

Title: LIFE SATISFACTION AND SELF-ESTEEM OF BLACK AND
WHITE SOUTH AFRICANS: A PILOT STUDY

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ABSTRACT

As part of the practical work for a Quality of Life Module (MPH) at the University of Pretoria, a pilot study was conducted on life satisfaction and self-esteem. A cross-sectional, analytical research design was used, with the hypotheses that: (1) life satisfaction and self-esteem were unitary concepts; (2) differences between black and white respondents on life satisfaction and self-esteem were confounded by demographic characteristics; and (3) self-esteem was positively related to life satisfaction. A structured questionnaire was designed to obtain information on demographic characteristics (race, age, gender, marital status, years of schooling and employment status), the 5-item Satisfaction With Life Scale (SWLS) and the 10-item Rosenberg Self-Esteem (RSE) scale. The questionnaire was administered to 34 black and 20 white South Africans. Black respondents were less likely to have completed high school than white respondents ($p < 0.001$); they were also more likely to be unemployed than white respondents ($p = 0.009$). Factor analysis resulted in a single factor for both scales, accounting for 76% of the variance in the SWLS and 77% of the variance in the RSE, providing substantial support for hypothesis 1. Coefficient alpha was 0.92 for the SWLS and 0.97 for the RSE. Multiple analyses of co-variance, controlling for education, showed non-significant differences between black and white respondents on life satisfaction ($p = 0.92$) and self-esteem ($p = 0.78$), providing support for hypothesis 2. Self-esteem was highly correlated with life satisfaction ($r = 0.86$, $p < 0.001$), providing substantial support for hypothesis 3. Overall, the results on the SWLS and the RSE show particular promise for measuring life satisfaction and self-esteem in cross-cultural settings.

INTRODUCTION

Life satisfaction has been defined as a person's cognitive judgement of life as a whole; one component of human well-being (Pavot and Diener, 1993). Positive and negative affect, the other two components of well-being, are related to life satisfaction but the three components do not overlap completely (Pavot and Diener, 1993). Although relatively stable, life satisfaction is influenced by life events. For example, only 48% of South African black respondents were satisfied with their lives in 1983 in comparison with 80% in 1994; attributed to the first universal franchise elections (Moller, 1996). By 1999, this proportion had decreased to 50%, in contrast with 80% of the white population (Moller, 2001).

International research, using a 5-item Satisfaction With Life Scale (SWLS), has found that the average scores on the index for most respondents fall in the slightly satisfied to satisfied range (Pavot and Diener, 1993). Prisoners, patients under treatment for alcohol abuse and abused women had significantly lower life satisfaction scores than other samples. The SWLS has strong internal reliability, with alpha coefficients ranging between 0.79 and 0.89 (Pavot and Diener, 1993). Life satisfaction was related to self-esteem ($r = 0.68$), depression ($r = -0.72$) and anxiety ($r = -0.54$). These findings provided substantial evidence on the reliability and validity of the SWLS.

Rosenberg defined self-esteem as "a positive or negative attitude toward a particular object, namely, the self (1965: 30). Individuals who take a positive attitude towards themselves do not necessarily feel superior to others, nor accept themselves unconditionally, but they do respect themselves and consider themselves as worthy. Furthermore, they recognise their limitations and have expectations concerning their

growth and improvement (Rosenberg, 1965). The 10-item Rosenberg Self-Esteem (RSE) scale measures the self-acceptance aspect of self-esteem as a unitary concept.

Although Carmines and Zeller (1979) found a two-factor solution (positive and negative self-esteem), the significant correlations between each self-esteem dimension and 16 external variables led to the conclusion that the items were measuring a single theoretical dimension of self-esteem. The bi-factorial solution had been contaminated by response set (Carmines and Zeller, 1979: 62-69). Reliability (internal consistency) coefficients for black South Africans ranged between 0.78 and 0.92 (Westaway and Wolmarans, 1992; Westaway, Rheeder, van Zyl and Golele, 2000). These coefficients demonstrated that this scale was a suitable cross-cultural measure of self-esteem.

