Time to flourish: The relationship of temporal perspective to well-being and wisdom across adulthood.

**Authors:** Webster, Jeffrey Dean. Psychology Department, Langara College, Vancouver, Canada, jwebster@langara.bc.ca

**Source:** Aging & Mental Health, Vol 168(8), Nov 2014, pp. 1045-1055

**Abstract:**
Objectives: Despite the centrality of time to the aging process, the well-being consequences of different temporal orientations for optimal aging are poorly understood. We investigate the underexamined area of temporal orientation, namely a balanced time perspective, in a large, lifespan sample from the Netherlands. Method: Participants consisted of 512 Dutch adults ranging in age from 17 to 93 years (Mage = 45.46, SD = 21.37), including 166 male and 346 females. Participants completed a measure of balanced time perspective, mental health, and wisdom. Results: Results indicated that a balanced time perspective uniquely predicted both mental health and wisdom even after controlling for demographic, physical health, and personality variables. Younger adults tended to be more past-oriented relative to younger adults. Further, both midlife and younger adults were more likely to have a balanced time perspective relative to older adults. Conclusion: A balanced time perspective is associated with higher well-being and wisdom across the adult age span. (PsyINFO Database Record (c) 2016 APA, all rights reserved)

**Keywords:** Balanced Time Perspective Scale, psychological well-being, reminiscence, future time perspective, Self-Assessed Wisdom Scale

**Document Type:** Journal Article

**Subjects:** Age Differences, Aging, Time Perspective, Well Being, Wisdom, Adult Development, Physiological Aging

**Medical Subject Headings (MeSH):** Adolescent, Adult, Aged, Aged, 60 and over, Female, Health Status, Human Development, Humans, Knowledge, Male, Mental Health, Middle Aged, Netherlands, Personal Satisfaction, Time, Young Adult

**PsychINFO Classification:** Cognitive & Perceptual Development (920)

**Population:** Human

**Location:** Netherlands

**Age Group:** Adulthood (18 yrs & older), Young Adulthood (18-29 yrs), Thirties (30-39 yrs), Middle Age (40-64 yrs), Aged (65 yrs & older), Very Old (85 yrs & older)

**Tests & Measures:** Self-Assessed Wisdom Scale, Dutch mental health continuum-short form, NEO-Five Factor Inventory, Subjective Health Questionnaire, Balanced Time Perspective Scale, DOI: 10.1037/00451-000

**Methodology:** Empirical Study, Quantitative Study

**Format Covered:** Electronic

**Publication Type:** Journal, Peer Reviewed Journal

**Publication History:** Accepted: Mar 18, 2014, First Submitted: Jan 4, 2014

**Release Date:** 20141117

**Copyright:** Taylor & Francis 2014

**Digital Object Identifier:** http://dx.doi.org/10.1080/13607863.2014.920518

**PMID:** 24807461

**Accession Number:** 2014-4207-041

**Number of Citations:** 57

**In Source:** GREAT FOR LIFESPAN RESEARCH

**Images:** Show all 5 images

---

Copyright of Aging & Mental Health is the property of Routledge and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.
Time to Flourish: the relationship of temporal perspective to well-being and wisdom across adulthood

Jeffrey Dean Webster*, Ernst T. Bohlin-Jonsson* and Gerben J. Westerhof

*Psychology Department, Laurentian University, Sudbury, Ontario, Canada; †Department of Psychology, Health, and Technology, University of Twente, Enschede, the Netherlands

(Received 14 January 2014; accepted 18 March 2014)

Introduction

Time reduces by or drug on, is wasted or well-spent, can be squandered, saved, and lay heavy on our hands. Procrastination is feared that time waits for no man, and persons struggling with the aftermath of negative life events are soothed with the platitude that time heals all wounds. It is an ubiquitous part of our everyday existence and it can be a major influence on our thoughts, emotions, and motivations. According to Carstensen (2006), “Time is an integral part of virtually all psychological phenomena” (p. 1013). In this paper, we focus on time perspective and its relationship to two important aspects of flourishing (Keyes, 2005), namely positive mental health and wisdom. Wisdom is considered to be a higher order (e.g., Costa & Paikeman, 1994) and is deeply related to the temporal perspective of the most powerful influences on virtually all aspects of human behavior” (p. 107). Although most adults have a dominant time perspective, findings from recent research (e.g., Boland, 2014) reveal that time perspective can be influenced by many factors, such as family dynamics, future, and immediate contextual factors (e.g., deadlines and stress) which can vary across both the short and long terms. In other words, there is an inherent developmental component to time perspective.

