




Investigating the Relationship between the Position of Married People in the Levels of Maslow's Hierarchy of Needs, with Life Expectancy and the Desire to have Children

Yeganeh Rahmanpour¹, Leila Mohammadnahal², Kiavash Hushmandi³, Seyed Hassan Saadat³, Sara Orouei⁴, Salman Daneshi⁵  and Rasoul Raesi^{6,7,*}

¹Master's Student of Medical Surgical Nursing, Islamic Azad University Kerman Branch, Kerman, Iran

²Department of Health Services Management, School of Health, Tehran University of Medical Sciences, Islamic Azad University, Tehran, Iran

³Nephrology and Urology Research Center, Clinical Sciences Institute, Baqiyatallah University of Medical Sciences, Tehran, Iran

⁴Department of Psychology, North Tehran branch, Islamic Azad University, Tehran, Iran

⁵Department of Public Health, School of Health, Jiroft University of Medical Sciences, Jiroft, Iran

⁶Department of Health Services Management, Mashhad University of Medical Sciences, Mashhad, Iran

⁷Department of Nursing, Torbat Jam Faculty of Medical Sciences, Torbat Jam, Iran

Abstract:

Background: The difference in life expectancy and willingness to have children among married people is influenced by the different positions of people in the levels of Maslow's hierarchy of needs.

Aim: The current research was conducted to determine the relationship between the position of married people in the levels of Maslow's hierarchy of needs with their life expectancy and desire to have children.

Methods: This cross-sectional study was conducted using convenience sampling on 140 married people in the general population of Khaf City in 2022. Data were collected using an electronic questionnaire and analyzed using the SPSS-22 statistical software, Pearson correlation coefficient, and multiple regression statistical tests at a significance level of 0.05.

Results: The highest average score of Maslow's Hierarchy of needs was related to the level of basic needs (5.45 ± 4.85), and the lowest average was related to the level of self-actualization needs (2.09 ± 5.55). The average score of life expectancy and willingness to have children in the studied subjects was 25.41 ± 6.62 (moderate) and 18.38 ± 6.38 (low), respectively. There was a positive and significant correlation between the levels of Maslow's hierarchy of needs on life expectancy and the desire to have children in the studied subjects ($p < 0.001$).

Conclusion: Basic needs are the most important needs of couples and they can directly affect life expectancy and the desire to have children. Therefore, the basic needs must be prioritized in the country's plans so that after the basic needs are met, conditions are created to improve life expectancy and the desire to have children.

Keywords: Maslow's hierarchy of needs, Life expectancy, Couples, Married people, Children, Population.

© 2024 The Author(s). Published by Bentham Open.

This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International Public License (CC-BY 4.0), a copy of which is available at: <https://creativecommons.org/licenses/by/4.0/legalcode>. This license permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

*Address correspondence to this author at the Department of Health Services Management, Mashhad University of Medical Sciences, Mashhad, Iran and Department of Nursing, Torbat Jam Faculty of Medical Sciences, Torbat Jam, Iran; E-mail: Raesi.br881@gmail.com

Cite as: Rahmanpour Y, Mohammadnahal L, Hushmandi K, Saadat S, Orouei S, Daneshi S, Raesi R. Investigating the Relationship between the Position of Married People in the Levels of Maslow's Hierarchy of Needs, with Life Expectancy and the Desire to have Children. Open Public Health J, 2024; 17: e18749445307861. <http://dx.doi.org/10.2174/0118749445307861240606070850>



Received: February 21, 2024

Revised: May 25, 2024

Accepted: May 29, 2024

Published: June 10, 2024



Send Orders for Reprints to
reprints@benthamscience.net

1. INTRODUCTION

The desire to have children as a social reality on a macro level is influenced by environmental, social, political, and cultural factors. On a micro level, it is affected by people's thoughts, motivations, desires, and tendencies [1, 2].

The growth of modern society favours individualism, utilitarianism, satisfaction or pleasure-seeking, and rationalism. These values are expanding and becoming more prevalent in women's society in Iran. The expansion of individualism justifies new lifestyles, such as living alone, living without children, and divorce, all of which impact fertility behavior [3, 4]. Additionally, the most significant consequence of modernity in Iran regarding fertility preference is pessimism towards the future [3, 5]. Iran has been experiencing a total fertility rate of less than two children in the last two decades [6]. Meanwhile, research findings have shown that Iranian couples tend to have two or more children, and the average number of ideal children for Iranian women is about 2.5 children [7]. Having said that, the current low fertility rates indicate a large gap between the ideal and actual fertility rates.

Not being able to provide for the expenses of another child, having the necessary number of children, interference of having children with interests, recreations, work and study plans, as well as concern for the future of the child are among the findings of the Erfani research about the fertility intentions of the people of Tehran. The results of this study showed that people's access to various economic and support resources has different effects on couples' fertility intentions. Financial problems, the decrease in stability in economic, social, and political decision-making, and people's habit of having one child and two children, which has been formed in more than two decades, are among the factors that prevent population growth [8].

Today, the decision to have or not to have a child is not random but based on solving or reducing perceived needs. It depends on a person's attitude towards the consequences of having a child, their perceived norms, and life expectancy [6, 7].

