### **Original Article**

# The Effect of Premarital Life Skills Training on Couples' Quality of Life

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### Abstract

**Introduction**: Life skills are the skills, knowledge, and behaviors that are learned to fulfill happiness and aim individuals to succeed in life. The impact of life skills training on quality of life in recent years has always been one of the issues under study in psychiatrists worldwide. The present study investigated the effect of life skills training on quality of life among young couples in Tehran, Iran.

**Method**: The study population consisted of all couples who referred to Ahmadi Health Center during the second 6 months of the year 94. The sample consisted of 60 (30 couples) who were selected by convenience sampling and simple random sampling method. The experimental and control groups were replaced. Before running the independent variable (X), the subjects in both groups were measured by pre-test. Then the independent variable (life skills training) was applied to the experimental group and again the quality of life questionnaire was administered to the test and control subjects. The data were analyzed using MANCOVA test by means of SPSS 22 software.

**Results**: The findings showed that the changes after the life skills training in the experimental group were significant and life skills training had an impact on the quality of life of young couples on the verge of marriage; in other words, the quality of life compared to pre-education significantly had.

**Conclusion**: Life skills training found to be an important factor in improving the quality of people's life, so it is necessary for the authorities to provide the context for these trainings so that these changes have a powerful and long lasting impact.

**Declaration of Interest:** None

Key words: Quality of Life, Life Skills, Couples, Marriage.

# Introduction

Improving the quality of life entails trying to reduce the gap between expectations and aspirations and what is really happening in reality. Having a high quality life usually results in happiness, satisfaction, and aim individuals to overcome problems. In fact, the quality of life is assessed and described by the individual (1). It is one of the most important components of the overall concept of health (2). One of the major areas of quality

of life is the quality of marital life. Many concepts such as adaptation, satisfaction, happiness, integration and commitment have been used for quality of marital life (3). The quality of marital life is a situation in which the husband and wife are happy and satisfied with the marriage (4). In Ellis's logical approach, marital quality of life is a rewarding exchange of behaviors (3). Also, it states that there are various ways of defining marital quality, one of the best being proposed by

Hackensey (5). He attributes the quality of marital life to the objective feelings of satisfaction and pleasure enjoyed by the husband and wife when considering all aspects of their marriage (5). The quality of marital life is even greater than the existence of children and their issues. Divorce prediction plays a role (6). The importance of quality of marital life appears in its impact on mental and physical health. Studies have shown that the quality of marital life affects many aspects of individuals' personal and social life (7).

Hill (8) considers the quality of marital life to be influenced by the marital agreement that describes the appropriate relationship between husband and wife. When couples significantly satisfied with their marital needs and expectations, they will report a favorable marital quality of life (8). Studies have found that marital quality of spouse had the greatest effect on marital quality of life arguing that factors affecting one couple's marital quality of life have a significant effect on the quality of another's marital life (3). The preventive and life skills programs have been designed and implemented by the World Organization (WHO) to maximize the level of mental health and prevent social harm, which is among one of the most effective and efficient programs (9). The needs of today's rapid cultural change, family life, restructuring, the widespread and complex human communication, network of diversity and influx of human information resources face numerous challenges, pressures and pressures that require effective psychosocial capabilities to cope effectively. Lack of emotional, psychological and social skills will make people vulnerable to problems that may result in a variety of psychosocial and behavioral disorders. These facts have led mental health professionals and practitioners worldwide to focus their efforts on prevention programs (10).

To prevent cigarette and drug use, the first-stage prevention programs were introduced by Botulin (11), whose primary goal is to develop whole-life skills and training skills that are more relevant to empowerment in cigarette, drug and alcohol use (11). Life skills are the skills, knowledge and behaviors that

individuals learn to feel happy and successful in life in order to aim them to adapt with challenges they face in life. Some of these skills are get along with others, express their feelings with change, and love life (12). These abilities enable the individual to accept the consequences and responsibilities of their social role and to deal with daily challenges in life, expectations, especially and interpersonal relationships without harming themselves and others (13). Life skills are the way to better living conditions. Learning these skills can lead to a more successful life (14). According to scholars, life skills are necessary for effective living and are relevant to all life stages, including childhood, adolescence, and adulthood (15).

skills basically provide a growth foundation for life that enables us to love and do productive work, as Freud puts it. Successful crossing of life in four important areas are family, educational, social and occupational areas that requires skills for a better quality of life. (16). Life skills, which include a set of abilities, increase the ability to adapt to positive and efficient behavior and thus enable one to accept responsibility for their social role without affecting themselves or others and to effectively face the challenges and problems of daily living (17). Life skills are abilities that are developed through consistent practice, and one is prepared to face life's challenges, increase mental, social and health abilities (18).