Lifespans theories and time

Time and age are intimately, and necessarily, linked constructs (e.g., Henrichz, 1990). As we age, our time horizons may shift as developmental tasks become coupled with differing time conceptions and perspectives (e.g., Timmer, Bode, & Dittmann-Kohli, 2003). Consistent with lifespan theory (e.g., Baltes, 1987), there may be a shift in the time frame in terms of time. As life experiences acerate and we progress incrementally closer to death, we may gain "more memories of our past and 'lose' more opportunities to accomplish our future tasks. Empirical studies have shown that younger and older adults situate themselves and their lives in clearly divergent structures of personal time (Dittmann-Kohli & Westerhof, 2000) and highlight the importance of both future and past perspectives for developmental outcomes across the lifespan.

In terms of future perspective, Carstensen’s (2006) well-known socioemotional selectivity theory (SST) illustrates how a limited future time perspective shifts emotional goals and life research. In this area (e.g., Carstensen & Carstensen, 2009; Lang & Carstensen, 2002) generally supports the intuitive and theoretical expectation (Carstensen, Isaacowitz, & Charles, 1999) that older adults do indeed, at least on average, have a more limited future time perspective than younger adults. Studies have found both negative and positive consequences of a future orientation. With respect to the former, for instance, anticipating feared deaths (Markus & Nisbett, 1986), existential angst, death anxiety, and other forms of perceived endings can all cause fear and sadness (e.g., Kennedy, Fang, & Carstensen, 2003). And focusing excessively on future goals and commitments can reduce happiness and contribute to relationship deterioration (Zimbardo & Boyd, 2008). In contrast, there is a host of positive consequences associated with a future orientation across broad domains, such as: health planning and behaviors (e.g., fruit and vegetable consumption and exercise); Geller, Ziegelmann, Lippke, & Schwarzer, 2012); work-related growth, career, and secure motivations (Konrath, DeLange, Jansen, & Dikkers, 2013); and positive affect and meaning in life (Hicks, Trent, Davis, & King, 2012).

In terms of a past orientation, findings from emerging adult research (see Webster, Boland-Jonsson, & Westerhof, 2010 for a review) demonstrate the many functions that remembering our personal past plays in psychological well-being. In fact, reflecting on our personal past is considered a major developmental process (Panyi, Weiks, & Rice, 2006; Staudinger, 2001) which begins in childhood (e.g., Reese, Haden, & Povish, 1993) and continues into adulthood. In a sense, time perspective (as a time perspective, time perspective, time perspective) can be a meaningful reflection and experience of life.

A balanced time perspective

An important issue in time perspective is the most recent emerging emphasis on a balanced time perspective (BTP). Conceived as the ability and motivation to flexibly engage different time orientations as dictated by situational forces (Zimbardo & Boyd, 1999), a BTP constructively strengthens connections to psychological functioning than any single time perspective in isolation. Recent studies (e.g., Bonnwell, Ots, Linley, & Ivanovska, 2013; Stolarski, Mathews, Poets, Zimbardo, & Bittner, 2013; Webster, 2013; Zang & Howell, 2011) have suggested that examining BTP would further the field. Most studies exploring BTP have used the Zimbardo Time Perspective Inventory (ZTPI: Zimbardo & Boyd, 1999). Results using this instrument have found that BTP is associated with higher happiness (Beauvais et al., 2010; Deske, Duncan, Sutherland, Abernethy, & Henry, 2008), life satisfaction (Desmyter & De Raedt, 2012; Gao, 2013; Zang & Howell, 2011), and higher positive mood states such as energy and hedonic tone (Stolarski et al., 2011).

Although the above studies represent important initial steps in investigating time perspective, there are some concerns about the ZTPI in general, and the scoring criteria for a BTP in particular (Bonnwell, 2009; Carelli et al., 2013; Webster, 2013; Zang, Howell, & Stolarski, 2013). Moreover, the majority of the participants in these studies have been either young or older adults, primarily the former. Few studies have included participants from across the entire adult age range, and of those that did, the focus was not on age differences in time perspective. Recently, a new measure, the Balanced Time Perspective Scale (BTPS: Webster, 2011), was developed to address facets of measurement concern.

