

Predicting general well-being from self-esteem and affectivity: An exploratory study with Scottish adolescents

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Abstract

The present study investigated the association between the personality constructs of self-esteem/affectivity and General Well-Being (GWB) in Scottish adolescents. A total of 425 secondary school pupils completed the P.G.I. General Well-Being Scale [Verma et al. *Ind J. Clin. Psychol.* 10 (1983) 299], the Hare Self-esteem Scale (HSES) [Hare, The Hare General and Area-Specific (School, Peer, and Home) Self-esteem Scale. Unpublished manuscript, Department of Sociology, SUNY Stony Brook, New York, mineo, 1985] and the Positive and Negative Affect Schedule (PANAS) [Watson et al. *J Personal Soc Psychol* 54 (1988a) 1063]. Combined self-esteem, positive and negative affectivity, age and gender accounted for 49.7% of the total GWB variance, 24.9% of the physical well-being variance, 41.6% of the mood/affect well-being variance, 33.3% of the anxiety well-being variance and 44.3% of the self/others well-being variance. Home self-esteem was found the strongest predictor of mood/affect and self/others well-being domains as well as well-being total. It was also the second best predictor of anxiety well-being domain. School self-esteem was the strongest predictor of physical well-being, whereas negative affectivity was the strongest predictor of anxiety well-being domain. However age and gender were not significantly associated with GWB, total or domain specific. The study adds to previous evidence regarding the high association between GWB and personality factors in adult and adolescent populations. Directions for future research are discussed.

Key words: General well-being, Adolescents, Self-esteem, Affectivity

Introduction

Despite its conceptual elusiveness, general well-being (GWB) has been defined as encompassing people's cognitive and affective evaluations of their lives [1]. Other terms that have been used, interchangeably with the GWB term, included life satisfaction, quality of life and psychological well-being (e.g., [2–4]). Nevertheless, previous large-scale studies on adults have indicated that, although such GWB-related constructs may be closely related, they still retain their unique and distinctive conceptual and measurement status [5, 6]. One of the most commonly accepted defi-

nitions across the literature describes Q.O.L. as “a general sense of well-being” [7]. Although this definition appears to be rather general, it incorporates the multiple meanings of the term described earlier on. In the present study the term includes physical, mental health and social aspects (see also [8]).

When it comes to GWB research on children and adolescents, little work has been carried out so far, as compared to the bulk of related work on adults (Jirojanakul et al., 2003). However, there are several reasons why research on adolescents' well-being is important. Firstly, adolescents, as an age group, are thought to reflect society's future

productive powers, therefore their well-being may be highly important as it might encourage resilience and protectiveness [9]. In addition, although adolescence is generally considered a time of good health and well-being, this particular age group still presents with high rates of mental health disorders [10]. It has been previously acknowledged that GWB could in fact act as a protective factor against psychopathology [11]. Furthermore, low levels of GWB have been found associated with major negative behavioural outcomes in adolescence. These included delinquency (e.g., [12], bullying/victimization [3, 13] and substance use [14, 15]). For example, there has been evidence, in previous research, that low levels of GWB are associated with bullying from the bully's point of view, whereas the experience of bullying from the victim's point of view could result in lower well-being levels. In the same study it was found that those who were involved in either bullying and/or victimization were also found to have significantly higher levels of negative affectivity and lower levels of self-esteem both total and area specific [3, 13]. These results indicate that behavioural outcomes in adolescence may be influenced by a number of psychological factors, including GWB and personality; therefore, it is worth exploring the association between these factors further.

Previous existing research in adolescents has identified a number of significant factors associated with GWB. These include demographic (e.g., Jirojanakul et al., 2003; [4]), personality (such as emotional stability, [16]; general confidence [17]; self-esteem [18, 19]), life events (e.g., 25) and school performance [17]. It may be important to emphasize that apart from GWB, personality constructs, like high self-esteem have been shown to act as protective factors against psychopathology in adolescents [20]. McGee and Williams [21] in a longitudinal study in New Zealand focusing on adolescents found that low self-esteem significantly predicted problem eating patterns, suicidal ideation and substance use.