Quality of life is one of the most important issues that individuals are facing the world today (19). Promoting the quality of life is also one of the most important goals of various governments and organizations around the world (20). Today, with the increasing expansion of the industrialization process, which is manifested by the mass production of goods and services of varying quantities, poses many problems for the modern human being (14). Such conditions have been raised in countries where quantitative development has been the objective (21). Thus, since the last decades of the 20th century, following the negative consequences of developmental approaches focused on economic growth as well as highlighting the social aspects of development in the context of development and social policy, the quality of life constructs as an indicator for evaluating and directing plans and policies. Development at various levels as well as reforming and reinforcing new approaches to development with a focus on social development (22). Diner believes that quality of life ensures that individuals have a positive evaluation of their own lives (23).

Concerns about the impact of life skills training on quality of life in recent years have always been one of the topics under study in psychiatrists worldwide. These planners have always wondered if new skills would be able to make life easier and happier, far removed from the day-to-day life of the machine world. Lack of life skills can lead to personality disorder and family harm. While the family is a very important source of livelihood and social status, today's family is becoming more and more intrinsic and day-to-day, making the relationship more complex. If this complexity is optimized by training new and efficient skills, it can be an effective strategy to reduce emotional and psychological well-being, and otherwise we must see the family's foundation collapse and fail. Therefore, it seems necessary to teach life skills to couples prior to their marriage. Because the family cornerstone of any large human society that plays a fundamental role in the strengthening of social relationships and the transcendent growth of the members of society, so any effort to consolidate and strengthen the foundations of the family paves the way for the growth and health of individuals, the moral values, and happiness. The general public provides a community. Given the importance of quality of life and the ambiguity in understanding and understanding the concept of life skills among young couples, this study aimed to answer the question of whether premarriage workshop on life skills training affects the quality of life among couples.

#### Method

This study is an experimental study. This Study applied pre-test and post-test experimental design with control group. The target population included all couples visiting

Ahmadi Health Clinic, affiliated with Shahid Beheshti University in Tehran, in 2015. Among all 60 individuals (30 couples) were selected using convenience sampling and were randomly assigned to experimental (15 couples) and control (15 couples) groups. To gather data, newly married couples were pre and post-tested. Inclusion criteria included being married for at least 6 months, no history of psychological problems, no previous marital status, and no history of chronic mental and physical illnesses.

Before introducing the independent variable, the experimental and control subjects were measured by means of pre-test. Pre-test allows for control and comparison and makes it possible to determine whether the change is because of experimental variable. Therefore, 30 couples were requested to fill in the survey of WHO quality of life (WHOQOL) as pretest. Upon analyzing the pre-test data, 30 couples were assigned to experimental and control groups. Afterwards, the experimental group was received 11 sessions of 2 hours' training in which such skills as self-awareness and sympathy, effective communication, anger interpersonal management, interaction. assertiveness, coping with bad temper, stress management, time management, problem solving, and critical thinking were delivered to the subjects. In order to deliver the life skills training to the experimental group, the life skills training package (adult specialist), developed by Fati, Motabi, Mohammad Khani & kazemzadeh (24) in 2012 and approved by the Ministry of Health and Medical Education (Mental Health Office, Social and addiction, women's office) was used. In the table below, the structure of the program is presented.

As mentioned earlier, life skills training was comprised of 10 sessions plus one session to answer subjects' questions. After a while, post-test was executed and analyzed using MANCOVA by means of SPSS 22.

