Résumé : Le but de cette étude était d’étudier l’état de satisfaction de la vie, la qualité de vie et l’anxiété de la mort en fonction des traits de personnalité (introversion et extraversion) des personnes âgées vivant à la maison et dans la ville de Kermanshah en 2016. La population statistique comprenait toutes les personnes âgées introverties ou extraverties, âgées de plus de 60 ans et vivant dans la maison de retraite de Mehrvarzan dans la ville de Kermanshah. Les participants comprenaient 300 personnes âgées, dont 102 en foyer de soins et 198 à leur domicile. L’outil de collecte de données était le Questionnaire sur la qualité de la vie de Wir et Sherborne, le questionnaire sur la satisfaction à l’égard de la vie, le questionnaire sur l’anxiété de mort de Templar. Les résultats de l’étude ont montré qu’il existe une différence significative entre la qualité de vie des personnes âgées introverties et extraverties. Si l’on considère les scores moyens de qualité de vie des personnes âgées extraverties et introverties, on peut dire que les personnes âgées extraverties ont une meilleure qualité de vie. Il existe également une différence significative entre la satisfaction de la vie des personnes âgées extraverties et celle des personnes introverties, de sorte que l’on peut dire que les personnes âgées introverties ont une plus grande satisfaction de vivre que les personnes âgées extraverties. Les résultats ont également montré qu’il existe une différence significative entre l’anxiété de mort des personnes âgées introverties, de sorte que les personnes âgées introverties ont une anxiété de mort moindre que les personnes âgées extraverties.

Mots-clés : qualité de vie, satisfaction de la vie, mort anxiété, vieillie, introverti, extraverti.

Introduction

Old age is one of the stages in the evolution of human life, in which the latest developments in human take place. The growth trend at this stage of life, like other phases of life is characterized by complex biological and psychological changes and traits. These changes affect the thoughts, feelings, beliefs, values and, in general, personality and
behavior, (Mahdizadegan and Bagherpour, 2001). The number of elderly people on the planet, including Iran, is increasing. This is promising; however, aging and increasing the aging population is a phenomenon that may cause many problems in the world in the future. Although in Iran, the ratio of young age groups to the total population of the country is high and Iran is considered a young country, according to the census in 2013, 6.2%, census in 2014, 6.5%, census in 2015, 2.5%, census in 2016, 4.5%, census in 2017, 6.6%, census in 2018, 7.3%, and census in 2019, 3.8% of the population of the country were over 60 years old (Iran Statistics Center, 2011).

Death anxiety is one of the variables that play a role in life satisfaction. Death anxiety means an unusual and great fear of death (Rice, 2009). Research shows that death anxiety occurs more often in middle-aged and elderly people. Empirical studies on life satisfaction and, subsequently, in the broader framework of functional well-being have been formed since the early twentieth century. Flugol studied temperament through the recording of emotional events. Post-World War II researchers have studied life satisfaction and happiness through simple lists (Beyani et al., 2007: 26). Recently, life satisfaction has become a favorite subject for sociologists and other development-related fields. It can be said that people who have life satisfaction, have a certain biological, psychological, economic and social status. Hence, one of the characteristics of life satisfaction is that the person has a sense of health and happiness. Life satisfaction plays an important role in the development or change of approaches of social development and planning. In other words, the formulation of developmental plans based on social survey data creates a kind of change in the top-down approach in planning, which leads to a strengthening of the bottom-up view of developmental plans and, subsequently, social policy-making. This kind of transformation is in the policy and social planning approach, because the data from this template are designed in a bottom up style. Social planning and policy-making as tools for implementing developmental plans require the recognition of social, political, economic and cultural structure and the recognition of social interaction patterns (Mohseni and Heidari, 2011: 105).

Life satisfaction is one of the issues which is influenced by culture. Basic issues of life such as what is good life? What is joy? are strongly influenced by culture values, so it can be stated that personality and culture have a mutual impact on each other, and both can determine the level of satisfaction for people. External factors such as income level, education, and socioeconomic status determine only a small proportion of the level of life satisfaction and happiness of an individual. Of course, this feeling is more related to personality traits. Major goals in life, progress toward them and conflict between goals that are completely culture-dependent all affect the level of health, life satisfaction and happiness (Khosravi and Nahidpour, 2012: 2).