The BTPS (see “Materials” section for full description) assesses a person’s subjective evaluation of their remembered past and imagined future. Large individual differences exist among persons in their reported evaluations of any kind, some who focus on the past, others on the future, and others who engage in an evaluation of both their past and future. To capture such differences, the past and future subscapes of the BTPS can be partitioned via a regression model and low scorers on the past, as well as the future. This creates four categories: time restrictive (those persons who score below the median on both past and future subscapes), time expansive (those persons who score above median on both past and future), balanced (those persons who score above the median on both the future and past), and time expansive (those persons who score above the median on both the future and past). Webster (2011) found that those persons in the time expansive (i.e., BTP) category scored higher in self-esteem, life satisfaction, and happiness, consistent with findings reported using the ZTPI.

Recently, Webster and Ma (2013) presented some of the first empirical evidence of age differences in a BTP. Young (M = 26.8 years), middle (M = 52.7 years), and older (M = 66.4) adults completed the BTPS and measures of happiness and satisfaction with life. Results, in part, demonstrated that a BTP explained an additional 8.8% and 7.4%, respectively, of the variance in happiness and satisfaction with life above and beyond demographic...
and health variables, and that a significant percentage of older adults achieved a BTP. Unfortunately, Webster and Ma (2013) did not include personality measures and so it is not known whether similar results would have been obtained if such effects had been taken into account.

In the current paper, we study differences in a BTP in younger, middle-aged, and older adults. Our first hypothesis is that younger adults have a more future-oriented perspective and older persons a more past-oriented perspective, but that BTP is equally distributed across age groups (Webster & Ma, 2013). Our second hypothesis is that a BTP will be related to higher levels of well-being and wisdom, and this association will hold true independent of age (hypothesis three). Finally, we include measures of physical health and personality traits in addition to the standard demographic variables in order to assess whether a BTP explains unique variance in well-being and wisdom. Our fourth hypothesis is that a BTP will account for additional unique variance in these two dependent measures after accounting for demographic, health, and personality traits.

Method
Participants
Participants consisted of 512 Dutch adults ranging in age from 18 to 92 years (Mage = 46.64, SD = 21.37), including 186 male and 326 females. Students (17-29 years) in an introductory personality psychology class participated themselves and then recruited two additional adults (34% parents and 17% grandparents, respectively) from a middle-aged group (40-60) and an older group (60-92). This convenience sampling technique may have increased the possibility of some minor dependency in the data and our results must be interpreted with this in mind. The sample was basically healthy (67.3% reported no health limitations, 9.2%, and 5.9% considerable health limitations; mean subjective health is 7.7 on a scale from 0 to 10). Completed education varied from lower levels (i.e., 10 years or less, 23%) and middle levels (between 11 and 14 years, 41%) to higher levels (15 years or more, 36%).

Measures
Demographic variables
Age: the gap for completed educational level in accordance with the Dutch educational system (primary school, lower vocational level, lower secondary level, higher secondary level, middle vocational level, higher vocational level, and university).

Physical health
Physical health was assessed with both a subjective health questionnaire ('How would you rate your present health condition on a scale from 0 to 10?') and a measure of physical health limitations ('Are you limited in your daily life due to health problems, e.g., in household chores?') with these answering categories: 'Not at all', 'Slightly', and 'Considerably'.

Personality
Three personality traits, neuroticism, extraversion, and openness, to experience were measured with a Dutch translation (Hoekestra, Ormel, & De Fruyt, 1996) of Costa and McCrae's (1992) NEO-Five Factor Inventory (NEO-FFI). In the present study, the reliability (Cronbach's alpha) was good (neuroticism = .86; extraversion = .82; and openness to experience = .71).

Well-being
Well-being was measured with the Dutch mental health continuum-short form (MHC-SF; Lamers, Westerhof, Bohman, Ten Klooster, & Kuyken, 2011). The MHC-SF consists of 14 items which correspond to theoretical formulations of emotional, psychological, and social well-being (Kuyken, 2005). Sample items are 'In the past month, how often did you feel: ... happy?' and '... that people are basically good?'. There were six answering categories ranging from almost never to every day. The scale proved to have good concurrent and discriminatory validity (Lamers et al., 2011), and in the present sample, Cronbach's alpha was .89.

