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Explaining the effectiveness of literacy education on the two components of self-esteem and problem solving of literate students¹

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ABSTRACT

The purpose of this research is to explain the effectiveness of literacy education on two components of self-esteem and solving the problem of literate students. This study is a causal-comparative research in which women participating in the literacy movement classes in Kerman were compared with illiterate women who did not participate in these classes. To estimate the sample size, Cochran's formula was used and the calculated sample size was 79 people. Is obtained. Also, the same number of illiterate women, in terms of age, marital status, were compared as a control group with the main group. To collect data, Cassidy and Long's problem solving styles questionnaire and Eysenck's self-esteem questionnaire were used. After collecting information through questionnaires, the results were tested in SPSS21 program. In order to check the status of the demographic components of the target statistical population, descriptive statistics methods were used, and in the inferential statistics section, T-Test and Chi-square tests were used to determine the state of self-confidence, as well as to check the current status of each of the four dimensions of problem solving skills. On the other hand, Friedman's tests were used to rank the indicators of the four dimensions. The obtained results indicate that literacy education has a significant effect on increasing the self-esteem of literate students who participate in literacy courses, and it increases with the continuation of literacy education.

Keywords: self-esteem, literate women, problem solving, literacy, education

INTRODUCTION

Despite the achievements of the 21st century, a common factor affecting both developed and developing countries is the staggering number of illiterate adults in cities, towns, and villages in all countries (Holst, 2004). Most developed and developing countries have succeeded in making

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literacy programs a part of their public education policy (Maruatona & Millican, 2006). The need for research to highlight the impact of literacy programs in rural communities, especially in countries It has always been developing (Minnis, 2006). However, studies detailing the impact of this increase in educational planning are very limited. Furthermore, few studies seem to be devoted to exploring and analyzing the consequences of literacy or lack thereof on mental health and problem-solving ability (Gottfredson, 2004).

Literacy, a basic skill (Street, 2016) is the backbone of social progress (Boshier, Huang, Song, & Song, 2006) and illiteracy hinders social progress and the collective participation of adults in civil society (Gastil, 2004). A low level of literacy negatively affects the level of income, the ability to access a job, and a person's sense of self-worth. It is also an obstacle to participate in the affairs of society in general and the development of society in particular (Subban, 2007). The importance of maintaining and improving literacy as a platform for the progress of societies in developed countries has been investigated from different angles (Dearing et al., 2006).

During the past decades, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has been at the forefront of promoting the general standard of literacy programs in all countries, especially in African and Asian countries (University of Pennsylvania, 1999). Some Asian countries have tried to follow UNESCO guidelines by including lifelong cultural principles as part of their literacy curricula and educational policy (Maruatona & Millican, 2006).

In Iran, adult literacy was identified as a vital skill for the socio-economic development of the country, and by starting extensive campaigns for literacy, numeracy and skills development, they launched an "educational revolution". Since 1344, the decree to fight illiteracy was issued and the organization of adult education was formed and the general fight against illiteracy began in Iran. And on the 7th of January 1358, after the Islamic revolution, the decree to fight against illiteracy was issued again, and after that decree, the literacy movement was formed as an institution. Now, about six decades have passed since the activity of the mentioned organization in Iran (Abrahimian and Kiasresht, 2019); And like all the countries of the world, effective steps have been taken to eradicate illiteracy and many people have started their movement towards acquiring literacy by benefiting from the training of this institution.

Acknowledging the positive impact of literacy programs on public perception of well-being and positive self-concept, Gastil (2004) has pointed out some of the problems that exist in the implementation of literacy programs: a) lack of sufficient and effective research in the field of literacy issues, (b) the need for strong and effective supporters, and (c) the lack of public awareness of the activities required in the literacy program, as well as the lack of trained teachers in the proper implementation of literacy programs. It should be said that these mentioned problems affect the general understanding of mental health and self-esteem among adults and overall personal and social development (McKay, 2020).

