THE PREDICTIVE ROLE OF SPIRITUAL ATTITUDE, MENTAL SECURITY AND SELF-ESTEEM IN COMMUNICATING WITH THE OPPOSITE SEX ON HIGH SCHOOL STUDENTS

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ABSTRACT

This study examined the predictive role of spiritual attitude, mental security and self-esteem in high school students to communicate with the opposite sex. The study is a descriptive-correlated survey. The statistical population consisted of all high school students in city "Kangavar" who were enrolled in the academic year 2014-2015, the sample size was 70 students, who were selected by simple random sampling method. Cooper-Smith tool was used to tests of spiritual attitude, mental security, and self-esteem. The results showed that there is a significant positive relationship between the spiritual attitude and mental security at level of 0.1. So the training component of spiritual attitudes can help improve the level of mental security. As well, the results showed that there is a significant positive relationship between mental security and communication with the opposite sex. This means that the mental security forecasts the communication with the opposite sex at 99% confidence level. It was also found there is a statistically significant difference between boys and girls who are students, in terms of self-esteem. Given that average more boys than girls are, therefore, self-esteem is higher in males than females. As well, there are differences between boys and girls, in terms of mental security. Given that more males than females are, there is mental security significantly more in boys than in girls.

Keywords: Spiritual Attitude, Mental Security, Self-Esteem and Communication with the Opposite Sex

INTRODUCTION

Orientation to heterosexual is a common phenomenon in adolescence period and a change of maturity period. In the course, the juvenile enjoys the communication with the opposite sex the natural action is considered as the human growth stage, this time is necessary for teens to grow and reach maturity and perfection of social relations. In puberty, the teen are looking curiously at the opposite sex and hearing and looking around, the ideal image of her/his future spouse in the mind (Nelson, 2013). The communications among girls and boys, in pre-marriage periods, would be considered as a complex phenomenon in today's society (Zare et al., 2012). The relations between both sexes have always been a significant issue, around the world and from different aspects, but it seems, in no countries except in Iran, this is of challenging and problematic issues. In Iran, several studies show that between 30% and 70% of adolescents are somehow involved in this issue (Golzari, 2004). Making relationships with the opposite sex in adolescence is forming romantic relationships and almost next stages of life, and friends of the opposite sex make a ground providing a romantic relationship expanded or restricted (Bradley, 2012). Krieshna et al., (2006) concluded that lack of education about damage arising from relations with opposite sex creates an imagination of the idea of forced and sexual (emergency) relationships among street boys. Zare et al., (2012) examined the factors associated with the university student's relationships before pre-marriage ones and concluded that about 60% of the subjects have a positive attitude towards the relationships before marriage and 22.5% of respondents have no relation with opposite sex. Spirituality is of the most important cultural factors which signify human values, behaviors, practices and structures. It is believed that people, by spirituality, manifest less ongoing self-destruction behavior like suicide, smoking and drug use and have less stress and more overall satisfaction with life (Bagheri, 2010). Thereupon, the spiritual attitude of individuals affects communicating with others and with the opposite

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sex, and influences the people perspective in interacting with the opposite sex and it is quite clear in communication with the opposite sex, the spiritual attitude have significant impact on established and not established relationship with the opposite sex and on kind of relation and on communication process with the opposite (Hosseininasab, 2010). The spiritual-religious factors deserve close and critical attention from healthcare professionals in achieving and training and also supplements of the conventional and alternative health care practices (Fallahi and Mazaheri, 2008). An important factor that can play a predictive role on the opposite sex tends would be mental security. The mental security is of basic human needs seen in most psychologists' theories as well as study on human characteristics (Safooraii and Ghasemi, 2007). In psychologists' opinions, the mental security topics would be very important in mental health of psychopathology. Peace, development, and human flourishing are achieved by talents and creativities and achievement of all human perfection, in the light of security. The security is relatively free of risk (Alpourt and Ross, 2008). Horney believed the mental security of children depends entirely on how their parents to treat them. The parents not showing sincerity and love to the children undermine their security (Seived, 2013). In other words, the mental security is of the state in which the personal needs and desires may be satisfied (Ghobari and Shoujaei, 2010) and cause a feeling of self-worth, confidence, self-esteem and acceptance by the group (Jensen, 2012). A sense of security, because of the sensitivity of the age at which adolescents are, would be one of the pillars being attended, the teens due to biological and hormonal and development requires are for the first time attracted to establish the relationship with the opposite sex as adult as would and many reasons have been stating to justify this relationship, including that it is said that young people who engaged in communication with the opposite sex is wrong make feel of mental insecurity within their own families.

