OVER THE HILL AND STILL "LIMING": PSYCHOLOGICAL WELL-BEING IN YOUNG, MIDDLE-AGED AND OLDER ADULT TRINIDADIANS

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In 2010 in Trinidad and Tobago individuals over 60 years-old represented 10% of the population. This figure is expected to reach 20% by the year 2025 (World Health Statistics, 2011). Late life is often characterized by decline and disease, but gains in human potential and functioning (i.e., psychological well-being, PWB) in older adulthood are possible (Baltes, 1987). Thus, the goal of the current study was to examine Trinidadian adult age group differences in three components of PWB: self-acceptance, positive relations with others, and purpose in life (Ryff, 1989). Older adults were expected to have higher acceptance of themselves, and relations with others that are as positive, if not better than, other age groups. Lower sense of purpose in one's life was expected in old age. The study sample consisted of 242 participants residing in Trinidad between the ages of 18 and 74 years-old (M = 36.84, SD = 16.35). The country's major ethnic groups were represented. Socio-demographic variables and PWB were assessed with self-report measures as part of a larger study. It was found that older adults reported lower levels of self-acceptance and purpose in life compared to young and middle-aged adults, whom did not differ. There were, however, no age group differences in how positively people viewed relationships with others. Older adults were just as likely as young and middle-aged adults to have healthy, positive relationships. Results remained relatively consistent even when controlling for socio-demographic variables (e.g., education, income, health, etc.) related to age and PWB. No ethnic group differences emerged. The pattern of gains and losses in PWB in late life are discussed, focusing on why older adult Trinidadians do not demonstrate levels of self-acceptance seen in other cultures, and the potential role that positive relations and 'the lime' may have across adulthood for the PWB of Trinidadians.

Keywords: psychological well-being, aging, culture, Trinidadians

Introduction

The world's population is aging. Demographic statistics from a United Nations report (World Population Aging: 1950-2050 2001) indicate that in 2006, almost 500 million people worldwide were 65 and older. By the year 2030, which is only 18 years from today, the number is projected to increase to 1 billion. This means that by the year 2030, every eighth person seen on the street or in the grocery store will be over the age of 65. Although these numbers are reflective of population statistics worldwide, the most rapid increase in the 65-and-older population is occurring in developing countries, like those in the Caribbean region. In 2000, in less developed regions of the world, 8% of the population was 60 years-old and over, but in 2050, it is expected to reach 20%. Although Trinidad and Tobago by some indicators is no longer considered a developing nation (Organization for Economic Co-operations and Development; OECD 2011), population projections for the aged are in line with less-developed countries. In 2010 in Trinidad and Tobago individuals over 60 years-old represented 10% of the population. This figure is expected to reach 20% by the year 2025 (World Health Statistics 2011).

Despite the rapid growth of the older adult population in the nation, very little data is available from a psychological perspective on the health and well-being of older adults in Trinidad.[i]1 There is considerable data on health issues facing children, teenagers, and young adult populations in Trinidad (e.g., Baptiste, Voisin, Smithgall et al. 2007; Maharaj, Alli, Cumberbatch et al. 2008) and there is also a growing body of work on the nation's older adults' physical, mental-health, social, and economic problems (e.g., Alea, Thomas, Manickchand, et al. 2010; Hector, Anderson, Paul, et al. 2010; McRae, Gershwin, Baboolal, & Morren 2008; Rawlins, Simeon, Ramdath, & Chadee 2008). However, no known data is available on the psychological well-being (PWB), or positive health indicators of growing older in Trinidad. Ill-health and well-being are not at opposite ends of the same health spectrum, but instead represent distinct constructs with independent, different predictors (Ryff, Love, Urry, et al. 2006). PWB is not the absence of psychological illness. Thus, it is imperative to move beyond knowing what ails the growing older adult population, to also explore the PWB of older adults in Trinidad. Thus, the purpose of the current research is to fill this gap in the literature by: (i) examining differences in multiple dimensions of PWB for young, middle-aged, and older adult Trinidadians, and (ii) to examine what socio-demographic variables help to explain age group patterns, if found. First, however, below we situate the current study in lifespan developmental theory (Baltes 1996; Baltes 1987; Baltes, Staudinger, & Lindenberger 1999), which encourages the exploration of positive growth and the human potential of old age, while considering cultural influences.

Lifespan Developmental Theory: Positive Late Life Functioning in Cultural Context

One of the fundamental principles of lifespan developmental theory is that "any process of development entails an inherent dynamic between gains and losses" (Baltes 1987: 611). Historically, the gains or positive growth in functioning were considered the privilege of childhood to young adulthood, and late life was a period of disease and decline (Labouvie-Vief 1982; Uttal & Perlmutter 1989). Lifespan developmental psychology does not deny that with age losses will occur and that perhaps the losses to gain ratio is unbalanced, and negative in old age (Baltes & Smith 2003). However, this perspective strongly emphasizes, as others in medical and social sciences have, that aging should not be equated with disease (see Baltes & Baltes 1990 for

a review). Humans can, and do, age successfully (Rowe, President, & Kahn 1996): they maximize desirable goals and outcomes, while minimizing potential losses (Baltes, et al. 1999). Functioning at all ages, even in late life, is multidirectional (Baltes & Baltes 1990; Shultz & Heckhausen 1996). Positive age-related patterns have been observed in numerous areas of psychological functioning (e.g., intelligence; Schaie 1994; emotion regulation; Carstensen & Charles 1998; identity achievement; Fadjukoff 2007), including the topic of the current study, PWB.