One of the issues that engulfed the minds of men from the very beginning of their creation is death and its surrounding issues, especially because science, and in particular psychology, has been silenced in this matter, while religions provide a suitable platform for psychological comfort and relaxation with the theme of human immortality (Shanfi Niya, 2008). In a study by Kakabenyi and Moazinejad (2015) entitled Relationship Between Age and Meaning in Life with Death Anxiety in elderly men and women, a significant negative relationship between meaning in life and aging with death anxiety in both elderly men and women was observed and can predict the level of death anxiety in elderly women and men. Hussein Zadeh et al. (1993) showed that social support has a direct effect on life satisfaction; self-efficacy and self-respect can influence life satisfaction indirectly. Hejazi et al. (1993), in a study on elderly people, showed psychological needs explain 29% of internal motivation and
22% of life satisfaction changes are predicted by psychological needs and internal motivation. Faraji and Khademi (2012) also showed that there is a significant relationship between life satisfaction of elderly people and their vitality. There is also a significant correlation between income and relative deprivation variables and life satisfaction.

Farhadi and his colleagues (2011) investigated the quality of life of elderly people in Dashti city of Bushehr province in February 2009 using the SF-36-quality of life questionnaire. In this study, two dimensions of psychological aspect (life expectancy, social function, emotional role, mental health) and physical aspect (physical function, physical role, physical pain, general health) were introduced as determining factors in life quality. The findings of this research show that the quality of life of rural elderly people in this city is lower than average, so that urgent care is needed and interventions to improve their life quality are necessary.

Hicran et. al (2017) conducted a research entitled Hidden Fear of the Elderly people in Nursing Homes: Death Anxiety and Depression. The results of this study showed that the total mean of depression was 43.4 years and death anxiety was 7.57. A mild depression was found in 69.8% and 16% of subjects reported depressive symptoms. Correlation between death anxiety and depression was positive and significant (correlation coefficient of 0.304).

Missler et al. (2012) entitled Death Anxiety Survey in Elderly People showed that higher death anxiety and lower self-esteem are seen in elderly people living in the nursing homes and women suffer more fear than men. Regarding the increasing number of elderly people in the community and concerns about their health and well-being, the purpose of this study was to study the literature on the death anxiety of the elderly people.

Stephen et al. (2010) also showed that life expectancy increased from 75.9 years to 77.6 years in 2005, reaching 82.6 years in 2050. Men and women who are about 85 years old have a large age group in the United States. The results also showed that there is a positive relationship between death anxiety and age, and there is no significant difference between the attitude of aging in elderly men and women. There was also no significant difference between elderly attitudes in elderly people with different ethnicities (black and white race).

Azayna et al. (2010) conducted a study on the death anxiety among Muslim Arab elders in Ismael. The results of this study showed that the elderly people living in a nursing home have more death anxiety than elderly people living in their homes. In a study by Ron (2010) entitled “Old people and their death anxiety” (a comparison among old people living in the community and nursing homes in Ismael), it was found that death anxiety existed for any elderly person regardless of their place of residence. But living in a nursing home exacerbates this anxiety. In his study, Ron (2010) showed that it is important to focus on nursing homes to find ways to increase life satisfaction, which is a variable that reduces the psychological anxiety associated with death. In line with previous researches, the main issue of the present research is to answer this question, “whether there is a difference between life quality, life satisfaction and death anxiety among elderly people who are introverted and extroverted living in their homes and nursing homes in Kermanshah?”.

**Research method**

This research is an applied research and is descriptive and comparative in terms of collecting required data.

The statistical population of the study consisted of all introverted and extroverted elderly people aged 60 years and more living in Mehrvarzan nursing home and living in
their homes in Kermanshah city. The participants included 300 elderly people, of whom 102 were at the nursing home and 198 were at their homes. Since the present study is a qualitative and statistical population is specific, Cochran’s formula was used to determine the sample size (≈168 people).

The elderly population of the community was selected by cluster sampling and elderly population living in the nursing home was selected by convenience sampling method. In order to choose the elderly living in their homes, Kermanshah city first divided into four districts, then 2 districts were selected and from these districts, elderly people who were at hospitals, public places, parks, mosques, shops and private homes were chosen. The subjects were selected randomly and tested.