Another factor that can affect relationships with the opposite sex is self-esteem. The adolescence is considered as ages to interact with the opposite sex and form puberty hormones (Sarabi, 2011), and so many factors are known to be important in these age that the self-esteem is enumerated as one of them and it is constantly stressed on its importance at a young age. It has been proposed over and over that because the teens remain constantly at odds with the family due to generational disagreements, they are greatly degraded in terms of self-esteem and as a result of this degradation, they communicate outside the family and in unhealthy relationships (Sarabi, 2011). The self-esteem is one of the most important and substantial factors in human growth and development that have received, in recent decades, the attention of many psychologists and researchers in field of educational affairs. The self-esteem means that the person judges the sense of self-worth and it implies oneself attitude. The shortages or lack of it leads to other not developed aspects of personality or their in-harmony and it may even found mental illnesses as diverse as depression, shyness and fear (ValiZadeh et al., 208). The self-esteem includes the degree of approval and confirmation and value one feels to oneself or judgment one does on oneself value. To any extent the person fails to gain the self-esteem's he would be experiencing anxiety, mental instability, truth aversion and feeling being inadequate in life (Abbasi, 2011). The adolescents of high self-esteem eniov more mental security (Maleki, 2010).

Based on the results of the investigation of Jensen, 2012, the parents spend more time to supervise their own children have higher self-esteem children and also their children make less poor relationships with the opposite sex. Having self-esteem is regarded as part of mental health and most experts know the self-esteem (positive evaluation of self) to be considered as a pillar of social-emotional adjustment of individuals (Abbasi, 2011). Referred to earlier research, predictive roles of spiritual attitude and mental security in relation to the opposite sex have been not yet discussed; due to the gap, present study investigated the predictive role of spiritual attitude, emotional security and self-esteem in communicating with opposite sex among high school students.

MATERIALS AND METHODS

Population, Sample and Sampling Method

The statistical population consisted of all high school students in the city Kangavar were enrolled in the academic year of 2014-2015, the sample size is of 240 students (120 female students, 60 of whom were

associated with the opposite sex but 60 subjects not in opposite-sex relationship, 120 male students, 60 of whom were associated with the opposite sex but 60 not in the opposite-sex relationship) who were selected by random sampling method.

Methodology

The research method was a descriptive-correlation way. The data was collected in field method using questionnaires of Self-Esteem by Cooper-Smith, of spiritual attitude by Shahidi and of mental security By Zareh. In order to test, 240 subjects of high school students were randomly selected of which 120 are female students, 60 with the opposite-sex relationship but60 not, and 120 are male ones, 60 with the opposite-sex relationship but 60 not. And having distributed the questionnaires, the test was performed in group.

Research Instruments

The questionnaire for measuring spiritual attitude: this questionnaire was designed by Shahidi and Farjnia (2012) to measure "spiritual attitude" that have two components of the ability to spiritual and spiritual attitude. The nominal and content validity of the questions was tested by getting 19 experts' comments and its reliability, by performing on 40 students in "retest" way and in time interval of 5 weeks, is equal to 0.61. As well, the internal consistency of questionnaire is obtained 0.91 by Cronbach's alpha calculation. Mental security questionnaire of 15 subscales is designed by Zare (2011). The reliability of the questionnaire is 93%, by Cronbach's alpha coefficient of this research. The validity of the questionnaire under factor analysis method showed that this test is composed of 10 independent factors and in overall these 10 factors explain 39.5% of total variance of the test.

Self Esteem questionnaire of Cooper-Smith (SEI): established by Cooper and Smith (2008), it describes feelings, opinions or reactions of the person. Moundenson *et al.*, (2006) have calculated the internal consistency coefficient of 86% to 90% for test of Self Esteem by Cooper and Smith. Also the reliability coefficients of the test have been reported 90% and 92% for girls and boys, respectively, in retest method (Fathi and Dadsetani, 2009).

