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Psychometric properties of time horizon at Tehran's high school students

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Abstract

The aim of this study is to evaluate the of psychometric properties of time horizon at Tehran's high school students that was conducted on 440 high school students at Tehran in 2014-2015 academic year. In order to collect the data in the study were used the scale of time horizon. Model construction of time horizon questionnaires designed by Jerald J.S. Wild in Quiz University of Canada. Time horizon scale is built to measure the four components of present time value, future time value, future planning and time pressure. To evaluate questionnaires reliability coefficient theta ordinal and multi-dimensional questions and answers theory have been used. In the field of analysis related to time horizon questionnaires found that this tool with emphasizing questions and answers theory have a good reliability.

Keywords: psychometric properties, time horizon, students.

Introduction and Problem Statement

Time horizon variable belongs to the field of positive psychology. Time horizon is set of hope and optimism indicators in positive psychology and has four subscale: of present time value, future time value, future planning and time pressure. The questionnaire has 40 questions which are graded based on the Likert scale. Hope therapy considers this goal that help to clients for formulate clear objectives. Many pathways create for this objectives and stimulate them to pursue their goals and framing the obstacles anew as challenges to overcome them (*Bryant*, 2010). With an emphasis on the absence of valid and new tests in the field of identify the positive psychology variables can be noted to new and innovative aspect of this research. The existing vacuum in the field of used tools in the relevant sphere is stamp of approval for this claim. The design a practical and brief edition for the identification of these variables that all psychologists, counselors and test makers can use it, is the most functional purposes in this research (Kusche, 2011).

Reliability and validity of psychological tests can be an important step in the fulfillment of research projects. Since the most methods of acquiring knowledge is the benefit of the research method, should be attempted until in all fields suitable methods for analysis in research processes, especially offered in the field of psychometrics (Fan, 2011). According to the expressed contents the aim of this study is to evaluate the psychometric properties of time horizon in Tehran's high school students. Therefore, the main question in this study is that the time horizon questionnaires: would be have the desirable characteristics of psychometrics?

Methodology

In this research to identify psychometric indicators, for identify indicators of time horizon has been paid. So is an applied-descriptive research and wants to assess the reliability and validity of time horizon instruments. The population of present study is all high school students at Tehran in 2014-2015 academic year. Therefore, to select the sample was used adequacy indicator of sampling volume (KMO) and 440 people were selected as sample population with multistage cluster sampling method.

In order to collect the data in the study were used the scale of time horizon. Model construction of time horizon questionnaires designed by Jerald J.S. Wild in Quiz University of Canada. Time horizon scale is built to measure the four components of the future value, present value, future planning and time pressure.

Each item of this scale is scored one to four. Finally, to evaluate questionnaires reliability have been used ordinal coefficient theta.

Research Findings

Table 1. Descriptive data related to components of development capital

components of time horizon	Volume.	Min	Max	Mean		standard deviation
				Mean Value	Standard error of the Mean	
future planning	423	15.00	39.00	26.6005	0.23456	4.82428
time pressure	423	19.00	37.00	27.4444	0.15920	3.27436
future planning	423	21.00	37.00	29.1058	0.15217	3.10357
time pressure	423	18.00	36.00	26.6643	0.18426	3.78959

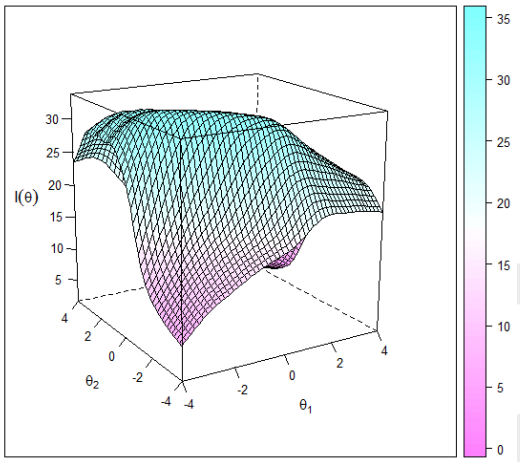
Table 2. The Ordinal theta value related to components of time horizon

components of time horizon	Ordinal theta value	N of Question
Present time value	0.853893	10
Future time value	0.872428	10
future planning	0.887191	10
time pressure	0.850216	10

The amounts of obtained theta shows that the future planning have the highest homogeneity (0.887191) and time pressure have least amount of homogeneity (0.850216).

For all components of time horizon the homogeneity of the questions is acceptable. In the figure.1 is proposed the amount of awareness for time horizon questionnaire. Since the full awareness factor analysis for this questionnaire has been implemented on two dimensions, figure.1 is provided all represents dimensions.

Figure 1. The amount of awareness for time horizon questionnaire based on two dimensions



The amount of total awareness of questionnaire is high at all levels. This amount of awareness is desirable and appropriate even for very large and very small thetas and its error rate is low and it shows questions well with these two dimensions.

But is necessary to be determined dimensions and the questions that have the highest load factor with them. In the following table factor loadings of each question is marked by two factors. Color values in this table are the factor loadings above 0.30.