Wisdom
Wisdom was measured with the Self-Assessed Wisdom Scale (SAWS; Webster, 2013, Webster, Westerhof, & Bohman, 2014), a 40-item questionnaire reflecting the following five components of wisdom: critical life experiences: 'I have experienced many painful events in my life'; reminiscence/reflexivity: 'Reviewing the past helps me gain perspective on current concerns'; openness to experience: 'I like to read books which challenge me to think about different alternative possibilities'; 'I am very good about reading my emotional states'; and humor: 'Now I find that I can really appreciate life's little irritations'. Participants respond to each question using a Likert type scale, where 1 = strongly disagree and 6 = strongly agree. Cronbach's alpha for the total SAWS in this study was .90.

Time perspective
Time perspective was measured with the BTPS (Webster, 2011; Webster & Ma, 2013). The BTPS is a 28-item scale containing 20-item subcales, one reflecting a positive past orientation and one reflecting a positive future orientation. Participants respond to each on a 6-point Likert type scale, where 1 = strongly disagree and 6 = strongly agree. Sample items of the former include, 'Reviewing events from my past helps me give my life meaning' and 'Seeing how the pieces of my past come together gives me a sense of identity'. Sample items of the latter include, 'Creating a positive future is something I often think about' and 'Looking ahead really gets me energized'. Cronbach's alpha for the past subscale of the BTPS in this study was .90 and the future subscale, it was .93.

Results
Our first hypothesis stated that younger adults have a more future-oriented perspective and older persons a more past-oriented perspective, but that a BTP is equally distributed across age groups. As can be seen from Table 1, the continuous measure for BTP is negatively correlated with both mental health and wisdom: a lower score on BTP (i.e., a more BTP) is related to higher levels of well-being and wisdom, as hypothesized. We then conducted separate analyses (age group: young, middle-aged, and older) by four (BTP category: time restrictive, reminiscence, reflexivity, and time expansive) ANOVA on each of the two dependent variables (mental health and wisdom).

For the dependent variable of mental health, the results show a main effect for both age and BTP category. The interaction was not significant. As can be seen in Figure 1, the dependent variable (SD) in the middle group (M = 50.34, SD = 10.36) tended to be lower than both younger (M = 54.39, SD = 11.51) and older adults (M = 52.00, SD = 12.45). 0.05<.p<.009, partial eta squared .027. In terms of BTP categories, as predicted, the time expansive category (M = 60.01, SD = 10.82) scored significantly higher than the time restrictive (M = 49.33, SD = 12.28) and reminiscence (M = 54.97, SD = 10.11) categories, but not significantly higher than the time restrictive. Further, the future category (M = 57.34, SD = 9.47), F(2, 599) = 27.06, p < .000, partial eta squared .140. For the dependent variable of wisdom, there is a main effect for both age and BTP category. The age group by

Table 1. Descriptive statistics and zero-order correlations among main study variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>46.46</td>
<td>21.37</td>
<td>-0.045</td>
<td>-0.264</td>
<td>-0.319</td>
<td>-0.460</td>
<td>-0.191</td>
<td>-0.160</td>
<td>-0.273</td>
<td>-0.009</td>
<td>-0.081</td>
<td>0.219</td>
<td></td>
</tr>
<tr>
<td>2. Sex</td>
<td>1.48</td>
<td>0.48</td>
<td>-1.26</td>
<td>-1.87</td>
<td>1.56</td>
<td>0.349</td>
<td>0.328</td>
<td>-0.011</td>
<td>0.036</td>
<td>0.027</td>
<td>-0.008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Edu</td>
<td>4.53</td>
<td>1.54</td>
<td>-2.40</td>
<td>-2.25</td>
<td>1.94</td>
<td>0.789</td>
<td>0.720</td>
<td>-0.084</td>
<td>0.030</td>
<td>0.034</td>
<td>-0.016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. SH</td>
<td>8.72</td>
<td>1.30</td>
<td>-0.27</td>
<td>-0.23</td>
<td>1.29</td>
<td>0.373</td>
<td>0.209</td>
<td>-0.097</td>
<td>0.013</td>
<td>0.022</td>
<td>-0.084</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. NE</td>
<td>3.84</td>
<td>1.38</td>
<td>-2.93</td>
<td>-2.14</td>
<td>2.02</td>
<td>0.789</td>
<td>0.720</td>
<td>-0.084</td>
<td>0.030</td>
<td>0.034</td>
<td>-0.016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. NE</td>
<td>30.16</td>
<td>7.86</td>
<td>-0.27</td>
<td>-0.23</td>
<td>1.29</td>
<td>0.373</td>
<td>0.209</td>
<td>-0.097</td>
<td>0.013</td>
<td>0.022</td>
<td>-0.084</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Fems</td>
<td>62.95</td>
<td>6.35</td>
<td>-0.27</td>
<td>-0.23</td>
<td>1.29</td>
<td>0.373</td>
<td>0.209</td>
<td>-0.097</td>
<td>0.013</td>
<td>0.022</td>
<td>-0.084</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Open</td>
<td>38.22</td>
<td>6.42</td>
<td>-0.27</td>
<td>-0.23</td>
<td>1.29</td>
<td>0.373</td>
<td>0.209</td>
<td>-0.097</td>
<td>0.013</td>
<td>0.022</td>
<td>-0.084</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. SH</td>
<td>0.14</td>
<td>0.47</td>
<td>-0.27</td>
<td>-0.23</td>
<td>1.29</td>
<td>0.373</td>
<td>0.209</td>
<td>-0.097</td>
<td>0.013</td>
<td>0.022</td>
<td>-0.084</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. MHC</td>
<td>55.27</td>
<td>11.84</td>
<td>-0.27</td>
<td>-0.23</td>
<td>1.29</td>
<td>0.373</td>
<td>0.209</td>
<td>-0.097</td>
<td>0.013</td>
<td>0.022</td>
<td>-0.084</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. BTP</td>
<td>5.03</td>
<td>1.45</td>
<td>-0.27</td>
<td>-0.23</td>
<td>1.29</td>
<td>0.373</td>
<td>0.209</td>
<td>-0.097</td>
<td>0.013</td>
<td>0.022</td>
<td>-0.084</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: BTP = time orientation; SH = subjective health; SD = subjective limitations; NE = neuroticism; SH = stress; extraversion; Open = openness; MHC = Self-Assessed Wisdom Scale; MHC = mental health construct-score form; BTP = balanced time perspective.
Figure 1. Mean raw score mental health as a function of age group and BTPS category.