According to Snyder, hope in life is a cognitive concept that focuses on the future. The hope of having a better life leads to the improvement and promotion of adaptation and adaptability in a person. Hopeful people have stronger stimuli and more energy to pursue their goals, and this increases the motivation to actively participate in problem-solving processes, adaptability, and flexibility [9, 10]. This way, life expectancy is considered one of the most important indicators of family, human, and health survival [11, 12].

As mentioned, life expectancy is related to a person's role and position in society, so people with different roles and positions will have various levels of need and life expectancy. One of the theories that classifies people's placement levels in a five-level pyramid based on their needs is Abraham Maslow's theory of human motivation.

Maslow's Hierarchy of Human Needs Theory is drawn

in the form of a pyramid consisting of five levels. This hierarchy starts from the basic needs in the lower level, and as it goes higher, it introduces more complex human needs, which are physiological needs or physical needs, security needs, social needs, or the needs of belonging and love, respect needs, and self-actualization needs. According to Maslow's theory, the lower each need is, the stronger it is, and the higher level cannot be reached without satisfying the needs of each level [13-15].

According to Maslow's theory, the need for love and belonging, which includes the desire for intimate relationships and family, is a fundamental human motivation. Once this need is met through marriage, couples may feel more secure and stable in their relationship, allowing them to focus on fulfilling higher-level needs, such as esteem and self-actualization. The presence of children in a marriage can further strengthen the bond between partners and provide a sense of purpose and meaning, which may contribute to overall life satisfaction and public health [7, 13, 14].

Currently, noticeable fundamental changes in the form and characteristics of the family, such as the transition from extended families to nuclear families, have led to a decrease in the birth rate and fertility in Iran [16]. This decrease, along with a disturbance in the country's age balance, can cause irreparable economic and social damage. Therefore, understanding the level of life expectancy and the position of individuals in Maslow's hierarchy of needs can provide fundamental research to assess the country's support for family foundations and childbearing. Since no study has been conducted to measure the relationship between the position of married individuals in Maslow's hierarchy of needs, life expectancy, and the desire to have children, we are uncertain about the existence or absence of a relationship between these two components. Additionally, there is no available information about the position of married individuals in Maslow's pyramid, their life expectancy, and their desire to have children. This study aims to determine the relationship between the position of married individuals in Maslow's hierarchy of needs and their hope for life and desire to have children in the general population of Khaf City. Also, the questions of this research that were examined to achieve the general goal of the research were:

- 1- What is the position of married people in the levels of Maslow's hierarchy of needs based on the average score?
- 2- What is the average life expectancy score in married people?
- 3- What is the average score of desire to have children in married people?
- 4- What is the relationship between the average score of life expectancy and the average of each of the levels of Maslow's pyramid?
- 5- What is the relationship between the average score of desire to have children and the average of each level of Maslow's pyramid?

6- What is the relationship between the position of people in Maslow's hierarchy of needs and demographic variables with the life expectancy of married people?

7- What is the relationship between the position of people in Maslow's Hierarchy of Needs and demographic variables with the desire to have children in married people?

2. METHODS AND MATERIALS

This is a descriptive-analytical cross-sectional study to determine the relationship between the placement of married people in the levels of Maslow's hierarchy of needs, with life expectancy and the desire to have children in the general population of Khaf City in 2022. The statistical population of this research was all married people in the general population of Khaf City, and 140 of them were selected and examined according to the entry and exit criteria. Permanent marriage, age range of 15 to 45 years, minimal literacy, no children, access to a smart mobile phone and virtual space to receive the link of the electronic questionnaire, and consent to participate in the study were considered as entry criteria, while incomplete completion of the questionnaire and divorce history were considered as exclusion criteria.

Data collection was performed using an electronic questionnaire related to the research objectives. Researchers shared this electronic questionnaire in popular groups on social platforms for three months. After the specified period for data collection, the electronic questionnaires received from the participants were reviewed and analyzed. The tool used in this research included a four-part electronic questionnaire. The first part of the questionnaire was related to the demographic information of the couple, including age, gender, education level, occupation, and monthly family income. The second part of the questionnaire was a researcher-made questionnaire to determine the position of people in the levels of Maslow's hierarchy of needs. This questionnaire uses Maslow's needs assessment questionnaire [17] and Jones and Pfeiffer's Hierarchy of Needs Questionnaire [18], and related studies were designed [14, 13].

This questionnaire was designed with 20 questions to determine the position of people in the levels of Maslow's hierarchy of needs (basic or physiological needs, security needs, social needs, respect needs, and self-actualization needs). This questionnaire contains 20 questions with grades of +3 (Agree), +2 (I agree), +1 (I slightly agree), 0 (I don't know), -1 (I slightly disagree), -2 (I disagree), -3 (I strongly disagree). The components and questions related to each level are:

1. Basic needs: (1-4-16-20)
2. Security requirements: (2-3-9-19)
3. Social needs: (5-7-12-15)
4. Respect needs: (6-8-14-17)
5. Self-actualization needs: (10-11-13-18)

The validity of this questionnaire was conducted in a

formal manner, using the opinions of 6 experts. The questions of the questionnaire were modified according to their opinions. This questionnaire demonstrated acceptable content validity in all statements. In terms of the Content Validity Index (CVI), the points obtained ranged from 0.83, indicating the appropriateness of the statements in terms of simplicity, relevance, and clarity. The internal consistency of the tool was confirmed by determining Cronbach's alpha coefficient of 0.89.