**Research tools**

The Wir and Sheborne life quality questionnaire with reliability (0.85), which is a self-report questionnaire is mainly used to assess the quality of life and health. This questionnaire has 36 items and assesses eight areas of physical function, social function, physical role, emotional role, mental health, vitality, physical pain and general health. In addition, the 36-SF provides two general measures of functionality: the physical component score (PCS), which also measures the physical dimension of health, and the overall mental component score (MCS), which measures psychosocial dimension of health. The subject’s score in each of these varies from zero to 100, and the higher scores better life quality. The validity and reliability of this questionnaire have been confirmed for Iranian population, and the internal consistency coefficients of the eight subscales have been reported between 0.70 and 0.85 and their test-retest coefficients have been reported between 0.43 and 0.79 at intervals of one week.

Life satisfaction questionnaire, with reliability (0.81), this questionnaire in a 7-point Likert style has 5 questions, which is made by Diner, Amnes, Larsen and Griffin. The range of correlation coefficients ranged from 0.43 to 0.96 with an average of 0.59. Moreover, the range of correlation coefficients of questions with total scale scores ranged from 0.44 to 0.73 with a mean of 0.73.

Templer’s death anxiety inventory has a reliability of 0.76 (12 questions). This questionnaire has four sub-scales, coefficient of fear of dying 0.82, fear of death of others 0.73, fear of emotional punishment after death 0.67 and the fear of sudden death is 0.13.

**Findings**

As shown in Table 1, the average of life quality scores for the introverted and extroverted elderly people were 92.54 ± 26.46 and 106.56 ± 22.626, respectively.

**Table 1: Mean and standard deviation of life quality in introverted and extroverted elderly people**

<table>
<thead>
<tr>
<th>Standard</th>
<th>SD</th>
<th>Mean</th>
<th>number</th>
<th>groups</th>
<th>Life-quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.881</td>
<td>26.406</td>
<td>92.54</td>
<td>84</td>
<td>introverted</td>
<td>Life-quality</td>
</tr>
<tr>
<td>2.469</td>
<td>22.626</td>
<td>106.65</td>
<td>84</td>
<td>extroverted</td>
<td>Life-quality</td>
</tr>
</tbody>
</table>

As shown in Table 2, the average of life satisfaction scores for the introverted and extroverted elderly people were 18.18 ± 8.810 and 15.15 ± 8.120, respectively.
Table 2: Mean and standard deviation of life satisfaction in introverted and extroverted elderly people

<table>
<thead>
<tr>
<th>Standard Error</th>
<th>SD</th>
<th>Mean</th>
<th>number</th>
<th>groups</th>
<th>Life satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.961</td>
<td>8.810</td>
<td>18.18</td>
<td>84</td>
<td>introverted</td>
<td></td>
</tr>
<tr>
<td>0.886</td>
<td>8.120</td>
<td>15.15</td>
<td>84</td>
<td>extroverted</td>
<td></td>
</tr>
</tbody>
</table>

As shown in Table 3, the average of death anxiety scores for the introverted and extroverted elderly people were 29.82 ± 11.727 and 35.58 ± 12.702, respectively.

Table 3: Mean and standard deviation of death anxiety in introverted and extroverted elderly people

<table>
<thead>
<tr>
<th>Standard Error</th>
<th>SD</th>
<th>Mean</th>
<th>number</th>
<th>groups</th>
<th>Death anxiety</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.280</td>
<td>11.727</td>
<td>29.82</td>
<td>84</td>
<td>introverted</td>
<td></td>
</tr>
<tr>
<td>1.356</td>
<td>12.702</td>
<td>35.58</td>
<td>84</td>
<td>extroverted</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Kolmogorov–Smirnov test for exploring normality of data on Life Satisfaction and Death Anxiety and Life Quality

<table>
<thead>
<tr>
<th>Life satisfaction</th>
<th>Life quality</th>
<th>Death anxiety</th>
<th>number</th>
<th>2-statistics</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>168</td>
<td>168</td>
<td>168</td>
<td>168</td>
<td>0.861</td>
<td>0.449</td>
</tr>
<tr>
<td>1.255</td>
<td>1.053</td>
<td>0.861</td>
<td>0.449</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.086</td>
<td>0.217</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Table 4, because the level of significance is greater than 0.05, so the data are normal, in order to obtain the difference between life quality of the extroverted and introverted elderly people, the t-test independent have been used whose results are shown in Table 5.