Despite the different understanding of social development in different societies, it seems that the relationship between literacy and positive self-concept or perceived overall health is similarly observed in different societies (Walter,2007).Quigley(1997)and Scanlan(1986) use self-confidence as a synonym for self-esteem. Self-schema, self-view, self-worth, self-efficacy, and self-perception are some of the terms that are sometimes used to describe this broad theoretical entity (Vygotsky,1991;Schafer & Keith,1999; Marsh,1990).Many researchers state have found that high self-esteem is an essential component in achieving positive outcomes in the adult



literacy classroom, and its lack is one of the biggest barriers to participation in adult education classrooms (McGivney, 2001; Beder, 1990; Valentine & Darkenwald, 1990, Hayes & Darkenwald, 1988; Scanlan, 1986).

Scanlan (1986) provided a review of the literature related to barriers to participation in the adult literacy classroom and named lack of self-confidence as one of the six main categories of barriers. The results of several studies support Quigley (1997) finding that lack of self-confidence appears to be a major inhibiting factor and is usually related to a negative attitude towards learning in general. McGivney (2001) notes that a key issue in increasing learner engagement in adult literacy classes is helping them see and accept themselves as successful learners.

Vogel et al (2007) state that literacy programs bring with them a sense of worth and awareness of positive issues related to counseling and other mental health services. Bennett et al (2007) in a study investigating the effect of illiteracy on people's susceptibility to depression symptoms (2007) concluded that illiterate young women are more likely to experience depression symptoms compared to those with high literacy skills. They also concluded that illiteracy is the strongest factor that affects the tendency to depression; Therefore, the difference in the higher incidence of depressive symptoms in illiterate compared to literate adults is likely a result of the inability to access mental health services.

In the last few decades, improving people's mental health as one of the most important aspects of developing and improving human resources in a society has attracted the attention of many researchers in Iran and abroad (Pourahmadi, 2016). For progress and growth in all fields, one must first use healthy, thinking and creative human resources, because the use of healthy physical and intellectual human resources in economic, service, educational, industrial and agricultural institutions is effective in raising the level of productivity and empowering people. It is significant (Hanushek, Eric & Woessmann, 2016).

And in relation to empowerment, Freire (2000) has pointed out that education has liberating power, liberation means empowerment. Inglis (1997) considers empowerment to include creating the capacities of people to function successfully in the existing system and structures. Whitmore (1988) definition of empowerment provides a more detailed explanation of the term. According to Whitmore, empowerment is "an interactive process through which people experience personal and social change that enables them to gain influence over the organizations and institutions that affect their lives and the communities in which they live. take action"

Hur (2006) believes that there are some issues related to the understanding of empowerment: firstly, "empowerment is multidimensional that occurs in sociological, psychological, economic, political and other dimensions. Empowerment also occurs at different levels such as individual, group and social (Hur, 2006) also says that empowerment is both a process and a result. As a process, empowerment does not happen by itself, but in relation to others.

While empowerment is considered as a change in the lives of individuals and societies, the main issue of concern at this stage is whether the informal education of adults in the form of a literacy program promotes the empowerment of literate learners or not. Stromquist (2009) states that "it is difficult to assess the effectiveness of the literacy program given the irregular attendance and length of enrollment of participants. Also, the content and intensity of literacy programs vary, making it difficult to generalize findings across programs." However, there are a significant



number of studies that have sought to investigate the relationship between literacy and individual empowerment of literate students, and in this research, we consider empowerment to be the ability to solve problems and self-esteem.

Carron & Mwiria (1989) and Stromquist (2009) study of the impact of the National Literacy Program in Kenya comparing literate graduates (those with literacy certificates) to illiterate ones show that the literate have higher political knowledge (e.g. party identification ruler and understanding of elections) and political behaviors (participating in elections and membership in a local association) performed significantly better than illiterate subjects. The findings of Prins (2008) study on literacy programs in El Salvador also showed that women and men participating in literacy courses experienced changes in the direction of greater self-confidence, self-esteem, the ability to participate and influence new spaces, the ability to formulate and express ideas, and improving relationships with their partners, parents, children.