The third part of the questionnaire is the Snyder's Hope Scale Questionnaire (SHS). The Hope questionnaire, developed by Snyder *et al.* in 1991, was designed to measure the life expectancy of adults over 15 years old. It consists of 12 statements that are self-assessed. The scoring method is based on a 4-point Likert scale, ranging from 1 (completely disagree) to 4 (completely agree). Therefore, the total score of the questionnaire will range from 12 to 48 [10, 19]. To obtain the overall score, the scores of each question are added together. Higher scores indicate higher life expectancy in the respondent and vice versa. In this questionnaire, a score between 12 and 24 indicates low life expectancy, a score between 24 and 36 indicates low to moderate life expectancy, and a score higher than 36 indicates high life expectancy.

Many studies support the reliability and validity of this questionnaire as a measure.

The internal consistency of the entire test is 0.74 to 0.84, and the retest reliability is 0.80. It is higher than this level in periods of more than 8 to 10 weeks. The internal consistency of the factor subscale is 0.71 to 0.76, and the strategic subscale is 0.63 to 0.80 [20]. In Iran, Kermani *et al.* reported the reliability of the instrument with Cronbach's alpha of 0.86 and with the test-retest method of 0.81 [21].

The fourth part of the questionnaire was a researcher-made questionnaire on the desire to have children. This questionnaire was designed with 8 questions to evaluate the tendency to have children. This score ranges from 8 to 40. The response range of this questionnaire is of the five-choice Likert type (5. I completely agree, 4. I agree, 3. I have no idea, 2. I disagree, 1. I completely disagree). To get the overall score of the questionnaire, the scores for each question were added together. The scoring details of this questionnaire are as follows: a score less than 13 indicates a very low tendency to have children or no tendency, a score between 14-19 indicates a low tendency to have children, a score of 20-25 indicates a moderate tendency to have children, a score of 26-31 indicates a high propensity to have children, and a score higher than 32 indicates a very high propensity to have children.

The validity of this questionnaire was conducted in a formal manner by utilizing the opinions of 6 experts. The questions in the questionnaire were modified based on their feedback. The questionnaire demonstrated acceptable content validity for all statements. In terms of CVI, the points obtained ranged from 0.81, indicating the appropriateness of the statements in terms of simplicity, relevance, and clarity. The internal consistency of the tool

was confirmed by calculating Cronbach's alpha coefficient, which was found to be 0.86.

The data were analyzed using SPSS version 22 statistical software. Firstly, the normal distribution of the data was assessed by examining the skewness and kurtosis coefficients. After confirming the normal distribution of the data, Pearson's correlation coefficient and multiple regression statistical tests were employed at a significance level of 0.05.

3. RESULTS

In this research, 140 married people from the general population of Khaf with an average age of 38.21 ± 9.69 years (minimum 22 years and maximum 57 years) were investigated. Most of the people studied were female (67.9%), housewives (33.6%), had a diploma (43.6%), and

had an income level of less than 10 million Romans per month (Table 1).

Based on the obtained results, the highest average score of Maslow's Hierarchy of needs is related to the level of basic needs (5.45 ± 4.85), and the lowest average is related to the level of self-actualization needs (2.09 ± 5.55). The overall score of Maslow's need in the studied subjects was 5.45 ± 4.85 . The average score of life expectancy and desire to have children in the studied subjects was reported as 25.41 ± 6.62 and 18.38 ± 6.38 , respectively, which indicates the average level of life expectancy and the low desire to have children respectively. Considering that the coefficients of skewness and kurtosis for all research variables are in the range of [2, 2], the research data have a normal distribution (Table 2).

Table 1. Demographic characteristics of the study subjects.

Variable		Frequency	Percent
Gender	Female	95	67.9
	Man	45	32.1
Job	Employee	34	24.3
	manual worker	22	15.7
	free	27	19.3
	housewife	47	33.6
	Retired	10	7.1
Level of Education	High school	23	16.4
	diploma	61	43.6
	university	56	40
Monthly income	Less than 10 million tomans	62	44.3
	10-15 million tomans	54	38.6
	More than 15 million tomans	24	17.1

Table 2. Descriptive indices of research variables.

Variable	Average	Standard Deviation	You are Crooked	Elongation
Basic needs	5.45	4.85	-1.13	0.87
Security needs	4.24	4.67	-1.03	0.65
Social needs	3.49	4.81	-0.99	0.26
Respect needs	2.87	5.31	-0.84	-0.05
Self-actualization needs	2.09	5.55	-0.74	-0.16
Maslow's needs, in general	5.45	4.85	-1.13	0.87
Life expectancy	25.41	6.62	-0.06	-1.09
Willingness to have children	18.38	6.38	0.74	-0.51

Table 3. Correlation between levels of Maslow's hierarchy of needs with life expectancy and desire to have children.

Variable	Life Expectancy		Desire to have Children	
	r	P-value	r	P-value
Basic needs	0.71	<0.001	0.72	<0.001
Security needs	0.68	<0.001	0.67	<0.001
Social needs	0.65	<0.001	0.60	<0.001
Respect needs	0.62	<0.001	0.59	<0.001
Self-actualization needs	0.58	<0.001	0.59	<0.001
Maslow's needs, in general	0.71	<0.001	0.72	<0.001

Pearson's correlation coefficient results in Table 3 showed that there is a positive and significant correlation between the levels of Maslow's hierarchy of needs with life expectancy and desire to have children in the studied subjects ($p < 0.001$).