As Pavot and Diener consider "that the SWLS has potential as a cross-cultural index of life satisfaction" (1993: 169), it was decided to empirically pilot-test the SWLS with a sample of black and white South Africans as part of the practical work for a Quality of Life Module (MPH) at the University of Pretoria.

METHODS

A cross-sectional, analytical research design was used to investigate the cross-cultural usefulness of the SWLS and the RSE. It was hypothesised that: (1) life satisfaction and self-esteem were unitary concepts; (2) differences between black and white respondents on life satisfaction and self-esteem were confounded by demographic characteristics; and (3) self-esteem was positively related to life satisfaction.

A structured questionnaire, with a consent form, was designed to obtain information on demographic characteristics (race, age, gender, marital status, years of schooling and

employment status), the 5-item Satisfaction With Life Scale (Pavot and Diener, 1993) and the 10-item Rosenberg Self-Esteem scale (Rosenberg, 1965).

Descriptive statistics were the first step for data analysis. Multi-trait scaling was used to test item convergent and discriminant validity (Stewart, Hays and Ware, 1988) of the two scales. This method tests whether each item in a hypothesised group is substantially related ($r \geq 0.40$) to the total score computed from other items in that group (item convergent validity criterion) and whether each item correlates significantly higher with its hypothesised scale than with other scales (item discriminant validity criterion).

The reliability (internal consistency) of the SWLS and the RSE was assessed (Cronbach, 1970); coefficient alpha of 0.70 was regarded as acceptable, between 0.71 and 0.80 as respectable and > 0.80 as very good (Arias and de Vos, 1996; Nunnally, 1978: 245). T tests, one-way analysis of variance and Pearson correlation coefficients were used to examine demographic effects. Thereafter, multivariate statistical procedures (principal components analysis, confirmatory factor analysis, multiple analyses of co-variance and stepwise multiple regression) were used to analyse the data further.

RESULTS

Demographic Information

The questionnaire was administered to 34 black and 20 white respondents (22 males and 32 females), aged between 17 and 70 years (average age = 36.1 years, $sd = 12.5$). There were no significant differences between black and white respondents on gender ($p = 0.78$), age ($p = 0.06$) or marital status ($p = 0.73$). However, black respondents were

less likely to have completed high school ($p < 0.001$) than white respondents; they were also more likely to be unemployed than white respondents ($p = 0.009$), Table 1.

Life Satisfaction

Average scores, factor loadings, item-total correlation coefficients and Fisher's z test for the 5-item SWLS are shown in Table 2. Average scores for each item were lower than those found for Americans (Pavot and Diener, 1993), suggesting that Americans were more satisfied with their lives than South Africans. The average overall score for the SWLS was 21.7 ($sd = 8.8$), in the slightly satisfied category. The Kaiser-Meyer-Olkin measure of item sampling adequacy was 0.88, in the meritorious category (Kaiser, 1974). A single factor emerged, accounting for 76% of the variance. This single-factor solution was virtually identical to previous studies with Dutch medical outpatients, French-Canadian college students and American college students (Pavot and Diener, 1993), and provided substantial support for hypothesis 1.

All corrected item-total correlation coefficients exceeded the item convergent validity criterion of 0.40 (Stewart, Hays and Ware, 1988), and ranged between 0.71 and 0.86. Only one item in the scale failed to meet the item discriminant validity criterion. Coefficient alpha was 0.92, indicative of very good scale reliability (Arias and de Vos, 1996; Nunnally, 1978).

Neither gender ($p = 0.47$), age ($p = 0.08$) nor marital status ($p = 0.75$) were related to life satisfaction. The average scores for black respondents placed them in the neutral category in comparison with the slightly satisfied category for white respondents. Although black respondents had significantly lower SWLS scores than white

respondents ($p = 0.02$), there was considerable variability on life satisfaction for black respondents as shown by the frequency distribution, the standard deviation (Black = 9.8; White = 5.9) and inter-quartile range (Black = 10-28.3; White = 22-27.8). Education explained 35% of the variance in life satisfaction ($p < 0.001$); being employed explained an additional 5% of the variance ($p = 0.04$).