Romm & Dichaba (2015) in their evaluation of the effects of literacy also found that since the participants joined the program, their self-confidence and self-esteem improved and they were able to participate in leadership positions in their communities. Rome and Dichaba (2015) also found in their evaluation of the effects of literacy that since the participants joined the program, their self-confidence and self-esteem improved and they were able to participate in leadership positions in their communities. The findings of Martinez and Fernandez (2010) also showed that, in general, illiteracy limits the full development of people and their participation in society. They also found that illiterate people suffer from low self-esteem, show little independence and have little ability to think critically, while literate people have high self-esteem.

It is clear from the above that by engaging in non-formal adult education programs, adults gain power that they did not have before. They can also make life-changing choices that they were not in a position to make before participating in such programs. Also, by getting involved in social activities, literate adults are able to make changes in their communities (Adewale et al., 2013). For this reason, providing adequate and necessary education throughout a person's life helps him by knowing the conditions in which he is placed. has to adapt to the constantly changing conditions of the society and is adaptable. The result of this adaptation is the formation of a powerful, efficient and effective human being with mental health. (Turani, 2014). Mental health means a degree of balance that a person establishes between his behaviors and shows rational behavior in the face of social problems and social adaptation to his surrounding environment (Khaganizadeh et al., 2015). Lack of mental health causes physical incompatibility, anxiety and insomnia, social dysfunction and low self-confidence, resulting in severe depression. And in this research, mental health means high self-esteem and ability to solve problems. Many researches have shown that there is a great relationship between the acquisition of knowledge and the success and maintenance of people's health (Bauldry, 2014; 2015; Conti et al., 2010; Ross and Mirowsky, 2011; Schaan, 2014; Montez and Friedman, 2015). For example, Andersson, Matthew (2017) have concluded in their research that in the United States there is a positive relationship between health and education of adults, especially for those who have been deprived of education since childhood. Even high levels of education and knowledge acquisition in literate students reduce the intensity or symptoms of depression. In general, around the world, people with a higher level of education have better health than people with a lower level of education. These people are trying to maintain health and stay away from diseases



and depression, as well as increase the lifespan of correct and principled loss (Mohammadi, 2016). In their research, Rajabi et al (2014) came to the conclusion that there is a significant relationship between self-esteem and social support with students' mental health, and Yari Moghadam et al. Reading comprehension and problem solving showed that reading comprehension had a mediating role in reducing the effect of depression and anxiety on problem solving, and the Global Monitoring Report on Education for All, published in 2014, showed that education and literacy, even in The limit of primary education reduces poverty, guarantees health and increases people's participation in the development of society, and strengthens democracy (Bagherzadeh, 2015).

Based on Wheeler's (1980) findings, an average increase of 20 to 30 percent in the level of literacy causes the GDP to increase between 8 and 16 percent. In general, the functions of literacy in different social, cultural, economic and even political aspects have the context of emergence and emergence.

Accordingly, in many European Union member countries, high quality adult education is an important goal and a significant decision. In fact, learning and teaching adults is done in different educational ways. Also, in order to optimize education and learning, various methods and techniques are used, such as coping with anxiety and worry, acquiring learning skills and supporting families (Mohammadi, 2016).

Another vital skill for living in today's age is problem solving. Today, all the activities of the owners are called towards high-level thinking and problem solving skills, whether in the general field or in the technological field, whether in natural activities or in problematic activities, and in most societies, they believe that increasing problem solving skills should be emphasized. (Wu et al., 1996).

Problem solving requires special and purposeful strategies by which a person defines problems, decides to adopt a solution, performs and monitors problem solving strategies (Elliot et al., 1995). Trifinger, Selby and Scott (2008) defined problem solving as stable individual differences in the preferred methods that people use when facing problems, although finding a solution to a problem requires a range of cognitive skills including information interpretation, planning, and methodological memory. , controlling the results and trying to interpret the results. The solutions we generate and the decisions we make not only affect a particular success, but potentially have a significant impact on our personal, social, and direction in life. Choon-Huat Koh, Eng Khoo, Wong, & Koh (2008) believe that successful problem solving increases people's ability in technical, social, cognitive, managerial, research and educational skills.

