



The role of intrinsic values for self-growth and community contribution at different life stages: Differentially predicting the vitality of university students and teachers over one year



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ABSTRACT

Self-determination theory distinguishes between intrinsic and extrinsic values and research has demonstrated that prioritizing intrinsic relative to extrinsic values is related to greater well-being. Intrinsic values have typically been amalgamated yet based on theories of development (Arnett, 2000; Erikson, 1980), we prospectively examined the relationship between specific intrinsic values and vitality among people at different life stages. We hypothesized that valuing self-growth, reflecting the self-exploration involved in developing an identity, would be particularly important for the vitality of college students ($N = 99$). Valuing community contribution, consistent with the generativity stage of later adulthood, was expected to be more important for the vitality of schoolteachers ($N = 90$). Supporting our hypotheses, regression analyses showed that self-growth was relatively more likely than community contribution to be associated with increased vitality among university students, whereas community contribution was relatively more likely than self-growth to be associated with increased vitality among teachers. The analyses controlled for participants' mean ratings of intrinsic and extrinsic values. Change in self-growth values over one year, moreover, predicted students' vitality at the end of the year. The potential for integrating theories of development with self-determination theory's conceptualization of values is discussed.

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Intrinsic values for self-growth, close relationships, and community contribution have generally been studied together based on self-determination theory's proposition that these values satisfy psychological needs and oppose extrinsic values for wealth, status, and an attractive image (Deci & Ryan, 2000). A large body of research has found that when individuals prioritize intrinsic relative to extrinsic values, they experience greater well-being (see Kasser, 2002 for a review). Erikson's (1980) theory of psychosocial stages, however, suggests that the importance of specific intrinsic values may depend on an individual's life stage. Erikson proposed eight developmental stages across the lifespan, each with its own psychosocial task. Identity during adolescence and early adulthood, a stage focused on an emerging sense of self, and generativity during adulthood, a stage focused on making a contribution, are considered to be central constructs of development in Erikson's theory (Erikson, 1982; Karcher & Benne, 2008). We therefore focus on these two

stages in our study of young and midlife adults.¹ We examined the two intrinsic values that reflect these stages – self-growth and community contribution – and hypothesized that they would differentially predict the vitality in two different groups of individuals: university students and adults pursuing a teaching career.

1. Self-determination theory of values

In line with humanistic theories (Maslow, 1954; Rogers, 1964), self-determination theorists have described intrinsic values, such as self-growth and community contribution, as being expressive of natural growth tendencies, leading to greater well-being (Kasser, 2002). In contrast, extrinsic values, such as wealth and status, do not satisfy an

¹ Although Erikson proposed a life stage between identity and generativity, intimacy versus isolation, other theorists have remarked that intimacy is an important need throughout the lifespan (Deci & Ryan, 2000) and that the experience of intimacy is interwoven with identity and generativity (Josselson, 2000). Furthermore, in a sample of 18 to 82 year old adults, Sheldon and Kasser (2001) found that unlike identity and generativity, intimacy did not vary with age.

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individual's psychological needs and are typically engaged in as a means to an end. In support of self-determination theory, a substantial body of research has demonstrated that prioritizing intrinsic relative to extrinsic values is associated with greater well-being, as measured by self-report and clinical interviews of individuals' vitality, social functioning, depression, anxiety, and physical ailments (see Kasser, 2002 for a review). Furthermore, two experimental studies have provided causal evidence for a link between intrinsic values and well-being (Sheldon, Gunz, Nichols, & Ferguson, 2010; Lekes, Hope, Gouveia, Koestner, & Philippe, 2012). However, both of these studies were limited in duration, spanning only four weeks. Few studies have examined the influence of values over longer periods of time (see Niemiec, Ryan & Deci, 2009 and Hope, Milyavskaya, Holding, & Koestner, 2014 for exceptions). The present study, therefore, extends previous research by examining the relationship between values and well-being over the course of a year, and specifically whether intrinsic values for self-growth and community contribution may differentially predict the vitality of university students and teachers.

2. Valuing self-growth during college

As Arnett (2000) explains, individuals from 18 into their twenties are in a unique developmental period of life, which he has termed emerging adulthood. During this time, young people explore career and educational paths, as well as experiment with romantic and sexual roles, thereby gaining life experience before taking on adult responsibilities. Of all periods of life, emerging adulthood has been distinguished as the one that offers the greatest opportunity for identity exploration. Erikson (1950) originally outlined identity versus role confusion as the central crisis of the adolescent stage of life yet he did not specify ages for his stages of development and along with other theorists and researchers has noted the prolonged adolescence occurring in industrialized societies (Côté & Levine, 1989; Erikson, 1968).