Lifespan developmental theory also emphasizes that development occurs within historical and cultural contexts (i.e., historical embeddedness; Baltes 1987), and that how a person develops over time, or how well they age, is keenly tied to sociocultural conditions. Cultural resources (e.g., economic, technological, education, etc.) are the driving factor, for example, behind the changes in average life expectancy in recent years (Baltes 1996). The average life expectancy of a Trinidadian born in 1950 was approximately 47 years-old; in 2009, the average life expectancy was 70 years-old (World Health Organization 2009). In Trinidad, it is highly likely that the 1970s oil boom which improved the material standard of living was a driving force behind the dramatic change in life expectancy in the last half century. It is not genetic evolution but cultural revolution (Baltes 1996) that is responsible for the growth in the older adult Trinidadian population. In fact, lifespan developmental theory proposes that the need for the accommodating and elevating role of cultural resources may become more important in old age (Baltes 1996), as older adults attempt to minimize losses and maximize gains (e.g., Brandtstädter & Greve 1994; Dixon & Bäckman 1995; Durham 1991; Marsiske, Lang, Baltes, et al. 1995). As reviewed below, socio-demographic representations of cultural forces (e.g., education, income, health status, etc.) have proven to be important predictors of PWB in late life (Chow 2010; Ryff & Singer 2002; Ryff, Keyes, & Hughes 2003).

Psychological Well-being (PWB) in Adulthood and Late Life

PWB is a multidimensional construct (Ryff 1995; see also Pavot & Diener 2004) that encompasses active engagement with life (i.e., eudaimonic well-being; Kahneman, Diener, & Schwarz 1999; Keyes, Shmotkin, & Ryff 2002; Ryan & Deci 2001) and positive human functioning (Ryff, 1989). The dimensions of PWB examined in the current study and thus the focus of this literature review, include: self-acceptance, which is the ability to see and evaluate oneself well, in terms of strengths and weaknesses; positive relations with others, which is about having close, positive, social connections with other people in one's life; and purpose in life, which encompasses having a sense that one's life is meaningful and has direction (Ryff, 1995). The age-related pattern of results for these three components of PWB is fairly consistent in the literature, and nicely demonstrates that aging is comprised of both gains and losses. Most of the literature on age group differences reviewed in this section comes from North America where the PWB scales that we utilized in the current study (Ryff 1989) were developed (see Methods for details and Discussion for the limitation of this approach). Cultural considerations are reviewed in the next section.

Self-acceptance and positive relations with others are two components of PWB that seem to be either unaffected by growing older (e.g., Ryff 1995; Springer, Pudrovska & Hauser 2011) or even shows improvement as one moves in to late life. A series of studies (e.g., Ryff et al. 2003;

Ryff & Singer 2006) finds that as a person gets older they tend to become more accepting of who they are: self-acceptance is positively related to aging. Young adulthood is a time for identity formation (Erikson 1968), but by late life, older adults expect to maintain a stable sense of self (Kroger 2002). Similarly, by the time someone reaches late life they have developed warm, positive relationships with others (e.g., Ryff & Singer 2006; Ryff, Kwan, & Singer 2001). Socioemotional goals of late life encourage the development of relationships that are more positive, deeper, and more meaningful than those relationships that a person has in young adulthood (Carsentsen 1992). Social networks may be smaller in older adulthood (Rook & Schuster 1996), but the relationships tend to be more satisfying (van Tilburg 1998).

Not all components of PWB, however, show gains in late life. As individuals get older there tends to be a decline in a person's sense of having purpose in their life (Ryff & Keyes 1995; Ryff, Keyes & Hughes 2004; Springer et al. 2011). The negative relation between age and purpose in life is found in both cross-sectional (Ryff et al. 2003; Ryff et al. 2001) and longitudinal work (Springer et al. 2001). This negative age-related pattern is likely a result of knowing, as one gets older, that mortality is approaching: there is less time left to live (Neugarten 1996). It may be difficult to have a sense of direction and purpose in one's life when time is viewed as limited. It is more typically the past, rather than the future, that is viewed as having purpose and meaning in old age (Alea & Bluck 2012; Butler 1963).

Socio-demographic Predictors of PWB: Cultural Considerations

This general pattern of growth in some components of well-being (e.g., self-acceptance, positive relations with others) but decline in others (e.g., purpose in life) as one ages has also been found in Japan (Karasawa, Curhan, Markus, et al. 2011), Germany, and the United Kingdom (Gerstorf, Ram, Mayraz, et al. 2010). Cultural variations in PWB have not been extensively studied, with the exception of work from independent versus interdependent cultures (e.g., Baker, Soto, Perez & Lee 2012; Morling, Kitayama & Miyamoto 2002; Karasawa et al. 2011; Ryff 1995) and only a few have focused on adult age group differences (Karasawa et al. 2011). The few studies that were located with Caribbean samples (Jamaicans, Bourne 2008; Trinidadians, Hector et al. 2010) found a negative relation between well-being and age. However, these studies tended to use composite measures of well-being, with an emphasis on physical well-being, and did not allow for the distinction between the dimensions of psychological well-being in particular.

The lack of literature on PWB in various cultures is compensated for by a large amount of work examining the socio-demographic variables (education, income, subjective health, relationship status), which are constructed by one's culture (Berger & Luckman 1966; Descartes 2012; Khumalo, Temane, & Wissing 2012), that predict PWB (e.g., Chow 2010 Grossi, Blessi, Sacco & Buscema 2012; Ryff et al. 2003; Ryff & Singer 2002). For example, a meta-analysis (Pinquart & Sŏrensen 2000) of almost 300 studies that had older adults in their samples found that higher socioeconomic status (SES), higher educational attainment, and better social integration predicted higher levels of well-being (i.e., life satisfaction, self-esteem). Effects were moderated by age: the relation between SES and education and life satisfaction became weaker with advancing age, indicating that perhaps these socio-demographic variables are less likely to account for late life costs and benefits to well-being. Additional studies support the link between education, income, and PWB. A cross-cultural study on older adults (50 years and older) with

data from the United States, Australia, and Korea found that individuals who were less satisfied with their level of wealth had poorer life satisfaction in all three countries (Kim, Sargent-Cox, French, et al. 2012). Research from Brazil replicates results regarding the importance of educational attainment on successful aging (Ordonez, Lima-Silva & Cachioni 2011).

