temane

The last decade has seen the evolution of many conceptualizations and operational-izations of psychosocial well-being, or mental health, since the shift in focus to mental well-being instead of merely on mental ill-being. However, very little is known about the prevalence of various levels of psychosocial well-being in communities and in various contexts. Such baseline knowledge is important for health and wellness promotion, not only for individuals but also for communities and societies. This chapter will report on some findings with regard to the prevalence of levels of psychosocial well-being within an African context against the theoretical backdrop of Keyes' mental health continuum model.

According to the World Health Organization (1998), *health* is a state of complete physical, mental, and social well-being. However, very little is known about the prevalence of such high levels of functioning in communities. In the past, the focus in epidemiological studies was mainly on *risk factors* and *pathology* and on *physical ill-health*, with an aim to decide where, and for which risk factors or diseases, interventions should be planned for the sake of health promotion in communities. Major studies on the epidemiology of diseases do exist. However, as far as levels of psychosocial well-being on the upper end of a mental health continuum are concerned, very little information is available. Only Keyes' research (2002, 2005, 2006a, 2007) in the United States on the distribution or prevalence of strengths and characteristics of psychosocial well-being in communities, and the findings of So and Huppert (2009), could be found. In order to approach the ideal of complete mental health that is more than the absence of symptoms, we also need information on the nature of complete psychosocial health and on the prevalence of levels of *psychosocial well-being* in communities, in order to decide where, when, and for whom interventions may be indicated (and should be planned) as part

M.P. Wissing (✉) • Q.M. Temane
School for Psychosocial Sciences: Psychology, North-West University,
Potchefstroom Campus, Private Bag X6001, 2520 Potchefstroom, South Africa
e-mail: Marie.Wissing@nwu.ac.za

of public health promotion. Therefore, it is also necessary to understand and measure the prevalence of levels of well-being in groups and communities.

Recently, the possible value of national indicators of psychological well-being has been highlighted (e.g., Diener 2000; Diener and Seligman 2004; Keyes 2007; Lyobomirsky et al. 2005). Diener et al. (2008) argued that accounts of well-being may be highly useful for policymakers and may add value beyond existing social and economic indicators. Previous research has indicated that psychological well-being and life satisfaction are associated with many positive outcomes on both individual and societal levels (e.g., Pressman and Cohen 2005; Keyes 2005, 2007).

Accounts of well-being may help a government to identify groups in the greatest need of interventions in a given society (Diener et al. 2008; Higgs 2007). These previous findings, however, do not indicate what theoretical model and measure would be the most appropriate for use in epidemiological studies and why or how various models and measures compare in predictions of outcomes. Neither are levels of well-being distinguished nor are critical cutoff points for positive outcomes indicated, except for indications in the work of Keyes (2002, 2007) with his mental health continuum measure in the United States and to a limited extent, categories for the Satisfaction with Life Scale (Pavot and Diener 1993). Currently, no national or regional systematically collected data on levels of psychological health over time exist, and in South Africa in particular, very little is known about the prevalence of various levels of well-being in different contexts. Some epidemiological data does exist for symptoms and syndromes of psychopathology in South Africa (e.g., Williams et al. 2007) but very little on levels of psychological well-being, although some data are available on quality of life (e.g., Higgs 2007).

Conceptual Challenges

Measuring the prevalence of levels of well-being in epidemiological studies poses several conceptual (and practical) challenges that need to be considered: Firstly, there is no word to indicate the distribution of strengths in a community. The construct *epidemiology* refers to the *distribution of diseases*. It is suggested that we use a new word such as "epidemiofortology" to indicate the distribution of (levels or patterns of) wellness and strengths in communities (*forte* = strength). This option is preferable to that of just broadening the meaning of the word epidemiology to also include the distribution of strengths, as that may strengthen the dominance of the medical model, which may not be the best suitable option in all instances.

Secondly, there is no consensus as to what model, strengths, characteristics, patterns, or levels of psychosocial well-being and measure should be considered in the development of an epidemiofortology of psychological well-being. There are many constructs that refer to facets of psychological well-being, for example, sense of coherence (Antonovsky 1987), self-efficacy (Chen et al. 2001; Schwarzer and Jerusalem 1993), positive affect (Fredrickson 2001), fortitude (Pretorius 1998), satisfaction with life (Diener et al. 1985, 2008), but very few refer to levels or cutoff

points for various levels of wellness. A further problem is that the same construct is sometimes defined in different ways; for example, Keyes (2002) developed the idea of *flourishing* as the positive end of the mental health dimension which is part of a holistic model of a mental health continuum, and specified criteria on his Mental Health Continuum Scale. However, the same construct is used by So and Huppert (2009), explicating it in terms of other core and peripheral features of well-being, as developed in the European Social Survey's (ESS) well-being module. To be flourishing, a participant must have scores above a specific level on all three identified core features (positive emotions, engagement/interest, and meaning/purpose) and at least three additional features (self-esteem, optimism, resilience, vitality, self-determination, and positive relationships; So and Huppert 2009). Huppert et al. (2009) refer to similar (but not the same) features in the well-being module of the European Social Survey, and this is also the case in Tennant et al.'s (2007) validation of the Warwick–Edinburg Mental Well-Being Scale (WEMWBS). However, the latter two publications do not refer to the construct of flourishing as an overarching concept.