Session	Topic	Aim: To help young married couples
1	Self-awareness and	Realize their needs, desires, goals as well as those of others
	empathy	
2	Effective	Actively listen and effectively express themselves
	communication	
3	Anger management	Realize what makes them angry and consequently manage their
	skills	anger
4	Effective interpersonal	Understand the significance of interpersonal relations and form
	skills	an effective relationship
5	U	Learn how to be assertive
	skills	
6	negative mood coping	identify their negative mood and consequently change it
	skills	
7	Stress management	determine their stress and handle it with such coping strategies
	skills	as relaxation
8	Time management	Doing based on proper time schedules
	skills	
9	Problem solving skills	Get familiar with emotion-based coping and executing it
_10	Critical thinking Skills	Realize their own as well as others thoughts

#### **Measures:**

To collect data, the short version of WHOQOL with 26 items was used. In this survey, 2 items were used to measure overt quality of life and individual general health. In general, the survey contains 4 sub-scales as follows: 1) physical health (7 items), 2) mental health (6 items), 3) social interaction (2 items), and 4) environment health (8 items). A 5-point Likert type scale is deployed to rate responses and items 3, 4, and 25 are reversed-scored. After calculating the points, scores ranging 4 to 20 is yielded, with 4 indicating the worst and 20 indicating the best. These scores can change to scores from 0 to 100. developers of the survey implemented the questionnaire in 15 international centers of WHO and reported the Chronbach's alphas ranging from .73 to .89. in Iran, Nasiri (11) tried to establish the reliability of the survey using test-retest with 3 weeks' interval, splithalf, and Chronbach's alpha and reported .67, .84, and .84 respectively.

#### **Results**

By means of SPSS, MANCOVA was used to analyze data. The table below shows the mean and standard deviation of WHOQOL in pre and posttest for both groups. As illustrated, the experimental group enjoys a significantly increased mean value at the posttest phase, indicating that the trainings were effective. Kolmogorov-Smirnov metric showed the normality of all the scales, which is the first requirement for MANCOVA. Levene's test showed that homogeneity of variances, another requirement for MANCOVA, is in place. Homogeneity of regression slopes is the most important requirement. F values verified that this requirement is the case.

Table 1: descriptive statistics of sample

Variable	Group	Pretest		Posttes	st	Sig.
		mean	Standard	mean	Standard	
			deviation		deviation	
Physical health	Control	3.319	0.558	3.002	0.247	0.0001
	Experimental	3.333	0.586	3.484	0.372	
Mental health	Control	3.228	0.488	3.361	0.287	0.159
	Experimental	3.272	0.457	3.572	0.412	

Social interaction	Control	3.155	0.565	3.222	0.319	0.026
	Experimental	3.222	0.624	3.529	0.482	
Environment	Control	3.149	0.512	3.141	0.276	0.0001
health	Experimental	3.191	0.481	3.607	0.352	
Quality of life	Control	3.213	0.395	3.182	0.133	0.0001
	Experimental	3.259	0.382	3.596	0.399	

As described in the table below and according to the values of source of variations, it can be stated that life skills training significantly affects the quality of life. In detail, life skills' training has a significant effect on physical health at 0.05, raising the value of physical health in posttest to 3.484. The training also has a significant effect on mental health at 0.05, raising the value of mental health in

posttest to 3.572. In addition, the training has a significant effect on social interaction health at 0.05, raising the value of social interaction health in posttest to 3.529. Also, the training has a significant effect on environment health at 0.05, raising the value of environment health in posttest to 3.141. Additionally, the training has a significant effect on quality of life at 0.05, raising the value of quality of life in posttest to 3.596.

Table 2. Covariance test of effect of life skills training on quality of life

Sources of variations	Variables	Sum of squares	df	Mean of squares	F	Sig
Corrected	Physical health	6.219	5	1.244	22.152	0.0001
model	Mental health	1.068	5	0.214	1.666	0.159
	Social interaction	2.287	5	0.457	2.791	0.026
	Environment health	3.639	5	0.728	7.243	0.0001
	Quality of life	3.464	5	0.693	8.803	0.0001
Intercept	Physical health	2.691	1	2.691	47.932	0.0001
•	Mental health	9.726	1	9.726	75.886	0.0001
	Social interaction	10.127	1	10.127	61.806	0.0001
	Environment health	10.973	1	10.973	109.192	0.0001
	Quality of life	10.734	1	10.734	136.374	0.0001
Groups	Physical health	3.330	1	3.330	59.304	0.0001
	Mental health	0.680	1	0.680	5.306	0.025
	Social interaction	1.457	1	1.457	8.894	0.004
	Environment health	3.261	1	3.261	32.453	0.0001
	Quality of life	2.694	1	2.694	34.233	0.0001
Error	Physical health	3.032	54	0.056		
	Mental health	6.921	54	0.128		
	Social interaction	8.848	54	0.164		
	Environment health	5.426	54	0.100		
	Quality of life	4.250	54	0.079		
Total	Physical health	641.013	60			
	Mental health	729.056	60			
	Social interaction	694.820	60			
	Environment health	692.267	60			
	Quality of life	697.031	60			
Corrected	Physical health	9.252	59			
total	Mental health	7.989	59			
	Social interaction	11.135	59			

