



## Relationship between Time perspective and work hope

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### ABSTRACT

*In this study, in order to examine the pattern of relationship between 5 dimensional model of time perspective and work hope, a sample of 149 high school students (62m, 78 fm) from Mashhad city was selected by multistage-cluster sampling and demographic questionnaire, work hope scale, and Zimbardo time perspective inventory were performed. Results of hierarchical regression analysis showed that time perspective by a combination of 3 dimensions of future, present-hedonistic, and present-fatalistic accounted 53% ( $r=0.73$ ) of variance of work hope. Results of canonical correlation analysis showed that in frame of a canonical variant by a canonical correlation of 0.78, a pattern of high scores in future, present-hedonistic, and positive past, and low scores in negative past and present-fatalistic represented best combination in accordance to work hope (by 61% of variance). In sum, results supported from utility of time perspective particularly balanced time perspective in career development practices. Other findings were discussed.*

**Keywords:** Work hope; Time perspective; Balanced time perspective; Correlation studies; Career development of high school students.

### INTRODUCTION

Prejudice and racial and sex discrimination, financial problems, low self-efficacy, and lack of opportunity call to challenge most of young people inquiring work to arrange their scholastic objectives and career paths. Therefore, the counseling intervention devises of career paths that focus on goal arrangement, can be so effectiveness (Howard et al., 2010). Hope is a construct that can fill this vacuum (Snyder, 2000). According to Snyder (2000), hope is a cognitive process of goal-centered that includes three components: needed short-term and long-term goals (goals), strategies for gaining basic goal (path), and a tendency to achieve the goals (operations). This variable can prevent suffering anxiety and depression (Arnau, Rosen, Finch, Rhudy, & Fortunato, 2007) by gradually increasing psychological fortification (Valle, Huebner, & Suldo, 2006) and affecting on self-esteem and attribution style (Ciarrochi, Heaven, & Davies, 2007). Eventually, it causes to improve career paths performance and promote mental well-being, as well (Werner, 2012). Juntunen & Wettersten (2006) presented the construct of «work hope» by generalizing Snyder's model to career paths domain.

Work hope that appears and augments by career paths experiences, can be a vital role as a construct in perceiving a link between career paths experiences and motivation (Kenny, Walsh-Blair, Blustein, Bempechat, & Seltzer, 2010) through creating a space to focus on the related issues with work setting where might occur in future (Park-Taylor & Vargas, 2012), as well as, establishing close relations with work identity (Diemer & Blustein, 2007; Juntunen & Wettersten, 2006). In spite of barriers and problems in person's constant relations with career paths future and consequently the increase of scholastic and work enthusiasm (Diemer & Blustein, 2007) and self-efficacy to take a decision on career paths (Juntunen & Wettersten, 2006), and the decrease of scholastic negligence and fear of failure (Alexander & Onwuegbuzie, 2007), work hope contrives to interact with growth of skills and an attainment level to the results of career paths (Sung, Turner, & Kaewchinda, 2013; Kenny et al., 2010), and in this way, plays an

important and constructive in career paths, especially, for deprived people (Park-Taylor & Vargas, 2012). Furthermore, individual's behavior rely on not only the present settings and conditions but also the future hope and his/her view on the past (Lewin, 1951; Zimbardo & Boyd, 1999).

### **Theoretical and experimental framework**

Time perspective is the most outstanding construct that is presented in person's view on time on the way of operationalization of individual differences. In most of models, time perspective is introduced as a construct centralized on individual's orientation conceptualization only to the future (e.g., Husman & Lens, 1999; Stouthard and Pitesma, 1999). All of the research literature of career paths over time perspective is related to the conceptualization. For example, Walker & Tracey (2012), Ferrari, Nota, & Soresi (2012), Ferrari et al.(2010), Husman and Shell (2008), Marco and Savicas, 1998) and Lennings (1994) have supported the role of time perspective related to the constructs such as decision self-efficacy, self-efficacy, career paths maturity, individual's orientation to the future. However, a more comprehensive model is presented that in addition to future, considers individual's positions to present and past, as well (Zimbardo & Boyd, 1999). In this model, five dimensions have been conceptualized in time perspective: past-negative (PN) reflects the negative and aversive perspective of the past events that may be based on the real negative experiences or negative reconstructions of the past events; past-positive (PP) includes reflecting a warm and affective perspective to the past; future orientation (FR), reveals an apprehension to the realization of goals, postponing pleasures and avoiding a waste of time; present-hedonistic (PH) includes present life, immediate gratification and hedonism; present-fatalistic (PF) reflects despair sense to the future and the disability in connection of present behavior with future outcomes.