Figure 2. Mean raw score wisdom as a function of age group and BTPS category.

was not significant. In Model 3, we added the personality variables of neuroticism, extraversion, and openness. Overall, the model was significant, $F(3, 503) = 32.84$, $p = .000$, and personality accounted for an additional 29.7% of variance explained in wisdom scores. However, the personality trait of neuroticism was not significant, while age was. Finally, in Model 4, we added the BTP score. Overall, the model was significant, $F(9, 502) = 61.06$, $p = .000$, and BTP accounted for an additional 17.9% of the variance in wisdom. In the final model, age, health limitations, extraversion, openness, and BTP were all significant. Therefore, our fourth hypothesis that a BTP accounts for additional unique variance in both well-being and wisdom is confirmed.

Table 2. Hierarchical regression on mental health continuum – short form.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>$t$</td>
<td>sig</td>
<td>Beta</td>
</tr>
<tr>
<td>Age</td>
<td>-.019</td>
<td>-4.18</td>
<td>.076</td>
<td>.058</td>
</tr>
<tr>
<td>Sex</td>
<td>.055</td>
<td>1.262</td>
<td>.208</td>
<td>.094</td>
</tr>
<tr>
<td>Edu</td>
<td>.228</td>
<td>5.045</td>
<td>.000</td>
<td>.197</td>
</tr>
<tr>
<td>HLT</td>
<td>-.085</td>
<td>-1.457</td>
<td>.146</td>
<td>-.006</td>
</tr>
<tr>
<td>SI</td>
<td>-.143</td>
<td>2.569</td>
<td>.010</td>
<td>.055</td>
</tr>
<tr>
<td>Near</td>
<td>-.256</td>
<td>-3.729</td>
<td>.000</td>
<td>-.234</td>
</tr>
<tr>
<td>Extra</td>
<td>.399</td>
<td>4.242</td>
<td>.000</td>
<td>.322</td>
</tr>
<tr>
<td>Open</td>
<td>-.288</td>
<td>-4.866</td>
<td>.000</td>
<td>.147</td>
</tr>
<tr>
<td>BTP</td>
<td>-.254</td>
<td>-3.707</td>
<td>.000</td>
<td>-.201</td>
</tr>
<tr>
<td>$R^2_1$</td>
<td>.233</td>
<td>.297</td>
<td>.554</td>
<td>.304</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.054</td>
<td>.088</td>
<td>.554</td>
<td>.219</td>
</tr>
</tbody>
</table>

Note: * $p < .05$; ** $p < .01$. Edu = education level; HLT = subjective health; SI = health limitations; Near = neuroticism; Extra = extraversion; Open = openness; DAVS = Self-Assessment Wisdom Scale; HMSC = mental health continuum short form; BTP = balanced timing perspective.
Table 3. Hierarchical regression on wisdom.