It follows that among the values that self-determination theorists have identified as intrinsic, self-growth may be particularly important for the vitality of emerging adults. Waterman (2011) describes identity formation as a process of self-discovery and Arnett (2007) points out that emerging adulthood is a period when individuals have the opportunity to focus on their self-development. Supporting Erikson's (1968) theory of identity, researchers have shown that emerging adulthood is associated with experimentation (Schulenberg & Zarrett, 2006) and with exploration of positive roles and orientations, including prosocial behaviour (Padilla-Walker, Barry, Carroll, Madsen, & Nelson, 2008). Across cultures, researchers have further found that engaging with identity issues during college and forming an identity contributes to greater well-being (Vleioras & Bosma, 2005; Hofer, Kärtner, Chasiotis, Busch, & Kiessling, 2007; Waterman, 2007). Waterman (2007) points out, however, that the research linking identity formation and well-being has been conducted at one time-point and that longitudinal studies are needed. Given Waterman's conclusion that identity formation and well-being are associated when young people reflect on identity alternatives before committing to an identity, valuing self-development may be particularly important for young adults in college.

3. Valuing community contribution among schoolteachers during adulthood

Whereas valuing self-growth may be especially important for young adults, valuing community contribution may be particularly important for the well-being of adults. Erikson (1980) described the central stage of adulthood, the longest stage, as resolving the midlife crisis of generativity versus stagnation. He explained that generativity involves "establishing and guiding the next generation" (1950, p. 267), by contributing to one's local community and improving the world for

future generations. Generativity has been described as the "hallmark of psychosocial maturity in the adult years" (McAdams, de St. Aubin, & Logan, 1993, p. 221). Individuals who fail to achieve generativity become stagnant, regressing to earlier stages of development (Erikson, 1982) and feeling less fulfilled and content (Ackerman, Zuroff, & Moskowitz, 2000). By valuing contributions to one's community, reflecting their generative concern, adults may therefore experience greater well-being.

In support of Erikson's theory, researchers have shown that concerns for generativity and a focus on taking care of others and one's community tend to be more present as individuals age (Sheldon & Kasser, 2001). In their study of 3032 young, midlife, and older adults, Keyes and Ryff (1998) showed that overall adults aged 40 to 59 tended to have the highest levels of generativity. Researchers have further found that generativity is a stronger predictor of subjective well-being in midlife adults, compared to younger adults (Ackerman et al., 2000). As a first test of whether community contribution specifically predicts well-being, we studied adults in a profession dedicated to educating the next generation, who may therefore experience greater vitality when they focus on community relative to self-growth.

4. Present study

The tradition of eudaimonia considers well-being to be the degree to which individuals are fully functioning (Ryan & Deci, 2001), living in accordance with their true self and feeling intensely alive and authentic (Waterman, 1993). Vitality, an indicator of eudaimonic well-being, concerns the degree to which a person feels energetic and alive (Ryan & Deci, 2001). Importantly, vitality is related both to psychological factors, such as self-actualization, self-esteem, and mental health, and to somatic factors, such as a person's experience of their physical health (Ryan & Frederick, 1997). Given that Erikson's theory is compatible with eudaimonic well-being (Keyes, Shmotkin, & Ryff, 2002), we chose vitality to prospectively assess the relationship between participants' well-being and their values for self-growth and community.

We hypothesized that valuing self-growth would be more important than valuing community contribution for the vitality of university students. Specifically, we expected that the more that university students valued self-growth, relative to community contribution, the greater their vitality over one year later, and that increases in values for self-growth over the year would predict vitality at the end of that year. In contrast, we hypothesized that valuing community contribution would be more important than valuing self-growth for the vitality of schoolteachers and that the more that teachers valued community contribution relative to self-growth, the greater their vitality over one year later.

