

# Does Subjective Well-Being Increase with Age?

Brian Scott Ehrlich and Derek M. Isaacowitz

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*Individuals vary in their levels of Subjective Well-Being (SWB). SWB is a measure of how good an individual feels about his/her life at a moment in time. Early research predicted that SWB was influenced by a host of socio-demographic variables that explained individual differences in SWB (Diener, Suh, Lucas & Smith, 1999). SWB is now considered to consist of three primary components: people's emotional responses (both positive and negative affect), domain satisfactions, and global judgments of life satisfaction (Diener, Suh, Lucas & Smith, 1999). Presently it is thought that older individuals have higher levels of SWB up to a certain age (Isaacowitz & Smith, 1999). The current study will use emotional responses and life satisfaction as the lens for investigating the differences in levels of SWB across age groups.*

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## INTRODUCTION

### *Age and Emotional Response*

Mroczek and Kolarz (1998) investigated affect among a nationally representative sample of 2,727 people aged 25 to 74, conducted by the McArthur Foundation Research Network on Successful Midlife Development. They administered the Midlife Development Inventory (MIDI affect scales) in an initial phone survey and a follow-up survey. They concluded that there were higher levels of positive affect in old age. Similarly, they found that older adults experienced lower levels of negative affect than younger adults. Isaacowitz & Smith (1999) examined the claim of higher SWB with age by analyzing data in the Berlin Aging Study (BASE). By extending the research of Mroczek & Kolarz into old age, this research found lower levels of positive and negative affect among the "oldest-old" age group (participants aged 70-100 years old). The research attributes this decline in advanced old age to health related problems and illnesses that preclude typical functioning, causing these older people to be less able to perform everyday tasks and activities. Isaacowitz & Smith (1999) posited that lower levels of negative affect do not equate to increased SWB. In fact, socio-emotional selectivity theory contends that while people may become better emotional regulators as they age, they do not necessarily have higher positive affect (Cartensen, Isaacowitz, & Charles, 1999). While there seems to be higher posi-

tive affect in adults as evidenced in the Mroczek & Kolarz article, the oldest-old age group showed lower levels in positive affect. According to Isaacowitz & Smith (1999), avoidance of negative affect can be a result of better emotional regulation.

Depression is perhaps the most extreme form of negative affect. The literature on the relationship between major depression and depressive symptoms reveals important conclusions about its age-related differences. Depression rates have been studied across age groups. The literature in this field can be divided into two groups. The first group of literature focuses on major depression as a unit of analysis while the second group focuses on depressive symptoms.

One study of major depression, Regier et al. (1988), measured the prevalence of mental disorders in the general population using the Diagnostic Interview Schedule (Regier et al., 1988). The highest rates for major depressive episodes were diagnosed in the two youngest age groups (18-24 yrs old, 25-44 yrs old) with prevalence rates of 2.2% and 3.0% respectively. The oldest age group (65 years and older) had the lowest prevalence rate for major depressive disorders of 0.7%. It may be that this age difference can be attributed to the stigma associated with such disorders and the potential reluctance and/or possible memory retrieval-related problems that older participants might face. Since older people may experience decreased functioning, it may be that the low prevalence rate is simply a function of older people forgetting to report symptoms

in the interview process. Still, there is robust data to suggest that the previous trend of increases or stability in positive affect applies to that of the negative affect present in mental disorders.

Concerning depressive symptoms among adolescents and adults, it has been found that adolescents show high levels of depressive symptoms, and older people show low levels of depressive symptoms (Nolen-Hoeksema, 1988). Nolen-Hoeksema posits that the age differences may be attributed to the frequency of parental divorce and parental depression that have affected childhood in more recent cohorts. Conversely, elderly individuals do not experience many uncontrollable or aversive events and thus do not have a greater risk of depression. The literature is consistent with higher levels of less negative emotional responses in older adults.

Emotional experience is included in the component of emotional response of SWB. Carstensen, Pasupathi, Mayr, & Nesselrode (2000) explored age differences in emotional experience in adults 18 to 94 years old. Participants were electronically beeped and asked to report the degree to which s/he experienced a spectrum of emotions across a one-week period. While this research did not find age differences in the frequency of positive emotional experiences, it did find an age difference in the frequency of negative emotional experiences. Negative emotional experiences seemed to decline up until age 60 and then ceased to decline, showing a resurgent, albeit non-significant, upward trend in the frequency of negative emotional experiences. This research provides another piece of converging evidence that negative affect seems to stop declining at best, and is perhaps increasing in advanced old age.

