Validation of the Future Orientation questionnaire among Iranian adolescents

Elaheh Hejazi[1*], Zahra Naghsh[1], Azam Moghadam[2] and Sheida Sharifi Saki[3]

[1.] Faculty of Psychology and Education, Tehran University , Iran
[2.] Faculty of Psychology and Education, Allameh Tabatabai University, Iran
[3.] Faculty of Psychology and Education, Science and Research Branch, Islamic Azad University, Tehran, Iran,

* Corresponding author's Email: ehejaz@yahoo.com

ABSTRACT: The purpose of the present study was to evaluate the factor structure and validity of an Iranian translation of the Future Orientation Questionnaire. For this end, 357 high school students (164 males and 193 females) were chosen by stratified sampling and filled out the Future Orientation questionnaire (FOQ). To evaluate validity, explanatory and confirmatory factor analyses were used. Explanatory factor analysis revealed a clear three-component structure of future orientation questionnaire consisting behavioral, motivational and cognitive components in the overall sample. Also, confirmatory factor analysis indicated that there was a three-factor structure consisting academic, career and marriage orientations with a higher order factor (future orientation). To evaluate reliability of this instrument, Cronbach's Alpha was used. Internal consistent of subscales and general factor of future orientation was proper. The findings suggest that the Iranian version of the Future Orientation Questionnaire is a useful tool for assessing adolescents' future orientation.
Keywords: Future Orientation Scale, Factorial Structure, Explanatory Factor Analysis, Confirmatory Factor Analysis.

INTRODUCTION

Some people are able to foresee the future implications of their present behavior. They understand how their present task-engagement is meaningfully related to desired future goals and how their present behavior serves the attainment of those future goals. Other people would rather live in the present; they do not anticipate as strongly the future consequences of their present activities. The degree, to which people are able to look into the future, and thus foresee the usefulness of their present behavior, differs from one person to another (Simons et al. 2004). As Seginer (1995, in seginer and Halabi-Kheir, 1998) noted future orientation consists of the images individuals hold concerning their future as these images are reflected in hopes and fears. Serving as the person's model of the future, future orientation provides the grounds for setting goals, planning, exploring options and making commitments that guide the person's behavior and developmental course (Bandura, 2001, Seginer, 2008, Nurmi, 1991, Trommsdroff, 1986, Hideg et al. 2010). Seginer (2005), and Seginer, Nurmi &Poole (1991), propose a future orientation model with three components: Motivation, Cognitive and behavior. The motivational component consists of the three variables that describe individuals' drive to invest in domain specific future thinking: the value of expected behavior outcomes, the subjective appraisal of their attainability

(expectance), and internal control over the fulfillment of personal hopes, plans and goals. The cognitive representation component of the future refers to the frequency of domain specific hopes and fears. The behavioral component consists of two variables: exploration of future option and commitment to one specific domain.

Due to the importance of the future orientation in predicting current behavior (Greene and DeBacker, 2004), developmental outcomes (Seginer, 2008), academic achievement (Seginer and Vermulst, 2002), agency. Ethnic identity (Adelabu, 2008), and identity. intimacy (Seginer, Noyman, 2005), it is necessary to develop a valid and reliable instrument for its' assessing. For this reason, Seginer, and her colleagues (1994, 1999, 2007) based on three-component model of the future orientation develop The Future Orientation Questionnaire (FOQ). This questionnaire is consist of three sections each of them assessing a particular prospective domain (education, marriage, career). Each section included 3 scales (Motivation, Cognitive, and Behavior) consisting of Likert –type and semantic differential- type items (all ranging from 1=low to 5=high).

The Future Orientation Questionnaire (different versions) was employed in several studies with Israeli Jewish (Seginer, Noyman, 2005, Seginer et al. 2004), Druzeadolescents (Seginer et al. 1998), Arab (Seginer,

2001, in Seginer, 2008)), African-American adolescents (Kerpelman et al. 2004, 2008) and demonstrated good psychometric properties.

According to Seginer (1998, 2008, 2009), the development of adolescents' future orientation requires both the freedom of making choices and the support of knowledgeable others. For example, the development of the future orientation in the context where encourages the independent self is different from context that supports dependent self. Therefore it seems useful to have an instrument that is free culture and identify the adolescents' future orientation from different cultures.

Based on mentioned above, the major aim of our research was to translate and validate the future orientation scale among Iranian high school students. Specifically, we examine the factorial structure of the future orientation scale. In fact, it is hypothesized that the Iranian version of this scale would comprise three factors. Iran as a religious society on one hand, and on other hand, in transition to modernity has a special characteristic. Therefore to identify the future orientation of Iranian adolescents can be provided a useful mean for Iranian educational system, and a clear picture of their hopes and fears.

MATERIALS AND METHODS

Participants

The sample consisted of 357 Iranian students (164 males and 193 females) of 10th grade whose the average age was 16years and 4 months with a standard deviation of 1.15. They were attending different public high schools located in the different districts of Tehran and were selected through random stratified sampling .