5. Method

5.1. Participants and procedure

5.1.1. University student sample

The sample of undergraduate students was recruited through online classified advertisements directed at the two English-speaking universities in Montreal, Quebec, as well as from a paid participant pool at one of these universities. The participants ranged in age from 18 to 30 years old (three participants over 30 were excluded), for a total of 190 participants, 138 female and 52 male. Participants reported their ethnic background as White (58%), Asian (21%), mixed White and Asian (3%), Hispanic (3%), Black (2%), or they did not provide this information (13%). They reported studying social sciences (36%), physical sciences (24%), arts (11%), engineering (9%), business (6%), nursing (1%), or either had not declared a major or did not indicate it on the questionnaire (13%).

The sample was part of a larger study on goal setting and personality traits.² Students were invited to participate in a study in which they would be asked to complete questionnaires on their goals at several time points. For the present study, we used data from the initial lab visit and from a follow-up assessment collected over one year later. During the lab session, which took up to 1.5 h, participants completed a questionnaire about their vitality, goals, personality, and values. Just over one year later, participants were sent a link to a 20-minute follow-up questionnaire. Vitality was assessed first, followed by the measure of values and other scales used in the larger study. Participants were compensated with \$20 after the initial baseline survey and with another \$10 after they had completed the final follow-up assessment. Ninety-nine participants completed the follow-up assessment, for a response rate of 52%.

5.1.2. Schoolteachers sample

The sample of teachers ($N = 581$) was part of a larger project on teaching experiences and burnout.³ Given that our hypotheses were framed based on developmental stage, we included only participants over age 30 and excluded 21 teachers who did not provide their age. Thus, our final sample included 470 participants aged 31–62, with a mean age of 43.4. The teachers had been teaching on average 15.5 years. With the collaboration of their unions, teachers within the Montreal school board received a questionnaire through their school's internal mail system. The questionnaire was in French, reflecting their language of instruction. Vitality was measured first, followed by other measures used in the larger study and the measure of values.

Approximately 30 min was necessary to complete the questionnaire. Teachers were invited to return the questionnaire directly to the research team via a pre-stamped envelop. Questionnaires were sent to 8000 teachers in total, with a response rate of 14%.⁴ Over one year later (between 19 and 23 months after a participant returned the initial questionnaire), a follow-up measure of vitality was collected, together with measures used in the larger study. We were not able to collect a follow-up measure of values due to the need to limit the length of the questionnaire. A total of 90 teachers completed the follow-up questionnaire, for a response rate of 19%. Teachers who participated in the two phases of the study were entered in a draw to receive a pair of hockey tickets.

5.2. Measures

5.2.1. Values

Participants completed a shortened version of the Aspiration Index (Kasser & Ryan, 1996), in which they rated the importance of 12 value statements on a scale of 1 to 7. Both intrinsic and extrinsic values were assessed. Intrinsic values included: “to have committed, intimate relationships”; “to work for the betterment of society”; and “to grow and learn new things”. Extrinsic values included: “to have your name appear frequently in the media”; “to have enough money to buy everything you want”; and “to have an image that others find appealing”. A mean score was created to control for participants' overall values. In addition, subscale scores for self-growth and community contribution were created by averaging the two items representing each type of value. The two items for self-growth were significantly

correlated, $r = .71, p < .001$ and the two items for community contribution were significantly correlated, $r = .62, p < .001$.

5.2.2. Vitality

The Vitality Scale (Ryan & Frederick, 1997) was used to assess participants' well-being.⁵ Using a 7-point scale, they responded to seven statements reflecting the feeling of being alive and alert, such as “I feel alive and vital.” The scale has been validated (Bostic, Rubio, & Hood, 2000) and good internal reliabilities of $\alpha > .85$ were obtained in each of our samples.

6. Results

6.1. Preliminary analyses

Attrition analyses were conducted in each sample of participants. Among college students, the 94 participants who did not complete the follow-up assessment were compared to the 99 participants who completed it. No significant between-group differences were obtained for vitality, self-growth, community contribution, or mean values measured at time 1 (p 's $> .10$). In the sample of schoolteachers over 30 years old, the 380 participants who did not complete the follow-up assessment were compared to the 90 participants who completed it. No significant between-group differences were obtained for any of the time 1 measures (p 's $> .05$). Gender did not significantly interact with self-growth or community contribution in predicting vitality, thus it is not included in our main analyses.