Information Analysis Method

Results of data analysis will be provided in two forms of descriptive statistics, including mean and standard deviation, and inferential statistics examining the Pearson correlation and stepwise multiple logistic or binominal regression.

RESULTS AND DISCUSSION Findings

Table 1: Demographic characteristics of the sample

| | With op | posite-sex Not | opposite-sex | Total number | |
|--------------|--------------|----------------|--------------|--------------|--|
| | relationship | relations | hip | | |
| Girls | 60 | 60 | | 120 | |
| Boys | 60 | 60 | | 120 | |
| Total number | 120 | 120 | | 240 | |

According to the data in Table 1, the total number of subjects is 240, there 120 girls that 60 involved in the opposite sex relationship but 60 not in, as well as 120 boys, 60 involved in the opposite sex relationship but 60 not in.

Table 2: Descriptive statistical indicators of concerned variables

| Variables | Number | Mean | Standard deviation | Maximum score | Minimum score |
|-----------------|--------|------|--------------------|---------------|---------------|
| Spiritual | 240 | 119 | 16.67 | 161 | 64 |
| attitude | 240 | 167 | 14.07 | 02 | 12 |
| Mental security | 240 | 46.7 | 14.97 | 92 | 13 |
| Self esteem | 240 | 37.7 | 9.4 | 57 | 11 |

Table 3: Results of logistic-regression analysis for the study variables

| Variable | В | Standard deviation | waLd | Df | Sig | Exp (B) |
|--------------------|-------|-----------------------|-------|----|-------|---------|
| Spiritual attitude | 0.007 | 0.008 | 0.751 | 1 | 0.386 | 1.007 |
| Self esteem | -0.02 | 0.021 | 0.011 | 1 | 0.917 | 0.998 |
| Mental security | 0.41 | 0.041 | 8.84 | 1 | 0.003 | 1.042 |
| Gender | 0.357 | 0.284 | 1.581 | 1 | 0.309 | 1.43 |

Question 1: What percentage is the variance in communicating with the opposite sex explained by the spiritual attitude?

According to the analysis of data obtained in Table 3, B is equal to 0.007that is not significant at any levels, meaning which the spiritual attitude cannot predict the relation with the opposite sex.

Question 2: What percentage is the variance in behavior of communicating with the opposite sex explained by the self-esteem?

According to the results in Table 3, B is-0.02that is not significant at any levels, meaning which the self-esteem cannot predict the relations with the opposite sex.

Question 3: What percentage is the variance in behavior of communicating with the opposite sex behavior explained by mental security?

According to table 3, B is equal to 0.41 and wald is equal to 8.84 that is significant at 0.003 level, meaning which the mental security can predict the relation with the opposite sex, at 99% confidence level. Question 4: What percentage is the communicating with the opposite sex behavior explained by the attitude of spiritual, mental security and self-esteem?

Table 4: Chi-square test for significance of the model

| P | df | Chi-square |
|----------|----|------------|
| P< 0.001 | 4 | 20.165 |

Using the chi-square test showed that the whole model is significant at the level of 0.001. The model explains about 0.08% to 0.11% of the variance of relation with the opposite sex. Under correct prediction, 61.7% have relation with the opposite sex but64.9% not relation with the opposite sex and in total 62.9% of prediction is correct.

According to Kaks-Snell indicator equal to 0.074, the model cannot put in practice the prediction of relation with the opposite sex successfully.

Ouestion 5: Is there a difference between male and female self-esteem?

Table 5: Results of independent t-test analysis for variables of self-esteem in male and female students

| Gender | Number | Mean | Standard deviation | Difference of mean | T | p | |
|--------|--------|-------|--------------------|-----------------------|-------|------|--|
| Girl | 120 | 35.32 | 9.37 | | | | |
| Boy | 120 | 40.11 | 8.84 | 4.79 | 4.074 | 0.01 | |

According to data in Table 5, t which was obtained is significant at level of 0.01, meaning which there is a difference between male and female students' self-esteem statistically. Given that the average to the boys more than that of girls is, therefore, the self-esteem in males is higher than in females.

Question 6: Is there a difference between male and female students' mental security?