In the selection of a model and measure to explore the prevalence of various levels of well-being in epidemiological/epidemiofortological studies, it makes intuitive sense to use a holistic model that includes various facets of wellness but is also operationalized with a relatively short, but comprehensive, measure of criteria for various levels/patterns of wellness. Such a possible suitable model and measure is Keyes' mental health continuum model (Keyes 2002, 2005, 2007), which includes emotional, social, and psychological/personal well-being facets, represents both hedonic and eudaimonic components of wellness, and for which scoring criteria for three levels of wellness are indicated on the measure (the distinguished categories are languishing, moderate mental health, and flourishing). However, a question on how findings on this scale correlate with those on other measures of psychosocial well-being (criterion-related validity) representing other theoretical perspectives of wellness still persists.

Theoretical Model and Measure as Point of Departure

For purposes of the current study, Keyes' (2002, 2005, 2007) mental health continuum model is taken as the theoretical backdrop. According to this model, mental health can be viewed as existing on a continuum from pathology to optimal functioning. Keyes proposed that psychopathology and psychological well-being are two different, but negatively correlated, dimensions of human functioning. At the upper end of the positive health dimension (upper part of the continuum), he distinguishes three levels of well-being (or mental health), namely, *languishing* (i.e., low levels of emotional, social, and psychological well-being), *moderate mental health*, and *flourishing* (i.e., high levels of emotional, social, and psychological well-being). Individuals who are moderately psychologically healthy have scores between flourishing and languishing. The positive dimension of the mental health continuum

model is operationalized with the Mental Health Continuum Scale for which a short form of 14 items exists (MHC-SF), with which the various levels of well-being can be established. Criteria for levels are as follows: To be flourishing, participants must report that they experience "every day" or "almost every day" at least seven of the characteristics, where one of them is from the hedonic (i.e., emotional well-being) cluster (i.e., happy, interested in life, or satisfied) and the others from the social and personal/psychological well-being clusters. To be identified as languishing, participants must report that they "never" or "once or twice" experienced at least seven of the characteristics, where one of them is from the hedonic (i.e., emotional well-being) cluster and the others from the eudaimonic clusters. Participants who do not fit these criteria for flourishing or languishing are moderately mentally healthy. Keyes (2005, 2007, 2010) has shown that languishing and moderately mentally healthy people in the United States have more chronic diseases, more days lost at work, and a generally higher morbidity and mortality rate than those who are flourishing, with an associated loss of quality of life for the individual and higher financial expenditure to the state. This supports the value of this model and measure for further use in studies on the prevalence of levels of well-being.

Previous Findings on the Prevalence of Levels of Well-Being

Keyes (2006a, 2007) found in a large representative sample of US adults ($N=3,032$) that 18% were flourishing as measured with the MHC scale–long form, 65% were moderately mentally healthy, and 17% were languishing. For US youth ($N=1,234$) between 12 and 18 years of age, he determined with the MHC-SF that 38% were flourishing, 56% were moderately mentally healthy, and 6% were languishing. He warned that it seems as if flourishing diminishes from adolescence to adulthood and that the number of languishing people increases—which has implications for public policy on the promotion of mental health.

In a South African context, Keyes et al. (2008) established with a Setswana version of the 14-item MHC-SF that 20% of a random sample ($N=1,050$) of Setswana-speaking people in the North West province were flourishing, 67.8% were moderately mentally healthy, and 12.2% were languishing. These percentages are roughly in line with those reported by Keyes (2007) for US adults but also different from those for adolescents reported in the United States. Van Schalkwyk and Wissing (2010) found prevalence levels for well-being in the case of a multicultural (but predominantly white) group of secondary school children ($N=665$) between 15 and 17 years of age in the Cape Province of South Africa that corresponded to that of US youth, as reported by Keyes (2006a), namely, 42% flourishing, 53% moderately mentally healthy, and 5% languishing. The question is, however, whether adolescents and adults in other South African contexts and specific cultural groups show the same prevalence and whether this prevalence is more or less stable over time.

Possible Contributions of This Study

Very little is known about the prevalence of levels of well-being in various contexts. This chapter will contribute to further filling this gap. The exploration of the prevalence of levels of psychosocial well-being in communities is also important because health promotion is part of public health responsibilities. Baseline information is necessary to enhance well-being not only for individuals but also for communities and for the majority of people in a broader population, as argued by Huppert (2009) and Keyes (2007). This study is one step in the direction of providing such baseline data.