If lack of income and education have a general detrimental effect on PWB, social integration (Luo & Waite 2011; Pinquart & Sŏrensen 2000) and good health (Ryff 1995; Ryff et al. 2006; Tran, Wright, & Chatters 1991) is good for late life PWB. For example, a Malaysian study with individuals ranging in age from 60 to 100 found that the oldest old unmarried participants (i.e., those with low social support) were at risk for experiencing poorer PWB compared to the younger aged people in the study (Momtaz, Imbrahim, Hamid, & Yahaya 2011). Similarly in Canada, being married is positively related to PWB (Chow 2010). Regarding health, older adults with lower biological risks of disease report having higher levels of PWB overall (Ryff et al., 2006), and being in good health (e.g. having low cholesterol levels) is related to having higher overall levels of life satisfaction, and a greater sense of purpose in life and direction for older adults (Mock & Eiback 2011; Ryff, Singer, & Love 2012). The same holds true for subjective health. Participants who rated themselves as more healthy have higher overall levels of well-being whereas those who rate themselves in poor health have lower levels of well-being (Ryff 1995; Tran et al. 1991). Thus, socio-demographic variables relate to PWB.

Study Expectations

As there is no previous literature on the three dimensions of PWB (self-acceptance, positive relations with others, and purpose in life) across adulthood for Trinidadians available, our study expectations are based mostly from the work that has been done in the United States by Ryff and her colleagues. This seems like a reasonable approach as research suggests that the Caribbean is influenced by North American cultural values through media and non-media contact (for example, through travel and tourism), because of the proximity and shared language of the two regions (Brown 1995). Secondly, well-being indicators are not vastly different in Trinidadian and American samples (Hector et al. 2010). Nonetheless, expectations are tentative and somewhat exploratory because cultural traditions and values might persist (Inglehart & Baker, 2000; Lindeman & Verkasalo, 2005) despite modes of contact and similarities with North America.

Multidirectional age-related patterns are predicted. Self-acceptance among older Trinidadians is expected to be at least as good as younger-aged groups, or perhaps even better. Older adult Trinidadians are also expected to have relations with others that are as positive, if not better than, young and middle-aged adults. On the other hand, feeling a sense of purpose in one's life is expected to be lower in late life compared to earlier in adulthood. The previous literature also suggests that education level, SES (i.e., income), social integration (estimated by relationship status in the current study), and subjective health relate to PWB, and thus should help to explain some of the age group differences. Specifically, higher levels of education and income, being married, and having better subjective health is expected to be positively related to all dimensions of PWB. We also anticipate that controlling for socio-demographic variables in analyses will provide a clearer picture of the age-related differences in PWB.

Method

Participants

Two-hundred and forty-two individuals residing in Trinidad participated. Participants ranged in age from 18 to 74 years-old (M = 36.84, SD = 16.35), but were divided in to three age groups: young (18-29 years-old, M age = 22.33, SD = 3.10, n = 110), middle-aged (30-49, M age = 38.82, SD = 5.89, n = 71), and older adults (50 and older, M age = 60.7, SD = 16.35, n = 61). The sample was 87% women. The ethnic distribution reflected the major groups in the country with 42% Africans, 33% Indians, and 24% mixed persons. Young and middle-aged adults were recruited from undergraduate psychology courses at the University of the West Indies, and received partial credit towards a research requirement in a course. Older adults were recruited primarily from the Trinidad and Tobago Association for Responsible Persons, and they were compensated with TTD100.00 for their participation. We recognize that the sample is thus not representative of the population of Trinidad and this is further discussed in the Limitations section.

Procedure and Measures

Data was collected as part of a larger study that took approximately 75 minutes. The procedures for the university and community samples were identical. Questionnaires were administered by female research assistants in a moderately-sized group, classroom-like setting. Participants were asked to complete an informed consent document, and then proceed to answer the study measures at their own pace. Researchers were available to answer questions, if necessary. Two groups of measures were used in the current study: a measure of PWB, which was the primary outcome measure, and a measure assessing socio-demographic variables to be used as covariates in analyses. These measures were presented in a counterbalanced order.

Psychological well-being. Three subscales of Ryff's Scales of Psychological Well-Being (Ryff 1989) were used, and included: self-acceptance, positive relations with others, and purpose in life. These psychological well-being scales show very good validity and reliability across a variety of cultures (e.g., Australia: Ferguson & Goodwin 2010; France: Salama-Younes, Ismail, Montazeri & Roncin 2011; Spain: Villar, Triadó, Celdran & Solé 2010; Italian and Belarusian: Sirigatti, Penzo, Iani et al. 2012).[ii] The self-acceptance subscale contains 15-items and assesses one's attitude towards the self, acknowledgement and acceptance of both good and bad characteristics of the self, and a feeling of positivity about past experiences. An example item is: I like most aspects of my personality. The positive relations with others subscale is made up of 14 items and assesses the presence of warm, satisfying and trusting relationships, care for others, empathy, affection and intimacy, and an understanding of compromise. An example item is: Most people see me as loving and affectionate. The purpose in life subscale has 14 items and assesses the presence of goals, a sense of direction, and beliefs that give life purpose; also the feeling that there is meaning to both the present as well as previous life experiences. An example item is: I enjoy making plans for the future and working to make them a reality. Items are not presented sequentially by subscale. Responses to all items are made on a 6-point Likert scale ranging from, strongly disagree (1) to strongly agree (6). Negatively-worded items are reversed prior to scoring so that higher scores are indicative of greater self-acceptance, positive relations with others, and purpose in life. The subscales showed good internal consistency in the current

sample: self-acceptance Cronbach's α = .75, positive relations with others Cronbach's α = .81, and purpose in life Cronbach's α = .86.