A number of studies have previously addressed the association between GWB and personality factors. However, DeNeve and Cooper [22] have offered the most comprehensive review on the association between GWB and personality factors, predominantly dimensions of the five factor model. In their meta-analytic study, they have

found that the typical personality/well-being correlation was about 0.19, which is comparable with variables, like income and self-reported health status. Nevertheless, high variations existed across studies regarding strength of association between GWB and personality factors, depending on GWB scales used and personality variables included. In studies reviewed by De Neve and Cooper, which employed both personality and demographic factors, as possibly contributing to well-being factors, the amount of GWB variance explained by demographic factors, ranged from 3 to 6%, and by personality ranged between 6 and 18%, across studies. It was also suggested that, when demographic and personality factors were combined, they explained a higher percentage of well-being variance, ranging from 20% to 39% across studies [22]. However, it is important to acknowledge that the above meta-analytic review was based on related research on adults and there has been evidence suggesting variations in GWB levels across the life span [23]. Previous limited research on the association between GWB and personality in adolescents has also shown that there is a high association between self-esteem and GWB [4]. In a study of 222 high school students in the USA, Dew and Huebner [24] found that well-being forms significant positive associations with self-esteem measures ($r = 0.15-0.62$, $p < 0.05$). In another study by McCullough et al. [25] the association between well-being and positive affectivity was $r = 0.45$, $p < 0.05$ and between well-being and negative affectivity was $r = -0.28$, $p < 0.01$. Their results were based in a sample of 92 high school students in the USA. Similarly to adult populations, variables such as age and gender have been found to be relatively weak predictors of GWB in adolescents [4].

Irrespective of the strength of association between GWB and various personality variables across age it appears that personality constructs, in general, are considered among the strong determinants of GWB in previous related research. Several explanations have been offered on this. Top-down theories of GWB, for example, claim that global GWB determines the levels of well-being in individual domains [26]. Such theories assume that there may be a personality trait-based tendency to experience life in a positive or a negative way. This tendency may influence individual

interpretations of momentary events; hence, the high association between GWB and personality factors [27]. Furthermore, Headey and Wearing [28] have suggested that when people experience adverse life events, certain personality traits may facilitate the maintenance of GWB levels. In addition, McCre and Costa [29] suggested that certain personality traits, such as extraversion, are directly linked with GWB, whereas other personality traits, such as conscientiousness, have an indirect instrumental role on GWB. Psychobiological explanations have also been employed to explain the link between personality and GWB (e.g., [30]), which are beyond the scope of the present review. The above theoretical formulations have been largely supported both by correlational and experimental research findings [22]. Methodological explanations on the association between GWB and personality factors have also been offered. In particular it has been suggested that GWB may share a core common meaning with personality measures like affectivity, albeit these two variables may be highly correlated [11]. There is also a tendency to measure GWB as a long-term, rather than a momentary phenomenon, thus personality factors may have a stronger effect on GWB than demographics [31]. Finally, cognitive factors could also account for perceived GWB levels. Bower [32] claimed that people tend to recall memories, which are congruent with their current emotional state. Generic research on memory networks has shown that people usually develop a rich network of positive memories and a poor network of negative ones. Predisposition to either positive or negative associations influences the perception of GWB in a positive or negative way, respectively.

Regarding the association between GWB and self-esteem and affectivity, on which the present study is focusing on, the Broaden-and-Build Theory of Positive Emotions [33] has offered a theoretical explanation. In particular Fredrickson proposed that “positive emotions broaden people’s momentary thought-action repertoires. These in turn serve to build their enduring personal resources, ranging from physical to intellectual resources to social and psychological resources” (p. 218). Fredrickson theorized that positive emotions fuel and build psychological resiliency and improve emotional well-being, by enabling

flexible and creative thinking, promoting coping and broadening the scopes of attention and cognition. In the particular case of self-esteem it has been suggested that this may influence human behaviour in certain situations, life events, social relationships, goal shaping and motivation [34]. Therefore self-esteem could be regulating GWB levels. Furthermore, Watson and Clark [35] proposed that general predisposition towards positive or negative affectivity could also affect GWB levels.