Self-Esteem

Average scores, factor loadings, item-total correlation coefficients and Fisher's z test for the 10-item RSE are shown in Table 3. The average overall score on the RSE was 30.8 ($sd = 9.7$). The Kaiser-Meyer-Olkin measure of item sampling adequacy was 0.90, in the marvellous category (Kaiser, 1974). A single factor emerged, accounting for 77% of the variance, providing substantial support for hypothesis 1. All corrected item-total correlation coefficients exceeded the item convergent validity criterion of 0.40 (Stewart, Hays and Ware, 1988), and ranged between 0.74 and 0.93. Five items failed to meet the item divergent validity criterion. Coefficient alpha was 0.97, indicative of very good scale reliability (Arias and de Vos, 1996; Nunnally, 1978).

Self-esteem was not related to gender ($p = 0.40$), age ($p = 0.06$) nor marital status ($p = 0.70$). Although black respondents had significantly lower RSE scores than white respondents ($p = 0.005$), there was considerable variability on self-esteem for black respondents as shown by the frequency distribution, standard deviation (Black = 11.1; White = 4.5) and inter-quartile range (Black = 17-39; White = 31.5-38). Education alone explained 37% of the variance in self-esteem ($p < 0.001$); employed respondents had higher self-esteem scores than unemployed respondents ($p = 0.05$).

Life Satisfaction and Self-Esteem

Multiple analyses of co-variance, controlling for education, were used to tease out racial effects on life satisfaction and self-esteem. There were no significant differences between black and white respondents on life satisfaction ($p = 0.92$) or self-esteem ($p = 0.78$), providing support for hypothesis 2 (Table 4).

The SWLS was highly correlated with the RSE ($r = 0.86$, $p < 0.001$), accounting for a greater proportion of variance than was found previously (Pavot and Diener, 1993). Stepwise multiple regression (forward and backward) was used to ascertain the effects of education, race and self-esteem on life satisfaction (Table 5). In both forward and backward models self-esteem explained 74% (adjusted R^2 : 0.736) of the variance in life satisfaction. Education and race did not explain any of the variance in life satisfaction.

DISCUSSION

White respondents were more likely to have completed high school than black respondents; they were also more likely to be employed. These differences were expected and reflected inequalities in access to education and jobs. Under the apartheid system, education was compulsory for the white population but not for the black population. In addition, the system restricted the movement of labour and job reservation meant limited social mobility for the black population (Moller, 2001: 35).

One factor explained 76% of the variance in the SWLS, 10% more than was found previously (Diener, Emmons, Larsen and Griffin, 1985). The two-factor solution found by Carmines and Zeller (1979) explained only 41% of the variance in the RSE, in contrast

with the 77% of the variance found in the present study. These one-factor solutions suggested that there is coherence to life satisfaction and self-esteem. All item-factor loadings on the SWLS and the RSE were above 0.50, contributing to a "strong" factor structure (Nunnally, 1978: 418). These analyses provided considerable support for hypothesis 1, and substantiated Pavot and Diener's (1993) and Rosenberg's (1965) theoretical perspectives on the unitary dimensions of life satisfaction and self-esteem.

Coefficient alpha was 0.92 for the SWLS, slightly higher than was found previously (Pavot and Diener, 1993), and 0.97 for the RSE. Both coefficients were indicative of very good scale reliability (Arias and de Vos, 1996; Nunnally, 1978).