Based on this, one of the goals of the education system, especially the literacy movement, is not only the transfer of information, but also the cultivation of creativity and logical thinking, so that people are able to recognize and fully use their abilities, in order to create personal and social well-being, in fact, with Acquiring literacy or increasing literacy, the society provides more opportunities for literate people and in this way they can have more self-esteem and solve their problems in an effective way in different situations. The realization of such a thing requires correct and precise educational planning.

And as already pointed out by Gottfredson (2004), there is a need for studies to examine the impact and effectiveness of literacy programs, especially the impact on perceived health and positive self-concept. Accordingly, this research examined the difference in self-esteem and problem-solving ability between adults enrolled in literacy programs and adults who were not



enrolled in any literacy programs. This research used comparative causal analysis to study the difference in self-esteem and problem-solving ability between adults in two groups in Kerman province.

The studied variables, i.e. self-esteem and problem solving, contribute to better education of adults and better understanding of social issues, as well as better understanding of the sense of well-being related to literacy. In addition, the importance of this study lies in its ability to create awareness of the importance of the adult literacy program as an influential variable that helps adults gain and maintain self-esteem and problem-solving ability.

Therefore, the focus of this article is beyond the mere examination of literacy. In fact, this article tries to analyze the social and personal impact of the adult literacy program in the lives of learners who have completed this program in Iran. In particular, this article raises this general question: How are the benefits of this program manifested in the personal and social lives of the beneficiaries? In other words, what is the contribution of literacy as one of the determining factors in increasing self-esteem and mental health and the ability of people to solve problems?

Research hypotheses

1. There is a difference in self-esteem between people who have benefited from the education of the literacy movement and illiterate people.
2. There is a difference between the people who have benefited from the education of the literacy movement and the illiterate people in terms of problem solving skills.
3. There is a difference between the variable components of problem solving in the literate group.
4. There is a difference between the variable components of problem solving in the illiterate group.

null hypothesis

No significant differences in self-esteem and problem-solving ability among adults currently enrolled in a literacy program; There are no people who are not enrolled in any literacy program.

Research Methods

The current research is a quantitative research using the survey method and due to its comparative nature, it is causal-comparative. Is. The purpose of causal-comparative method is to find possible causes of a behavior pattern. For this purpose, the subjects who have the studied behavior are compared with the subjects in whom this behavior is not observed. (Delaware, 2018, 393) and its comparative nature is that the women participating in the literacy movement classes in Kerman city are compared with the illiterate women who did not participate in these classes. The statistical population consists of two groups: the first group, which is the main group, consists of women participating in the literacy movement classes in Kerman, and the second group, which is the control group, consists of all women who, despite their illiteracy, have not yet participated in the literacy movement classes.

In this research, the researchers used Cochran's formula to find the appropriate formula for estimating the sample size since they were faced with two statistical populations, and the calculated sample size was equal to 79 people. Also, the same number of illiterate women, in terms of age, marital status, were compared as a control group with the main group. (a total of



158 people). In order to collect data, Cassidy and Long's problem solving style questionnaire (24 questions) and Eysenck's self-esteem questionnaire (30 questions) were used. He was encouraged to complete the questionnaire. After collecting information through questionnaires, the results were tested in SPSS21 program. In order to check the status of the demographic components of the statistical population, descriptive statistics methods were used, and in the inferential statistics section, T-Test and Chi-square tests were used to determine the state of self-confidence and also to check the current status of each of the four dimensions of problem solving skills. On the other hand, Friedman's tests were used to rank the indicators of the four dimensions.

Eysenck self-esteem test

Eysenck's self-esteem test consists of 30 questions. The examinee should try as much as possible to answer yes or no to each question. If it is really not possible for him, they take the middle option. A score of "1" is assigned to the answers that measure self-esteem versus feelings of inferiority in the questionnaire. While no marks are awarded for it and the total marks are 30.

A score of 21 indicates average self-esteem and higher than that indicates high self-esteem. A score of 11 and below indicates a feeling of inferiority and emotional instability (Biabanagard, 2014). Hormozinejad (2010) reported its validity to be 74% for women and 79% for men. Its reliability coefficient is also reported as 0.88 using Cronbach's alpha method and 0.87 using the bisection method.