<table>
<thead>
<tr>
<th>Model</th>
<th>Beta</th>
<th>t sig</th>
<th>Beta</th>
<th>t sig</th>
<th>Beta</th>
<th>t sig</th>
<th>Beta</th>
<th>t sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.50</td>
<td>1.09</td>
<td>0.28</td>
<td>0.57</td>
<td>1.13</td>
<td>0.253</td>
<td>0.57</td>
<td>3.517</td>
</tr>
<tr>
<td>2</td>
<td>0.89</td>
<td>1.343</td>
<td>0.186</td>
<td>0.567</td>
<td>1.484</td>
<td>0.138</td>
<td>0.567</td>
<td>1.799</td>
</tr>
<tr>
<td>3</td>
<td>0.25</td>
<td>2.128</td>
<td>0.009</td>
<td>0.209</td>
<td>4.234</td>
<td>0.000</td>
<td>0.209</td>
<td>7.099</td>
</tr>
<tr>
<td>4</td>
<td>0.34</td>
<td>0.648</td>
<td>0.317</td>
<td>0.059</td>
<td>1.171</td>
<td>0.240</td>
<td>0.059</td>
<td>2.079</td>
</tr>
<tr>
<td>5</td>
<td>0.078</td>
<td>1.711</td>
<td>0.171</td>
<td>0.009</td>
<td>0.186</td>
<td>0.033</td>
<td>0.009</td>
<td>0.008</td>
</tr>
<tr>
<td>6</td>
<td>0.046</td>
<td>1.051</td>
<td>0.294</td>
<td>0.013</td>
<td>0.135</td>
<td>0.250</td>
<td>0.013</td>
<td>0.094</td>
</tr>
<tr>
<td>7</td>
<td>0.317</td>
<td>1.714</td>
<td>0.000</td>
<td>0.173</td>
<td>0.714</td>
<td>0.000</td>
<td>0.173</td>
<td>0.474</td>
</tr>
<tr>
<td>8</td>
<td>0.286</td>
<td>0.833</td>
<td>0.186</td>
<td>0.209</td>
<td>0.000</td>
<td>0.000</td>
<td>0.209</td>
<td>0.286</td>
</tr>
<tr>
<td>9</td>
<td>0.204</td>
<td>0.604</td>
<td>0.004</td>
<td>0.297</td>
<td>0.004</td>
<td>0.297</td>
<td>0.004</td>
<td>0.004</td>
</tr>
<tr>
<td>10</td>
<td>0.716*</td>
<td>3.240</td>
<td>0.000</td>
<td>0.3240</td>
<td>0.000</td>
<td>0.3240</td>
<td>0.000</td>
<td>0.3240</td>
</tr>
</tbody>
</table>

Note: ETQ = education level; SH = subjective health; HL = health fantasies; NP = neuroticism; ETS = extraversion; Open = openness; SANS = well-being; Wisdom Scale; MHIC = mental health continuums (from BTSP = balanced time perspective).

Discussion

In this study, we investigated an important and understudied aspect of aging studies, namely the relationship of a BTP versus young, middle, and older adulthood, with well-being and wisdom. We confirmed our hypothesis that younger adults focus more on their future and older persons on their past. Although older persons do have a somewhat less BTP than middle-aged and younger persons, nearly one in four older adults (i.e., 22.6%) was in this category. In line with our second and third hypotheses, BTP is related to well-being and wisdom across age groups, and even more so than a positive perspective on the past or the future alone. As hypothesized, BTP explains additional variance in well-being and wisdom beyond other individual characteristics.

By drawing on our past, we can remember times in which we were successful in coping with problems, see how we have changed or grown in positive directions over time, and maintain pleasant and happy memories concerning loved ones. These are all ways in which autobiographical memories can enhance the psychological, emotional, and social well-being of persons as we develop adulthood. Similarly, imagining future goals, dreaming about later success stories, and anticipating exciting events and possible future pathways in which a positive future orientation can contribute to mental health.