Socio-demographic variables. Four socio-demographic variables were measured: education, relationship status, income, and subjective health. Descriptive statistics appear in Table 1. For education, participants reported the number of years of formal schooling attained since, and inclusive of, primary school. The relationship status question asked participants to indicate whether they were single, in a stable long-term relationship, cohabitating or common law union, married, divorced or separated, widowed, or "other." This variable was used as a proxy for social integration and thus we collapsed across the categories for analyses so that people were either in a relationship or not. Income was a representation of total household family monthly income, and was assessed with eight possible income brackets, including: <$999, $1000-$2999, $3000-$4999, $5000-$6999, $7000-$8999, $9000-$9999, $10000-$11999, >$12000. We recognize that this is a rather rough estimate of SES (Adler & Stewart 2007), and thus it should only be viewed as a proxy. Finally, subjective health was measured with a widely-used one item question which asks participants to rate their health compared to own-age peers on a 6-point Likert-scale (Maddox 1962). The question does not distinguish between psychical or mental health; it is generic. Responses are made on a 6-point Likert scale, ranging from 1 (very poor) to 6 (very good).

Table 1

Descriptive statistics for socio-demographic variables by age group

	Age group	*M*	*SD*
Education	Young	16.04	2.73
	Middle	17.28	6.04
	Old	15.89	7.36
Income	Young	5.81	2.21
	Middle	6.39	1.80
	Old	5.65	2.12
Subjective health	Young	4.70	.90
	Middle	4.97	.74
	Old	4.97	.79
Relationship status		% not in a relationship	% in a relationship
	Young	72	28
	Middle	50	50
	Old	45	55

Note. There were no significant age group differences for education, income, and health. The χ^2 test for differences in relationship status by age group was significant, χ^2 (238) =

10.21, $p < .01$, with older adults being more likely than chance to be in a relationship, and younger adults being less likely.

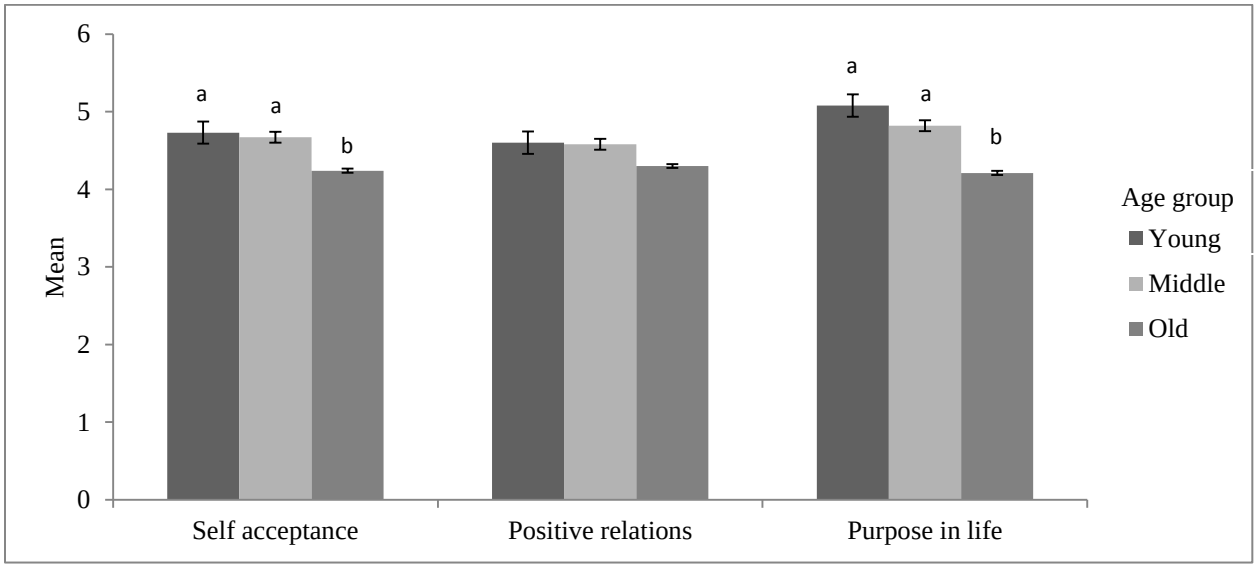
Results

Analyses correspond to the study aims: (i) to examine whether there are differences in PWB dimensions (self-acceptance, positive relations with others, purpose in life) between young, middle-aged, and older adult Trinidadians, and (ii) to explore whether socio-demographic variables related to both age and PWB account for adult age group differences in PWB, if differences exist. Results are divided in to two sections corresponding to these aims.

Adult Age Group Differences in PWB

To examine whether there were adult age group differences in PWB, an age group multivariate analyses of variance (MANOVA) was conducted. Age group was a between-subjects variable. Dependent variables were the three components of PWB: self-acceptance, positive relations with others, and purpose in life.[iii] Univariate results were considered only if the MANOVA was significant, and age group differences were followed up with all possible pairwise comparisons using the Bonferroni correction. The multivariate age group effect was significant, Wilk's $\lambda = .84$, $F (6, 474) = 7.35$, $p < .001$, $\eta p2 = .09$. Univariate tests revealed that there were significant age group differences for only two components of PWB: self-acceptance, $F (2, 242) = 5.09$, $p < .001$, $\eta p2 = .06$, and purpose in life, $F (2, 242) = 21.50$, $p < .001$, $\eta p2 = .15$. Young, middle-aged, and older adults did not differ in the extent to which they had positive relationships with others, $F (2, 242) = 1.97$, $p = .05$, $\eta p2 = .03$. The pattern of results is shown in Figure 1, and the post-hoc analyses for self-acceptance and purpose in life are presented overleaf.

Figure 1 Age differences in self-acceptance, positive relations with others, and purpose in life



Note. Bars within each dimension of psychological well-being with different letters were significantly different. When controlling for socio-demographic variables: there is no longer a significant difference in self-acceptance between middle-aged and older adults; the non-significant difference between young and middle-aged adults for purpose in life becomes significant

As can be seen in Figure 1 for self-acceptance, contrary to expectations, older adults had lower levels of self-acceptance than younger adults, $t\ (170) = 3.91$, $p < .001$, and middle-aged adults, $t\ (131) = 3.13$, $p < .01$. There was no difference between young and middle-aged adults' self-acceptance, $t\ (180) = .53$, $p > .05$. The pattern of results was similar for purpose in life, though this was what was hypothesized. Older adults reported the lowest levels of having purpose in their life, significantly lower than both the young, $t\ (170) = 6.56$, $p < .001$, and middle-aged adult group, $t\ (170) = 4.13$, $p < .001$. Again, young and middle-aged adults did not differ in PWB, measured as purpose in life, $t\ (180) = 2.12$, $p > .05$. Thus, contrary to expectations, older adults reported having lower levels of self-acceptance. Consistent with what was expected: purpose in their life was also lower in the older adult age group compared to the other two age groups. Also consistent with what was expected, older adults' relationships were as positive as the other two age groups.