Cassidy and Long problem solving style questionnaire

Cassidy and Long's problem-solving style scale was built in two stages in 1996 and has 24 questions that measure six factors and each factor includes four test items. These factors are:

1. Helplessness in problem solving or orientation (expressing the helplessness of a person in problematic situations)
2. Inhibition of problem solving or control in problem solving (the dimension reflects external-internal control in problematic situations)
3. Creative problem style (indicating planning and considering various solutions according to the problem situation)
4. Confidence in problem solving (expresses belief in a person's ability to solve problems)
5. Avoidance style (indicating the tendency to avoid problems instead of facing them)
6. The style of orientation or approach (indicates a positive attitude towards problems and the desire to face them head-on).

Therefore, the styles of helplessness, inhibition and avoidance are sub-scales of non-constructive problem solving and styles of orientation, creativity and trust are sub-scales of constructive problem solving (Shatari, Ashkani and Modares Gharavi, 2018).

The scoring of the questionnaire is done in the form of zero and one, and a score of 5% is considered for the I don't know option, and then the sum of these scores indicates the overall score of each of the six factors. Therefore, each factor with 4 questions will have a minimum score of 0 and a maximum of 4. Any factor with the highest score indicates that the person uses that method when facing problems. In this case, the maximum score for solving the problem will be 24, the minimum score will be 0, and the average score will be 12. Cassidy and Long (1996) Cronbach's alpha of this questionnaire in a study for styles of helplessness, restraint,



creativity, trust, avoidance and tendency were 0.66, 0.66, 0.57, 0.71, 0.52 respectively. , 0.65 and in another study, Cronbach's alpha coefficients of this questionnaire were obtained as 0.86, 0.60, 0.66, 0.66, 0.51, and 0.53 respectively for the aforementioned dimensions.

In Mohammadi's research (1377), the alpha coefficients were above 0.50, except for the tendency style. In addition, Mohammadi and Sahibi (2010) reported the internal reliability of this test using Cronbach's alpha coefficient equal to 60%.

Table 1. Components of the problem solving styles questionnaire

style	Definition
helplessness	This style expresses a person's helplessness in problematic situations (Agha Yousefi and Sharif, 2013; Gholami and Bagheri, 2013). Passivity and activity are the characteristics of people who use this style of problem solving (Gregory, 2019).
restraint	This style of problem solving refers to the influence of external and internal controllers in the problem situation (Agha Yousefi and Sharif, 2013; Ghanbari Hashemabadi et al., 2011).
Creativity	Creative problem solving style shows planning and considering various solutions according to the problem situation (Cassidy and Long, 1996).
the trust	Confidence style in problem solving expresses belief in one's ability to solve problems (Gregory, 2010).
tendency	Orientation style shows a positive attitude towards problems and the desire to face them head on (Beker, 2003).
avoid	Avoidance style is the tendency to ignore problems instead of dealing with them (Beker, 2003).

research findings

Literacy status of subjects:

According to the data analysis, 79 people (0.50%) are illiterate and 79 people (0.50%) are literate among the examined subjects (Table 2).

Table 2: Frequency distribution of subjects' condition

Literacy status	abundance	Percentage abundance	Cumulative abundance
illiterate	79	50.0	50/0
literate	79	50/0	100/0
Total	158	100/0	--

The status of different variables in illiterate and literate groups

The score of the self-esteem variable was obtained by calculating the sum of the scores of the questions in the questionnaire, and to describe this variable, its scores were divided into three

categories: low, medium and high. Among the 79 studied subjects in the literate group, 2 people (2.5%) have low self-esteem variable score, 73 people (92.4%) have average and 4 people (5.1%) have high. Among the 79 studied subjects in the illiterate group, 64 people (81.0%) have average and 15 people (19.0%) high variable score of self-esteem (Table 3).