Table 5: Independent t-test for assessing the quality of life in the extroverted and introverted elderly people

<table>
<thead>
<tr>
<th>t-test</th>
<th>Life quality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Confidence level</strong>%95</td>
<td><strong>Average</strong></td>
</tr>
<tr>
<td><strong>Higher</strong> bound</td>
<td><strong>of Differences</strong> in means</td>
</tr>
<tr>
<td>Lower bound</td>
<td>-6.627</td>
</tr>
<tr>
<td>-6.627</td>
<td>-21.611</td>
</tr>
</tbody>
</table>

As shown in Table 5, the calculated t statistic is -3.721 with a degree of freedom of 166 and the significant level of less than 0.01 was obtained. Therefore, there is a significant difference between life quality of the introverted and extroverted elderly people. According to the mean scores of life quality in the elderly people, both introverted and extroverted, it can be said that extroverted elderly people have higher life quality. To obtain the difference between life satisfaction in extroverted and introverted elderly people, the independent t-test has been used and its results are shown in Table 6.
Table 6: T-test for independent groups for assessing life satisfaction in the introverted and extroverted elderly people

<table>
<thead>
<tr>
<th>T-test</th>
<th>Levene Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence level</td>
<td>Average of Differences in means</td>
</tr>
<tr>
<td>Higher bound</td>
<td>Lower bound</td>
</tr>
<tr>
<td>5.605</td>
<td>0.443</td>
</tr>
<tr>
<td>5.605</td>
<td>0.443</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td></td>
</tr>
</tbody>
</table>

As shown in Table 6, the calculated t statistic of 2.313 with a degree of freedom of 166 is greater than the value of the table, and the significant level of less than 0.05 was calculated.

Therefore, there is a significant difference between life satisfaction of the introverted and extroverted elderly people. According to the mean of life satisfaction scores in the elderly, both introverted and extroverted, it can be said that introverted elderly people have higher life quality.

To find the difference between the death anxiety in extroverted and introverted elderly people, independent t-test has been used whose results are shown in Table 7.

Table 7: T-test for independent groups for assessing death anxiety in the introverted and extroverted elderly people

<table>
<thead>
<tr>
<th>T-test</th>
<th>Levene Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence level</td>
<td>Average of Differences in means</td>
</tr>
<tr>
<td>Higher bound</td>
<td>Lower bound</td>
</tr>
<tr>
<td>-2.038</td>
<td>-9.486</td>
</tr>
<tr>
<td>-2.038</td>
<td>-9.486</td>
</tr>
<tr>
<td>Death anxiety</td>
<td></td>
</tr>
</tbody>
</table>

As shown in Table 7, the calculated t statistic of 3.055 with a degree of freedom of 166 is greater than the table value and the significant level of less than 0.05 was calculated. Therefore, there is a significant difference between death anxiety between introverted and extroverted elderly people and the zero assumption is rejected. Depending on the mean scores of death anxiety in the elderly, both the introverted and extroverted, it can be said that the introverted elderly people have a lower death anxiety than the extroverted ones.

Discussion and conclusion

The results showed a significant difference between the life quality in the extroverted and introverted elderly people. These results were consistent with the studies of Mogal allo and Agilar Vafaie (2009) and Argyle (2001).

In explaining these results, it can be said that aging is a sensitive period of human life and paying attention to the issues and needs of this stage is a social necessity. Considering the needs of this stage, attention to life quality of the old is an important issue (Taheri, Fereidooni Moghadam, Cheraghi, Hekmatpour and Hojjati, 2013). Many researchers describe life quality as a multidimensional concept that includes health, functional status, social status, and other aspects of the individual’s life (Bowling et al., 2002). Some experts consider two aspects of human personality more important in determining the quality of life (extroversion and tranquility/introversion and anger). Indeed, most people have a single-dimensional and extreme personality— that is, a natural person who is neither completely
introverted nor extroverted, not angry and violent, and not quite cold and calm. However, the character of many people in one dimension is more advanced than the other dimension, and therefore some are introverted and extroverted (Ising, 1996). Being sociable, loving people, preferring large groups and gathering, being courageous, energetic, and optimistic are some of traits of the extroverted (Lucas and Fujita, 2000).