Multiple linear regression was used to investigate the effect of the levels of Maslow's hierarchy of needs and demographic variables on life expectancy. Dummy Coding was used to enter qualitative variables (gender, occupation, education level, monthly income) into the model. The levels of the hierarchy of Maslow's and Self needs are included quantitatively in this model.

The results of the mentioned test showed that there is a negative and significant relationship between age ($p < 0.001$), gender ($p = 0.007$) and life expectancy in married people. As age increases, life expectancy decreases significantly, and life expectancy is significantly higher in married women than in married men.

Moreover, the results showed that the life expectancy of housewives and retired people is significantly lower than that of employees ($p < 0.01$). People with a diploma and university education have a significantly higher life expectancy compared to people with under-diploma education ($p < 0.05$), and people with an income level of 10 million and above compared to an income level of less than 10 million tomans per month ($p < 0.001$).

A positive and significant relationship was observed between the level of basic needs and life expectancy ($p = 0.002$), but no significant relationship was found

between other levels of Maslow's hierarchy of needs and life expectancy ($p > 0.05$). (Table 4).

Multiple linear regression was used to investigate the effect of Maslow's hierarchy of needs levels and demographic variables on the willingness to have children. Dummy coding was used to enter qualitative variables (gender, occupation, education level, monthly income) into the model, and the levels of Maslow's hierarchy and self-esteem needs were included quantitatively in this model.

The results of the mentioned test showed that there is a negative and significant relationship between age ($p < 0.001$) and gender ($p = 0.04$) with the desire to have children in married people. This way, as age increases, the desire to have children decreases significantly, and the desire to have children is significantly higher in women than in men.

Moreover, the results showed that the desire to have children is significantly lower among working and retired people than employed people ($p < 0.05$). People with an income level of 10 million and above, compared to an income level of less than 10 million Romans per month, have a significantly higher tendency to have children ($p < 0.001$).

A positive and significant relationship was found between the level of basic needs and the desire to have children ($p < 0.001$). Still, no significant relationship was observed between the other levels of Maslow's hierarchy of needs and the level of education with the desire to have children in the studied married people ($p > 0.05$). (Table 5).

Table 4. Regression coefficients related to the impact of Maslow's hierarchy of needs and demographic variables on life expectancy.

Variable	Non-standard Coefficient		Standard Coefficient	The value of t	Level of Significance	The Correlation Coefficient	Coefficient of Explanation	
	The value of B	Standard Error	The value of β					
Fixed	25.17	4.02	-	6.26	<0.001	-	-	
Age	-0.37	0.05	-0.55	7.67	<0.001	0.55	0.29	
gender	-3.22	1.17	-0.23	2.75	<0.007	0.23	0.05	
Job	manual worker	-2.96	1.76	-0.16	1.68	0.10	0.29	0.06
	free	-2.35	1.66	-0.14	1.42	0.16		
	housewife	-4.34	1.45	-0.31	2.99	0.003		
	Retired	-6.34	2.32	-0.25	2.74	0.007		
Level of Education	diploma	3.70	1.57	0.28	2.37	0.02	0.28	0.07
	university	5.46	1.59	0.41	3.45	0.001		
Monthly income level	10-15 million tomans	5.43	1.04	0.40	5.23	<0.001	0.55	0.29
	More than 15 million tomans	9.53	1.34	0.54	7.10	<0.001		
basic needs	0.68	0.21	0.50	3.21	0.002	0.72	0.50	
Security needs	0.32	0.37	0.23	0.86	0.39			
Social needs	0.03	0.41	0.02	0.08	0.94			
Respect needs	0.48	0.42	0.38	1.12	0.26			
Self-actualization needs	0.49	0.32	0.41	1.51	0.13			

Table 5. Regression coefficients related to the impact of Maslow's hierarchy of needs and demographic variables on the desire to have children.

variable	Non-standard Coefficient		Standard Coefficient	The value of t	Level of Significance	The Correlation Coefficient	Coefficient of Explanation	
	The value of B	Standard Error	The value of β					
Fixed	33.04	3.34	-	9.89	<0.001	-	-	
Age	-0.49	0.04	-0.75	13.21	<0.001	0.75	0.56	
gender	-3.31	1.13	-0.24	2.94	0.004	0.24	0.05	
Job	manual worker	-3.41	1.67	-0.20	0.04	0.04	0.33	0.08
	free	-2.21	1.58	-0.14	1.40	0.16		
	housewife	-1.15	1.38	-0.09	0.84	0.40		
	Retired	-8.32	2.20	-0.34	3.78	<0.001		
Level of Education	diploma	2.82	1.55	0.22	1.82	0.07	0.17	0.01
	university	2.88	1.57	0.22	1.83	0.07		
Monthly income level	10-15 million tomans	4.98	1.08	0.38	4.61	<0.001	0.43	0.17
	More than 15 million tomans	6.44	1.40	0.38	4.62	<0.001		
basic needs	0.95	0.20	0.72	4.75	<0.001	0.73	0.52	
Security needs	0.26	0.35	0.19	0.73	0.47			
Social needs	0.55	0.39	0.42	1.43	0.15			
Respect needs	0.09	0.40	0.08	0.23	0.82			
Self-actualization needs	0.37	0.31	0.32	1.21	0.23			