Table 3: Frequency distribution of self-esteem variable in illiterate and literate groups

Self-esteem	literate			illiterate		
	abundance	Percentage abundance	Cumulative abundance	abundance	Percentage abundance	Cumulative abundance
Down	2	2/5	2/5	0	0	0
medium	73	92/4	94/9	64	81/0	81/0
Top	4	5/1	100/0	15	19/0	100/0
Total	79	100/0		79	100/0	

The scores of the research variables in the literate group

Table 4: Descriptive statistics of the research variables in the literate group

Variables	Self-esteem	Problem Solving	Helplessness in problem solving	Problem solving skills	Creative style	Confidence in problem solving	Avoidance style	trend style
Number	79	79	79	79	79	79	79	79
Average	17/16	13/64	1/42	1/960	2/23	1/58	1/89	2/92
Middle	17/00	14/50	1/00	2/00	2/00	2/00	2/00	3/00
Mod	15/00	14/50	1/00	2/00	3/00	1/00	1/00	4/00
standard deviation	2/91	3/619	0/93	0/99	1/064	0/942	1/165	0/920
crookedness	574/0-	519/0-	0/668	0/096-	0/334-	0/076	0/550	0/467-
Elongation	0/817	003/0	0/400	0/681-	0/515-	0/390-	0/922-	0/933-
the least	7/00	4/50	00/0	0/00	0/00	0/00	0/00	1/00
the most	23/00	21/00	4/00	4/00	4/00	4/00	4/00	4/00
Range of scores	0-30	0-24	0-4	0-4	0-4	0-4	0-4	0-4



Checking research hypotheses

1. There is a difference in self-esteem between people who have benefited from the education of the literacy movement and illiterate people.

The comparison of self-esteem in the group of illiterate and literate people is based on the calculations obtained through T-test and the p-value (significance) of the above variable is equal to 0.001 and smaller than the significance level. And as a result, it can be said that there is a significant difference in the average scores of self-esteem in the group of illiterate and literate people. In other words, there is a difference in self-esteem between people who have benefited from the education of the literacy movement and illiterate people. The comparison of averages shows that people who have used literacy trainings have higher self-esteem than illiterate people (Table 5).

Table 5: T-test statistics to compare the average scores of self-esteem in the group of illiterate and literate people

group	literate			illiterate			T statisti c	Degr es of freedo m	meaninf ul j
	Numb er	averag e	standar d deviati on	Numb er	avera ge	standar d deviati on			
Self- esteem	79	17/15 8	2/909	79	18/8 8	3/18	3/55 0-	156	0010/0

2. There is a difference between the people who have benefited from the education of the literacy movement and the illiterate people in terms of problem solving skills.

Table 6. Descriptive statistics of the scores of research variables by the group of literate and illiterate students

Source of change	group	Numb er	Descriptive statistics				T statistic	
			the least	the most	averag e	standard deviation	T	Sig
Problem solving helpless ness	literate	79	0	4	0/49	0/77		0/00
	illiterate	79	0	5	1/42	0/93	6/84 6-	0

restraint	literate	79	0	6	3/285	0/649		0/00
	illiterate	79	0	7	1/96	0/989	9/93	0
Creativity	literate	79	2	8	3/27	0/72	7/22	0/00
	illiterate	79	2	8	2/23	1/064	3-	0
Self Confidence	literate	79	3	6	2/72	0/905	5/94	0/00
	illiterate	79	2	6	1/85	0/94	4-	0
avoid	literate	79	0	8	1/68	1/13	1/18	0/25
	illiterate	79	0	8	1/89	1/165	0	0
trend	literate	79	3	8	3/46	0/760	3/95	0/00
	illiterate	79	3	8	2/924	0/920	9-	0

According to the information obtained from the above table, among the components of problem solving, approach with a mean and standard deviation equal to (3.46 ± 0.760) in the group of literate students and with a mean and standard deviation equal to $(924 \pm 0.920) 2/2$ In the illiterate group, the highest mean and component of problem solving helplessness with the mean and standard deviation equal to (0.49 ± 0.77) in literate students and with the mean and standard deviation equal to (1.425 ± 0.93) in The illiterate group has the lowest average.