Environment health	9.066	59	
Quality of life	7.714	59	

#### Conclusion

The results indicated that life skills training had a significant effect on newly married couples' quality of life. In other words, the mean score of experimental couples' quality of life in posttest increased and was greater than that of experimental couples' quality of life in pretest. The total scores of qualities of life were compared and contrasted between control and experimental groups. Variance analysis showed that there was a significant difference between the two groups in terms of the components of quality of life. Moreover, the analysis revealed that there was a significant difference between pretest and posttest scores within the experimental group. On possible explanation for this significant difference is that experimental subjects had learned and applied the life skills in their interpersonal interactions. Those individuals on the eve of marriage who learn and practice life skills may have a successful entry to marital life, develop a positive relationship with their spouses, and exhibit a wide range of approved behaviors and manners.

Findings of the present study indicate the effectiveness of life skills training, with findings including the effect of life skills training on: Drug Abuse Prevention Program (25 and 26), Adolescent Pregnancy (27 and Intelligence Promotion 28). (29),Prevention of Sexual Abuse (30). It is aligned. Therefore, life skills training is very important in maintaining community health. Overall, the results of this study are in line with the of findings the research by Bagaei Moghaddam, Malekpour, Amiri, and Molavi, (31), Albertine, (32), Qassemi (33).

Malin (34) also assessed life skills training as effective on social life. Butwin et al. (26) examinedhe effects of life skills training programs on alcohol, cigarette and drug use were examined. This program included communication skills training, decision making, anxiety and stress control. Therefore, the results showed that training was effective in reducing smoking, alcohol and drug use. Weisser (30) conducted a study in South Africa entitled Strategic Life Skills Training to

Prevent AIDS. In this study, 667 middle school students were present. The results showed that life skills training changed highrisk behaviors in middle school students. Young (34) conducted a study on the effect of life skills training on increasing physical adolescent girls. activity of Moghaddam et al., (31) conducted a study on "The Effectiveness of Life Skills Training on Anxiety, Happiness and Anger Control in Adolescents with Physical-Motor Disability". The study conducted on 30 adolescents (15 in the experimental group and 15 in the control group) in Isfahan's exceptional schools, showed that after training life there was a significant difference between experimental and control groups in terms of anxiety, happiness and anger control. Albertine et al. (32) have found that life skills training enhances active role in life, responsibility in the work environment, planning for the future, and critical thinking ability. In his research, Oassemi (33)concluded that the implementation of life skills training programs increased the happiness of prisoners.

Life and social skills training have increased self-esteem, improved social behaviors and social adjustment, increased family system satisfaction and family adjustment, increased personal and interpersonal problem-solving skills, and increased coping skills. Learning life skills enables one to transform knowledge, values, and attitudes into actual abilities. Therefore, life skills affect one's perception of self-sufficiency and self-esteem and selfesteem and thus play an important role in mental health. As mental health increases, motivation for self and others care, prevention of health problems, and behavioral problems increases (35). Because life skills training to improved perceptions of workplace (36), then life skills training and encouragement training are effective in selfefficacy and marital satisfaction (37). Also, pre-marriage life skills training in couples are effective in reducing spouse abuse (38) and improving the quality of life of married women (39). Because life skills training has a significant impact on marital adjustment in young couples (40). Life skills training, without control and by controlling the duration of marriage, can increase the marital adjustment of married women. Life skill training improves the quality of relationship between couples. Problem-solving skills training also offers effective solutions when problems occur and thereby increases their satisfaction and satisfaction with marital life (41).