These five perspectives are like the five dimensions perpendicular upon each other (independent of others) in relation to others. Therefore, a person can be high or low in these five domains of time perspective. Hence, it is supposed that people may really create and grow a time bias in which habitually emphasizes more on a time domain. In this manner, people may neglect one or more cases of these time domains, as usual (Boyd & Zimbardo, 2005). Brown & Rector (2008) proposed that the multi-dimension study of time perspective has more efficiency in the vocational psychologists' knowledge augment than uni-dimension method (often relies on the future time up to now) to conceptualize the decision problems of career paths. Boniwell & Zimbardo, 2004) indicate a state arising from moderate or high PH, PP and FR, and low PF and PN reflecting the balanced time perspective (BTP). Several studies have relied on the structural competence of the Zimbardo's model (e.g. Worrell & Mello, 2007; Milfont, Andrade, Belo, & Pessoa, 2008; Anagnostopoulos & Griva, 2012).

Different studies have emphasized on the efficiency of BTP in predicting decision style adjustment (Wiberg, Wiberg, & Carelli, 2011),the increase of happiness, self-esteem, conscientiousness, creativity, scholastic performance, life satisfaction and achievement, and the decrease of aggression and shyness, anxiety, depression, lying, gambling, stealing and addiction ( e.g., Zimbardo & Boyd, 1999; Zhang & Howell, 2011; Gao, 2011; Hall et al., 2012; Adams, 2009; Hodgins & Engel, 2002; Boniwell, Osin, Linley, & Ivanchenko, 2010; Henson, Carey, Carey, & Maisto, 2006; Mello, Finan, & Worrell, 2013; Mello & Worrell, 2006). They have also shown that people with low PH perspective and high future gain more work achievements. Nowack, Milfont, & van der Meer (2013) have indicated that the future perspective promotion cause to be fulfilled more cognitive investment over work activities. Laghi, Baiocco, Liga, Guarino, & Baumgartner, (2013) have reported identity formulation in relation to strengthening the future and PP perspective, and identity disintegration in relation to the poor future perspective and increasing PN and PH perspective.

In sum, contrary to the uni-dimension studies, the multi-dimension studies of time perspective have been much worthless in the career paths literature. In relation to career paths certainty, Ferrari et al., (2012), neglect styles, and Taber (2013) in relevant to decision problems have supported the multi-dimension role of time perspective. Although Ferrari et al., (2012) supported the intervention effect based on time perspective on hope increase (and continuity), in this study, wasn't specified the effectiveness quality of time perspective separately dimensions on work hope components and in addition, in their study wasn't investigated work hope but common hope was only studied. This study tried to consider the multi-dimension role of time perspective in explaining the work hope changes. The questions that challenge this research include: how much is the time perspective strength in predicting work hope? How is the relations pattern between the time perspective dimensions and work hope components? According to the results of the previous studies, it is expected that the balanced time perspective pattern can reveal considerable power in explaining the work hope changes.

## **MATERIALS AND METHODS**

### **Research method, sample, sampling and measurement instrument**

In this study, research method was correlation. Sample consisted of 161 (92 female and 69 male) Mashhad high school students who were randomly selected by multi-stage cluster sampling method, in this way, two districts from Mashhad educational districts, and one case in a district from female high school students and one in another from male high school students and at next step, four classes from each school were randomly selected and distributed the questionnaires between volunteer students. Of this sample, 12 (5 female and 7 male) students were omitted due to questionnaire defect and final sample as follows: 87 female, a range of 13-19 years of age (M= 19.94 and SD=1.27), 62 male, a range of 13-19 years of age (M= 15.98 and SD=1.44).