### *Age and Life Satisfaction*

Life satisfaction refers to the cognitive-judgmental aspects of SWB. While there is less literature on life satisfaction than on emotional response, Diener et al (1999) provide a summary of several studies on the age differences of life satisfaction. According to this summary, life satisfaction seems to stay the same, if not increase with age. This finding countered earlier conventional wisdom that older people were less satisfied because they were unhappy with their unfulfilled lives as they reached the uselessness of old age. The increase in life satisfaction with age may be attributed to a trend in greater involvement in satisfying areas of life among older cohorts. Nonetheless, there seems to be a slight increase in life satisfaction from age 20 to

age 80 with negative affect held constant. Considering that life satisfaction stays the same or increases in old age, Diener, et al. suggests that people become better at adapting to their conditions as they get older (1999). One piece of literature examines the levels of life satisfaction in a sample of 1,000 Canadians ranging in age from 15 to 95 (Horley & Lavery, 1995). Participants completed a number of SWB measures that included a version of the Affect Balance Scale, an 11-point life satisfaction rating, and an 11-point quality of life rating. Mean levels of life satisfaction increased in the 65-74 year old age group, but appeared to taper off in the 75 and older age group, with the oldest-old age group ceasing to exhibit the increase in higher levels of life satisfaction. One hundred and thirty-six participants completed these same SWB measures at the seven-year follow-up in the longitudinal component. Researchers found that younger people tended to report lower levels of life satisfaction over time. These two studies converge to show that adults in the older adult age group had higher levels of life satisfaction.

### *Summary of Past Findings*

It seems that higher levels of Subjective Well Being are found in older people up to a certain age. Health related problems that occur at "advanced old age" might contribute to an upswing in negative affect and/or a lack of positive affect in the oldest-old cohorts, as well as the presence of minor depressive disorders. There is overwhelming cross-sectional evidence that suggests that the levels of positive affect and life satisfaction are at least consistent over time, if not getting higher as individuals age. In the oldest-old age group, there seems to be a resurgence in emotional responses of negative affect. Overall, we would expect to find increases in Subjective Well Being into older age up until advanced old age (Isaacowitz & Smith, 1999).

### *Hypothesis*

The current study evaluated life satisfaction and positive and negative affect in young adults, (aged 18-25), middle-aged adults (37-59), and older people (60 and over). Using four measures of Subjective Well Being, this study assessed the levels of SWB among the age groups in the sample. It is hypothesized that we will find higher positive affect and lower levels of negative affect and depressive symptoms into old age. It is expected that life satisfaction will show similar high levels, with older adults showing higher life satisfaction.

## METHOD

### *Participants*

Two hundred and eighty research participants, ranging in age from 18 to 93 years old were recruited for this study. The sample was divided into three age/cohort groups (young people, aged 18-25; middle aged people, aged 37-59; and older people aged 60-93). There were 100 participants in the young adult cohort, 86 participants in the middle-aged cohort, and 94 participants in the older adult cohort. Participants were recruited from various community organizations. Younger participants were recruited from universities in the Delaware Valley and throughout the northeast. Middle aged participants were recruited from churches, community groups, and businesses. Older participants were recruited from several senior centers and unassisted living communities for elderly in the Philadelphia area. Older participants from assisted living communities or who experienced cognitive impairments were not recruited. Participants were excluded only if they had trouble completing the first questionnaires even when read aloud to them.

The sample was comprised of 190 women and 90 men. The total sample was predominantly comprised (80%) of participants who identified themselves as Caucasian. The sample included 224 participants who identified themselves as Caucasian, 26 who identified themselves as African-American, and 22 who identified themselves as Asian. Eight participants would not provide race/ethnicity information. Middle-aged and older cohorts had a higher proportion of Caucasians. The younger adult sample contained the largest percentage of Asian-Americans, while the older adult sample did not contain any Asian-American participants.

### *Measures*

*Emotional Responses: Positive and Negative Affect.* We used the Positive and Negative Affect Schedule (PANAS) as one measure to assess emotional response in this sample (Watson, Clark, & Tellegen, 1988). The PANAS is a widely used measure of affect. It includes ten negative and ten positive adjectives that describe ways people may feel. Participants used a five-point scale to rate themselves on the degree to which they felt a certain emotion during the course of the day. Higher scores for the ten negative adjectives indicate higher negative affect, while higher scores for the ten positive adjectives indicate higher positive affect. By phrasing the question with an emphasis on

the short term (i.e. today) rather than the long term, the PANAS is sensitive to fluctuations in mood (Watson, et al, 1988). These scales have been proven highly internally consistent.

