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Future Orientation and Well-Being in High School Students: Mediation Role of School Connectedness

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Abstract: This study examined the relationship between future orientation and well-being mediated by school connectedness. Data were collected from 380 high school adolescents in Shiraz (Iran) in 2021. Participants completed the Future-Orientation Questionnaire, the Psychological Sense of School Membership scale, and Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) to assess their future orientation, school connectedness, and well-being, respectively. Results revealed that students' future orientation (toward academic or career futures) was positively related with school connectedness (b = .78). Future orientation was also significantly associated with their feeling of well-being (b = .61). School connectedness was significantly associated with the feeling of well-being as well (b = .62). According to the results, future orientation had an indirect significant effect (b = .48) on the well-being; based on this, school connectedness played a significant mediating role in the relation between future orientation and well-being. The results recommend that school connectedness may be a mechanism by which adolescents' orientation toward academic or career futures may have an effect on their feeling well-being.

Keywords: Future orientation, well-being, school connectedness, high school students

Introduction

Former studies have examined life satisfaction, positive affect, and general health status as general indicators of well-being (Coudin & Lima, 2011; Desmyter & De Raedt, 2012). The concept of subjective well-being concerns the appreciation of one's personal condition or one's subjective enjoyment of life as a whole (Diener et al., 1999). Like hope, well-being has both a cognitive and an emotional component. When we think about our well-being, for example, we may ask ourselves not only whether we feel comfortable throughout the day but also whether we are satisfied with our lives and whether we have achieved the goals we have set for ourselves. The first component concerns intuitive experiences, or our emotional affect balance. The second component is more about a cognitive assessment of life as a whole or how we think our current life compares to the most ideal life we have in mind. Together, these components determine - from a hedonistic point of view - overall well-being (Kashdan et al., 2008).

These different components of well-being are influenced in different ways by our living conditions. A successful career may well contribute to life satisfaction, while the additional stress creates a more negative emotional balance during the working day. However, it is also possible to feel good throughout the day but not be satisfied with what we have achieved in our lives. For example, a higher income is usually found to increase life satisfaction (Kahneman & Deaton, 2010), whereas social contacts mainly lead to a positive emotional balance (Diener et al., 2010).

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Previous research has found that well-being is influenced by individual differences and context factors, such as positive emotions (Wang et al., 2015), work-related stress (Wang et al., 2015), high-performance work systems (Zhang et al., 2014), and organizational justice (Moliner et al., 2008). Throughout the research on the predictors of well-being, future orientation has been identified as a key influential factor (Chua et al., 2015; Shobe & Page-Adams, 2001). Studies have explored the influence of school connectedness on well-being (Han, 2021; Monahan et al., 2010).

Future orientation in adolescence is of particular interest because they need to make decisions about major developmental tasks related to occupation, education, and many other important life decisions (NURMI, 1989). This decision making process requires consideration of the future in terms of years compared to mere days or weeks, and some adolescents competently consider the future rationally and strategically but other adolescents are ill-equipped to think constructively about future events. Importantly, previous studies have reported that adolescents and young adults who place higher emphasis on a future orientation tend to engage in less risk-taking behavior (Apostolidis et al., 2006) and report better well-being (Rivas-Drake et al., 2008). Future orientation thus has important implications for the health and well-being of adolescents.

Future orientation has been described in terms of the basic process of motivation, planning, and evaluation (Johnson et al., 2014), and research has indeed suggested that future-oriented people spend more time thinking about possible scenarios, plans, and goals (Keough et al., 1999). However, not all thoughts about the future qualify as future orientation (Atance & O'Neill, 2005). For Atance and O'Neill (2001) future orientation is the "ability to project the self forward in time to pre-experience an event which they termed as 'episodic future thinking'.

Another important aspect of future orientation refers to its motivational consequences (Karniol & Ross, 1996). The distinction between intrinsically or extrinsically motivated goals is important in determining efforts to achieve future-oriented goals. Intrinsic goals refer to goals that people set for themselves out of their own interests, while extrinsic goals are goals induced or imposed by others or an external source. People typically put more effort into achieving and have a greater chance of success with regard to intrinsic goals compared to extrinsic goals (Karniol & Ross, 1996).

Importantly, an individual's perspective of time extends further into the past and future as he or she develops and ages (Atance & O'Neill, 2005). Future orientation varies across age groups (Steinberg et al., 2009), which arguably reflects developmental processes, and future orientation also varies within particular age groups, which arguably reflects individual differences. One's sense of future orientation is developed through socialization, education, culture, and the people with which we come into contact (Keough et al., 1999). It is believed that the emergence of future thinking appears at about three to 6 years of age, becoming more well-formed and coherent as children grow older (Atance & O'Neill, 2005), and more elaborate and perceptive during the adolescence period (NURMI, 1989). Yet, some adolescents have better planning abilities and clearer goals than other adolescents, which support the call for a better developmental understanding of how future orientation develops across. Several studies

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have found future-oriented adolescents and adults to engage in less risky behavior and to adopt a more positive life-style (Apostolidis et al., 2006; Coudin & Lima, 2011).