Socio-demographic Variables, Age, and PWB

The second goal of the study was to examine whether any initial findings regarding adult age group differences in PWB would remain when considering socio-demographic variables that relate to both age and to PWB. Thus, to first determine what socio-demographic variables might be of relevance, bivariate correlations were conducted between age group, socio-demographic variables, and the three dimensions of PWB. The socio-demographic variables included:

education, relationship status, income, and subjective health. Spearman rank-order correlations were used, and are reported in Table 2.

Table 2

Correlations among age group, socio-demographic variables, and psychological well-being

	1	2	3	4	5	6	7	8
1. Age group	--	-.03	.18**	-.00	.12	-.27***	-.16*	-.35***
2. Education level		--	-.03	.16*	.18**	.09	.05	.12
3. Relationship status			--	.21**	.01	.00	-.03	-.04
4. Income				--	.19**	.10	.16*	.10
5. Subjective health					--	.20**	.09	.23***
6. Self-acceptance						--	.64***	.74***
7. Positive relations with others							--	.60***
8. Purpose in life								--

* $p < .05$, ** $p < .01$, ***$p < .001$

As can be seen, age group correlated with one socio-demographic variable: relationship status. As age increased individuals were more likely to be in a relationship. Two socio-demographic variables were correlated with PWB dimensions: income and subjective health. Income was related to having positive relations with others: as income increased people were more likely to report positive, healthy relationships. Subjective health was positively correlated with two components of PWB: self-acceptance and purpose in life. As self-reported subjective health increased so did one's acceptance of themselves and life seemed to have more purpose. In addition, as can be seen in Table 2, some of the socio-demographic variables were related. Being more educated was related to higher income levels and better subjective health status. Individuals in relationships were also likely to have higher income levels. These correlational results thus suggest that controlling for education, relationship status, income, and subjective health may provide a clearer picture of age group differences in PWB.

Thus, the initial age group (young adults, middle-aged, older adults) MANOVA was redone as a multivariate analysis of covariance (MANCOVA), controlling for education, relationship status, income, and subjective health.[iv] The dependent variables again were self-acceptance, positive relations with others, and purpose in life PWB dimensions. The same criteria used in the initial

analyses applied: univariate effects were considered only for significant multivariate effects, and the Bonferroni correction was used. Subjective health was the only covariate that predicted PWB, Wilk's $\lambda = .89$, $F (3, 204) = 8.40$, $p < .001$, $\eta p2 = .10$. The age group multivariate effect was significant, Wilk's $\lambda = .82$, $F (6, 408) = 7.35$, $p < .001$, $\eta p2 = .10$, with univariate effects for self acceptance, $F (1, 206) = 11.13$, $p = .001$, $\eta p2 = .05$, and purpose in life, $F (1, 206) = 13.80$, $p < .001$, $\eta p2 = .09$, consistent with initial and correlational analyses. The univariate results changed slightly when the socio-demographic covariates were included. However, there continued to be no age group differences in positive relations with others, even when controlling for socio-demographic variables: young, middle-aged, and older adults group did not differ significantly with respect to how much they felt engaged in and happy with their social relationships.

Again, there was a significant age group difference in the self-acceptance component of PWB, $F (2, 206) = 5.29$, $p < .01$, $\eta p2 = .05$. Younger adults ($M = 4.77$, $SD = .87$) reported higher levels of self-acceptance compared to older adult age groups ($M = 4.31$, $SD = .70$), $t (148) = 3.25$, $p < .01$. However, when controlling for socio-demographic variables, particularly subjective health, the initial effect between middle-aged adults ($M = 4.63$, $SD = .78$) and older adults was no longer significant, $t (100) = 2.13$, $p > .05$. To further examine why this might have occurred, Spearman rank-order correlations were conducted between subjective health (i.e., the only significant socio-demographic predictor of self-acceptance) and self-acceptance for young, middle-aged, and older adults separately. It was found that there was a positive relation between subjective health and self-acceptance for middle-aged adults only, $r (71) = .42$, $p < .001$: as subjective health increased so did levels of self-acceptance. For younger and older adults subjective health and self-acceptance are not related, young $r (110) = 16$; old $r (59) = .13$, $ps > .05$. Thus, when controlling for socio-demographic predictors, particularly subjective health, the age difference between middle-aged adults, whose self-acceptance is related to their subjective health, and older adults, whose self-acceptance is not related to their subjective health, goes away.

For purpose in life, the results controlling for socio-demographic variables were again fairly consistent with the original analyses showing an age group difference, $F (2, 206) = 21.00$, $p < .001$, $\eta p2= .17$, but the difference actually became more striking. Older adults ($M = 4.20$, $SD = .85$) continued to report less purpose in life than young ($M = 5.15$, $SD = .77$), $t (148) = 6.46$, $p < .001$, and middle-aged adults ($M = 4.78$, $SD = .96$), $t (100) = 3.68$, $p = .001$. However, controlling for the socio-demographic variables, and again particularly subjective health, which was the only predictor, revealed an effect that was previously not significant: middle-age adults' now reported lower levels of purpose in life compared to younger adults, $t (165) = 2.73$, $p< .05$. Spearman rank-order correlations were again used to deconstruct this change in the pattern of results. It was found that there were significant, positive relations between subjective health and purpose in life for young, $r (110) = .22$, $p < .05$, and middle-aged adults, $r (71) = .38$, $p = .001$, and a correlation that was equal in magnitude to that of the younger adults for the older adults, which was marginally significant, $r (59) = .24$ had a $p = .06$. Thus, subjective health is related to purpose in life at all points in the life span, and thus when controlling for this socio-demographic predictor linear age differences in purpose in life emerges.