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Table 6: Results of independent t variable mental security for male and female students

| Gender | Number | Mean | Standard deviation | Difference of mean | T | p | |
|--------|--------|-------|--------------------|-----------------------|------|------|--|
| Girl | 120 | 42.55 | 14.76 | | | | |
| Boy | 120 | 90.50 | 14.09 | 8.35 | 4.49 | 0.01 | |

According to Table 6, t which was obtained is significant at level of 0.01. This means that there are differences between male and female students' mental security statistically. Given that the average to the boys more than that of girls is, therefore, the mental security in males is higher than in females.

Question 7: Is there a difference between male and female students' spiritual attitude?

Table 7: The results of independent t-test for spiritual attitude of female and male students

| Gender | Number | Mean | Standard deviation | Difference of mean | T | p |
|--------|--------|------|-----------------------|-----------------------|------|-------|
| Girl | 120 | 118 | 17.02 | | | |
| Boy | 120 | 120 | 16.30 | 2.44 | 1.14 | 0.258 |

According to Table 7, t which was obtained is not significant at any levels, meaning which there is no difference between female and male spiritual attitude statistically.

Hypothesis 1: there is a relationship between the security mental and spiritual attitude.

Table 8: Pearson correlation analysis between spiritual attitudes and mental security

| Variable | The number | R | р | _ |
|--------------------|------------|------|------|---|
| Mental security | 240 | 0.20 | 0.01 | |
| Spiritual attitude | 240 | | | |

According to Table 8, R which was obtained equal to 0.20 is significant at level of 0.01, meaning which spiritual orientation also increases to the extent that mental security increases.

Hypothesis 2: there is a relationship between the spiritual attitude and self-esteem.

Table 9: The analysis of the Pearson correlation between spiritual attitudes and self-esteem

| Variable | The number | R | р | |
|--------------------|------------|------|------|--|
| Spiritual attitude | 240 | 0.21 | 0.01 | |
| Self esteem | 240 | | | |

According to Table 9, R which was obtained equal to 0.21 is significant at level of 0.01, meaning which the self-esteem also rises to the extent that spiritual attitude increases.

Hypothesis 3: there is relationship between the self-esteem and mental security.

Table 10: Pearson correlation analysis between spiritual attitudes and self-esteem

| Variable | The number | R | р | |
|-----------------|------------|------|------|--|
| Self esteem | 240 | 0.20 | 0.01 | |
| Mental security | 240 | | | |

According to Table 10, R which was obtained equal to 0.74 is significant at level of 0.01, meaning which also the mental security rises to the extent that self-esteem increases.

Discussion and Conclusion

This study examined the predictive role of spiritual attitude, mental security and self-esteem of high school students communicating with the opposite sex in Kangavar. According to the analysis of data in Table 3, B which is achieved 0.007 is not significant at any levels, meaning which the spiritual attitude

does not predict the relation with the opposite sex. That is, the relation with the opposite sex is not just associated with the spiritual attitude but it is associated with all people. This means that a person, according to oneself profit and loss, regardless of religious values, wants to establish such relations, of course, these issues do not imply the end of religion and being religious, meaning that a certain level of spiritual attitudes is not significant for this test, but it seems that a deeper level of spiritual attitudes can be predictive and preserver of this relationship. Therefore, there is a need for vast reconstruction of belief inclination grounds governing the society, and it has been always put the internalized being religious to be controller and guide versus the instinct so that it is spoken of controller of the instincts. Similar research results indicate that among people who are of more religious scores, early low sexual relations are seen (Zareshahabadi, 2012). So, the spiritual attitude affects the relation with others and with the opposite sex and too, how people to see the communication with the opposite sex and it is quite obvious the influence of moral attitude on communication with the opposite sex, the spiritual attitude affects on not establishing a relation with the opposite sex and kind and process of communication with the opposite sex dramatically (Hosseininasab, 2010). It should be noted that this may on average the subjects had a superficial attitude this level of attitude does not have as necessary as predictive role. These findings are consistent with many studies but not with some. According to Table 3, B which was obtained -0.02 is not significant at any levels, meaning which the self-esteem cannot predict relation with the opposite sex. The people problems who suffer lack of self-esteem would be also well-represented in personal, work and career relationships and relation with the opposite sex (Betty, 2010). The low self-esteem is considered as a risk factor for aggression, delinquency, drug abuse, depression, poor academic performance, domestic violence the spouse, child abuse and how to communicate with the opposite sex (Moradi, 2011). This finding is consistent with the findings of many studies but not with some. According to the analysis of data in Table 3, B and wald which were obtained 0.41, and 8.8, meaning which the mental security predicts the relation with the opposite sex at 99% confidence level. Conflict between parents and children causes the teen are under intense pressure emotionally and mentally (Tehrani, 2008). In this case, to satisfy their own psychological needs, they get attracted towards the community and to find the peace of mind, theywant to communicate with the opposite sex and feel to be able restore the lost sense of security within the family, in the presence of the opposite sex (Koenig, 2010; Candler, 2013; Holl, 2012; Hood and Hill, 2013). The findings of the study are consistent with those of study by Hejazi (2012); Moradi (2011). Based on Kaks-Snell's indicator equal to 0.074, the model predictions are not successful to predict communicating with the opposite sex. The findings are consistent with those of study by Hosseini (2009), Betty (2010), Sarabi (2011), in relation to spiritual attitudes and self-esteem variables.