The present research aimed to study the association between certain personality constructs (positive/negative affect, school, peer and home self-esteem) and GWB. Previous limited GWB research on adolescents, that employed personality factors such as self-esteem, lacked specificity (i.e., school self-esteem vs. home self-esteem) despite that previous research has suggested that the impact of self-esteem on well-being is closely dependent to the actual self-esteem measure used [36]. On the other hand, affectivity as a potential predictor of GWB has been rather neglected in previous research with adolescents, with a few exceptions (e.g., [25]). In addition, in the present research, the selection of affectivity and self-esteem, as potential predictors of GWB, was also based on the account that these two have been classified amongst the most influential personality traits on GWB, in previous research ([22], p. 219). Finally, these two factors have rarely been examined in combination, especially in adolescents, as in the present study.

Method

Procedure

A set of self-rated measures, described below, was administered to secondary school pupils by their teachers, in two schools in Central Scotland, during allocated class time. The two schools were not selected randomly from all schools in Scotland; therefore they are not representative of such population. However, measures were administered in two classes out of four, each selected randomly from grades 1–6, in both schools. Approximately one third of the student population was sampled from each school. Response rate was 100%. Parental written consent for participation in the

study was obtained prior to administration. The study was approved by the University of Stirling Research Ethics Committee. An information letter accompanied the questionnaires, emphasizing that participation was entirely voluntary, anonymous and confidential.

Participants

Sample consisted of 425 pupils from two secondary schools in Central Scotland. A total of 197 pupils from school A and a total of 228 pupils from school B participated. Males consisted 44.2% ($n = 188$) and females 54.8% ($n = 233$) of the sample. Four students (1%) did not report their gender. Mean age was 14.2 years ($SD = 1.3$).

Instruments

The questionnaire pack consisted of four scales described as follows.

Demographic measures

This comprised a set of two questions about pupil's age (years) and gender.

P.G.I. General Well-Being Scale [37]

A limited number of well-being scales suitable for adolescents exist at present [38], which incorporate physical, mental health and social aspects of well-being. P.G.I. General Well-Being Scale has been designed to assess general and domain specific subjective well-being in various age groups. It has been based on the scales used by Fazio [39] and Dupuy [40]. The scale has been previously used in research with adolescents in Scotland [2, 3, 13, 15]. Other similar scales such as the General Health Questionnaire [41] are predominantly being used as measures of psychological strain rather than as measures of GWB, which is the focus of the present study. The P.G.I. scale consists of 20 statements organized in four domains; physical (e.g., feeling bothered by illness or pain), mood (e.g., feeling cheerful most of the time), anxiety (e.g., feeling bothered by nervousness), self/others (e.g., feeling useful/wanted) of five items each. Each item is rated on a four-point scale indicating personal frequency of occurrence (not at all, rarely, often or most of the time, frequently or all the time). Higher total and domain-specific scores indicate higher

levels of well-being. Possible range for the total score is 20–80 and possible range for the subscales is 5–20. In the present study, Cronbach's α for the total score was 0.87 and for the physical subscale was 0.61, for the mood Subscales 0.71, for the anxiety subscale 0.58 and for the self/others subscale 0.77. Gutman's Split-half reliability coefficient on the total was 0.86 (ten items in part one = 0.76 and ten items in part two = 0.78). Intercorrelations between the total and subscales were high, ranging between $r = 0.77$, $p = 0.001$ and $r = 0.88$, $p = 0.001$. Intercorrelations between subscales were moderate to high, ranging between $r = 0.46$, $p = 0.001$ and $r = 0.75$, $p = 0.001$, indicating high internal consistency.