Measures

Future Orientation Questionnaire

The last version of FO (Seginer et al., 2007) was used in this study .It is a self-report questionnaire that contains 3 sections, each of them focusing on a particular prospective domain(higher education, career, and marriage)and including likert-type and semantic differential items ,ranging from 1=low to 5=high. Each section assesses the three components of future orientation: behavioral, cognitive and motivational. The future higher education is measured by37 items (13 items in, behavioral component, 4 items in cognitive component and 20 items in motivational components). The future work and career is assessedby38 (13 items in behavioral component, 5 items in cognitive component and 20 items in motivational component).The future marriage and family is measured by36items (1o items in behavioral, 5 items in cognitive component and 20 items in motivational component).The behavioral component

subsumes 2 scales: exploration of option for future(engagement in gathering information regarding future education, career, or marriage),and commitment to one preferred alternative(How determined are you to fulfill your plans about future education, career ,and marriage). The three variables of motivational component are value (How do you evaluate your future higher education, career, and marriage), expectance (How likely do you think it is that your higher education, career, family plans will materialize), internal. External control (What effect will each of the factors have on realization of your plans concerning your future, education, career, family). The cognitive representation component subsumes two variables: the basic aspects of each domain reflected in thoughts about one's future education, career or marriage, and domain-specific development reflected in developing one's future education, career and marriage (How often do you think about or plan your future, education, family and career).

The future orientation questionnaires (FOQ) was translated from English to Iranian and back translated from Iranian to English. In present study 2 parts of this questionnaire was used: prospective life course, and my future.

Academic achievement

For academic achievement, the mean of students' grade point averages for the previous semester and the previous academic year were taken into account.

Procedure

Data for this study were collected during the second session of the school year. Questionnaire was group-administrated by a graduate student. Two forms of the questionnaire, with the subscales in different order, were administrated to distributed effect son scales.

RESULTS

The main purpose of this study was to determine the validity and reliability of the Iranian translation of FOQ. For this reason, firstly descriptive statistics consisting of mean and standard deviation is presented in table 1.

Factor structure of the FOQ

One of the purposes of this study was to test the factor structure of the Iranian translation of FO questionnaire. An explanatory factor analysis with principle component analysis and promax rotation using SPSS was performed on the 111 FO items. Kaiser-Meyer –Olkin sampling adequacy for education, career and marriage subscales was 0.78, 0.80 and 0.82 respectively and Bartlett's test of sphericity for education, career and marriage subscales was 3719.36, 4288.62 and 4428.66 respectively. It is shown that sample and correlation matrix in each subscale

were proper. Because of the relation between three components (behavioral, cognitive and motivational) in each domain, oblique (promax) rotation was used. Results revealed 3 distinct factors with eigenvalues greater than 1.0.The first factor, accounted for 22.5%, the second factor, for 19% and the third factor, accounted for 11% of the variances. These initial results suggest that the factors are measuring distinct dimensions of the future orientation.

After performing explanatory factor analysis nine items with highest factor loading were chosen and confirmatory factor analysis for each domain (education, career and marriage) with using LISREL 8.5 software was administrated. In fact, nine items (three items if each components) as indicators for education orientation construct, nine items for career orientation construct and nine items as indicators of marriage orientation construct were specified. As seen in table 2 GFI and AGFI were higher than…82 and RMSEA was lower than.06. It means that each three models of future orientations had a good fitting with data.

The three factor structure of the future higher education, future career and future marriage are presented in Fig1, 2 and 3.

Convergent validity

Associations between each component of FEO and academic achievement are examined

With partial correlations (see Table 3) considering as convergent validity.

Based on the previous findings (Seginer, Mahajna, 2004), the three component of the FEO have a significant relation with academic achievement.

Reliability

For assessing the internal consistency of the FOQ Cronbach α was used. Cronbach's as for academic sub-scale , behavioral, cognitive and motivational components were 0.83, 0.76 and 0.92,for career components of behavioral, cognitive and motivational s were 0.82, 0.73 and 0.79 and for marriage components of behavioral, cognitive and motivational were 0.78, 0.68 and 0.71 respectively.