Another educational construct that has an influence on well-being in high school students is school connectedness. School connectedness is argued to be particularly important for adolescents as they rely less on family as part of the individuation process and come to rely more on extra familial relationships, such as those found in schools, with friends, and others. Researchers have not yet reached consensus about the definition of school connectedness. In the current study, to define school connectedness, we adopted Brown and Evans (2005) definition of psychological school connectedness. According to them, School connectedness is when students feel that adults and peers in school care about their learning as well as about them as individuals. This includes a sense of being cared for, being supported, and belonging at school. Empirical studies have documented that students' school connectedness is negatively related to a number of conduct problems, aggression, and violent behaviors (Chapman et al., 2011) and positively associated to a number of positive outcomes like the well-being (Lester et al., 2013; Liu et al., 2020; McCabe et al., 2022; Oldfield et al., 2016).

Considering the role of well-being in the mental health of adolescents and the existence of numerous evidences related to the effect of well-being on the emotional and cognitive outputs of adolescents, and also considering the fact that probably after covid-19 and now, the well-being of adolescents may have been affected, in the current study, the relationship between the future orientation and the well-being of adolescents has been investigated. Also, considering the important effects of students' attachment to school, the role of school connectedness has also been studied.

Material and Methods

Methods: The present study is a correlational study, in which the hypotheses of the study have been investigated with the method of structural equation modeling. SPSS-26 software was used for descriptive analysis of data, and then a SEM analysis was done by the use of Amos 24.0. The fit indices used the approximation mean square error (RMSEA), the ratio $\chi 2/df$, and the comparative fit index (CFI). By the RMSEA approaching 0.06, the CFI $\geq$ 0.90, and the ratio $\chi 2/df > 3$, the goodness-of fit model was regarded as satisfactory.

Participants: Participants were 380 students from Shiraz (Iran). Of this total, 190 (50 %) were girls and 190 (50 %) were boys high school students. They were selected by convenient sampling method. Data were collected in spring 2021 through anonymous self-report questionnaires distributed in the regular classroom by the researcher and teachers. Information about the purpose of the survey and confidentiality of responses was clearly explained. Parent or guardian permission and student assent were obtained. Students completed the questionnaires during class time.

Measures

Future Orientation Scale: The Future Orientation Scale (Steinberg et al., 2009) is a 15-item self-report scale served as a measure of the degree to which adolescents tended to perceive, anticipate, and plan for

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the future. Specifically, adolescents were presented with a series of pairs of contrasting statements with the word "BUT" between them, and were asked to select the statement that best described them. After selecting the best self-describing statement, they were then asked to indicate whether the selected descriptor was really true or sort of true Responses for each pair of statements were then coded on a 4-point Likert scale, ranging from really true for one descriptor to really true for the contrasting descriptor (e.g., "Some people like to think about all the possible good and bad things that can happen before making a decision BUT Other people don't think it's necessary to think about every little possibility before making a decision"). Items were scored in such a way that higher summary scores indicated greater future orientation. The possible range of scores is 15 to 60. The internal consistency of this measure in the current sample was adequate (Cronbach's α = .74), and the FOS has been found to have adequate validity (Steinberg et al., 2009). In the present study, the reliability of this scale was checked using Cronbach's alpha as 0.88.

Well-being Scale: Students' subjective well-being was measured with the Brief Adolescents' Subjective Well-Being in School Scale (BASWBSS). It includes two subscales: School Satisfaction and Affect in School. The School Satisfaction subscale includes six items (e.g., "The teachers' instructional methods and quality are good."), addressing the six domains of school life as previously mentioned. Items are rated on a 6-point scale, ranging from 1 (strongly disagree) to 6 (strongly agree). The MacDonald ω coefficient for the School Satisfaction subscale was 0.87 in previous study (Tian et al., 2020). The Affect in School subscale includes two items (i.e., "In school, the frequency of my pleasant feelings is…"; "In school, the frequency of my unpleasant feelings is…"), and both of which are rated on a 6-point scale (1 = never, 6 = always). Tian et al. (2020) have provided evidence of the validity of these two items among adolescent students. They found meaningful and statistically significant correlations between these two items and the Positive Affect and Negative Affect in School subscales of the Adolescents' Subjective Well-Being in School Scale (Tian et al., 2020) respectively. The possible range of the scores for total scale is 8 to 48. In the present study, the reliability of this scale was checked using Cronbach's alpha as 0.78.