4. DISCUSSION

The present study will be conducted to determine the relationship between the position of married people in the levels of Maslow's hierarchy of needs, with life expectancy and the desire to have children in the general population of Khaf. The findings of the present study showed that the highest average score of Maslow's Hierarchy of Needs pyramid in married people is related to the level of basic needs, and the lowest average is related to the level of self-actualization needs. In explaining this research finding, it can be pointed out that basic needs cast a shadow on all aspects of married people's lives. The existence of sanctions and increasing inflation has shaken the families' economy and has made families face many problems in meeting their basic needs. This research finding clearly showed that the highest average score of Maslow's Hierarchy of Needs pyramid in married people is related to the level of basic needs, which can be concluded that married people need special attention and all-around support to meet the basic needs of themselves and their families.

According to Maslow, human needs have a hierarchy, and the most intense need influences the behavior of people in certain moments. When the satisfaction of needs begins, the change that will occur in individuals' motivation is such that instead of the previous needs, another level of need will become important and drive behavior. In the same way, the needs rise to the end of the hierarchy of needs, and after satisfaction, they subside, and it is the turn of the next one [13-15].

In this regard, the first finding of our study, which showed that the lowest average score of Maslow's

hierarchy of needs in married people is related to the level of self-actualization needs, can be explained. In explaining this research finding, it can be pointed out that the most intense needs influence the position of people in Maslow's pyramid, and when people are involved in their basic needs, there is another opportunity to move towards the higher stages of Maslow's pyramid and be placed at higher levels. Therefore, it can be said that being involved in the level of basic needs is one of the reasons that caused the lowest average score in Maslow's pyramid of married people to be related to the level of self-actualization needs.

In line with this finding of the present study, the results of the study by Raesi *et al.* (2023) in determining the position of patients who have recovered from COVID-19 in the levels of Maslow's hierarchy of needs have shown that most of the patients who have recovered from COVID-19 are at the basic needs level of Maslow's pyramid. Moreover, the results of their study showed that the provision of basic needs is the most important need of patients who have recovered from COVID-19, which requires the special attention of national policymakers to the issue of the basic needs of people in society [22].

The findings of the present study show that the average life expectancy score for married individuals is average. Since there is no similar study with which to compare these findings, it is not possible to make such a comparison. Therefore, this research finding is explained solely based on the data obtained. When explaining this research finding, it can be suggested that married individuals, being involved in fulfilling their basic life needs, may gradually find their initial ideas about life unattainable or feel that the ideal life they imagined for themselves is not what they actually have. This gradual

realization may cause their life expectancy to decrease, and they may lack a clear and optimistic vision for the future. In the present study, the reason for the average life expectancy among married individuals can be attributed to the fact that most participants in the research are placed at the first level of Maslow's Hierarchy of needs, which is the basic needs level. This placement has the potential to impact the life expectancy of married individuals.

The findings of the present study showed that the desire to have children is low in married people. In explaining this research finding, it can be mentioned that there is a negative and significant relationship between the number of children and marital satisfaction. Therefore, with these interpretations, it can be said that some married people may decide to have fewer children to achieve a higher level of marital satisfaction. However, it is important to note that the decision to have children is complex and influenced by many factors beyond marital satisfaction, including cultural, social, and economic factors.

In line with the findings of the current research, numerous studies have shown that financial problems in families, concerns about the future of their children, social and cultural issues, the costs of raising children, the negative experience of having a large number of children and having a large number of family members are among the factors that have led to a low willingness of married people to have children (25-28). However, contrary to this finding, some studies have indicated that married people have a high desire to have children. These studies suggested that the reason for the increase in the desire to have children is to prevent the breakup and destruction of the family foundation. Therefore, the results of these studies showed that both women and men have a greater desire to have children in order to strengthen marital relationships and preserve the family foundation (29, 30).

Another finding of the current research showed that there is a positive and significant correlation between the levels of Maslow's hierarchy of needs and the life expectancy of married people. This finding demonstrates that married individuals who are in the lower levels of Maslow's pyramid have a lower life expectancy, while those at higher levels have a higher life expectancy. Therefore, it can be concluded that there is a positive, direct, and significant relationship between the levels of Maslow's pyramid and life expectancy.

In explaining this research finding, it can be noted that as individuals progress from the first level of Maslow's pyramid to higher levels, their basic needs become less prominent, and they become less dependent on others for fulfilling these needs, as they have already achieved financial stability and have started contemplating the higher levels of the pyramid. Consequently, being at the higher levels of Maslow's pyramid can lead to an increase in life expectancy, whereas being at the level of basic needs can result in a decrease in life expectancy for married individuals.

In line with the findings of the current research, Guillaume Marois and colleagues showed in their study that life expectancy is related to an individual's position in society and the financial status of the family. They also demonstrated that the psychological effects of implementing health policies at the community level can impact the life expectancy of the general population [23-30]. Additionally, the results by Raesi *et al.*'s study (2023) [22] and Dogleby *et al.* (2009) [11] are consistent with our research findings. In their study, they revealed that life expectancy is linked to a person's role and position in society, meaning that individuals with different roles, needs, and positions in society have varying levels of life expectancy.