Discussion

The purpose of the study was to examine, for the first time, adult age group differences in three dimensions of PWB (self-acceptance, positive relations with others, purpose in life) in a Trinidadian sample. Drawing from lifespan developmental theory (Baltes 1987) multidirectionality in PWB, which includes the potential for positive human functioning and growth in late life was considered a possibility in conjunction with late life loss. The pattern of results was sometimes consistent with expectations and previous research conducted mostly in the United States (e.g., for purpose in life; Ryff & Keyes 1995; Ryff et al. 2004; positive social relations with others; Ryff & Singer 2006; Ryff, Jwan, & Singer 2001), but not always (e.g., for self-acceptance; Ryff et al. 2003; Ryff & Singer 2006). The second goal of the study was to consider socio-demographic variables as covariates consistent with the cultural embeddedness emphasis of lifespan development (Baltes 1987, 1996; Berger & Luckman 1966; Descartes 2012; Khumalo et al. 2012). There were actually fewer relations between these socio-demographic variables and PWB than was anticipated based on research that has been done in other countries (Kim et al. 2012; Pinquart & Sŏrensen 2000). Controlling for the socio-demographic variables, however, did shift results slightly and follow-up correlations for each age group separately gave some indication as to why results changed. Findings for each dimension of PWB are reviewed in turn below considering how socio-demographic variables, as well as Trinidadian culture, potentially impacted upon results.

Purpose in Life is Lower from Young Adulthood, to Midlife, to Old Age

A hallmark of good PWB is feeling that life is worthwhile, and has purpose and direction (Diener & Diener 1995; Ryff 1995). This dimension of PWB shows rather steady decline from young adulthood to old age across various cultures (e.g., US; Ryff & Keyes 1995; Asia; Karasawa et al. 2011; Europe; Gerstorf et al. 2010), and was replicated in the current study with a Trinidadian sample. Purpose in life was consistently lower in older adults compared to younger adults and middle-aged adults. Further, when controlling for socio-demographic variables, differences between young and middle-aged adults also emerged, with individuals in midlife reporting less purpose in life than their younger counterparts. However, the only covariate that was a predictor of PWB was subjective health, and a relation between subjective health and purpose in life existed for each age group. As subjective health increased, purpose in life increased for young, middle-aged, and older adults. Recent research has begun to focus in more detail on the interrelation between health and PWB (e.g., Feldman & Steptoe 2003; Lindfors & Lundberg 2002; Ryff 1995; Ryff et al. 2006; Tran et al. 1991). For example, in a study with aging women (from 61 to 91 years old), Ryff and colleagues (2012) found that several physiological indicators of good health (e.g., neuroendocrine, immune, and cardiovascular biomarkers) were related to having greater purpose in life (see also Ryff et al. 2006). In fact, for some biomarkers of health (i.e., salivary cortisol levels – a biomarker for stress) the relation with purpose in life was stronger as individuals got older. Thus, whether subjective or objective indicators of health are used, there seems to be positive relations between subjective health and purpose in life at all points in the adult lifespan.

Feeling less purpose in life as one ages, however, is probably not only a result of advancing chronological age (i.e., lived time) and potential health difficulties (Moch & Eiback 2011; Tran et al. 1991), but is likely reflective of one's perception of time left to live (i.e., future time perspective; Demiray & Bluck under review). Future time perspective (Carstensen & Lang 1996) is operationalized as perceived time left to live relative to one's current point in the lifespan and how positively one feels about their potential remaining time. In young adulthood, the future is seen as open-ended and full of possibilities (Fung & Carstensen 2006), but in midlife there is a dramatic shift in perspective (Neugarten 1996): a life is viewed as time left to live, rather than time lived. Having a limited view of what the future may hold, as older adults do because of impending mortality, impacts upon feeling a sense of purpose and direction in life (Demiray & Bluck under review). Thus, time left to live and its impact on feeling a sense of purpose in life is perhaps also influencing the Trinidadian older adults in this study.

Older Adults Have Lower Self-Acceptance than Young Adults

Although the age-related pattern of results for purpose in life was one of loss with age, gains or positive growth for PWB assessed as self-acceptance were expected. Older adults were expected to have higher levels of self-acceptance compared to younger adults (Ryff et al. 2003; Ryff & Singer 2006). This expectation, however, was not supported and the opposite pattern emerged. Older adult Trinidadians had lower levels of self-acceptance than younger adults and middle-aged adults in this study. Even when socio-demographic covariates were included, older adults' levels of self-acceptance continued to be lower than younger adults' levels. Subjective health again (as was the case with purpose in life) emerged as the socio-demographic variable with a positive relation to self-acceptance: as subjective health improved, self-acceptance also improved. This relation, however, only existed for middle-aged adults.

Having positive self-regard is a central feature of theoretical perspectives on mental health and personality (i.e., Allport 1961; Jahoda 1958; Rogers 1962), and the ultimate goal of psychosocial development in late life (i.e., ego integrity; Erikson 1968). So, why then did Trinidadians in the current study not show the typical age-related pattern of better or at least stable self-acceptance with age? One possible explanation is the cultural milieu surrounding aging in Trinidad. In her most recent book, for example, Joan Rawlins (2010: 3) provides several case studies of older women describing how, "it is not easy to be an older person in Trinidad and Tobago." Financial issue, health-care inadequacies, loneliness, and lack of respect from younger generations were among the major difficulties that women growing old in Trinidad were facing (see also Rawlins et al. 2008). Although we did not find relations between income and education and age and PWB in our sample, research across cultures finds that in societies that have overall lower mean income levels (i.e., developing countries), well-being is lower (e.g., Diener et al. 1995; Diener & Biswas-Diener 2002). Specifically related to the self-acceptance dimension of well-being, perhaps only after challenges of daily living are mastered (e.g., physiological and safety needs) and financed, that self-actualization and self-acceptance can be achieved (Maslow 1943). Or, perhaps, with increased ill health, the lower self-acceptance is due to difficulties older women, in particular, might be experiencing in accepting their current circumstances, which also change their accustomed social role of independent caretaker, to the dependent identity of a person being taken care of (cf. Ryff, 1989).