Aims

The aims of this study were (a) to explore the congruence of Keyes' measure with other operationalizations of psychosocial well-being and (b) to explore the prevalence of various degrees (or levels) of psychosocial health (languishing, moderate mental health, and flourishing) in various South African samples against the backdrop of Keyes' model.

Method

For purposes of this study, analyses were done on data obtained in various projects with other objectives. All studies had a cross-sectional survey design as far as the psychological data are concerned. All protocols were approved by the relevant ethics committees.

Participants

Group 1: FET 1 (FET = further education and training) college students (N = 568). This availability multicultural group consisted of 75% black African participants. Students were between 16 and 35 years of age (mean age = 21 years) and were from four different campuses of an FET (further education training) institution (overlapping between secondary and tertiary education). Two were situated in middle-income-level areas and two in lower socioeconomic areas. On all campuses, students varied in mean income levels within their families. Data were collected at the end of the 2007 academic year, close to the examination period and were part of the FORT2 (FORT2 = Understanding and promoting psychosocial health, resilience, and strengths in an African context; Wissing 2005) and FORT3 projects (FORT3 = The prevalence of levels of psychosocial health: Dynamics and relationships with

biomarkers of (ill)health in South African social contexts; *forte* = strength; Wissing 2008).

Group 2: FET 2 college students (N = 1,480). This availability multicultural sample consisted of 75% African students. Students were from four campuses and had a mean age of 20 years. Data were collected at the beginning of the 2008 academic year as part of the FORT3 project.

Group 3: FET 3 Setswana-speaking college students (N = 185). This was an availability sample consisting of only black students from a deep rural area (Taung). The mean age of participants was 22 years. Data were collected in the middle of academic year, 2009, as part of the FORT3 project.

Group 4: FET 4 college students (N = 263). This was a multicultural sample of mainly black participants in an urban area, with a mean age of 20 years. Data were collected at the beginning of the academic year, 2010, as part of the FORT3 project.

Group 5: University students (N = 293). This was an availability multicultural sample consisting of predominantly white students. The mean age of students was 19 years. Data were collected in 2010 as part of the FORT3 project.

Group 6: Adults, Afrikaans speaking (N = 122). This was an availability sample of Afrikaans-speaking adults between 30 and 51 years of age, with equal numbers of males and females in each of the age groups 30–40 and 41–51 years. Data were collected in 2008 as part of the South African leg of the Eudaimonic-Hedonic Happiness Investigation (EHHI; Delle Fave et al. 2011) and the FORT3 project (cf. Coetzee et al. 2010).

Group 7: Adults, English, and Afrikaans speaking (N = 204). This was an availability multicultural sample of mainly white participants with a mean age of 35.9 years. Data were collected in 2007 and 2008 as part of the FORT2 and FORT3 projects.

Group 8: Teachers (N = 409). This randomized sample of South African teachers consisted of 200 black and 209 white adult teachers at a secondary school and were part of the multidisciplinary SABPA project (SABPA = Sympathetic Activity and Ambulatory Blood Pressure in Africans; Malan 2007; Potgieter et al. 2010) and FORT3 projects. Fifty percent in each of the black and white groups were males. Data were collected in 2008 and 2009.

Group 9: Adults, Setswana speaking (N = 296). This random sample of black Setswana-speaking adults from an urban area were between 18 and 80 years of age and consisted of 104 males and 192 females. Data were collected in 2008 as part of the FORT3 project (cf. Khumalo et al. 2010).

Group 10: Adults, Setswana speaking (N = 459). This was a randomly selected sample of Setswana-speaking adults from urban (N = 249) and rural (N = 210) areas in the North West province between 31 and 60 years of age, with 21% being between 30 and 40 years of age. It consisted of 141 males and 318 females. Data were collected in 2009 as part of the FORT3 project (cf. Khumalo et al. 2010).

Group 11: Adults, Setswana speaking (N = 1,050). This was a stratified community sample of black Setswana-speaking adults from rural (N = 599) and urban (N = 451) areas in the North West province. It consisted of 392 males and 649

females. Data were collected in 2005 as part of the multidisciplinary PURE-SA project (PURE = Prospective Urban and Rural Epidemiology; Kruger 2005) and the FORT2 project (cf. Keyes et al. 2008).

Group 12: Adults, Setswana speaking (N = 1,275). Data were collected from this stratified randomly selected community sample of urban (*N* = 581) and rural (*N* = 694) Setswana-speaking adults as part of the multidisciplinary PURE-SA project and the FORT3 project in 2010. This was a follow-up study in the community in which the 2005 data collection took place, described in group 11 (mostly the same participants). Data collection for the urban group took place in March and April 2010 and in April and May 2010 for the rural group.

Measures

Mental Health Continuum–Short Form (MHC-SF). The 14-item MHC-SF measures the degree of (a) emotional well-being (EWB; items 1–3) as defined in terms of positive affect/satisfaction with life, (b) social well-being (SWB; items 4–8) as described in Keyes' (1998, 2006b) model of social well-being (one item on each of the facets of social acceptance, social actualization, social contribution, social coherence, and social integration), and (c) psychological well-being (PWB; items 9–14) as described in Ryff's (1989) model (including one item on each of the dimensions of autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance).