In addition to demographic questionnaire, the work hope made-researcher scale and the short form of Zimbardo time perspective inventory were used. First scale has three subscales, goals (5 items), path (5 items) and implementation (5 items) on Likert spectrum of 5-point (from strongly disagree to strongly agree) to operationalize Hope model of Snyder et al. (2002) in relation to work. Although Juntunen & Wettersten (2006) had designed an instrument for this purpose, the item design weakness caused not to support so much. In this study, this instrument didn't reveal needed efficiency and new instrument was designed of necessity. Items were selected from 24 items, in this order, in primary study, 5 stronger items were selected in each subscale in the light of the correlation with total score. The essential components analysis indicated the competence of three factors in explaining the items variance of this instrument (57%). Cronbach alpha coefficients showed relevant reliability in three subscales (Table 1). Its total reliability was accounted 0.92. High correlations of its subscales with career paths adaptability indicated its validity. Second inventory has 5 subscales, PP (5 items), PN (5 items), PH (5 items), PF (5 items) and future (5 items) that has designed to operationalize Zimbardo time perspective model in relation to an attitude on different time domains. Its items were selected from the sum of items of its long form (Zimbardo & Boyd, 1999). Participants were asked to indicate on 5-point Likert spectrum (from strongly disagree to strongly agree). In addition to evidence confirming the reported reliability and validity by Zimbardo & Boyd (1999), its reliability and validity was also approved in several transcultural studies (e.g. Worrell & Mello, 2007). In this study, the accounted reliability coefficient was reported in Table 1.

#### Data and findings analysis method

In results analysis, the hierarchical regression analysis was used to determine the most useful combination of time perspective dimensions in explaining the work hope changes. Likewise, canonical correlation analysis was used to examine the common pattern of relations. As the results (Table 1) showed, in time perspective dimensions, PF attitude has been the least mean between female and male students and the most in future. Thus, in relation to the work hope components, in each three cases, has been high mean (higher than 15, where is the average score of each subscale). Reliability coefficient supported the reliability of all of hope and time perspective scales, as well. On one hand, the correlations between hope subscales were also significant with all of time perspective subscales.

**Table 1. Descriptive statistics, reliability coefficients and correlation coefficients of research variables**

Variables		Number of items	M	SD	R	correlation coefficients								
						1	2	3	4	5	6	7	8	
Work	Goals	5	18.19	4.48	0.88	1.00								
	path	5	18.45	3.91	0.76	0.79	1.00							
	Operations	5	17.56	4.62	0.71	0.83	0.82	1.00						
Time perspective	Negative past	5	15.14	3.91	0.73	-.30	-.31	-.33	1.00					
	Positive past	5	15.51	3.93	0.71	0.47	0.42	0.57	-.26	1.00				
	Present-hedonistic	5	15.62	3.86	0.69	0.46	0.43	0.48	-.18	0.51	1.00			
	present-fatalistic	5	11.76	4.45	0.70	-.37	-.26	-.40	0.36	-.41	0.00	1.00		
	Future	5	17.30	4.01	0.75	0.68	0.57	0.72	-.32	0.59	0.44	-.49	1.00	

\* The coefficients of statistical insignificant are specified in form of «0.00». The reliability coefficient was calculated with internal consistency by Cronbach alpha (n=149). In above variables, gender between difference wasn't significant (p>0.05). In each of work hope and time perspective dimensions, was the least score 5 and the most 25.

Q1. How much is the time perspective power in predicting work hope?

**Table 2. Summary of regression model**

Model	R	R <sup>2</sup>	Standard error of estimate	R <sup>2</sup> changes	F Changes	Degree of Freedom		Sig
future	0.68	0.46	8.81	0.46	127/70	1	147	0.0005
Present-hedonistic	0.70	0.50	8.59	0.04	8.86	1	146	0.003

present-fatalistic	0.73	0.53	8.33	0.03	10.33	1	145	0.002
Negative past	0.73	0.53	8.34	0.00	0.51	1	144	0.48
Positive past	0.73	0.53	8.36	0.00	0.24	1	143	0.63

\*The score of work hope was computed from the sum of scores of three components, goal, path and implementation.