The means for all study variables for college students and teachers are presented in Table 1. As can be seen, university students rated self-growth higher than teachers while teachers rated community contribution higher than students. A repeated measures analysis of variance with group (students/teachers) as a between subject factor and type of values (self-growth/community contribution) as a within-subject factor revealed a highly significant Group \times Type of values interaction effect, $F(1665) = 10.33, p < .001$. University students were relatively higher than schoolteachers in their self-growth values whereas the reverse pattern was obtained for community contribution values. Table 2 presents the correlations for the study variables for both students and teachers.

6.2. Main analyses

To examine the relationship of values to vitality over time, we conducted a regression analysis with vitality at time 2 (over one year later) as the dependent variable. Following the methodology of previous researchers (Kasser & Ryan, 1996; Vansteenkiste et al., 2007), we controlled for participants' mean values on the Aspiration Index. Mean values and vitality at time 1 were entered as the first set of predictors, followed by group status (university student/teacher). The main effects of self-growth and community contribution were entered next. The two-way interactions between group and self-growth, between group and community contribution, and between self-growth and community contribution were entered as a fourth set of predictors. Finally, the three-way interaction of group, self-growth and community contribution was entered as a fifth set. The multiple R of .42 was significant, $F(9176) = 4.58, p < .001$.

As shown in Table 3, the two-way interaction of group \times community contribution was significant, while the group \times self-growth interaction was in the opposite direction but not significant. The three-way interaction of group \times self-growth \times community contribution was significant. To interpret the three-way interaction we conducted regression analyses separately for the university student and teacher samples. Specifically, vitality at one year was regressed on initial vitality and

² The larger study examined goal inspiration (Milyavskaya, Ianakieva, Foxen-Craft, Colantuoni, & Koestner, 2012), need satisfaction (Milyavskaya, Philippe, & Koestner, 2013), trait perfectionism (Powers, Milyavskaya, & Koestner, 2012), support (Koestner et al., 2015), and goal motivation (Werner, Milyavskaya, Foxen-Craft, & Koestner, 2016). This is the only study examining values.

³ Other variables included in the larger project were passion for work, motivation, depression (see Houliort, Philippe, Vallerand, & Ménard, 2014). This is the only study examining values.

⁴ A union survey was circulating concurrently concerning teachers' satisfaction with a new school program which could explain the low response rate obtained for this study.

⁵ This was the only measure of well-being that was administered in both groups.

Table 1
Means and standard deviations (in parentheses) for study variables.

	University students	Schoolteachers
Self-growth	6.27 (.87)	6.05 (.90)
Community contribution	5.46 (1.28)	5.56 (1.02)
Mean values	4.91 (.73)	4.53 (.69)
Vitality time 1	4.53 (1.07)	4.09 (1.10)
Vitality time 2	4.40 (.99)	4.18 (1.05)

mean values entered as a set, with values for self-growth and community contribution entered as a second set. For students, self-growth values were positively associated with later vitality (beta = .21) whereas community values were negatively associated with later vitality (beta = −.13). For teachers, self-growth values were negatively associated with later vitality (beta = −.01) whereas community contribution was positively associated with later vitality (beta = .18). In sum, the pattern of these interactions suggests that self-growth was relatively more likely than community contribution to be associated with increased vitality among university students. By contrast, community contribution was relatively more likely than self-growth to be associated with increased vitality among teachers.

To examine whether change in values was related to vitality at time 2, a regression analysis was conducted for college students. (Time 2 values were not available for the sample of teachers.) Mean values and vitality at time 1 were entered as the first set of predictors while self-growth and community contribution were entered as the second set of predictors. Finally, values for self-growth and community measured at time 2 were entered. The predictors accounted for a multiple R of .52, $R^2 = .27$, $F(6, 92) = 5.76$, $p < .001$. As shown in Table 4, change in self-growth predicted vitality at time 2, while change in community contribution did not.

7. Discussion

Erikson (1968) suggested that young people's psychological adjustment depends on whether they are able to establish an identity. In support of his proposition, we found that the degree to which the young adults in our sample focused on self-growth over the course of a year, the more their vitality increased. As Vleioras and Bosma (2005) point out, previous research on identity formation has focused on different identity styles, rather than the relationship between successfully forming an identity and well-being. In their study of university students, they reported that the more participants avoided identity issues, the lower their well-being and the more that they engaged with identity issues, the greater their well-being. Similarly, researchers studying university students in different countries have found that identity formation and well-being are related (Waterman, 2007; Hofer et al., 2007), but these studies used only one time-point. By using a prospective research design, our results provide further support.