Although speculative, it is also possible that lower self-acceptance among older Trinidadian adults compared to their younger counterparts is a cultural phenomenon specific to the older adult generation in Trinidad. Although Trinidad is a multicultural society, made up of both interdependent (i.e., Indo-Trinidadian) and independent (i.e., Afro-Trinidadian) cultures (Descartes 2012), it seems likely that the older generation of Trinidadians may tend towards a more interdependent, collectivist orientation. Older adults in the current study would have grown up during the time of the transition from a British colony to an independent nation in 1962, and then to a Republic in 1976. During this period, the then Prime Minister, Eric Williams, encouraged citizens to create a unique identity for the new nation (Bolland 2004). Group solidarity is the basis of identity formation (Premdas 1999). Additionally, these older adults might also have a more interdependent personal value system because they are now also generative, and are therefore primarily preoccupied with social concerns (Erikson 1968). Interdependent cultural orientations (mostly seen in Asian cultures) devalue the pursuit of personal goals and instead respond to the need for social harmony, and connections with others (Markus & Kitayama 2004), and perhaps this is why individuals from cultures that have an interpersonal orientation have lower levels of self-acceptance compared to those with intrapersonal modes of being (Karasawa et al. 2011). Self-acceptance is less valued than other dimensions of PWB. The pathway to PWB varies by cultural orientation (Kitayama et al. 2010), and perhaps cultural orientation varies by generation because of historical circumstance in Trinidad, leading older adults in the current study to have lower self-acceptance.

Social Relations Are Consistent and Positive Across Adulthood

Only one dimension of PWB, positive relations with others (Ryff 1989), did not show age-related decrement; instead no age differences were found. Thus, young, middle-aged, and older adult Trinidadians enjoy positive social relations with others to the same extent. This parallels previous work conducted outside of the Caribbean (Ryff 1995; Ryff & Singer 2006; Ryff et al. 2001). Socioemotional goals in late life involve conserving emotional resources (Frederick & Carstensen 1990) and channelling positive emotional energy in to meaningful, satisfying relationships. Decades of cross-sectional (e.g., Consedine & Magai 2003; Luong, Charles & Fingerman 2011), longitudinal (e.g., Carstensen 1992), and experimental (e.g., Carstensen & Charles 1998) research thus finds that older adults' tend to have emotionally satisfying relationships that are equivalent to, if not better than younger generations. Thus, perhaps when it comes to the PWB associated with social relationship in adulthood, Trinidadian older adults in the current study are similar to individuals from other countries.

Why, however, would social PWB be different from other dimensions of PWB in Trinidad? What might be helping older adults sustain positive social relations with others, while purpose in life and self-acceptance are lower than younger aged groups? We speculate that the importance of social relations for Caribbean people in general (Jackson, Forsythe-Brown, & Govia 2007), and the Trinidadian "lime" in particular may be the reason. Loosely translated to "hanging out" in Standard English, the "lime" is a leisurely social activity that facilitates social integration (Eriksen 1990). The prototypical lime is among a group of people who regularly spend time together for the hedonistic purpose of experiencing intense enjoyment by exchanging ingenuous, humorous repartee (picong). Liming is done to enjoy the company of others, and it is embedded in Trinidadian culture (Eriksen 1990) from relatively early in adulthood. Integration in to one's

culture is related to better PWB (Baker et al. 2012). Thus, perhaps in Trinidad, having warm, trusting relationships is paramount at all stages of the adult lifespan because of the lime: the benefits on well-being of social life is Trinidadian-related, and perhaps not necessarily age-related.

Conclusion: Limitations, Future Directions, and Implications

Since 1948, the World Health Organization has attempted to discourage scholars and practitioners from conceptualizing well-being as the absence of illness (as cited in Ryff et al., 2010): PWB is a distinct, independent construct from psychological ill-being (Ryff & Singer 1998, 2000). Detaching PWB from the spectrum of disease may be particularly challenging when researching and working with an older adult population, where ageist stereotypes are pervasive (e.g., Cuddy, Norton, & Fiske 2005; Richeson, & Shelton 2006). Although this paradigm shift in thinking about older adult psychological health is beginning to take root around the world (e.g., Europe; Gerstof et al. 2010; Asia; Kitayama et al. 2010; Momtaz et al. 2011), less developed countries seem slower to follow suit. Data from the current study provides a starting point for discussing psychological dimensions of well-being that are sustained throughout adulthood (i.e., positive social relations with others), although the study is not without limitations.

Limitations and future directions. The study limitations are primarily about the sample and methodology. The sample was biased towards women, and research has shown that men and women show different patterns of PWB (Pinquart & Sorensen 2001; Ryff, 1995; Ryff et al. 2004; Momtaz et al. 2011). For example, using a nationally-representative American sample, Ryff and colleagues (2004) found that women's levels of self-acceptance tend to be lower than men's levels in late life, men in young adulthood have higher purpose in life than women in young adulthood, and across adulthood, women report more positive relations with others than men. Perhaps this gender bias is the reason why we found, contrary to expectations, lower self-acceptance among older adult Trinidadians: the sample was primarily women.

In addition, the older adults of the sample were sourced through community centres and organizations (e.g., the Trinidad and Tobago Association for Responsible Persons senior centres). These centres seem to cater to healthy, mobile older adults. Thus, the older adult sample was not representative of the older adult population in Trinidad, in particular, it did not sample older adults who may not have access to resources and who are isolated due to immobility. The older adult sample in the current study may have essentially been the best of the best in Trinidad. Supporting this speculation, there were no age group differences in total number of years of formal schooling, income, and subjective health. Furthermore, the younger and middle-aged adults, who were university students, are probably also not necessarily representative of the general population of Trinidad & Tobago for this age bracket. For example, in 2008, there was a 40% participation rate in tertiary-level education in the population (Republic of Trinidad and Tobago Policy on Tertiary Education, Technical Vocational Education and Training, and Lifelong Learning in Trinidad and Tobago, 2011). Thus, the results of the current study are not necessarily generalizable to the population of Trinidad. Another limitation is that the sample did not include individuals from Tobago. However, it is unlikely that findings would be different there. Tobago's culture is of a communal orientation (Luke 2006), it is therefore likely that older

adults will also have scored lower on self-acceptance as found in Trinidad and that positive social relations with others would have continued to show no age differences. Future research should thus use a representative sample from both the island of Trinidad and Tobago.