Argyle (2001) in his study showed that extroversion has a positive relationship with cheerfulness and life quality. Moghlanlo and Aglar (2009) also found out that extraversion makes people to participate in social activities and enjoys the presence among other people, and, as a result, the quality of life in individuals raises.

In general, it can be stated that personality traits generally affect people’s lifestyle and, consequently, affect the quality of life of individuals. Individuals who acquire higher score in certain personality traits, such as extroversion, usually experience more positive emotions, and this affects positively their life quality as opposed to the introverts. Therefore, there seems to be a significant difference between the life quality in the introverted and extroverted elderly people. The results showed that there is a significant difference between life satisfaction in the introverted and extroverted elderly people, which were consistent with the studies of Ahadi, Kashani and Bagheri (2011), and Blatney et al. (2004) In explaining these results, it can be said that the general life satisfaction of the elderly means the cognitive and informed evaluation of individuals from their life quality as a whole unit based on the elderly personal criteria. Research has shown that personality traits, such as introversion-extroversion, are one of the essential components for predicting and explaining life satisfaction (Beyrami and Gholizadeh, 2011). The extroverted are essentially sociable, risky and daring, and experience more pleasant emotions and experiences (Lucas and Fujita, 2000).

Tversky & Griffin (1991) also argue that positive emotions and life satisfaction are related to personality traits, and because of some personality traits such as extroversion, some people (like the extroverted) emphasize more on positive events of life and thus, experience higher life satisfaction.

Ahadi et al. (2011) in their study showed that people who are high in extroversion have broad verbal and communication abilities. This facilitates relationships with others and provides a wider social network and more social support for them, which also increases their life satisfaction. Blatney et al. (2004) also showed that extroversion makes people experience higher life satisfaction.

In sum, it can be stated that extroverted tend to experience new experiences more than the introverted and have more social relationships than the introverted, and one of the factors of life satisfaction is having social bonds and relationships. On the other hand, introversion is associated with more isolation and lower creativity, and hence the introverts experience less joy than extroverts. Therefore, there seems to be a significant difference between life satisfaction in the extroverted and introverted elderly people. The results also showed that there is a significant difference between the death anxiety in the extroverted and introverted elderly people. In fact, a study that directly correlated with these results was not found, but it can be said that most elderly people have one or more underlying illnesses that change their lifestyle, reduce their self-esteem, increase the their sense of vulnerability, disorder, and disturb their social and mental activities (Raiesey, 2014). With the advancement of the disease, the pain and suffering of patients from loneliness and dependence on others increases. Elderly people, because of physical changes, poor health,
inability and loss of affiliates, are more likely to think or talk about death. In fact, the death anxiety is inevitable and since nobody has experienced death, thinking about it causes anxiety (Mohammazadeh, 2014). Death Anxiety includes a set of attitude of death such as fear, threat, anxiety, discomfort, and other negative emotional reactions associated with anxiety (Azaiza, Ron, Shoham, 2010).

On the other hand, extroverted elderly people are more interested in engaging in social activities and engaging with others, because they are able to take advantage of them by being among other people and talking about their problems. In general, most people feel somewhat better when they share their own problems or even talking about their illness or their lack of energy. Considering that extroverts have better communication and can partly interact with their peers, they can reduce their anxiety. Thus, it seems that there is a significant relationship between the death anxiety between the extroverted and introverted elderly people.

This research has some limitations like the fact that some elderly people could not fill in the questionnaire due to physical and visual problems, as well as the unmanageable social and economic differences of the elderly. It is suggested that future research compare the life quality, life satisfaction, mental health and emotional intelligence. This research should be replicated in other cities and other areas and its results should be compared with the them.

It is suggested that for elderly people, safe places, other than nursing homes, should be considered as places providing appropriate recreational facilities for their age, because the positive emotion and purposefulness of life are prerequisites for happiness and in this way elderly people find the world a safer place. They should be able to make their decision easier and have a greater life expectancy and, as a result, they should experience higher life satisfaction. It is suggested that nurses and nursing caregivers strengthen the religious beliefs of the elderly people in order to reduce their anxiety and encourage them to participate in social activities. It is also suggested that elderly people should be trained in order to improve their life quality in accordance with their age.

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