Sense of Coherence Scale (SOC). The SOC 29-item scale was implemented, which measures an individual's way of experiencing the world and life within it. Core components are comprehensibility, manageability, and meaningfulness (Antonovsky 1987, 1993).

Affectometer 2 (short version; AFM). The AFM was developed to measure a general sense of well-being (or general happiness) and measures positive affect (PA), negative affect (NA), and affect balance (PA–NA). The 20-item scale was used in the present research. The more that positive affect predominates over negative affect, the higher the overall level of well-being (Kammann and Flett 1983).

Satisfaction with Life Scale (SWLS). The 5-item SWLS measures a person's general satisfaction with life on a cognitive–judgmental level and as evaluated according to self-reported criteria (Diener et al. 1985).

General Health Questionnaire (GHQ). The 28-item GHQ was implemented. It aims to detect common symptoms indicative of various syndromes of mental disorder and differentiates between individuals with psychopathology as a general class and those who are considered to be normal. Subscales are somatic symptoms (SS), anxiety and insomnia (AI), social dysfunction (SD), and severe depression (DS; Goldberg and Hillier 1979).

New General Self-Efficacy Scale (NGSE). This 8-item scale measures individuals' tendency to view themselves as capable of meeting task demands in various contexts (Chen et al. 2001).

Self-Regulation Scale (SRS). The 7-item SRS measures participants' post-intentional self-regulation when they are in the process of goal pursuit and facing difficulties in maintaining their action. Attention as well as emotion regulation are reflected in the scale items (Schwarzer et al. 1999).

Coping Self-Efficacy Scale (CSE). This 26-item scale measures a person's confidence (or perceived self-efficacy) in performing coping behaviors when facing life challenges or threats and can also be implemented to assess changes in coping self-efficacy (CSE) over time (Chesney et al. 2006).

The Fortitude Questionnaire (FORQ). The 20-item FORQ measures the extent to which a person feels able to handle stress and experiences support from family and friends (Pretorius 1998).

Patient Health Questionnaire: Depression Symptoms (PHQ-9). The 9-item PHQ measures the extent of symptoms of major depression as conceptualized in the DSM-IV criteria (Kroenke et al. 2001).

General Psychological Well-Being Scale (GPWS). This 20-item scale measures general psychological well-being as conceptualized by Wissing and Van Eeden (2002) and measures hedonic and eudaimonic facets of well-being (Khumalo et al. 2010).

Warwick–Edinburg Mental Well-Being Scale (WEMWBS). The WEMWBS is a 14-item questionnaire on a 5-point scale (1 = *none of the time* to 5 = *all the time*; Stewart-Brown et al. 2009). It measures hedonic as well as eudaimonic components of well-being and includes facets of positive affect and emotional well-being (optimism, cheerfulness, relaxation), satisfying interpersonal relations, and positive functioning (energy, self-acceptance, personal development, competence, autonomy; Tennant et al. 2007).

Procedure

Participants completed the MHC-SF as well as the various other questionnaires measuring facets of psychological well-being after informed consent was obtained in each of the specific subgroups. In the community sample, trained field-workers administered the questionnaires in a structured interview format. All groups completed the MHC-SF, but other measures of psychosocial well-being varied in the different studies. Groups 3, 9, 10, 11, and 12 completed the validated Setswana version (cf. Keyes et al. 2008) of the MHC-SF, as well as other validated Setswana measures. All other groups completed the English versions of the measures.

Analyses

Descriptive statistics for the MHC-SF in the various groups were determined, as well as correlations between the MHC-SF and other measures of psychosocial well-being, the percentage of languishing, and the amount of moderately mentally healthy and flourishing participants in each group.

Results

Descriptive Statistics for the MHC-SF in All Groups

The descriptive statistics (mean, standard deviation, range, skew, and kurtosis) and Cronbach's alpha reliability indices for the MHC-SF in all samples are shown in Table 4.1.

The MHC-SF measured consistently in all groups, as indicated by Cronbach's alpha coefficients from 0.71 for the Setswana version as completed by adult Setswana speakers in group 11 (2005) to 0.91 for the English version as completed by Afrikaans- and English-speaking adults. Most of the other reliability indices were between 0.80 and 0.90. Mean scores vary between 36.5 for the Setswana

Table 4.1 Descriptive statistics and reliability of the MHC-SF in the various subgroups