*Emotional Responses: Depressive Symptoms -* We used the Center for Epidemiologic Studies Depression Scale (CES-D) to assess depressive symptoms (Radloff, 1977). The CES-D is a twenty-item scale that places an emphasis on the negative affective component of depressive mood. Participants mark the degree (on a scale from 0 to 3) to which they have felt or behaved the way described during the past week for each item. Four of the items are reverse coded, and a high score is indicative of a risk of depression or necessity for treatment. The CES-D was found to have a very high internal consistency, acceptable test-retest reliability ( $r=.54$ ), and good concurrent validity by clinical and self-report criteria (Radloff, 1977). The measure also appears to be suitable for a host of demographic groups (e.g., socio-economic statuses and ethnicities).

*Life Satisfaction -* We used the Satisfaction with Life Scale (SWLS) to measure global life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985). The SWLS is a five-item scale where participants rate themselves on the degree to which they agree with five statements regarding global life satisfaction. Higher scores indicate higher life satisfaction. The SWLS focuses explicitly on global life satisfaction and excludes positive affect and loneliness (Diener, et al., 1985). The measure appears to have high internal consistency and high temporal reliability.

### *Procedure*

Participants completed the baseline interview in a one-on-one or small group setting with an interviewer from the research team. This interview included self-reported measures of positive affect, negative affect, depressive symptoms, and life satisfaction. When participants had difficulty reading questionnaires, the interviewer read the items aloud and recorded the participants' responses. The interview included measures of life events and emotional response. While this study is part of a larger longitudinal study, this paper will focus exclusively on the baseline interview. Participants were then paid ten dollars at the completion of the baseline interview.

**Table 1. Mean Levels and Standard Deviations of SWB Components**

	Depressive Symptoms	Positive Affect	Negative Affect	Life Satisfaction
Young Adults	13.74 S.D.= 8.55	3.02 S.D.=0.79	1.8 S.D.=0.67	16.84 S.D.=3.37
Middle-aged Adults	10.06 S.D.=8.45	3.43 S.D.=0.68	1.38 S.D.=0.47	16.81 S.D.=3.99
Older Adults	12.39 S.D.=8.84	3.18 S.D.=0.74	1.38 S.D.=0.52	17.81 S.D.= 4.39

## RESULTS

Perceived health was lowest in the older adult cohorts. Participants rated their present health on a five-point Likert scale from 0 (poor) to excellent (4). Participants in the young adult age/cohort group had an average perceived health score of 3.3 (with a maximum score of 4), while participants in the middle-aged age/cohort group had an average health score of 3.01, and the participants in the older adult age/cohort group had an average health score of 2.29. Thus, there are noticeable age related differences in perceived health. Average years of education differed among the three cohorts. Middle-aged adults reported the most years of education, followed by young adults, and finally the older adults. The middle-aged cohort had an average score (determined by the number of years of education) of 17.69, the young adults had an average score of 14.77, and the older adults had an average score of 12.39. This difference between the middle-aged adult cohort and the older adult cohort may be attributed to the cohort effect that many participants from older generations were schooled to a lesser extent than those participants in the middle-aged cohort. The slightly lower educational average among the young adult sample (14.77) may be attributed to the large number of college students recruited that were in the process of completing their education.

Age groups differed significantly on mean values of depressive symptoms,  $F(2, 276) = 4.27, p < .05$ . (Mean levels are provided in Table 1). The mean levels were the highest for the younger adult cohort, followed by the older adults, and finally the middle aged