The comparison of different styles of problem solving in the group of illiterate and literate people is based on calculations obtained through T-test and because the p-value (significance) of the above variables is equal to 0.000 and smaller than the significance level. As a result, it can be said that there is a significant difference between the average scores of problem solving styles in the group of illiterate and literate people. In other words, there is a difference between the people who have received the trainings of the literacy movement and the illiterate people in terms of problem solving styles. The comparison of averages shows that people who have used literacy trainings have higher problem solving styles than illiterate people (Table 6).



3. There is a difference between the variable components of problem solving in the illiterate group

The comparison of the variable components of problem solving in the illiterate group was obtained based on calculations by Friedman's test and because the p-value (significance) is equal to 0.000 and smaller than the significance level. And as a result, it can be said that there is a significant difference between the variable components of problem solving in the illiterate group. The comparison of the average ratings shows that the tendency style component has the highest priority compared to other components in the illiterate group, and the components of helplessness in problem solving, creativity style, lack of avoidance style, problem solving restraint and confidence in problem solving are in the next priorities respectively. are located (Table 7).

Table 7: Friedman's test statistics to compare the variable components of problem solving in the illiterate group

factors	component	average rank	prioritize	Number	Chi-square	Degrees of freedom	meaningful
Variable components of the problem solving in the illiterate group	Problem solving helplessness	3/99	2	79	69/296	5	0/000
	restraint	2/58	5				
	Creativity	3/41	3				
	Self Confidence	2/77	6				
	avoid	3/23	4				
	trend	4/74	1				

4. There is a difference between the variable components of problem solving in the literate group

The comparison of the variable components of problem solving in the literate group is based on the calculations obtained through Friedman's test and because the p-value (significance) is equal to 0.000 and is smaller than the significance level. And as a result, it can be said that there is a significant difference between the variable components of problem solving in the literate group. The comparison of the average ranks shows that the component of helplessness in problem solving has the highest priority compared to other components in the literate group, and the components of orientation style, problem solving control, creativity style, confidence in problem solving and lack of avoidance style are ranked in the next priorities respectively. have (Table 8).

Table 8. Friedman's test statistics for comparing the variable components of problem solving in the literate group

factors	component	average rank	prioritize	Number	Chi-square	Degrees of freedom	meaningful
Variable components of the problem solving in the literate group	Problem solving helplessness	4/36	2	79	92/416	5	0/000
	restraint	3/72	5				
	Creativity	3/71	3				
	Self Confidence	2/68	6				
	avoid	2/28	4				
	trend	4/25	1				

Discussion and conclusion

When people add roles and situations to their lives, the extent of subsystems changes, this change in environments or, as Bronfen Brenner (1997) calls ecological transitions, occurs throughout life and is often an important turning point in transformation. Wisdom develops when people engage in learning processes in the classroom and in life, thinking about them, synthesizing them, and applying them (Greene & Brown, 2009). Therefore, it can be said that literacy increases the acquisition of wisdom, and by increasing self-confidence and self-belief, it makes people resistant to the decrease of wisdom in the future life (Ardelt, (2011). People's health is a prerequisite for the development of any country in the world, because healthy people can work in their jobs. To be constructive and innovative, education, and indeed adult education, can help equip citizens with life skills that are critical to improving and maintaining their health and well-being (Lopes & McKay, 2020). But despite the clear connection between literacy and mental health, this issue has been largely ignored in educational research (Pekrun et al, 2011). This is especially true in the area of increasing self-esteem and problem-solving ability. Research on literacy usually focuses on cognitive and linguistic factors, and less attention is paid to the role of emotional factors. Based on this, this study examined how the literacy program has affected personal and collective life in terms of self-esteem and problem-solving ability.