Table1. Mean and standard deviation of sub-scales according to sex

variable	M	SD	M	SD
Academic future orientation	3.52	0.38	3.57	0.33
Career orientation	3.76	0.47	3.77	0 .37
Marriage orientation	3.55	0.52	3.50	0.58

Table 2. Fit statistics for each sub-scales

sub-scales / Fit statistics	Academic orientation	Job orientation	Marriage orientation
GFI	97.0	92.0	87.0
AGFI	93.0	87.0	82.0
RMSEA	03.0	05.0	06.0
χ^2	34.81	16.93	91.96
df	27	27	27

Table 3. Pearson Correlations among the Variables

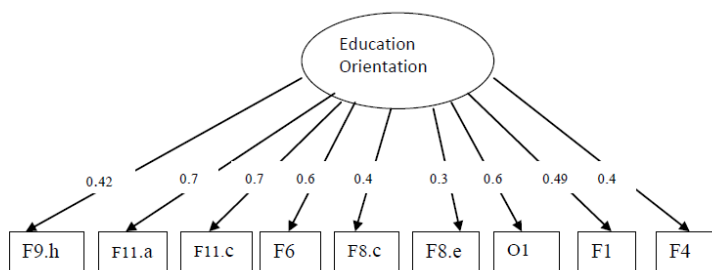| variable	1	2	3	4
1-behaviral	1	.20***	.32***	.30***
2-cognitive	.18**	1	.28***	.18**
3-motivational	.34***	. 29***	1	.26***
4-academic achievement	.28***	.19***	.32***	1

Fig1. Standardized solution of the three –component of the FEO
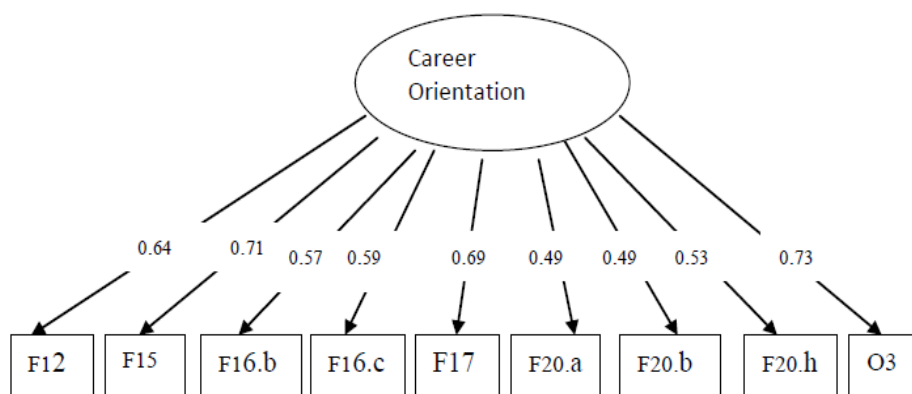
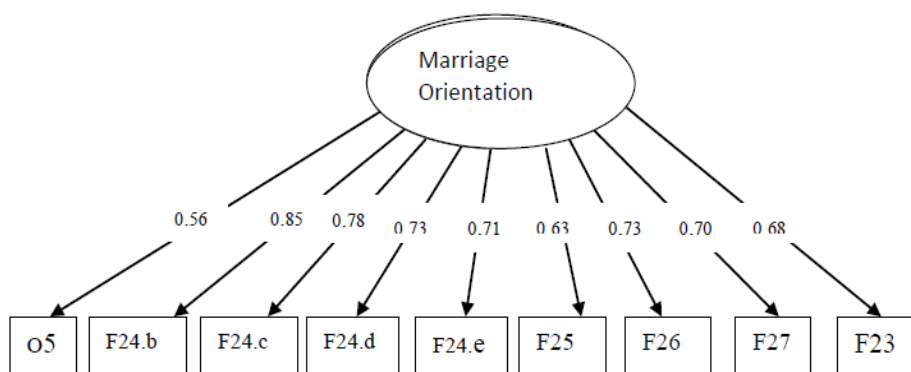**Fig2.** Standardized solution of the three –component of the FCO

Fig3. Standardized solution of the three –component of the FMO

DISCUSSION

This research was designed to study psychometric properties of the Persian version of FOQ in second year high school students. The result showed that three orientation subscales had acceptable validity and reliability. In this study, for examining the reliability of FOQ, contingency coefficient (Cronbach's Alpha) was applied and the results conform the acceptable reliability for each of the subscale (academic, career, and marriage). According to this result it was concluded that these subscales had suitable ability to screen future orientation among students; in other words the reliability of this scale was proper.

To examine the construct validity of the FOQ, explanatory and confirmatory factor analysis was used. Factor analysis is used to validate psychometric instruments and test theories underling the instrument.

The result of explanatory factor analysis supports the structure of FOQ.

After the explanatory factor analysis, for determining the factorial structure of questionnaire and testing the power and significance proportion of each components (behavioral, cognitive and motivational) in measuring of future orientation

(academic, career and marriage) confirmatory factor analysis was used.

The factor structure of Persian version of FOQ consisted of three future orientations (academic, career, marriage) with three components (behavioral, cognitive, motivational) which had a good fit to the data.

According to the findings, academic future orientation is related to the academic achievement significantly which is consistent with the previous findings (Seginer and Mahajna, 2004).

In general the findings showed that the Persian version of FOQ has an acceptable validity and reliability and can be used for research purposes.

The findings of the present study can be generalized in adolescents' population and applying it in other population needs to be investigated.

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