The findings of the present study indicated a positive and significant correlation between the levels of Maslow's hierarchy of needs and the desire to have children among the subjects studied. As individuals ascend higher levels of this pyramid, their desire to have children increases. Conversely, as individuals descend to the lower levels of this pyramid, their desire to have children decreases. Due to the absence of a similar study, it is not possible to compare the findings of the present study with those of previous studies. To explain this research finding, it can be suggested that most married people are at the first level of Maslow's pyramid, which represents basic needs. This reduces their desire to have children because meeting their basic needs is challenging for them. Consequently, they do not wish to have more children. However, when married individuals surpass the first level of Maslow's pyramid and no longer struggle to meet their basic needs, they reach higher levels where their desire to have children should increase.

The findings of the present study showed that with increasing age, the life expectancy of married people decreases significantly. In line with this finding of the present study, the results of numerous studies also showed that age is an influential factor in life expectancy, and life expectancy decreases with age [31, 32].

The findings of the present study showed that the life expectancy of married women is significantly higher than that of married men. What is important in the interpretation of this finding of the current research is that the relationship between marital status and life expectancy is complex and may vary based on various factors, such as geographic location, period, and specific causes of death. More research is needed to understand better the underlying mechanisms that contribute to these differences in life expectancy between married men and women. In line with this finding of the current research, the results of numerous studies indicate that gender is an influencing factor on life expectancy. Hence, the life expectancy of married women is higher than that of married men [33, 34].

The findings of the present study showed that there is a negative and significant relationship between the age of married people and their desire to have children. This way, as age increases, the desire to have children decreases significantly. In line with this research finding,

the results of numerous studies also showed that age is an influencing factor in the desire to have children, so as age increases, the desire to have children decreases. [35-38].

The findings of the present study showed that there is a significant relationship between gender and the desire to have children in married people. This way, the desire to have children is significantly higher in women than in men. In line with this finding of the current research, the results of many studies indicate that the desire to have children in the family is higher in women than in men [39, 40].

CONCLUSION AND RECOMMENDATIONS

The results indicated a correlation between moderate life expectancy and the low desire to have children with the fundamental needs outlined in Maslow's pyramid. This correlation emphasizes the significance of early-life factors in shaping long-term health outcomes, linking to Maslow's physiological needs as a foundation for overall well-being. Understanding these determinants can be crucial in public health interventions aimed at supporting individuals in fulfilling their reproductive choices. By considering these research insights alongside Maslow's pyramid, public health initiatives can be tailored to address the diverse needs and motivations related to reproductive choices, ultimately promoting holistic well-being and fulfillment in individuals' lives. It becomes evident that these basic needs hold utmost significance for couples, as they directly impact both life expectancy and the desire to have children. Consequently, it becomes imperative for nation macro planners to prioritize the provision of these basic needs. By ensuring the fulfillment of these needs, favorable conditions can be established to enhance life expectancy and foster a greater desire to have children. Additionally, investing in resources for children, such as education and healthcare, can improve life expectancy at birth and promote a positive environment for individuals and couples to consider having children. By prioritizing these recommendations, countries can work towards enhancing the overall well-being of their populations and ensuring sustainable demographic growth.

LIMITATIONS OF THE STUDY

Among the limitations of this study were the small sample size, the method of data collection with an electronic questionnaire, the participants' honest answers to the questionnaire questions, psychological issues, and their individual and personality differences at the time of data collection, which may have affected the research results. Also, the study design is cross-sectional, which does not allow for the establishment of causal relationships between the variables. It should be noted that the control of all limitations was beyond the responsibility of the researcher. Since this research was conducted at the level of a city, caution should be observed when generalizing the results from that side. Designing interventional and qualitative studies for further investigations and conducting studies in research environments different from the statistical population is more recommended.

AUTHORS' CONTRIBUTION

It is hereby acknowledged that all authors have accepted responsibility for the manuscript's content and consented to its submission. They have meticulously reviewed all results and unanimously approved the final version of the manuscript.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This article is the result of a research project approved by Mashhad University of Medical Sciences, which is approved by the code of ethics IR.MUMS.FHMPM.REC.1401.189.

HUMAN AND ANIMAL RIGHTS

No animals were used for the studies that are the basis of this research. All human procedures followed were per the guidelines of the Helsinki Declaration of 1975.

CONSENT FOR PUBLICATION

Written informed consent has been taken from the patients.

STANDARDS OF REPORTING

STROBE guidelines have been followed.

AVAILABILITY OF DATA AND MATERIALS

The data that support the findings of this study are available from the corresponding author upon reasonable request.

FUNDING

This research was conducted with the financial support of Mashhad University of Medical Sciences.

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

ACKNOWLEDGEMENTS

We would like to express our sincere gratitude to the Honorable Vice President of Research and Technology of Mashhad University of Medical Sciences, who sponsored this research project, and to all the people who helped us in conducting this research.