Hare Self-esteem Scale (HSES) [42]

HSES is a standardised, 30-item scale that measures self-esteem in school age children. The Hare Self-Esteem Scale is one of the very few self-esteem measures standardised in British adolescents, as opposed to other widely used scales such as the Harter's scale [43], which is not recommended for British children [44]. The scale provides both a general self-esteem score (the sum of all 30 items) and sub-scores for peer (e.g., I am not as popular as other people in my age), home (e.g., My parents are proud of me for the kind of person I am) and school (e.g., My teachers expect too much of me) 10-item domains. These are considered the main areas of interaction in which children develop self-worth. Participants respond in a four-point agree-disagree scale. Test-retest correlations (3-month interval) were between 0.56 and 0.65 for the subscales and 0.75 for the total score. The scale has also been found highly correlated ($r = 0.83$) with both the Coopersmith Self-Esteem Inventory [45] and the Rosenberg Self-Esteem Scale [42, 46].

Positive and Negative Affect Schedule (PANAS) [47]

PANAS is a standardised measure, which consists of 20 adjectives, ten assessing positive affect (e.g., excited) and ten assessing negative affect (e.g., upset). These adjectives describe different feelings and emotions. Participants responded in a five-point scale, ranging from "very slightly" to "extremely". Each point of the scale indicates the extent to which the adjective describes respondent's feelings. PANAS has been extensively

used with various population groups [35, 48]. Test-retest reliability of the scale was 0.68 for the positive affectivity sub-scale and 0.71 for the negative affectivity. Negative affectivity has been found to be positively and significantly related with self-reported stress and health complaints, whereas positive affectivity has been found to be positively and significantly associated both with social activity and physical exercise [47]. In our sample, Cronbach's α coefficient for the positive affectivity sub-scale was 0.82 and for the negative affectivity was 0.80.

Statistical analysis

Predictors of well-being, total and domain specific, were studied by means of stepwise linear regression analysis. Each of the self-esteem domains, as well as positive and negative affectivity, were entered together, in step 2, in a regression equation to predict scores on well-being total and domain specific. Gender and age were entered in step 1. Results are shown in Table 2. To control for multicollinearity, relationships between continuous variables were investigated by Pearson's r correlations. Although there were high interrelations between the variables (r range = 0.235, $p \leq 0.000$ to $r = 0.650$, $p \leq 0.000$), no bivariate correlation exceeded 0.70 [49], thus no variables were excluded from the regression analysis.

Results

Levels of well-being

As shown in Table 1 total well-being mean was 61.02 (SD = 7.96). As regards domain specific well-being, the highest levels were reported in the

Table 1. Mean, SD, sample range and scale range of well-being total and Domains

	Mean	SD	Sample range	Scale range
Well-being total	61.02	7.96	34–79	20–80
Physical well-being	15.10	2.42	8–20	5–20
Mood well-being	15.74	2.48	6–20	5–20
Anxiety well-being	14.60	2.41	7–20	5–20
Self/others well-being	15.41	2.65	6–20	5–20

mood/affect domain (mean = 15.74, SD = 2.48), followed by the self/others (mean = 15.41, SD = 2.65), the physical (mean = 15.10, SD = 2.42) and the anxiety domain (mean = 14.60, SD = 2.41).

Predicting well-being from demographics, self-esteem and affectivity

Combined self-esteem domains, positive and negative affectivity, age and gender accounted for 49.7% of the total GWB variance ($F[7,278] = 41.24$, $p \leq 0.001$), 24.9% of the physical well-being variance ($F[7,295] = 15.27$, $p \leq 0.001$), 41.6% of the mood/affect well-being variance ($F[7,298] = 31.98$, $p \leq 0.001$), 33.3% of the anxiety well-being variance ($F[7,301] = 22.92$, $p \leq 0.001$) and 44.3% of the self/others well-being variance ($F[7,296] = 35.41$, $p \leq 0.001$).