Subgroup	Mean	SD	Min-max	Skewness	Kurtosis	Cronbach's alpha
Group 1 (*N*=568)	46.4	11.3	4–70	−.61	.28	.83
FET1 college students 2007						
Group 2 (*N*=1,480)	48.0	10.4	10–70	−.53	.32	.82
FET2 college students 2008						
Group 3 (*N*=185)	43.0	10.4	15–63	−.31	−.51	.74
FET3 Setswana-speaking college students 2009						
Group 4 (*N*=263)	48.3	10.6	5–68	−.78	.84	.83
FET4 college students 2010						
Group 5 (*N*=293)	46.6	10.5	14–67	−.63	.03	.90
University students 2010						
Group 6 (*N*=122)	43.9	10.8	6–66	−.57	.75	.90
Adults, Afrikaans speaking 2008						
Group 7 (*N*=204)	45.1	11.6	8–69	−.49	.23	.91
Adults, English and Afrikaans speaking 2007/8						
Group 8 (*N*=409)	48.2	10.9	11–70	−.42	−.18	.89
Teachers multicultural 2008/9						
Group 9 (*N*=296)	46.2	13.1	6–70	−.49	−.35	.82
Adults, Setswana speaking 2008						
Group 10 (*N*=459)	43.4	12.8	2–69	−.29	−.52	.84
Adults, Setswana speaking 2009						
Group 11 (*N*=1,050)						
Adults, Setswana speaking						
A. Urban 2005	41.0	9.2	8–63	−.36	−.11	.71
B. Rural 2005	36.5	9.3	6–67	.52	.86	.76
Group 12 (*N*=1,275)						
Adults, Setswana speaking						
A. Urban (*N*=581) 2010	45.9	12.1	7–70	−.59	.30	.80
B. Rural (*N*=694) 2010	46.4	11.9	4–70	−.86	.53	.78

Table 4.2 Correlations between the MHC-SF and other measures[a] of psychosocial health in student/youth subgroups

Measures	Group 1 FET1 $N=568$	Group 2 FET2 $N=1,480$	[b]Group 3 FET3 $N=185$	Group 4 FET4 $N=263$	Group 5 University $N=293$
SWLS					.50
GHQ	−.23	−.30	−.29	−.31	
PHQ-9	−.24	−.31	−.28	−.32	
NGSE	.31	.38	.26	.40	
SRS	.46	.49		.40	
CSE	.49	.50		.56	
FORQ	.42	.51	.30	.55	
GPWS				.58	

MHC-SF Mental Health Continuum-Short Form, *SWLS* Satisfaction with Life Scale, *GHQ* General Health Questionnaire, *PHQ-9* Patient Health Questionnaire: Depression Symptoms, *NGSE* New General Self-Efficacy Scale, *SRS* Self-Regulation Scale, *CSE* Coping Self-Efficacy Scale, *FORQ* Fortitude Questionnaire, *GPWS* General Psychological Well-Being Scale
[a]Measures varied in the different groups
[b]Setswana version

version as determined in a rural sample (2005) and 48.3 for the English version in a college student group as completed in 2010. Standard deviations vary between 9.2 and 13.1. In all instances (except that of the adult rural Setswana-speaking group of 2005), scores were negatively skewed, indicating more scores to the positive/higher side though all the values were within the suggested range of −1 to 0, which indicates a moderate deviation from the normal distribution curve (Field 2005). The kurtoses for the various groups range from steep (groups 1, 2, 4, 5, 6, 7, 11, and 12) to shallow (groups 3, 8, 9, 10), with group 5 almost nearing a normal curve (Howitt and Cramer 2008).

Correlations Between the MHC-SF and Other Measures of Psychosocial Well-Being

The correlations between the MHC-SF, on the one hand, and other measures of psychosocial well-being on the other are shown in Table 4.2 for the student/youth groups and in Table 4.3 for the adult groups.

As can be noted in Tables 4.2 and 4.3, the MHC-SF correlates significantly with other indices of psychosocial well-being and negatively with indices of symptoms as measured by the GHQ and PHQ-9. The magnitude of correlations of the MHC-SF with a particular scale varied slightly in the different groups. The strongest positive correlations are found with positive affect, sense of coherence, coping self-efficacy, fortitude, and general psychological well-being. The correlations can be classified as ranging from large to medium effect (Field 2005) in terms of the practical significance of the correlations. Satisfaction with life in group 5 has a significant correlation of 0.50 with MHC-SF, which explains 25% of the variance.

Table 4.3 Correlations between the MHC-SF and other measures[a] of psychosocial health in adult samples

Measures	Group 6 Afrikaans N=122	Group 7 English N=204	Group 8 Teachers N=409	Group 9 Setswana N=296	Group 10 Setswana N=459	Group 11 Setswana N=1,050 U–R	Group 12 Setswana N=1,275 U–R
SOC	.57				.46	.30–.31	
AFM:PA	.70				.56	.51–.51	
AFM:NA	−.54				−.18	−.25 to −.29	
SWLS				.49	.34	.39–.39	.40–42
GHQ		−.56	−.30		−.37	−.22 to −.21	−.37 to −.37
PHQ-9		−.53	−.25	−.25	.38		−.19 to −.20
NGSE						.31–.35	
SRS		.31					
CSE		.70		.47	.45		.50–.39
FORQ	.65	.59	.46		.48		
GPWS				.53	.52		.50–.50
WEMWBS							.42–.42