According to results of Table 2, of five time perspective dimensions, three dimensions, future, PH and PF could almost explain the entire joint variance between time perspective and work hope. These three dimensions could explain 53% ( $P < 0.05$ ,  $R = 0.73$ ) from the variance of work hope. In this way, first, future perspective has enhanced 46% ( $P < 0.05$ ,  $R = 0.73$ ) of model power. After adding PH scores, this power has overtaken 50% ( $R = 0.70$ ) with increase of 4% ( $P = 0.003$ ). Adding PF scores, de novo, has enhanced 3% of explanation power ( $P = 0.002$ ), and extended the model power to 53% ( $R = 0.73$ ). Adding two dimension related to past haven't been a significant effect on increasing the explanation power ( $P > 0.05$ ).

Q2. How is the relations pattern between the time perspective dimensions and work hope components?

**Table 3. Summary of results of canonical correlation analysis**

variables		Excerpted canonical variable	
		Standard coefficient	correlation
Work hope	goals	-0.82	-0.98
	path	-0.40	-0.92
	operations	0.21	-0.78
time perspective	Negative past	0.06	0.42
	future	-0.67	-0.96
	present-fatalistic	-0.17	0.53
	Positive past	-0.10	-0.73
	Present- hedonistic	-0.28	-0.62

\* n=149

The results of canonical correlation analysis showed that in sum, just one canonical variable is extractable of time perspective and work hope dimensions with statistic significance less than 0.05 (statistics Wilks=0.37,  $\chi^2(15) = 143.44$ ,  $P = 0.0005$ ). This canonical coefficient was 0.78 (61% variance overlap). The correlations and standard canonical coefficient have shown in Table 3. In this canonical variable, the variables, that their coefficient is higher than critical value of 0.30 are just reported effective.

In regard with Table3, the burden of all of variables has had the prerequisite significant in this canonical variable ( $R > 0.30$ ). Therefore, this canonical variable has consisted of high scores in NP (0.42) and PF (0.53), and low scores in the variables of goals (-0.98), path (-0.92), implementation (-0.78), future time perspective (-0.96), PP (-0.73) and PH (-0.62).

## DISCUSSION AND CONCLUSION

Nowadays, employment needs to have the defined short and long-term goals, paths to attain them, high power and motive in following goals, and confronting with barriers. Work hope is a construct that can conceptualize and operationalize these characteristics (Juntunen & Wettersten, 2006), and play an effective role to catch up the skills and outcomes of career paths (Sung et al., 2013). On the other hand, people's position in the different time sections is also a construct that has a worthy role to direct thoughts, feelings and behavior. Like, time perspective is an important construct that is able to conceptualize and operationalize such attitudes (Zimbardo & Boyd, 1999). In this study, contrary to most previous studies which have merely examined the role of uni-dimension models of time perspective, its five-dimension model effect on work hope was investigated as an important construct to extend career paths. In this manner, two questions were presented, data was collected, computed and analyzed relevant to them.

In reply to Q1 (level of the time perspective power in predicting work hope), the results of the hierarchical regression analysis (Table 2) showed that time perspective could explain 53% from the variance percent of work hope. This explanation power was under the influence of three dimensions, future, PH and future-fatalistic (FF). In the meantime, several points are considerable: first, homolateral to other previous studies (Taber, 2013; Walker & Tracey, 2012; Ferrari et al., 2012, 2010; Hesketh, 2000), our study also showed that time perspective could be a much useful construct to predict the important variables of career paths growth. Second, contrary to most previous studies which have merely considered the uni-dimension role of time perspective in career paths growth (Walker & Tracey, 2012; Ferrari et al., 2012, 2010), this study homolateral to the study of Taber (2013) indicated that the multi-dimension model can practice more useful and stronger than the uni-dimension model that regards an attitude on future, alone. Third, the results of the hierarchical regression analysis showed that an attitude on present time has more effective than an attitude on past time; in other words, the effect of past perspective (positive or negative)