Although Michalos (1991: 59) reported that demographic characteristics, within countries, explained a very low proportion of the variance in subjective well-being, education explained 35% of the variance in life satisfaction and 37% of the variance in self-esteem in the present study. When education was controlled, there were no differences between black and white respondents on life satisfaction and self-esteem. It would appear that education, in the South African context, moderates the effects of race on life satisfaction and self-esteem. Moller (2001) found that only 50% of black South Africans were satisfied with their lives, in comparison with 80% of white South Africans, in 1999. These contrasting findings were probably due to the different statistical procedures used in the two studies (V. Moller, personal communication, 15 October, 2001). In another study with the richest black and white South Africans, there were no differences between the groups on any subjective quality of life measures (V. Moller, personal communication, 15 October 2001). It would appear that racial differences on life satisfaction and self-esteem, in the South African context, tend to be an artefact of socio-economic differences rather than race *per se*. Of even more importance to the

South African debate on racial differences in life satisfaction (Moller, 1996, 2001), was the finding that self-esteem alone explained 74% of the variance in life satisfaction. This finding suggested that subjective variables, such as self-esteem, are much more important for life satisfaction than socio-demographic characteristics (Bowling and Windsor, 2001).

In conclusion, the results on the SWLS and the RSE show particular promise for measuring life satisfaction and self-esteem in cross-cultural settings.

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Table 1. Demographic Characteristics of the Sample

Demographic Characteristics		Black (n = 34)	White (n = 20)
Gender:	Male	13	9
	Female	21	11
Age Groups:	17-24 years	2	4
	25-34 years	17	9
	35-44 years	6	4
	45-54 years	3	2
	55+ years	6	1
Education:	None	3	0
	Grade 1-6	9	0
	Grade 7-9	5	0
	Grade 10-11	2	3
	Grade 12	15	17
Marital Status:	Married	19	10
	Single	12	9
	Divorced/Separated	3	1
Employment Status:	Employed	16	17
	Unemployed	18	3

Table 2. Item Means, Standard Deviations, Item Factor Loadings (IFL), Corrected Item-Total Correlation Coefficients (r) and z tests for the Five Satisfaction with Life Items

Items	m	sd	IFL	r	z
1. My life is close to my ideal	4.1	2.1	0.82	0.73	1.99*
2. My life conditions are excellent	4.4	2.0	0.90	0.83	3.04*
3. I am satisfied with my life	4.5	2.0	0.91	0.84	2.02*
4. Have got the important things in my life	4.5	2.0	0.92	0.86	2.10*
5. Would change almost nothing in my life	4.3	2.1	0.81	0.71	1.20

* $p < 0.05$

Table 3. Item Means, Standard Deviations, Item Factor Loadings (IFL), Corrected Item-Total Correlation Coefficients (r) and z tests for the 10 RSE Items

Items	m	sd	IFL	r	z
1. I feel that I'm a person of worth	3.1	1.1	0.95	0.93	2.92**
2. I feel that I have a number of good qualities	3.2	1.0	0.91	0.89	2.54**
3. I am inclined to feel that I'm a failure	3.2	1.0	0.92	0.89*	2.59**
4. I am able to do things as well as others	3.2	1.1	0.92	0.89	2.77**
5. I feel I do not have much to be proud of	3.1	1.1	0.88	0.85*	1.61
6. I take a positive attitude towards myself	3.2	1.1	0.93	0.90	3.11**
7. On the whole, I am satisfied with myself	3.1	1.1	0.83	0.78	1.28
8. I wish I could have more respect for myself	2.7	1.3	0.78	0.74*	1.34
9. I certainly feel useless at times	2.8	1.1	0.80	0.76*	1.29
10. At times I think I'm no good at all	3.0	1.1	0.85	0.82*	1.34

* reversed items

** $p < 0.05$

Table 4 Mean Scores (m), Standard Deviations (sd), Adjusted Means (am) and Standard Errors (se) for Black and White Respondents on the SWLS and the RSE

Scale	Black (n = 34)				White (n = 20)				F	p
	m	sd	am	se	m	sd	am	se		
SWLS	19.9	9.8	21.8	1.3	24.9	5.9	21.6	1.8	0.79	0.78
RSE	28.4	11.1	30.5	1.4	34.8	4.5	31.2	1.9	0.01	0.92

Table 5. Regression of Self-Esteem, Race and Education on Life Satisfaction

Variable	beta	t	p
Self-esteem	0.862	12.28	0.000
Race	-0.004	-0.05	0.963
Education	0.102	1.15	0.257