U urban, *R* rural, *MHC-SF* Mental Health Continuum-Short Form, *SOC* Sense of Coherence Scale, *AFM* affectometer 2, *PA* positive affect, *NA* negative affect, *SWLS* Satisfaction with Life Scale, *GHQ* General Health Questionnaire, *PHQ-9* Patient Health Questionnaire: Depression Symptoms, *NGSE* New General Self-Efficacy Scale, *SRS* Self-Regulation Scale, *CSE* Coping Self-Efficacy Scale, *FORQ* Fortitude Questionnaire, *GPWS* General Psychological Well-Being Scale, *WEMWBS* Warwick–Edinburg Mental Well-Being Scale
[a]Measures varied in the different groups

Prevalence of Levels of Psychosocial Well-Being

The percentages of participants who were flourishing, languishing, or moderately mentally healthy in each of the subgroups are shown in Table 4.4.

As can be seen from Table 4.4, the prevalence of flourishing in groups varied from 28% in teachers to 61.7% in a rural Setswana-speaking group of adults and between 1.5% (teachers) and 9% (urban Setswana-speaking adults) for languishing. The variation in percentage of groups that were flourishing was relatively large.

Discussion

The main finding of this study is that there are considerable differences in the prevalence of levels of well-being, as measured with the Mental Health Continuum–Short Form (MHC-SF) among the various groups explored in this study. This variation is, in some instances, greater than previously reported and needs to be explained and explored further.

Table 4.4 The prevalence of the various levels of mental health in all groups

Subgroup	Number of participants	Flourishing	Moderate mental health	Languishing
Group 1	568	60	34	6
FET1 college students 2007				
Group 2	1,480	60.2	34.3	3.5
FET2 college students 2008				
Group 3	185	43.9	47.6	7.5
FET3 Setswana-speaking college students 2009				
Group 4	263	60.8	35.4	3.8
FET4 college students 2010				
Group 5	293	51.5	45.1	2.7
University students 2010				
Group 6	122	38.5	57.4	4.1
Adults, Afrikaans speaking 2008				
Group 7	204	51.5	45.1	3.4
Adults, English and Afrikaans. speaking 2007/8				
Group 8	409	28.0	70.5	1.5
Teachers multicultural 2008/9				
Group 9	296	52.0	42.6	5.4
Adults, Setswana speaking Urban 2008				
Group 10	459	47.4	43.6	9.0
Adults, Setswana speaking Urban and Rural 2009				
Group 11				
Adults, Setswana speaking				
A. Urban 2005	443	29.6	66.1	3.6
B. Rural 2005	583	13.9	78.9	7.2
Group 12				
Adults, Setswana				
A. Urban 2010	581	52.8	40.6	6.5
B. Rural 2010	694	61.7	32.4	5.9

The Measure and Model of Levels of Well-Being

Both the English and Setswana versions of the MHC-SF measured reliably in all the groups of participants and showed comparable descriptive statistics. In both the student and adult groups, findings showed moderate to strong positive correlations between the MHC-SF, on the one hand, and all other measures of (facets of) psychosocial well-being as implemented in the specific project on the other hand, especially with positive affect, coping self-efficacy, perceived social support, and general psychological well-being. The MHC-SF also showed negative correlations with indices of symptoms and pathology. These findings support the criterion-related

validity of the MHC-SF as a measure of well-being in these various groups, which differ—in some instances—in cultural contexts, and are in line with the conclusions of Keyes et al. (2008). The positive correlations, with a variety of other measures of different facets of well-being, also support the assumption that this model is appropriate for establishing (levels of) psychosocial well-being from a relatively holistic perspective.

The Prevalence of Levels of Well-Being in Youth

The findings of this study are in line with that of Keyes (2006a, 2007) in so far as youth, in general, show a higher percentage of flourishing than adults. However, the findings differ from the findings in the United States, as participants in some of the five convenience samples of young people in the South African context showed much higher percentages of flourishing. Whereas Keyes (2006a, 2007) reported a prevalence of approximately 38% flourishing in US youth, the current student samples showed prevalence between 43 and 61% of flourishing. Of course, it may be because the South African groups were convenience samples, whereas Keyes used larger and more representative samples, but it is probably also because they are student samples. Students at colleges and universities are highly selected, and in some instances, quite privileged, and may therefore report relatively higher levels of flourishing and the same or smaller levels of languishing. Another possible explanation for the difference between the current findings and that of Keyes for youth may perhaps be because the student groups are slightly older (mean age of 20 years) than youth in the Keyes sample (12–18 years of age). Percentages of flourishing youth in Keyes' (2006a) sample are more in line with those found in secondary school children (between 15 and 17 years of age) in the South African context; for example, Van Schalkwyk and Wissing (2010) found 42% flourishing in a multicultural group, and Brink (2010) found 32% flourishing in a primarily white group.