As can be seen in the tables, the analysis of the findings related to the questions shows that the trainings of the literacy movement in the group of literate students had a significant positive effect in terms of problem solving styles. Thus, the problem solving styles of helplessness and containment have a significant inverse relationship with the individual's literacy. It means that illiteracy brings a feeling of inferiority, often literate people get confused because they cannot cope with the lack of basic skills. Many of them have carefully memorized oral instructions or instructions in their minds to avoid being forced to read or take notes. Some others have learned to wander in their surroundings and not to go further so as not to get caught in the problems they are sure of, and this itself leads to adopting a helpless style. The helplessness style expresses the loneliness and helplessness of a person in problematic situations, and the results of the findings showed that the problem solving styles of creativity, trust and tendency have a direct and meaningful relationship with literacy. Thus, the people who participate in the literacy movement classes use a creative problem solving style and when faced with issues and problems, they have planning and will consider various solutions to solve them. Therefore, the results of the second, third and fourth questions have confirmed the same issue. In other words, the education of the literacy movement, according to the average of literate students compared to the average of illiterate students, has increased the ability to solve problems and as a result, the difference in the problem solving styles of literate students. Therefore, the researchers' analysis of the obtained data shows a positive relationship between taking literacy courses and self-esteem.

Especially for women who were exposed to depression and other forms of deprivation, literacy and the subsequent increase in self-esteem may be a form of protection and a way forward for them. However, although quantitative analyzes provide evidence of the effectiveness of literacy courses, of course, researchers are cautious in making causal inferences based solely on these evidences, because many other factors can influence people's self-esteem in this way. In general,



the results of this study showed that there is a significant relationship between people's feelings and the acquisition of literacy, in other words, literacy is moderately and positively correlated with the self-concept of people and the self-esteem of literate students, a criterion that is also related to the ability to solve problems.

People who do not have reading and writing literacy have a lower sense of competence compared to literate students, they are the ones who fear reading and may subsequently avoid it, and this finding is consistent with many findings, including the studies of Manninen (2010); Desjardins (2008) and Feinstein & Budge (2007), McKay (2020) and Gottfredson (2007), correspond. The results of these studies showed that the participants have become more aware of their and their family's health issues. Also with the findings of Vogel et al. (2007), Quigley (1997), McGivney, (2001); Beder (1990); Valentine and Darkenwald (1990); Hayes and Darkenwald (1988); Scanlan (1986) and Scanlan (1986) who showed that high self-esteem is an essential component in achieving positive results in the adult literacy classroom and that its lack is one of the biggest deterrents to participation in adult education classrooms is consistent. Götz and Hall (2013), also showed in their studies that the enjoyment of learning is related to people's success in solving life problems. Schaffner and Shiffle (2013), Pekron and his colleagues (2017) also concluded that motivation and positive self-concept of people were related to academic achievement at different ages. In the explanation of these results, it can be said that one of the effective factors in a person's finding the right solution to solve a problem is the ability to read and write. In this information age, every person can access and select information effectively by using reading and writing skills. learned and this ability will cause the development of problem solving skills in literate students. According to David Azobel (2008), learning can be seen as an internal factor in increasing motivation. He believes that learning itself creates motivation (quoted by Hormazi, 2007). In general, the participation of illiterate women in literacy courses affects their personal growth, family and social relationships, and their professional lives. Because with the increase in self-efficacy and self-esteem, the motivation to face new challenges, including participating in more challenging courses, increases. Success in learning and acquiring literacy creates confidence in their cognitive and social abilities and provides them with more job opportunities. In the end, the key findings of the researchers from the current research is that the participation of adults, especially women, in literacy classes leads to an increase in the ability to solve problems and, as a result, an increase in self-esteem and self-efficacy in individuals, and this leads to well-being, health and social inclusion. Upgrades Literacy seems to play an important role in these cycles, because by increasing self-efficacy and self-esteem, the individual's motivation to pass more challenging courses also increases, and participation in these courses not only increases self-efficacy, Rather, it promotes social relations, makes horizons wider and wider. However, as multiple studies show, the causal processes underlying these changes in people's life course are complex and not fully predictable.

Therefore, we do not seek to attribute causality to literacy in the sense of claiming it as a magic solution. But it must be said that learning is a lifelong journey. The more people learn, the more they can adapt to a rapidly changing world. The more they can adapt, the more they can improve their standard of living and live a longer, healthier and more creative life; Literacy creates self-esteem. People who cannot read and write are likely to have problems expressing themselves, even verbally. This can lead to anxiety, depression or other issues that affect the overall quality



of life. The more a person has the ability to express himself, the more self-confidence, self-esteem and chances of a happy and healthy life he will have.

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