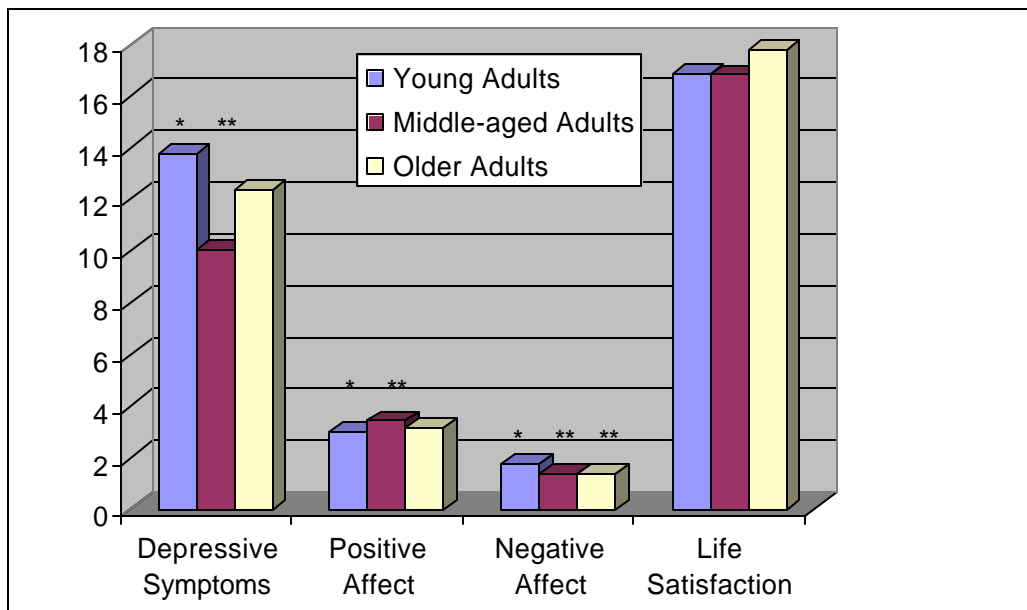
cohort. When using Tukey's Studentized Range Test, only the pair-wise difference between the young adult age group and the middle-aged group emerged as significant.

Age groups differed significantly on mean values of positive affect,  $F(2, 273) = 6.97, p < 0.01$ . The middle-aged group had the highest mean level and the younger adult group had the lowest mean level of positive affect, while the older age group fell somewhere in the middle (see Table 1). The Tukey comparisons revealed that only the pair-wise difference between the young adult age group and the middle-aged group emerged as significant. Therefore, middle-aged people were found to have significantly higher levels of positive affect when compared to the younger adults. However, there was no significant difference between older adults and the other age groups when looking at the more conservative analysis provided by Tukey's Studentized Range Test.

Age groups differed significantly on mean values of negative affect,  $F(2, 273) = 17.33, p < 0.01$ . The mean levels show that younger people have the highest levels of negative affect, followed by the older people, and the middle aged group. Analysis by the Tukey comparisons show that the younger adults are significantly higher in negative affect when compared to the older adults and the middle aged adults, while the middle-aged people and the older people are not significantly different from each other.

Mean levels did not differ significantly in life satisfaction across age groups,  $F(2, 274) = 1.94, p < 0.10$ . Analysis by the Tukey's Studentized Range Test further shows that there is no significance for the young people, middle-aged people, or the older people

Table 2. Histogram of Mean Levels of SWB Components



in life satisfaction, as there are no group comparisons with a significance level at a 0.05 alpha-level. There is, however, a non-significant trend, with younger adults and middle-aged adults at approximately the same level of life satisfaction, and older adults non-significantly higher in life satisfaction.

## DISCUSSION

By using these measures of SWB, the current study was able to tap into the components of SWB and find some pair-wise differences between age groups that emerged as significant. We found converging evidence that some components of SWB seem to be increasing with age (emotional response), and that another component of SWB (life satisfaction) does not appear to be increasing or declining, but rather staying at the same level.

These data support the idea that positive affect appears to be at relatively higher levels in middle adulthood when compared to younger adult cohorts. This finding is justified by cross sectional data. When we look at these findings in light of Isaacowitz & Smith's (1999) findings that positive affect was not as high in advanced old age, we might expect the decline in mean levels of positive affect in the older adult cohort. The mean level of positive affect in the older adult cohort was non-significantly lower than the middle-aged cohort. Nonetheless, it is still worthy to note this non significant age difference may be attributed to the growing health problems in the older adult cohort and the fact that this study did not separate participants into

an old age group and an oldest-old age group. This cross-sectional data on positive affect was in accord with the hypothesis that there are significantly higher levels of positive affect as adults age.

Similar to what was found in terms of positive affect, we found that there was a significant pair-wise difference between the younger adults and the middle aged adult groups in levels of negative affect. These findings suggest that there is a significant decline in negative affect into middle age. My hypothesis also predicted that there would be lower levels of negative affect as people age. A further direction for this research might be to divide this old age cohort into two groups of older people and oldest-old people to test the claim of an upswing in negative affect in advanced old age (Isaacowitz & Smith 1999). These findings seem to be consistent with recent research that shows negative affect declining throughout middle age, specifically up until age 60 (Carstensen, Pasupathi, & Mayr, & Nesselrode, 2000).