Age and gender were not found to be significantly associated with either the GWB domains or GWB total. As indicated from β scores higher total well-being scores were significantly associated with higher scores in all self-esteem domains and positive affectivity and lower levels of negative affectivity. Higher levels of physical well-being were significantly associated with higher scores in school self-esteem and positive affectivity and lower scores in negative affectivity. Higher levels of mood well-being were significantly associated with higher scores in all self-esteem domains and positive affectivity and lower scores in negative affectivity. Higher anxiety well-being was significantly associated with higher levels in all self-esteem domains and lower negative affectivity. In addition, higher levels of self/others well-being were significantly associated with higher scores in home and school self-esteem and higher positive affectivity and lower scores in negative affectivity (see Table 2). β scores also indicate that home self-esteem was the strongest predictor of the following well-being domains, i.e., mood/affect ($\beta = 0.29$, $t = 5.49$, $p \leq 0.001$) and self/others ($\beta = 0.31$, $t = 5.89$, $p \leq 0.001$), as well as of total well-being ($\beta = 0.29$, $t = 5.56$, $p \leq 0.001$). School self-esteem was the strongest predictor of physical well-being ($\beta = 0.26$, $t = 3.81$, $p \leq 0.001$) and negative affectivity was the strongest predictor of anxiety well-being domain ($\beta = -0.28$, $t = -5.38$, $p \leq 0.001$). These results indicate that home

Table 2. Predicting well-being total and domain specific from self-esteem and affectivity

	Physical well-being		Mood/affect well-being		Anxiety well-being		Self/others well-being		Total well-being	
	β	t	β	t	β	t	β	t	β	t
Age	-.02	-0.42	-0.05	-1.04	-.05	-1.12	-.02	-0.55	-.04	-0.88
Gender	-0.08	-1.52	0.04	0.90	0.01	0.30	-0.01	-0.38	-.01	-0.23
Peer self-esteem	0.06	1.13	0.11	2.32*	0.12	2.33*	0.09	1.89	0.13	2.80**
Home self-esteem	0.11	1.83	0.29	5.49***	0.25	4.47***	0.31	5.89***	0.28	5.56***
School Self-esteem	0.26	3.81***	0.16	2.73**	0.13	2.04*	0.17	2.98**	0.21	3.68***
Positive Affectivity	0.12	2.17*	0.19	3.94***	0.06	1.14	0.23	4.87***	0.20	4.21***
Negative Affectivity	-0.17	-2.99**	-0.20	-4.14***	-0.28	-5.38***	-0.17	-3.53***	-0.23	-4.97***
	Adj	$R^2 = 0.249,$	$R^2 = 0.416,$		$R^2 = 0.333,$		$R^2 = 0.443,$		$R^2 = 0.497,$	
	$F = 15.27***$		$F = 31.98***$		$F = 22.92***$		$F = 35.41***$		$F = 41.24***$	

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

self-esteem may be one of the most important predictors of **GWB** as it was found the best predictor of two well-being domains as well as well-being total. Home self-esteem was also the second best predictor of anxiety well-being domain ($\beta = 0.25$, $t = 4.47$, $p \leq 0.001$).

Discussion

Although previous research has primarily focused on the association between personality dimensions of the five factor model and **GWB** in adults (e.g., [50]), the present research focused on self-esteem and affectivity as prospective predictors of **GWB** in adolescents. Total scores of well-being (mean = 61 on a 20–80 scale) are in line with Cummins's [51] work on well-being levels, who suggested that sample means representing normal populations in western countries are 75% of scale maximum (SM) with a standard deviation of just 2.5% SM. Transformed into a 1–100 scale, the reported 61 points represent 75.9% SM.