There are three primary methodological concerns of the current study which limit our ability to talk about age-related decline and/or stability in PWB across adulthood. A cross-sectional methodology was employed: thus age findings are about age group differences are not necessarily reflective of developmental progression. However, in studies that have followed individuals from midlife to old age, the pattern of results is similar to what was found in our cross-sectional study for purpose in life (Ryff & Keyes 1995; Ryff et al. 2003) and positive relations with others (Ryff, 1995; Ryff et al. 2001). Thus, perhaps more problematic, particularly in a country like Trinidad which has undergone major economic, health, and industrial advances in the past 50 years that would have affected older adults (Rawlins et al. 2008), is that age group differences are actually reflecting cohort or generational perspectives on PWB. We alluded to this problem above in speculating about the older generation of Trinidadians perhaps being more inter- than independently-focused, which is why they reported lower levels of self-acceptance. Self-acceptance may not necessarily show decline with age in Trinidad, but is instead less valued by today's older adult generation. The current study is perhaps not even a glimpse of what the PWB of today's younger generation of Trinidadians' will be like when they are older. Only large-scale sequential designs (Schaie 1994) can concretely provide the answers.

Related to this, however, is another limitation: although the Ryff (1989) Scales of Psychological Well-being is a measure that has been validated around the world (e.g., Australia: Ferguson & Goodwin 2010; France: Salama-Younes, Ismail, Montazeri & Roncin 2011; Spain: Villar, Triadó, Celdran & Solé 2010; Italian and Belarusian: Sirigatti, Penzo, Iani et al. 2012), there is no guarantee that the scales are valid for Trinidadians. Thus, perhaps Trinidadians in the current study view self-acceptance differently than individuals from more developed countries, like those where the Ryff (1989) scales were developed. It is thus cultural differences in the perception of what "self-acceptance" means that may have led to result differences in the current study compared to other work (Ryff et al. 2003; Ryff & Singer 2006). Subtle differences in cultural traditions and values (Inglehart & Baker, 2000; Lindeman & Verkasalo, 2005) can obviously emerge in interpreting items on a psychological measure. Thus, the field would benefit from future research conducting large-scale validations of psychological well-being measures prior to examining age group differences.

The final major methodological concern is, as with most data in this area, that the findings reflect only the (bi-directional) relation between age, socio-demographic variables, and PWB and are not indicative of causal pathways. Take our results regarding the relation between subjective health and PWB at different points in the adult lifespan as an example. Perhaps feeling that one is in good health leads to higher feelings of self-acceptance and purpose in life, but it is equally likely that individuals who are more accepting of who they are and what their life and future holds, are engaged in activities (e.g., eating right, exercising, etc.) that lead to feeling better about one's health. Innovative experimental work that manipulates feelings of subjective health (e.g., Whitbourne & Collins 1998), or an individuals' perception of time left (e.g., Fredrickson & Carstensen 1990), for example, has the potential to move the field forward substantially.

Implications. The growing older adult population in Trinidad and Tobago has not gone unnoticed by the government, as well as non-governmental organizations. A 1999 conference at the Faculty of Medical Sciences of the University of the West Indies, St. Augustine, was the impetus for discussions regarding the development of a national policy for older adults, a Division of Ageing of the Ministry of Social Development was established in 2003 (renamed the Ministry of the People and Social Development in 2010), and the Trinidad and Tobago National Policy on Ageing was approved by the Cabinet in September 2006. Twelve priority areas of action are detailed in the policy, including: social security, income security, social inclusion, health care, housing, education, recreation, dignity and respect, legislation, research, transportation, and disaster preparedness. The priority areas and the opening paragraph of the policy highlight that the government's mission is to address the "needs of older persons," which is a respectable and indispensable goal.

In the current paper, however, we have encouraged a broader perspective: one that asks whether positive human functioning or PWB is possible as an older adult Trinidadian (see Frankson 2004 for a similar discussion). Local data collections suggest that Trinidadians are doing well in old age. Data from a large-scale, cross-country survey of over 800 people in Trinidad over the age of 65, for example, found that only 11% of older adults reported being in bad to very bad health, whereas about 45% of older adults reported being in good to very good health (Rawlins et al. 2008). Thus, aging well in Trinidad does not seem to be an anomaly. The data from the current study further suggests that positive social relations with others may be one dimension of PWB that has not been sufficiently exploited, and that perhaps encouraging the Trinidadian "lime" through mechanisms and support centres (e.g., like the Trinidad and Tobago Association for Responsible Persons' senior centres) for older adults will enable the older adult population to thrive, rather than simply survive

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[i] The literature reviewed primarily focuses on the island of Trinidad and not Tobago because data collected in the current study was only from Trinidadians. Best (2001) has argued that because of the different worldviews of its citizens, the two islands are culturally different and thus it seems reasonable to focus our work exclusively in Trinidad. The absence of data from Tobago, however, is noted as a limitation in the Discussion.

[ii] It is recognized that there is no guarantee that the Ryff (1989) scales are valid in Trinidad simply because the scales have been validated in other cultures. This is addressed as a limitation in the Discussion.

[iii] Preliminary analyses were conducted to determine if there were gender and ethnic group differences in psychological well-being, none were found. Therefore, neither was further considered as variables of interest given the small age group sample sizes for each variable

[iv] Four MANCOVAs controlling for education, relationship status, income and subjective health separately were also conducted. However, the MANCOVA controlling for all covariates together is being reported for parsimony, and to show that the primary predictor of psychological well-being is subjective health.