Depressive symptoms seemed to be significantly lower in middle-aged cohorts as compared to younger cohorts. There is a non-significant upswing in depressive symptoms in the older adult cohort, which is at best a trend. In light of Nolen-Hoeksema's literature, our data are in accord with the tendency for depressive symptoms to be at the highest levels as young adults. The claim that cohort effect may explain this difference is applicable to our research here as well, since it is easy to see that parental divorce and parental depression may explain higher levels of negative affect in this cohort. The hypothesis was validated by these data since there was a decline in negative affect. The resur-

gence of the older adult cohort in negative affect was evidenced by only a non-significant trend.

The current study was not able to show a significant difference in life satisfaction between age groups. If one were only to look at the mean levels, it might appear that life satisfaction exhibits some highs into old age (see Table 1); however it bears repeating that a conclusion on such a trend is drawn from non-significant group or individual pair-wise comparisons. These findings on life satisfaction, and the absence of pair-wise differences between any age groups, suggests that life satisfaction is staying the same. This finding is converging evidence for the summary provided by Diener et al. (1999), which claimed that life satisfaction was at least the same, or higher in old age. The data seem to support parts of the hypothesis that SWB does increase with age. The data also suggest that the middle-aged cohort was typically high or stable in their levels of SWB.

### *Limitations*

Where the data have not been able to explain declines or highs in old age, it may be useful to consider a range of confounding variables. The current study over-sampled females and under-sampled males, which is important in considering certain gender differences in emotional response. Obviously this study can only claim to make conclusions about SWB in terms of a cross-sectional analysis. We are not able to see if the young adult cohort approaches questions of negative/positive affect and life satisfaction with more honesty overall, thus having higher levels of negative affect and lower levels of positive affect. This age group may be significantly different from older cohorts and the young adult cohort may even show their consistency in affect and life satisfaction over time if a longitudinal study is to be conducted in the future. Cohort effect is always a possible confound when we are not able to see changes in SWB in longitudinal terms.

Another limitation of this study may be the sample. It may be difficult to generalize these findings to all socio-economic statuses when our study barely sampled any younger adults in lower middle class settings. Since the bulk of the younger participants were recruited from a particularly wealthy Ivy League institution, and a host of other universities and colleges with high SES students, it is hard to generalize the findings on SWB when this cohort may have been skewed in terms of their representative wealth for average peers in their age group. Since this does not represent the average American, and the sample might have come

from a disproportionate amount of middle to upper class participants, this sub-sample might not have been representative of the average American young adult.

Another limitation that may have affected this young adult group is their familiarity with questionnaires in a university setting. It is likely that university students are accustomed to completing these surveys and are obviously more exposed to an academic environment, thus de-emphasizing their importance as younger adults are continuously completing them. Furthermore, middle aged adults and older adults might take greater time with the questionnaires due to their decreased familiarity and they might be less likely to report more emotional responses that are indicative of higher levels of negative affect. Younger adults may be more accustomed to these surveys and more willing to make themselves vulnerable and report their negative emotional responses. In addition, young people are often undecided in their career and life paths, and these opportunities to answer questionnaires might be potentially overwhelming and thus evocative of higher negative affect and lower levels of positive affect. Middle-aged adults and older adults may have been exposed to all of the important life domains, and thus the remainder of their life is much less daunting and less likely to be interpreted more negatively and less positively.

Future directions on the topic of age and SWB might include analyzing this data set longitudinally, by analyzing the young adult age group when they become middle aged adults, and the middle aged group when they become older adults. In addition, the current study might also better divide the age groups studied; specifically the older adult group. This age group combines individuals in "advanced old age," an age group that is prone to health conditions that are not normally correlated with high levels of SWB. Therefore, these data could be analyzed by creating a fourth age group that might show significant comparisons in upswings or declines that occur in advanced old age. Furthermore, the combination of these two diverse old aged groups is clumsy and may explain why the Tukey comparisons showed no significant pair-wise differences in the old age group.

Future research might consider both more diverse recruitment strategies and help to disentangle high levels of SWB in light of more favorable health conditions. Health seems to be a particularly crucial variable that explains, in part, differences in age and SWB. A further direction of this research might be to conduct this study, but exclude all those individuals suffering from health related problems. These ailments

may explain why older adults showed higher negative affect and higher depressive symptoms. While this type of recruitment seems to be a likely remedy, it would not be an ultimate solution given the limited amount of older adults who are completely healthy. In fact, such an exclusion criteria might result in a non-existent sampling of older people. Whenever dealing with health, it is difficult to control for health related problems; they are found at a higher prevalence in the older age groups. It is not easy to argue that health must be factored out of the equation, when decreased health and functioning is symptomatic of old age. Because deteriorating health and old age are related, it is debatable to call health declines confounding variables when they are an integral part of aging.

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