School connectedness scale: The scale was developed by Chung-Do et al. (2015). Confirmatory factor analyses demonstrated the association of the 15 items with the 5 factors identified in the literature-school involvement, academic motivation, school attachment, teacher support, and peer relations ($\chi(2) = 439.99$, df = 83, $p < .0001$, Comparative Fit Index = 0.991, Tucker-Lewis index = 0.988, root mean square error of approximation = 0.077). Cronbach coefficient alphas for the factors ranged from 0.73 to 0.93. All quantitative items on the scale were measured with a 5-point Likert scale with 1 being strongly disagree and 5 being strongly agree. The possible range of the scores for total scale is 15 to 75. In the present study, the reliability of this scale was checked using Cronbach's alpha as 0.75.

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Results

Descriptive results

Table 1 presents the mean of scores of the variables in the sample. It also provides the normality indices. The findings of Table 1 show that the distribution of scores in all variables is normal.

Table 1. Descriptive statistics and indexes of normality of variables (n=380)

Variables	Mean (SD)	Skewness	Kurtosis	K-S	p
		SE(.227)	SE(.114)		
Future orientation	32.16 (2.97)	-.28	-.93	.21	0.11
Well-being	25.63 (2.66)	-.12	-.96	.20	0.10
School Satisfaction	21.06 (1.74)	-.76	-.59	.26	0.15
Affect in School	9.61 (1.23)	-.49	-.91	.22	0.12
School involvement	8.52 (.97)	-.13	-.985	.23	0.12
Academic motivation	9.81 (1.04)	-.52	-.941	.22	0.12
School attachment	7.91 (1.24)	-.61	-.806	.23	0.12
Teacher support	8.63 (1.10)	-.38	-.65	.11	0.08
Peer relations	9.25 (1.15)	-.67	-.45	.13	0.09
School connectedness	47.68	2.76	-.45	.13	0.09

The model was tested using a SEM with maximum likelihood estimation. The model fit was examined using the CFI, the RMSEA, and the chi-square to degree-of-freedom ratio ($\chi 2/df$). The CFI values above .90, RMSEA values below .08, and $\chi 2/df$ values below 3.0 (or 5.0) showed a good fit. The variables of the model have explained about 57% of the variance of the well-being variable. Our findings showed the relationships between variables are significant (table 2 & 3).

Table 2. Model fit indices

Index	$\chi 2$	df	$\chi 2/df$	p	RMSEA (CI 95%)	CFI
Value	296.88	147	2.02	.001	.06[.055; .077]	.95

Table 3. Path coefficients of the proposed model

Path	B	Beta	p
FO to SC	1.02	.78	.001
FO to WB	1.12	.61	.001
SC to WB	0.97	.62	.001

FO = Future Orientation, SC = Scholl Connectedness, WB = Well-Being

In order to test the indirect relationship between future orientation and well-being through school connectedness, bootstrap test was used in AMOS software. The results of this test showed that the indirect effect (0.48) is significant.

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Discussion

The study examines the direct and indirect relationships between future orientation and well-being, mediated by school connectedness. Overall, findings support the hypotheses about the direct and indirect relations proposed in the structural model. Below is a discussion of the direct and indirect relationships that were expected compared to what was found.

The findings indicated that there is a positive and significant relationship between future orientation and school connectedness. The obtained findings are in line with a number of previous studies (Chen & Vazsonyi, 2013; Crespo et al., 2013). In general, the positive and productive view of teenagers towards school can have positive consequences such as attachment to school and connection with school. According to Bandura's social cognitive theory, people's cognitions can lead to human agency. An important part of human agency includes commitment to job, education and future. Therefore, future orientation can create commitment to school and belonging to educational affairs.

Another finding of the present study showed that there is a positive and significant relationship between future orientation and well-being. This finding is consistent with the studies done in the past (Huang et al., 2021; Shobe & Page-Adams, 2001). It is obvious that having a positive view of the future can create positive feelings such as well-being and mental health in people. Basically, one of the correlates of well-being is hope for the future, which can lead to a positive relationship between future orientation and mental well-being.

Also, according to the findings, there is a positive and significant relationship between connection with school and well-being. The findings obtained in this part are also consistent with the findings of previous studies (Konu & Rimpelä, 2002; Sulkowski et al., 2012). Components of connection with school, such as peer relationships, academic motivation, and teacher support, are variables that have a strong relationship with well-being and mental health. Therefore, a stronger connection with the school can lead to higher well-being of students.

It is important to note limitations when interpreting these results. First, due to limited research resources (e.g., research fund), author can only conduct cross-sectional study using convenient sampling and only collect self-report data. However, reliance on exclusively self-reported data raises the issue of social desirability and recall biases, which may inflate or deflate correlations. Further research would benefit from a multi rate–multimethod design, such as using teacher-, self-, and peer report simultaneously in one study.

Despite these limitations, this study has a number of strengths. It is the first to apply a positive psychology framework to explain well-being, and to incorporate a framework of future orientation to explain the developmental nature of adolescent well-being. Other strength is the examination of the role of future orientation in conjunction with school connectedness, which focused on protective.

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