Probably other variables and factors are influential in communicating with the opposite sex which are identified and tested and analyzed by the researchers. While research findings by Koenig (2010), Sultani (2012), Sarabi (2011) are consistent with the findings of the present study, on the mental security. According to data in Table 5, t which was obtained equal to 0.01is significant at level of 0.01, meaning that there is a significant difference between the female and male students' self-esteem statistically. Given that on average more high self-esteem boys than girls are, therefore, the self-esteem is higher in males than females, which is consistent with research findings by Pour (1993) who showed a significant difference between female and male students' self-esteem. This is because of the different roles and characteristics of girls and boys, the dimensions women are undervalued in, the level of women's awareness of their own low-valued base, and also receiving the feedback from the environment, they all might affect the difference in gender-based self-esteem observations.

According to data in Table 6, t which was obtained is significant at level of 0.01, meaning that there are differences between the female and male students' mental security, statistically. Given that on average, more high mental security boys than girls are, the boys' mental security is significantly more than the girls. Feeling of insecurity can be arose by various aspects of life, work, school, the family and community and reduced or intensified by demographic characteristic such as age, gender, religion, marital status, occupation, education major (Sajedi, 2013). Feeling of insecurity can be seen in different age periods (Sarmasti, 2014). Most research suggests that boys are more likely to tend towards

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communicating with the opposite sex and they show their own approval of relation with opposite sex more than girls (Zareshahabadi *et al.*, 2012). The research findings are consistent with the findings of this study, because of societal views towards the girls and boys to communicate with the opposite sex, of family and social constraints that are imposed for girls. According to data in Table 7, t which was obtained is not significant at any levels, meaning which there is no spiritual difference between girls' and boys' spiritual attitude. In this study by Mazaheri *et al.*, (2012) and the study by Chang *et al.*, it is reported that there is no significant relationship between attitude towards spirituality and demographic characteristics such as gender and marital status. And based on the study by Shar *et al.*, (2012), there is a significant difference between attitudes to spirituality in nursing and medical students, these findings were consistent with those of the study.

According to the findings in Table 7, R which was obtained equal to 0.20 is significant at level of 0.01, meaning that the spiritual security also rises to the extent that the mental security increases. These findings are consistent with those of Bagheri (2010), Hosseininasab (2010). They believed that in general people of spiritual suffer few ongoing self-destructive behavior, including suicide, smoking and drug use, and manifest less stress and more mental security and their overall satisfaction is further than others without. Individually, a man in the shadow of faith in God and following the Islamic rules make the sense of peace and security that its fact is endorsed by the majority of psychologists such as Carl Jung, William James and even Freud expressly or implicitly. The religion and spirituality are important cultural factors give sense to human values, behaviors, practices and structures. The faith in God protects and helps the human and gives peace and security to them and reduces anxiety. According to the results in Table 8, R which was obtained equal to 0.21 is significant at level of 0.01, meaning which the self-esteem rises to the extent that the spiritual attitude also increases. These findings are consistent with those of Qureshi. In accordance with sacred religion of Islam, all Muslims' honor, male and female, poor, rich, strong and weak, from every class and every place is so respected that according to many traditions, insulting any of them is known as disagreement and war against God. Imam Sadiq (AS) said: all things done by the Muslims have been devolved to God, but they did not give themselves to make humble and humiliated. And Imam Ali said: one hour of humiliation is not equality with dignity throughout all life. Juveniles of every nation and race want divine knowledge and moral attributes, security and self-esteem, this deep, natural desire has led psychologists to call the young adulthood as supernatural period.