Various limitations can be related in relation to a BTP and wisdom. Wise persons learn from their past, and reminisce in order to regulate emotions, and resolve (or tolerate) and challenging or traumatic events from earlier in life. Wise persons also recognize the positive motivational consequences of setting long-term goals and nurture an optimistic and expansion-oriented future perspective. Importantly, however, the data we present demonstrate that it is not just a positive past orientation (remembrance), or a positive future orientation (futurism) in isolation which produces the most salutary effects; rather, both the ANOVA and regression analyses that is that it is a balanced, high level of each in combination which produces the maximum levels of well-being. In other words, current well-being is strongly associated with positive diaherous evaluations of our perceived past and imagined future throughout our lives (e.g., Kamil & Ross, 1996; Suh, H. & Herbert, 2003).

Our findings show both similarities and important differences from other studies on past perspective. In terms of similarities, for instance, using the ZTPS, Zhang and Howell (2011) found that a positive past orientation was negatively correlated with neuroticism, and positively correlated with life satisfaction, extraversion, and openness. Similarly, in the current study, the BTPS past subscale was negatively correlated with neuroticism, and positively correlated with extraversion, mental health, and wisdom. These results support the contention that a positive past orientation is associated with adaptive personality traits and well-being. Interestingly, however, despite such similar findings using the ZTPS and BTPS, the past subscales of these two instruments only correlate 43 (Webster, 2013), suggesting they are tapping somewhat different conceptualizations of the past.

Differences emerge when focusing on the future. For the ZTPS future subscale, the relationship with well-being is sometimes inconsistent. For instance, Zhang and Howell (2011) and Durkaj and Webster (2011) reported, respectively, that the future subscale was not negatively correlated with neuroticism, or indeed, was positively correlated with neuroticism. These findings are clearly in contrast to the ZTPS future subscale measured, in part, a type of anxiety about uncertain commitments and stressful responsibilities in addition to more positive dimensions (Carrell et al., 2011). In contrast, the future subscale of the BTPS is negatively correlated with neuroticism, and positively with extraversion, openness, well-being, and wisdom. Moreover, the correlation between the ZTPS and BTPS future subscales is only .32 (Webster, 2013) suggesting that they measure somewhat different facets of a future orientation. For instance, the BTPS future subscale has a stronger affective component, reflecting positive emotions such as excitement, optimism, energy, and hope. As such, the BTPS past and future subscales are balanced in the sense of affective quality, whereas there seems to be an imbalance in the ZTPS subscales of a nostalgic past focus and current future focus.

As noted earlier, very few studies have examined a BTP, particularly in older adults. Most of those studies have used the ZTPS which, as described above, has some limitations when used for this purpose. Consequently, integrating our findings with directly relevant literature is difficult. Nevertheless, at a general level, our results are consistent with previous findings (e.g., Roniswell et al., 2010; Dehneley & De Raedt, 2012; Enke et al., 2008; Guo, 2011; Shalev et al., 2013) that a BTP is associated with positive outcomes including happiness, life satisfaction, and higher mood. To this line, we can add self-reported well-being and wisdom.

Additionally, our results, at least with respect to a future orientation, are in line with the findings from SST, particularly as they relate to age differences and well-being. Our finding that older adults, on average, score higher on the BTPS future subscale is entirely consistent with findings using the FUP scale in which older adults also score lower. Beyond this basic trend, however, direct comparison of the current findings to SST findings is complicated by the fact that these two areas are assessing different components of time. In SST, it is the perception of time being left, while the cognitive, emotional, and motivational aspects of a perceived positive past and future. It remains an open empirical question as to whether, and how, a BTP (as conceptualized within SST and a BTP) are associated. Moreover, this study provides new insights into how younger, middle, and older adults perceive their past and future and the attendant well-being outcomes of such temporal perspectives. In contrast to deeply entrenched stereotypes suggesting older adults only live in the past, and younger adults only live for the future, our results demonstrate that these perceptions vary by younger adults and middle adults to be more future and past oriented, while older adults are more past and less future oriented.

Midlife adults fell between younger and older adults on both the futurism and reminiscence categories. In contrast to Webster and Ma (2013), however, midlife adults were higher than older adults in the time expansive category, and also higher in an absolute sense (40.4% versus 37.7%), which may strike a balance between what has come before and what we still expect to occur in our future. Nevertheless, it is still certainly possible and our results suggest the effect would be worthwhile.