Of the student samples included in the current study, group 3 (a Setswana-speaking group from a deep rural area with very little resources and poor infrastructure) showed the smallest percentage of flourishing (43%), which is still slightly higher than that reported by Keyes. The relatively lower prevalence of flourishing in this group may indicate the possible role of context and sociodemographic variables. Groups 1, 2, and 4, for which data were gathered from 2007 to 2010, showed a very high percentage of flourishing (60%). These groups are multicultural samples with approximately 75% black participants from urban areas. This high level of flourishing was unexpected, as most of the participants in these samples had many socioeconomic and other challenges to cope with. However, it is in line with findings of Rugiera et al. (submitted) in a Tanzanian group of students who also showed an unexpected 72% of flourishing. University students (group 5), of which approximately 70% were white, also manifested high percentages of flourishing (51%); however, this is lower than that of the primarily black groups of students. It may thus be that black African participants show a higher prevalence of flourishing,

as suggested by Keyes (2007), but this needs to be explored further, as well as the role of contextual factors and sociodemographic variables determined in the South African context.

In order to obtain a further perspective on the discrepancy between percentages of flourishing youth in the United States and South African samples, post hoc analyses were conducted on the percentage participants in each level of well-being who also manifested symptoms of major depression, as diagnosed with the PHQ-9, in the various student groups where data were available. Keyes (2005) reported that 5%, 13%, and 28% of adults in the flourishing, moderate mentally healthy, and languishing groups, respectively, experienced major depression. The flourishing participants in the South African college student groups 1, 2, and 3 showed symptoms of major depressive disorder of 21%, 14%, and 13%, respectively; the moderately mentally healthy level participants showed major depression of 32%, 19%, and 27%, respectively, in the various samples; and the languishing participants showed 56%, 34%, and 29% of depressive disorder in groups 1, 2, and 3, respectively. The high levels of depressive symptoms in group 1 in comparison to the other two groups may be due to data being collected directly before the end-of-the-year exams, whereas the other groups completed the questionnaires in the beginning (group 2) and middle (group 3) of the year. The tendency reported by Keyes (2005) for adults with higher percentages of depression in languishing groups was also found in the South African data with college students, but the students showed a higher incidence of depression. It should, however, be taken into account that depression was not evaluated in the same way in the US and South African studies. What is important to note for the purposes of the current study is that the South African groups showed both higher percentages of flourishing and more depression. This raises the question of whether these findings are the result of a response artifact or whether other, perhaps cultural, explanations are possible. Further research is necessary, for example, on the role of response style and specific contexts of the identification of levels of well-being and pathology. Possibly, measurement equivalence to exclude bias could be tested in various contexts.

The Prevalence of Levels of Well-Being in Adults

Adults in the South African context, as evaluated in groups 6–12, showed notably higher percentages of flourishing and lower levels of languishing than the 18% and 17%, respectively, found by Keyes (2007) in a US sample. The subgroup with the lowest percentage of flourishing participants in this study was found in group 11 for Setswana-speaking people in a deep rural area where only approximately 14% were flourishing (but at the same time also only 7% languishing) during data gathering in 2005. This is the same area where the college students in group 3 were evaluated in 2009 and which showed lower levels of well-being than other student groups in the same educational system. Context and sociodemographic variables may thus play a role and should be further explored. The other adult group that showed a notably

lower percentage of flourishing in comparison to other groups in this study (but still slightly higher than adults as found by Keyes in the United States) is the multicultural group of secondary school teachers (group 8) with 28% flourishing. The explanation for this relatively lower percentage of flourishing in comparison to other South African groups of adults in the current study may be due to teachers experiencing relatively high levels of stress, especially in the South African context, because of various factors such as high pressure, high workloads, little resources, low salaries, many curricula changes, overcrowded classes, etc. (Naring et al. 2006). It is, however, also noteworthy that this group manifested the lowest percentage of languishing. It may be because people who could not cope in the educational system had left. In the instance of this group of comparable (age, gender, socioeconomic status; cf. Malan 2007; Potgieter et al. 2010) black and white teachers, the mean scores on the MHC- SF did not differ significantly between black ($M=48.3$, SD = 10.9) and white ($M=47.8$, SD = 9.8) teachers.

The other adult groups (excluding groups 8 and 11) showed prevalence rates for flourishing between approximately 40% and 60% and languishing between 4% and 9%, which differ from Keyes' (2007) adult sample and with generally little differences between primarily black and white samples. Results from group 11 showed that urban versus rural contexts are important, as was also suggested by the findings for students in urban versus rural contexts. Other South African studies have also indicated that people in rural areas are far worse off as far as psychosocial well-being is concerned, in comparison to people from urban areas, and different from the trend in developing countries (cf. Vorster et al. 2000; Wissing et al. 2010).