According to the results in Table 9, R which was obtained equal to 0.74 is significant at level of 0.01, meaning which the higher the self-esteem, the more the mental security increases. These findings are consistent with those of Sarabi (2011), Abbasi (2011); they believed people feeling good about themselves pass conflicts behind easily, resist against negative pressures and can well enjoy the life. One of the limitations of the present study is that it is limited to high school students, thus extending the results to students of other courses should be undertaken with caution. It is recommended that it is conducted future studies on variables such as social status, intelligence, personality, social class, parenting style, learning style. Given that this study is also offered in high school education, it is recommended in other levels. According to the predictive power of mental security of relation to the opposite sex, it is necessary that state, youth organizations, schools and families identify and take ways to resolve conflicts and needs of adolescent that them not to seek to satisfy their own needs and desires in their way which is abnormal.

REFERENCES

Abbasi A (2011). Investigating relationship between self-esteem and anxiety about exam for high school students in Kermanshah. MSc thesis, University of Hamedan, Faculty of Humanities.

Allport GW and Ross GM (2008). Personal religious and prejudice. *Journal of Personality and Social Psychology* **5** 432-443.

Beti H (2010). *The Psychology of Religious Behavior, Belief and Experience* 149.

Research Article

Bredle JM (2012). Spiritual Well- Being as a Component of Health-Related Quality of Life: The Functional Assessment of Chronic Illness Therapy—Spiritual Well-Being Scale (FACIT-Sp). *Religions* 2 77-94.

Fallahi Khoshknab M and Mazaheri M (2008). Spirituality, Spiritual Care and Spiritual Therapy (Tehran: University of Medical Sciences).

Golzari M (2004). Training consultation with young people in the context of relations between the opposite sexes. *Quarterly Journal of Psychology* 122-105.

Hejazi A (2012). The relationship between androgenic and mental security. MSc thesis, PNU of Kangavar.

Hosseininasab SD (2010). Culture of Education and Training (Tabriz, Ahrar) 571.

Jensen- Campbell (2012). Agreeableness, conscientiousness and effortful control Processes. *Journal of Research in Personality* **36** 476-489.

Jensen L (2012). Religiosity, education and civic belonging: Muslim youth in New York City Public Schools. Presented at the *Muslim Youth in NYC Public Schools Conference*, *Teachers College*, *Columbia University*.

Koenig HG (2010). Handbook of Religion and Health (New York: Oxford University Press) 139.

Maleki A (2010). Examining the relationship between self-esteem and mental security of high school students in Yazd. MSc Thesis, Azad University of Yazd.

Moradi I (2011). Examining the relationship between creativity and self-esteem, achievement in basic science and humanities students, PNU of Qasr-e Shirin. MSc Thesis, Hamedan University, Faculty of Humanities.

Nelson CJ (2013). Spirituality, religion, and depression in the terminally ill. *Psychosomatics* 43 213-20.

Sajedi A (2012). Comparison of attachment styles with psychological security of primary school students. Clinical Master's thesis, University of Shiraz.

Sarabi S (2011). Exploring the relationship between coping strategies, mental health and self-esteem in staff working in Tehran's Azad University. MSc thesis, University of Tehran.

Sarmast R (2014). Evaluation of physical and mental illness and mental health of adolescents in Tehran. MSc thesis, Tehran University.

Shahidi SH and Farajnia S (2012). Establishment and validation of a questionnaire of spiritual attitude measurement, Tehran. *Psychology and Religion* (3) 6-1.

Soltani A (2011). Causes of mental security of young people. New ideas, 2 edition 36-15.

Tehrani S (2008). Factors affecting adolescent mental security. *Psychological New Things* 2(3) 56-31.

Zareshahabadi A and Souleymani Z (2012). Evaluating factors associated with students' tendency towards pre-marital relations at Yazd University. *Journal of Social Welfare* **45** S346-339.