General limitations and conclusions

Certain limitations are worth discussing. First, like all cross-sectional studies, we cannot determine whether the results are true developmental changes or cohort
effects. Perhaps, growing up in a time where average life expectancy was 65 years, people placed psychological limits on their own time. In contrast, persons growing up in a time of medical advances, lifestyle enhancements, and technical improvements might anticipate living into their 90s and beyond, effectively extending their sense of the future. Longitudinal studies are needed to examine individual and cohort con-
founders. Further, there are obviously other possible predic-
tors of well-being not included in the present study (e.g., relationship quality, satisfaction, and additional personality traits). Moreover, although we did not include a measure of social desirability in the present study, Webster (2011) reported that neither the BTPs past nor the future subscapes were correlated with social desirability.

Additionally, with respect to the BTPs itself, we acknowledge a possible limitation in assigning persons to categories on the basis of a median split. The most impor-
tant, perhaps, is that the median is sample specific and consequently, the numbers of persons assigned to the time restrictive, reminiscent, future, and time expansive cate-
gories may differ from study to study. This potential shortcoming is not limited to the BTPs but applies to the ZTPs as well when the latter is used to assess a BTP. A related time concerns the unequal numbers of younger and older adults in the sample as it is possible that the value of the median is biased towards younger (and there-
fore greater future perspective) adults. Although the discrep-
cy in the current study between young and older adults is small (i.e., 175 versus 159, respectively), we ne-
evertheless ran an analysis by "adding" an additional 16 older adults and categorized them as time expansive. We then reverse the chronological age and the results did not change. Older adults remained less expected in the time expansive category as originally reported. Addition-
ally, Webster and Ma (2013) found that chi-square results did not change overall even when the different median values were used (i.e., 175 versus 159, respectively and those from the current study) were used to classify participants into the BTPS categories. Nevertheless, the establishment and use of median splits consistently across all future studies would eliminate this potential problem. We note that the medians employed in the current study are the same as those calculated in Webster and Ma (2013) which serves to attenuate concerns over this issue to a certain degree. We note further that the calculation of the deviation from optimal score with the BTPS is not sample specific and therefore future studies can be conducted with the same scores.

Finally, it will be interesting to examine in more detail the meaning, both conceptually and empirically, of the three temporal dimensions and how they are seen as some form of present orientation? For instance, the present partialistic sub-
cale of the ZTP is associated with many negative out-
comes (e.g., depression, pessimism, and neuroticism). Is the time restrictive category ischemic with present focalism? Indeed, a recent correlational analysis by Beck et al. (2007) showed that the time restrictive category was higher in neurotics suggesting some intriguing similarities. What factors, then, might account for persons classifying themselves within such a temporal orientation. Some younger persons, for instance, may feel overwhelmed by choices, stress, pressure, and relationship stresses and thereby succumb to a fatalistic orientation. Older adults, confronted with health limitations (obesity, hypertension, etc.), may have more control over their environment and thereby be more open to new ideas and new experiences. For example, the ZTPS can also be seen as the antithesis of the BTPS categories with the ZTPS fatalistic category as a start.

Despite these limitations, the results are promising in that they suggest possible intervention strategies that may be of particular efficacy for older adults. Although some-
what premature to draw specific therapeutic techniques, an encouraging area for future research will be to investi-
gate how increasing a BTP might ameliorate negative psych-
ological outcomes such as anxiety and depression. These older adults with a limited future time perspective, for instance, may experience narrative foreclosure (Boehm, Westerhof, Rand, Tromp, & Kenyon, 2011), a sense that life holds no new tasks, goals, or opportunities. Consequently, despite, rather than opti-
mism and excitement, pervade everyday cognitions. By challenging such individuals to accommodate to changing abilities and opportunities, new realistic goals can be negotiated and provide a renewed sense of hope for the future. For instance, Korte, Boehm, Westerhof, Cap-
peliers, and Smid (2012) found that both reversing one's past and focusing on developing meaningful future goals was effective in reducing depression among adults of 60 and 80 years of age.

As a corollary, we know that reminiscence therapy or life review is therapeutic (e.g., Korte et al., 2012; Wester-
hof, Boehm, & Webster, 2010). From a lifespan per-
vie, it may be adaptive for younger, future oriented adults to more frequently reminisce about prior memories, accomplishments, and lessons learned. In combination with a life review, a psychological intervention that might reflect a more BTP in younger adults. Some combination, then, of drawing strength from the past and anticipating future goals may play a more effective approach for adults of all ages. It may, in fact, allow one to "honor" (Keyes, 2002).

References


Bieberstein, B., Westerhof, G.J., Randell, W., Tromp, T., & Kenyon, G. (2011). Narrative timelines in later life: Pers-