In line with previous findings, suggesting non-existent or non-significant associations between demographics and **GWB** in adolescents (Jirojanakul et al., 2003; [4]), in this study basic demographics, i.e., age and gender, were not significantly associated with **GWB**, neither total nor domain specific. Nevertheless, similarly to previous limited research in adolescents (e.g., [17, 18, 24]), regression analysis in this study revealed that self-esteem and affectivity explained a high proportion of **GWB** variance of both total and

domain specific. However, home self-esteem was one of the most important predictors of well-being as it was found the best predictor of two well-being domains (mood/affect, self/others) as well as total well-being. It was also the second best predictor of anxiety well-being domain. This finding adds to an existing body of evidence regarding the role of home and familial factors in well-being (e.g., quality of relationships and communication) (e.g., [52, 53]). In addition, school self-esteem was the best predictor of physical well-being domain and negative affectivity was the best predictor of anxiety well-being. Although, no previous research has focused on the association between school self-esteem and well-being, generic research in the area (e.g., [8]) suggested that school factors, such as social support received from teachers, can enhance **GWB** levels. When it comes to the association between **GWB** and negative affectivity, previous generic research in the area (e.g., [54]) also confirms the present finding. In previous relevant research with adults, negative affectivity was found to be positively and significantly related with self-reported stress and health complaints [48]. Our pattern of results indicate that, although there are similarities amongst well-being domains with regard to best personality predictors, differences are also apparent. This finding further supports the unique conceptual and measurement status of different well-being measures [5, 6].

The present study suffered a number of methodological limitations, including its cross-sectional design as well as the small reliability coefficients obtained in some of the measures used (e.g., P.G.I.

anxiety subscale). In addition, the correlational design of our study did not allow any causal inferences amongst factors studied. Furthermore, the present study did not succeed in answering core questions in the area of *GWB*. In particular, there is little known, for example, about the pattern of associations between personality measures and *GWB* across the life span. In addition, future research could also focus on comparing the impact of various personality factors on *GWB*, as the present study included only self-esteem and affectivity. More importantly, future research could compare the impact of the personality dimensions derived from the five-factor model with other personality factors, such as affectivity and self-esteem, in relation to *GWB*. Such research would highlight the most significant personality contributors to *GWB* and may facilitate the construction of a *GWB* model for adolescents incorporating appropriate personality constructs. However, even if we adopt such a methodological approach, it is important to bear in mind that personality constructs such as self-esteem and affectivity, although important in our initial understanding of psychological phenomena, such as psychological well-being, are unable to explain intraindividual variations regarding well-being. There is a need to understand how personality constructs interact with environmental factors (e.g., [55]) in order to produce positive or negative subjective experiences of well-being. Inclusion of several socio-demographics, such as socio-economic class, living conditions, school and family factors as well as employment of advanced statistical techniques (i.e., path analysis), in future *GWB* research, would be able to offer us more advanced explanations of *GWB* in adolescents.

A major conclusion that could be drawn from the present research is that affectivity and self-esteem are important predictors of *GWB* in adolescents, although home self-esteem seems to be one of the most important predictors of well-being. To date, there is limited research on the familial or parental processes that help adolescents construct a positive self-image at home and the factors associated with it. Based on the present findings, this area of inquiry should be explored further. Previous methodological, practical and notional accounts have been offered to explain the association between personality variables and *GWB*.

These have been thoroughly presented in the introduction. On the basis of the present findings, it could be suggested that *GWB* and personality factors, such as self-esteem and affectivity, may derive from similar underlying self-evaluation processes, such as self-enhancement tendencies, thus they are conceptually inseparable (e.g., [11]). This account also implies that personality traits tend to colour human perceptions in a positive or negative fashion [56] therefore they could regulate *GWB* experiences. To further support this, Oliver and Brough [54] found that negative affectivity affects well-being and their relationship would be mediated by cognitive appraisal, thereby highlighting the importance of cognitive factors in the perception of *GWB*. There have also been studies in the area of *GWB*, which considered affectivity as a measure of *GWB* (e.g., [25]). On the basis of such evidence, a stronger association between *GWB* and affectivity may be due to conceptual and measurement commonalities between the two. Despite these methodological explanations, our data support the hypothesis that adolescent's self-appraisals within their family or parental setting impact upon their *GWB* levels.

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