on work hope is moderated through present time perspective (hedonistic or fatalistic) and future. Fourth, homolateral to most of studies that in relation to the effective role of time perspective have been presented in anticipating feeling, behavior and thoughts (Zimbardo & Boyd, 1999; Boyd & Zimbardo, 2005), this study showed that future time perspective plays the most colorful role in prediction model. In reply to Q2 (How to be the relations pattern between the time perspective dimensions and work hope components), the results of computed canonical analysis (Table 3) showed that the pattern of balanced time perspective (Zimbardo & Boyd, 2004) appears the most effective combination of time perspective dimensions in forecasting positive results. In regard to this pattern, people who achieve high scores in future, PH and PP, and low scores in PN and PF, will have more adaptable performance pattern. This research also showed that the pattern of balanced time perspective is much efficiency model to explain the variance of work hope. Therefore, it is expected that the intervention based on the pattern of balanced time perspective is able to attain much helpful results in the augment of work hope. Likewise, the results of calculated correlation coefficients between the time perspective dimensions (Table 1), average and fairly low correlation coefficients between these dimensions homolateral to assertion of Zimbardo & Boyd (1999) suggest independence of these dimensions of each other. According to Table 1, correlation coefficients between two dimensions, time perspective of PH and PF has been lack of statistic significance and almost zero. The correlation between PP and PN has been just -0.26 and between future and PF just -0.49. So, our study results confirm independence of the time perspective dimensions, utility of multi-dimension approach and specially the pattern of balanced time perspective in the use of work hope growth and preparing people for achieved employment in future. This study had several practical results: first, in regard to the role that work hope can play in career paths (future), attention to the balanced time perspective growth can be one of the most important preconditions to gain the effective performance levels in career paths and preparation enhance for employment. Therefore, the intervention based on time perspective can be the most important programs of work hope and training the skills of career paths counselors in relation to children and adolescents. On the other hand, it is said, according to the strength of different effectiveness between the time perspectives dimensions, the interventions of time perspective must focus more on improvement of future perspective and PH, and decrease of PF. Then, beside the interventions that focus on the future design of career paths (homolateral to future perspective), the interventions to improve life style, exhilarate it and the increase of relation sense between present time behavior and future time results are the most important practices that counselors and psychologists of career paths should consider it.

The effect probability of cultural differences in results of the study was of our work limitations; that's why, our statistical population was among Mashhad students. In this research package, weren't properly examined the role of peripheral moderating factors, such as social support, the perceived peripheral barriers and limitations and or personality traits in connection between time perspective and work hope. Therefore, it is recommended that such a relation is studied by the different samples and more complex of variables in next studies.

## REFERENCES

1. Adams, J. (2009). The role of time perspective in smoking cessation amongst older English adults. *Health Psychology, 28*(5), 529-534. doi: 10.1037/a0015198.
2. Alexander, E. S., & Onwuegbuzie, A. J. (2007). Academic procrastination and the role of hope as a coping strategy. *Personality and Individual Differences, 42*(7), 1301-1310.
3. Anagnostopoulos, F., & Griva, F. (2012). Exploring Time Perspective in Greek Young Adults: Validation of the Zimbardo Time Perspective Inventory and Relationships with Mental Health Indicators. *Social Indicators Research, 106*(1), 41-59.
4. Arnau, R. C., Rosen, D. H., Finch, J. F., Rhudy, J. L., & Fortunato, V. J. (2007). Longitudinal effects of hope on depression and anxiety: A latent variable analysis. *Journal of Personality, 75*(1), 43-63.
5. Boniwell, I., & Zimbardo, P. (2004). Balancing time perspective in pursuit of optimal functioning. In P. A. Linley, & S. Joseph (Eds.), *Positive psychology in practice* (pp. 165-178). Hoboken, NJ: John Wiley & Sons.
6. Boniwell, I., Osin, E., Linley, P. A., & Ivanchenko, G. V. (2010). A question of balance: Time perspective and well-being in British and Russian samples. *Journal of Positive Psychology, 5*, 24-40.
7. Boyd, J. N., & Zimbardo, P. G. (2005). Time perspective, health, and risk taking. In A. Strathman, & J. Joireman (Eds.), *Understanding behavior in the context of time: Theory, research, and application* (pp. 85-107). Mahwah, NJ: Lawrence Erlbaum Associates.
8. Brown, S. D., & Rector, C. C. (2008). Conceptualizing and diagnosing problems in vocational decision making. In S. D. Brown, & R.W. Lent (Eds.), *Handbook of counseling psychology* (4th ed., pp. 392-407). Hoboken, NJ: John Wiley & Sons.
9. Ciarrochi, J., Heaven, P. C. L., & Davies, F. (2007). The impact of hope, self-esteem, and attributional style on adolescents' school grades and emotional well-being: A longitudinal study. *Journal of Research in Personality, 41*(6), 1161-1178. doi: 10.1016/j.jrp.2007.02.001.