REFERENCES

- [1] Makoto A. Very low fertility in Japan and value change hypotheses. *RPSP* 2001; 10: 1-21.
- [2] Mitchell D, Gray E. Declining fertility. *J Sociol* 2007; 43(1): 23-44. <http://dx.doi.org/10.1177/1440783307073933>
- [3] Mohammadi M, Rastergarkhaled A. Cultural changes, and reduce fertility in Iran (Based on second analysis of data of Iranian's survey values and attitudes). *J Appl Sociol* 2015; 26(2): 159-80. <http://dx.doi.org/20.1001.1.20085745.1394.26.2.10.6>
- [4] Kalantari S, Abbaszadeh M, Aminmozafari F, Rakeibonab N. The sociological study of attitude to child bearing and its some related factors (Case study: Married youth In Tabriz City). *J Appl Sociol* 2010; 21(1): 83-104. <http://dx.doi.org/sid.ir/paper/154851/en>
- [5] Mohammadi N, Seifouri B. A sociological study of the factors

- influencing women's fertility preferences. 2016.
- [6] Alimoradiyan M, Razeghi Nasrabad HB, Alimondegari M, Askari-Nodoushan A. Delay in the second birth: An analysis of the length of waiting time from first to the second birth among women in the city of Khorramabad, Iran. *JPAI* 2023; 17(34): 73-111. <http://dx.doi.org/10.22034/JPAI.2023.1983029.1258>
 - [7] Razeghi Nasrabad HB. Sources of conflict between work and family roles and its coping strategies: A case study of employed women in tehran municipality. *Wom Dev Pol* 2022; 20(1): 131-64.
 - [8] Erfani A, Shojaei J. Proximate determinants of fertility intentions in Tehran, Iran. *JPAI* 2015; 10(20): 164-86. <http://dx.doi.org/20.1001.1.1735000.1394.10.20.6.5>
 - [9] Rasouli M, Yaghmaei F, Alavi Majd H. Psychometric properties of "hopefulness scale for adolescents" in iranian institutionalized adolescents. *Payesh* 2010; 9(2): 197-204. <http://dx.doi.org/20.1001.1.16807626.1389.9.2.9.9>
 - [10] Sanagouye Moharer G, Shirazi M, Kia S, Karami Mohajeri Z. The effect of compassion focused training on hope, life satisfaction and alexithymia of delinquent female adolescents. *IJPN* 2020; 8(3): 46-56.
 - [11] Duggleby W, Cooper D, Penz K. Hope, self-efficacy, spiritual well-being and job satisfaction. *J Adv Nurs* 2009; 65(11): 2376-85. <http://dx.doi.org/10.1111/j.1365-2648.2009.05094.x> PMID: 19737323
 - [12] Yekani MB. The effect of social support on life expectancy in the workplace with the mediating role of nurses' self-efficacy during coronaries outbreak. *Summer Psychology and Educational Sciences Studies* 1399; 35-48.
 - [13] Keshtkaran A, Kharazmi A, Yoosefi S. A study on incentive needs for nursing staffs in selected teaching hospitals of universities of medical sciences according Maslow's needs hierarchy (2007). *J Healthc Adm* 2006; 9(24): 45-50. <http://dx.doi.org/magiran.com/p619354>
 - [14] Arshi S, Sadeghi H, Seifnejad S, Salem Safi P, Biria MJ. A study of maslow hierarchical needs among staff of ardebil university of medical sciences and their satisfaction, 2002. *JAUMS* 2005; 5(16): 160-6. <http://dx.doi.org/sid.ir/paper/59637/en>
 - [15] Mirzamohammadi MH, Zahedi Z. Meeting Maslow's need hierarchy and job satisfaction of educational managers. *Daneshvar Raftar* 2007; 13(21 (SPECIAL EDITION ON EDUCATION 7)): 25-31. <http://dx.doi.org/sid.ir/paper/46437/en>
 - [16] Abbasi-Shavazi MJ, Hosseini H. Ethnic fertility differentials in Iran: trends and correlates. *Iran J Sociol* 2009; 8(4): 3-36. <http://dx.doi.org/sid.ir/paper/67466/en>
 - [17] Brown K, Cullen C. Maslow's hierarchy of needs used to measure motivation for religious behaviour. *Ment Health Relig Cult* 2006; 9(1): 99-108. <http://dx.doi.org/10.1080/13694670500071695>
 - [18] Pfeiffer JW, Jones JE. The annual handbook for group facilitators. San Diego, Calif.: University Associates 1973. <http://dx.doi.org/ark:/13960/113p1n150>
 - [19] Snyder CR, Harris C, Anderson JR, *et al*. The will and the ways: Development and validation of an individual-differences measure of hope. *J Pers Soc Psychol* 1991; 60(4): 570-85. <http://dx.doi.org/10.1037/0022-3514.60.4.570> PMID: 2037968
 - [20] Sadeghi Z, Hamzehpoor T. The relationship between life expectancy and death anxiety and mental health of devotees spouses city branch 2016. Available from: <https://www.sid.ir/paper/910491/en>
 - [21] Kermani Z, Khodapanahi M, Heidari M. Psychometrics features of the snyder hope scale. *J Appl Psychol* 2011; 5(3 (19)): 7-23. <http://dx.doi.org/sid.ir/paper/151686/en>
 - [22] Hushmandi K, Saghari S, Raesi R. Investigating the relationship between needs and life expectancy (Maslow's Hierarchy) among COVID-19-recovered patients. *Open Public Health J* 2023; 16(1) <http://dx.doi.org/10.2174/18749445-v16-230818-2023-57>