Although few studies have integrated self-determination theory and Erikson's stages, a recent study of college students found that shifts in

Table 2
Correlations among study variables for university students and schoolteachers.

	Self-growth	Community	Mean values	Vitality 1	Vitality 2
Self-growth	—	.43***	.50***	.27***	.20*
Community	.40***	—	.55***	.26***	.00
Mean values	.53***	.45***	—	.16*	−.04
Vitality 1	.10*	.18***	.07	—	.41***
Vitality 2	.08	.22*	.09	.32**	—

Correlations above the diagonal are for the university student sample and correlations below the diagonal are for the schoolteacher sample.

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

Table 3
Results of hierarchical regression predicting time 2 well-being.

		β	t-Test
Step 1	Mean values	−.03	−0.46
	Vitality time 1	.37***	5.27
Step 2	Group status	.11	1.13
	Self-growth	.12	1.40
Step 3	Community contribution	.04	0.63
	Group × self-growth	.16*	2.12
Step 4	Group × community	−.11	−1.32
	Group × self-growth × community	−.20*	−2.38

*** $p < .001$.
* $p < .05$.

prioritizing intrinsic relative to extrinsic values led to greater resolution of Erikson's identity stage, which in turn predicted well-being (Hope et al., 2014). Our findings build on this work by isolating self-growth values. It fits that during the age of identity explorations, instability, feeling in-between, self-focus, and possibilities, as Arnett (2006) has described emerging adulthood, that the more focus that young people put on self-development, the greater their vitality.

Erikson (1982) described the task of the longest stage of development, adulthood, as making a contribution to the next generation. We found some support for his theory — a focus on helping people and working towards the betterment of society was more likely than self-growth to be associated with increased vitality among teachers. The opposite pattern emerged for young adults and together these results support the finding that generative concern is a stronger predictor of subjective well-being in midlife adults, compared to younger adults (Ackerman et al., 2000).

7.1. Limitations and future directions

As an initial examination of whether specific intrinsic values are more important at certain life stages, we chose samples in which self-growth may be more relevant — college students — and in which community contribution may be more significant — teachers in mid-life. Future research would benefit from a more diverse sample, including young adults who do not attend university, have entered the workforce, and become parents younger, and working adults from different professions. As a profession dedicated to teaching the next generation, it may be that community contribution is particularly important for the well-being of teachers as well as other helping professionals, but not other adults. Our samples are also limited in that we had low response rates, particularly for the schoolteachers. A further limitation of the present study is that we did not collect ratings of teachers' values at the follow-up assessment. We would expect that changes in the degree to which they prioritize community contribution would predict changes in vitality, but we were unable to test this hypothesis. Finally, while we used a shortened version of the Aspiration Index and we focused on vitality, future research examining specific intrinsic values would benefit from a more in-depth measure of values and multiple measures of well-being.

7.2. Conclusions

Waterman (2011) explains that individuals experience greater well-being when they discover and develop their best potentials — those activities, talents, and skills that are expressive of their true nature. But their task does not end there. As Waterman further explains, individuals must determine what to do with their developing potentials, choosing purposes in living. It may be that focusing on their self-growth helps young adults to discover their best potentials and that focusing on community contribution as adults provides an opportunity to act on their potentials and find purpose in their lives. Building on experimental studies in which individuals were assigned intrinsic

Table 4
Results of hierarchical regression predicting university students' time 2 vitality from change in values.

		β	t-Test
Step 1	Mean values	-.07	-.71
	Vitality time 1	.43***	4.62
Step 2	Self-growth T1	.21*	1.91
	Community T1	-.16	-1.43
Step 3	Self-growth T2	.26*	2.21
	Community T2	-.05	-.33

*** $p < .001$.

* $p < .05$.

$p < .08$.

goals (Sheldon et al., 2010) or reflected on their intrinsic values (Lekes et al., 2012), future research might explore interventions in which individuals focus on the specific intrinsic value associated with their life stage.

In conclusion, this study suggests the importance of examining the role of specific intrinsic values from the perspective of developmental theories, such as Erik Erikson's theory of psychosocial stages. We found some support for the proposition that valuing self-growth and community contribution is differentially related to vitality depending on whether an individual is in college, in the identity stage of early adulthood, or is a teacher, in the generativity stage of adulthood. These findings have implications for future research examining values and well-being as well as interventions designed to improve people's well-being.

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