10. Diemer, M. A., & Blustein, D. L. (2007). Vocational Hope and Vocational Identity: Urban Adolescents' Career Development. *Journal of Career Assessment*, 15(1), 98-118. doi: 10.1177/1069072706294528.
11. Ferrari, L., Nota, L., & Soresi, S. (2010). Time perspective and indecision in young and older adolescents. *British Journal of Guidance & Counselling*, 38, 61-82.
12. Ferrari, L., Nota, L., & Soresi, S. (2012). Evaluation of an Intervention to Foster Time Perspective and Career Decidedness in a Group of Italian Adolescents. *Career Development Quarterly*, 60(1), 82-96.
13. Gao, Y.-J. (2011). Time Perspective and Life Satisfaction Among Young Adults in Taiwan. *Social Behavior & Personality: An International Journal*, 39(6), 729-736.
14. Hall, P. A., Fong, G. T., Yong, H. H., Sansone, G., Borland, R., & Siahpush, M. (2012). Do time perspective and sensation-seeking predict quitting activity among smokers? Findings from the International Tobacco Control (ITC) Four Country Survey. *Addict Behav*, 37(12), 1307-1313. doi: 10.1016/j.addbeh.2012.06.022.
15. Henson, J. M., Carey, M. P., Carey, K. B., & Maisto, S. A. (2006). Associations among health behaviors and time perspective in young adults: Model testing with boot-strapping replication. *Journal of behavioral medicine*, 29(2), 127-137.
16. Hesketh, B. (2000). Time Perspective in Career-Related Choices: Applications of Time-Discounting Principles. *Journal of Vocational Behavior*, 57(1), 62-84. doi: 10.1006/jvbe.1999.1725.
17. Hodgins, D. C., & Engel, A. (2002). Future time perspective in pathological gamblers. *The Journal of Nervous and Mental Disease*, 190, 775-780.
18. Howard, K. A. S., Budge, S. L., Gutierrez, B., Owen, A. D., Lemke, N., Jones, J. E., & Higgins, K. (2010). Future plans of urban youth: Influences, perceived barriers, and coping strategies. *Journal of Career Development*, 37, 655-676.
19. Husman, J., & Lens, W. (1999). The role of the future in student motivation. *Educational Psychologist*, 34(2), 113-125.
20. Husman, J., & Shell, D. F. (2008). Beliefs and perceptions about the future: A measurement of future time perspective. *Learning and Individual Differences*, 18(2), 166-175. doi: 10.1016/j.lindif.2007.08.001.
21. Juntunen, C. L., & Wettersten, K. B. (2006). Work hope: Development and initial validation of a measure. *Journal of Counseling Psychology*, 53(1), 94-106.
22. Kenny, M. E., Walsh-Blair, L. Y., Blustein, D. L., Bempechat, J., & Seltzer, J. (2010). Achievement motivation among urban adolescents: Work hope, autonomy support, and achievement-related beliefs. *Journal of Vocational Behavior*, 77(2), 205-212. doi: 10.1016/j.jvb.2010.02.005.
23. Laghi, F., Baiocco, R., Liga, F., Guarino, A., & Baumgartner, E. (2013). Identity status differences among Italian adolescents: Associations with time perspective. *Children and Youth Services Review*, 35(3), 482-487. doi: 10.1016/j.childyouth.2012.12.018.
24. Lennings, C. J. (1994). An investigation of the effects of agency and time perspective variables on career maturity. *Journal of Psychology: Interdisciplinary and Applied*, 128(3), 243-253.
25. Lewin K. (1951) 'Field Theory in Social Science', Harper and Row, New York.
26. Marko, K.W. & Savickas, M.L. (1998). Effectiveness of a career time perspective intervention. *Journal of Vocational Behavior*, 52(1), 106-119.
27. Mello, Z. R., & Worrell, F. C. (2006). The Relationship of Time Perspective to Age, Gender, and Academic Achievement Among Academically Talented Adolescents. *Journal for the Education of the Gifted*.
28. Mello, Z. R., Finan, L. J., & Worrell, F. C. (2013). Introducing an instrument to assess time orientation and time relation in adolescents. *J Adolesc.* doi: 10.1016/j.adolescence. 2013. 03.005.
29. Milfont, T. L., Andrade, P. R., Belo, R. P., & Pessoa, V. S. (2008). Testing Zimbardo Time Perspective Inventory in a Brazilian Sample. *Interamerican Journal of Psychology*, 42(1), 49-58.
30. Nowack, K., Milfont, T. L., & van der Meer, E. (2013). Future versus present: Time perspective and pupillary response in a relatedness judgment task investigating temporal event knowledge. *International Journal of Psychophysiology*, 87(2), 173-182. doi: 10.1016/j.ijpsycho.2012.12.006.
31. Park-Taylor, J., & Vargas, A. (2012). Using the Constructs Multifinality, Work Hope, and Possible Selves With Urban Minority Youth. *Career Development Quarterly*, 60(3), 243-253.
32. Rand, K. L., Martin, A. D., & Shea, A. M. (2011). Hope, but not optimism, predicts academic performance of law students beyond previous academic achievement. *Journal of Research in Personality*, 45(6), 683-686. doi: 10.1016/j.jrp.2011.08.004.
33. Snyder, C. R. (Ed.). (2000). *Handbook of hope: Theory, measures, and applications*. San Diego, CA; Academic Press.
34. Snyder, C. R., Rand, K. L., & Sigmon, D. R. (2002). Hope theory: A member of the positive psychology family. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 257-276). Oxford, England: Oxford University Press.
35. Stouthard, M. E. A., & Peetsma, T. T. D. (1999). Future-time perspective: Analysis of a facet-designed questionnaire. *European Journal of Psychological Assessment*, 15(2), 99-105.
36. Sung, Y., Turner, S. L., & Kaewchinda, M. (2013). Career Development Skills, Outcomes, and Hope Among College Students. *Journal of Career Development*, 40(2), 127-145. doi: 10.1177/0894845311431939.
37. Taber, B. J. (2013). Time Perspective and Career Decision-Making Difficulties in Adults. *Journal of Career Assessment*, 21(2), 200-209. doi: 10.1177/1069072712466722.
38. Valle, M. F., Huebner, E. S., & Suldo, S. M. (2006). An analysis of hope as a psychological strength. *Journal of School Psychology*, 44(5), 393-406. doi: 10.1016/j.jsp.2006.03.005.
39. Werner, S. (2012). Subjective well-being, hope, and needs of individuals with serious mental illness. *Psychiatry Res*, 196(2-3), 214-219. doi: 10.1016/j.psychres.2011.10.012.