An unexpected finding that is difficult to explain is that the rural subgroup in group 12 showed 61% flourishing, whereas the rural group in group 11 showed only 13% flourishing (findings were double checked, from data collection to coding and statistical analyses). Data for group 12 were collected in 2010 as part of a multidisciplinary follow-up study on the same participants who participated in the 2005 data collection wave (group 11), with only a few new participants in the sample. The urban subgroup also showed a notable increase in percentage of flourishing participants, but not to the same extent as the rural group. Although circumstances in South Africa might have improved in some regards from 2005 to 2010, very little has changed in the rural areas, which still have fewer resources, poor infrastructures, poor health facilities, high unemployment, high poverty rates, etc., and where recent protests took place because of the lack of facilities. However, the ministry of rural development and land reform, with its planning, may have given more hope to people in rural areas in terms of agrarian transformation, land reform, and consequent development (Parliamentary Monitoring Group 2009). A further possible explanation for the much higher percentages of flourishing in the rural participants of group 12 is that the soccer World Cup, which took place in South Africa during June–July 2010 generated a very positive mood in the country as reported by various social commentators such as *esprit de temps* and by Harris as part of her follow-up study of optimism in South Africa (Harris 2007). This explanation links to Haybron's (2007) argument that people's evaluations of their lives are influenced by the perspectives they are taking at that moment and that these are influenced by

contextual factors. But why was there more incidence of flourishing in rural areas than in urban areas? It may be because there is so little going on in the rural areas that the World Cup festivities in the rural areas made such a huge difference to people's lives—more than in the case of urban participants, who also have other distractions and recreational opportunities. However, further research is necessary, especially qualitative research, to understand the 2010 findings in the rural group.

Limitations

The current study has several limitations; for example, only some of the samples were probabilistic whereas others were not. The role of age, gender, time of data collection, and sociodemographic variables has not been systematically controlled for. Possible concomitant psychopathology was also not taken into account, and therefore, findings cannot be generalized. But still, the findings suggest that the prevalence of levels of well-being may vary in different contexts and that the prevalence of levels of flourishing, as measured with the MHC-SF, is higher in an African context than in the United States, despite the fact that South Africa is only a developing country with many challenges ahead of it.

Further Research

Future research could explore the prevalence of psychosocial well-being in typically probabilistic national surveys, such as the US General Social Survey and the European Social Survey. These types of studies could explore the role of sociodemographic variables and the urban–rural divide in psychosocial well-being, as prevalence differentials are indicated in various studies. In this way, national probabilistic samples may clarify the distribution of psychosocial well-being in various contexts in order to enable a body of knowledge in epidemiofortology.

Programs to enhance strengths, coping self-efficacy, and flourishing for various specifically targeted groups may be developed and evaluated. Van Schalkwyk and Wissing (in press) show that such a program can significantly enhance the number of flourishing participants in a multicultural secondary school sample of children, but further research is still necessary. This is true for adult groups, as well.

Further Conceptual Issues for Consideration

Keyes' mental health continuum model conceptualizes mental health from pathology to flourishing and can be viewed as an idealistic, hermeneutic model, or a critical approach model, with a pragmatic focus on health promotion. However, the

distinction of levels (or categories) of mental health on the positive end/dimension (languishing to flourishing) and their measurement with the MHC-SF also suggest a statistical, nomothetic model. This raises the question of whether psychological health is normally distributed in a community and/or whether it is realistic to optimize psychological functioning for all people to levels of flourishing or close to that. Conceptual clarification of such issues is important for standardizing cutoff points and norms for levels of well-being and percentages of flourishing.

Another issue to be considered is that it may be worthwhile to distinguish between levels (degrees) of well-being and *patterns* of well-being (analogous to patterns or syndromes of psychopathology) and to further explore both in epidemiological and epidemiofortological studies. Keyes refers in his description of the categories flourishing, moderate mental health, and languishing sometimes as levels (or degrees) of well-being, and then again as *syndromes*, to make it comprehensible in a medical context. The problem with this is, firstly, that a degree and a syndrome are not the same thing, and secondly, a syndrome is a combination of symptoms and thus part of a medical model. We suggest that patterns of well-being may exist that may also vary in different cultural contexts (cf. Wissing and Temane 2008), and that these should be further explored, described, and researched in epidemiofortological studies.

Conclusion

The prevalence of levels of well-being is not the same in all the groups included in this study, and various contextual, sociodemographic, or group-specific characteristics may play a role and should be explored in future studies. The percentages of flourishing in most of these South African groups are higher than those in the United States, particularly in students and black African participants, whereas the percentages of languishing are similar. Further empirical research is required to determine the role of contextual, historical, and sociodemographic variables. Qualitative research may help to provide a deeper understanding of the shift in well-being in rural areas, as found from 2005 to 2010, in order to capitalize thereupon for consolidation and further facilitation of psychosocial health. Further conceptualization and exploration with regard to possible patterns of well-being (different from *levels* of well-being but analogous to syndromes of pathology) may be a next step in building a base of knowledge for mental health from a positive perspective.

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