 - [23] Kowal M, Groyecka-Bernard A, Kochan-Wójcik M, Sorokowski P. When and how does the number of children affect marital satisfaction? An international survey. *PLoS One* 2021; 16(4): e0249516. <http://dx.doi.org/10.1371/journal.pone.0249516> PMID: 33886597
 - [24] Jahangiri J, Ahmadi H, Tabiee M, Moltafet H. Construction of one-child women understanding of childbearing challenges (Participants: One-child women of Ahvaz). *QJSD* 2014; 9(1): 85-110. <http://dx.doi.org/sid.ir/paper/400688/en>
 - [25] Hosseini H, Pakseresh S, Rezaei M, Mehrganfar M. Qualitative analysis of childbearing action of Arab spouses in Ahwaz City. *JPAI* 2014; 9(17): 141-69. <http://dx.doi.org/20.1001.1.1735000.1393.9.17.5.1>
 - [26] Razavizadeh N, Ghafarian E, Akhlaqi A. Grounds for low child seeking and delay in child bearing (Case Study: Mashhad Women). *Strategy for Culture* 2015; 8(31): 73-98.
 - [27] Motlagh ME, Taheri M, Eslami M. Factors affecting the fertility preferences in Iranian ethnic groups. *Nurs Midwifery J* 2016; 14(6): 485-95. <http://dx.doi.org/unmf.umsu.ac.ir/article-1-2845-en.html>
 - [28] Haerimehrizi AA, Tavousi M, Sadighi J, Motlagh ME, Eslami M, Naghizadeh F. Reasons for fertility desire and disinterest among Iranian married adults: A population-based study. *Payesh* 2017; 16(5): 637-45. <http://dx.doi.org/sid.ir/paper/23892/en>
 - [29] Ayatollahi Z, Bankipourfard A, Sadathoseini S. Family knowledge and population. *Iran: Daftar nashremaaref* 2015.
 - [30] Marois G, Muttarak R, Scherbov S. Assessing the potential impact of COVID-19 on life expectancy. *PLoS One* 2020; 15(9): e0238678. <http://dx.doi.org/10.1371/journal.pone.0238678> PMID: 32941467
 - [31] Thomae M, Houston DM. The impact of gender ideologies on men's and women's desire for a traditional or non-traditional partner. *Pers Individ Dif* 2016; 95: 152-8. <http://dx.doi.org/10.1016/j.paid.2016.02.026>
 - [32] Nitsche N, Hayford SR. Preferences, partners, and parenthood: Linking early fertility desires, marriage timing, and achieved fertility. *Demography* 2020; 57(6): 1975-2001. <http://dx.doi.org/10.1007/s13524-020-00927-y> PMID: 33179200
 - [33] Eskes T, Haanen C. Why do women live longer than men? *Eur J Obstet Gynecol Reprod Biol* 2007; 133(2): 126-33. <http://dx.doi.org/10.1016/j.ejogrb.2007.01.006> PMID: 17324494
 - [34] Fiala T, Langhamrova J. Differences in life expectancy by marital status in the Czech Republic after 1990 and their decomposition by age. *Demography and Health Issues: Population Aging. Mortality and Data Analysis* 2018; pp. 185-98. http://dx.doi.org/10.1007/978-3-319-76002-5_16
 - [35] Rahnama A, Roozbeh N, Salimi Asl A, Kazemi Gerashi Z, Abbaszadeh M, Dabiri F. Factors related to childbearing in Iran: A systematic review. *J Prev Med* 2022; 9(1): 6-17. <http://dx.doi.org/10.32598/JPM.9.1.4>
 - [36] Amerian M, Kariman N, Janati P, Salmani F. The role of individual factors in decision making for the first childbearing. *Payesh* 2016; 15(2): 143-51. <http://dx.doi.org/20.1001.1.16807626.1395.15.2.2.4>
 - [37] Valashani ST, Heidari Z, Shoushtari-Moghaddam E, Zamani-Alavijeh F. Predictors of childbearing willingness in the center of Iran in 2019: A cross sectional study. *Res Sq* 2020. <http://dx.doi.org/10.21203/rs.3.rs-53261/v1>
 - [38] Aradmehr M. Socio-demographic and religious factors affecting fertility rate among childbearing women in Easter Iran: A population-based study. *Reprod Health* 2019; 7(1): 1553-9. <http://dx.doi.org/10.22038/jmrh.2018.17015.1307>
 - [39] Duvander AZ, Fahlén S, Brandén M, Ohlsson-Wijk S. Who makes the decision to have children? Couples' childbearing intentions and actual childbearing. *Adv Life Course Res* 2020; 43: 100286. <http://dx.doi.org/10.1016/j.alcr.2019.04.016> PMID: 36726251
 - [40] Boivin J, Buntin L, Kalebic N, Harrison C. What makes people ready to conceive? findings from the international fertility decision-making study. *Reprod Biomed Soc Online* 2018; 6: 90-101. <http://dx.doi.org/10.1016/j.rbms.2018.10.012> PMID: 30547108

DISCLAIMER: The above article has been published, as is, ahead-of-print, to provide early visibility but is not the final version. Major publication processes like copyediting, proofing, typesetting and further review are still to be done and may lead to changes in the final published version, if it is eventually published. All legal disclaimers that apply to the final published article also apply to this ahead-of-print version.