Table 3. Load factor of development capital questionnaire's questions

Question no.	First Factor	Second Factor	Third Factor	Forth Factor	The Value of shared variance
1	0.326	0.099	0.144	0.021	0.137254
2	0.312	0.024	0.0252	0.072	0.10373904
3	0.083	0.348	0.0348	0.129	0.14584504
4	0.036	0.063	0.078	0.541	0.30403
5	0.418	0.064	0.1	0.085	0.196045
6	0.037	0.084	0.111	0.61	0.392846
7	0.078	0.07	0.378	0.008	0.153932
8	0.058	0.58	0.001	0.017	0.340054
9	0.549	0.049	0.054	0.105	0.317743
10	0.012	0.087	0.08	0.61	0.386213
11	0.098	0.08	0.183	0.394	0.204729
12	0.072	0.141	0.537	0.366	0.44739
13	0.432	0.072	0.0439	0.094	0.20257121
14	0	0.515	0.0515	0.065	0.27210225

Question no.	First Factor	Second Factor	Third Factor	Forth Factor	The Value of shared variance
15	0.113	0.03	0.413	0.077	0.190167
16	0.024	0.024	0.047	0.301	0.093962
17	0.47	0.47	0.296	0.012	0.52956
18	0.011	0.087	0.514	0.064	0.275982
19	0.059	0.059	0.459	0.073	0.222972
20	0.068	0.04	0.668	0.055	0.455473
21	0.468	0.074	0.059	0.023	0.22851
22	-0.09	0.815	0.09	0.072	0.685609
23	-0.11	0.014	0.793	0.039	0.642666
24	0.068	0.038	0.088	0.111	0.026133
25	0	0.045	0.651	0.024	0.426402
26	0.446	0.446	0.12	0.024	0.412808
27	0.702	0.002	0.01	0.505	0.747933
28	-0.01	0.015	0.03	0.324	0.106201
29	-0.03	0.015	0.815	0.664	1.106246
30	0.09	0.074	0.09	0.339	0.136597
31	-0.07	0.801	0.07	0.045	0.653426
32	-0.05	0.058	0.05	0.738	0.553008
33	-0.11	0.014	0.814	0.073	0.680221
34	0.099	0.052	0.052	0.434	0.203565
35	0.52	0.045	0.399	0.087	0.439195
36	0.024	0.464	0.064	0.067	0.224457
37	0.461	0.001	0.139	0.074	0.237319
38	0.541	0.055	0.045	0.01	0.297831
39	0.041	0.541	0.138	0.031	0.314367
40	0.062	0.573	0.073	0.012	0.337646

The results of exploratory factor analysis based on the theory of multi-dimensional answer questions, the questionnaire component of time horizon are obtained through experimental data. This situation reflects to the structure of the questionnaire in target population in this study. In other words, have the same dimensions in the target population that has been achieved in its population.

Table 4. The reliability value related to factors of time horizon based on the theory of multi-dimensional answer questions

Estimation method	EAP
Reliability of first factor	0.891
Reliability of second factor	0.912
Reliability of third factor	0.909
Reliability of forth factor	0.881
The average correlation between factors based on subject's thetas	0.0067

The achieved reliability shows that the questions of the questionnaire are homogeneous. The results of factor loadings and the theory of multi-dimensional answer questions shows that time horizon questionnaire has good psychometric indices and is applicable in the target population of this research.

Conclusion and Discussion

The aim of this study is to evaluate the psychometric properties of time horizon questionnaire in Tehran's high school students. In analysis related to reliability of time horizon questionnaire found that this tool with emphasizing to theory of multi-dimensional answer questions has good reliability. The results of this research is consistent with results of Roni (2010), Purdie (2010) and Randolph, & Radey (2011). Because this research showed 0.71coefficient of Cronbach's alpha for questionnaire which represents good reliability. Also, in this research is emphasized on extracting of reliability of all aspects of the time horizon questionnaire. The results showed that is obtained Cronbach's alpha value 0.75 for the future time value, 0.83 for the present time value, and 0.78 for future planning. This obtained Cronbach's alpha coefficients implies on desirable reliability. All the above-mentioned studies confirm our findings and results.

References

1. Bryant, C. (2010). Creativity and technology. *Evaluative art education*, 63(2), 43-48.
2. Fan, Y. (2011). Is there a core neural network in empathy? A firm based quantities meta-analysis. *Neuroscience and bio behavioral reviews*, 35,903-911.
3. Kusche, C. (2011). Pathsinyour classroom: promoting emotional literacy and alleviating emotional distress, in Cohen (ed.), social- emotional learning and the elementary school child ;a guide for educators . New York: teacher college press, 140-161.
4. Purdie, N. Carroll, A. Roche, l. (2010). Parenting and adolescent self - regulation, *Journal of adolescence*, 27(1, 6), 663-676.
5. Randolph, K.A. & Radey, M. (2011). Measuring parenting practices among parents of elementary school - age youth. *Research on social work practice*, 21. 88- 97.
6. R oni, M. (2010) successful problem solving .*Journal of research in science teaching*, 47(9), 1094-1115.