40. Walker, T. L., & Tracey, T. L. G. (2012). Perceptions of occupational prestige: Differences between African American and White college students. *Journal of Vocational Behavior, 80*, 76-81. doi: 10.1016/j.jvb.2011.06.003.
41. Wiberg, M., Wiberg, B., & Carelli, M. G. (2011). Development and Construct Validation of the Swedish Zimbardo Time Perspective Inventory. *European Journal of Psychological Assessment, 27*(4), 220-227. doi: 10.1027/1015-5759/a000076.
42. Worrell, F. C., & Mello, Z. R. (2007). The Reliability and Validity of Zimbardo Time Perspective Inventory Scores in Academically Talented Adolescents. *Educational and Psychological Measurement, 67*(3), 487-504. doi: 10.1177/0013164406296985.
43. Yakushko, O., & Sokolova, O. (2010). Work Hope and Influences of the Career Development Among Ukrainian College Students. *Journal of Career Development, 36*(4), 310-323. doi: 10.1177/0894845309345670.
44. Zhang, J. W., & Howell, R. T. (2011). Do time perspectives predict unique variance in life satisfaction? *Personality and Individual Differences, 50*, 1261-1266.
45. Zimbardo, P. G., & Boyd, J. N. (1999). Putting time in perspective: A valid, reliable individual difference metric. *Journal of Personality and Social Psychology, 77*, 1271-1288.