## **Limitations and Implications**

Since survey questionnaire was the method of data collection, the results may be, therefore, biased due to social desirability.

It is suggested that future studies use larger sized samples. It is suggested that future studies consider behavioral and emotional factors when studying life skills training and compare life skills training impacts between men and women in different regions. It is also suggested that future studies apply longitudinal design in exploring life skills training programs.

### References

- 1. Shi, L., Reid, L. H., Jones, W. D., Shippy, R., Warrington, J. A., Baker, S. C., ... & Luo, Y. The MicroArray Quality Control (MAQC) project shows inter-and intraplatform reproducibility of gene expression measurements. Nature biotechnology, 2006, 24.9: 1151.
- 2. Park, K. Role of micronutrients in skin health and function. Biomolecules & therapeutics, 1995, 23.3: 207.
- 3. Ellis, A., Sichel, J. L., Yeager, R. J., DiMattia, D. J., & DiGiuseppe, Rational-emotive couples' therapy. Pergamon Press, 1989.
- 4. Ahmadi, H & Grossi, S. Influencing the Brotherhood's Social and Cultural Inequality on Gender Inequality in Kerman's Families and its Related Villages, Two Chapters in Women's Psychological Social Advertising, Zestan, 2004, 6, 33-5.
- 5. Gomori, J. M., Grossman, R. I., Goldberg, H. I., Hackney, D. B., Zimmerman, R. A., & Bilaniuk, L. T. Occult cerebral vascular

- malformations: high-field MR imaging. Radiology, 1986, 158.3: 707-713.
- 6. Dorian, M, & Cordova, J. V. Observing intimacy in couples' interactions. Invited chapter in P. K. Kerig & D. Baucom (Eds.), Couple observational coding systems. Mahwah, NJ: Lawrence Erlbaum Associates. 2004.
- 7. Jadidi, M. and John B, S. (2009), Study and Comparison of Communication Beliefs and Marital Conflicts in Men, Third Congress of Family and Health | Sex, Tehran: Shahed University.
- 8. Benner, M K.; Hill, A, B. 10-year follow-up of chronic non-malignant pain patients: Opioid use, health related quality of life and health care utilization. European Journal of Pain, 2006, 10,5: 423-423.
- 9. Arabestani, M. & Nikparvar, R. Evaluation of life skills training program in fourth and fifth grades. deputy for cultural affairs, Iranian Welfare Organization.2005.22(1).44-65.
- 10.Ramesht, M. & Farshad, S. Effect of life skills training on drug use prevention among students. The 2th conference on students' mental health .2004,2:126-138.
- 11. Naseri, H. Life skills for students. Deputy for cultural affairs and prevention, Iranian Welfare Organization .2007,1(5):147-152.
- 12.Pittman, k. Promoting youth development academy for educational development. Washington 1997.2.15.146-164.
- 13. Taremian, F. & Sahjoei, M. Life skills. Tehran: Tarbiat Pub. 2009.
- 14. Nori, R. & Pairavi, H. A guide for adjustment during student life. Tehran: Parsa Pub. 2007.
- 15.Dardan. C & Ginter.e "Life Skill Selevel op ments caleadoles". Cense.1996.
- 16. Sanai Z, Bagher; F, Vali E & Fallahzadeh, H. The Effectiveness of Emotional Couple Therapy and Integrated Couple Therapy on Couple Anxiety Reduction. Journal of Family Research; 2012. 8 (32): 465-484.
- 17.PHILLIPS, D. Quality of life: Concept, policy and practice. Routledge, 2006.

- 18.NILSSON, J; RANA, A.M; KABIR, Zarina Nahar. Social capital and quality of life in old age: results from a cross-sectional study in rural Bangladesh. Journal of aging and Health, 2006, 18.3: 419-434.
- 19.Mahmoodi, A. A comparative analysis of quality of life indicators. M.A. dissertation. Tarbiat Modares University .2011.
- 20. Hosseinzadeh, D. & Mirzaei, S. Effect of quality of life on productivity. Quarterly Journal of Management, 2007.18(12).
- 21. Mokhtari, M. & Nazari, J. Sociology of quality of life. Tehran: Sociologists Pub.2010.
- 22. Ghafari, G. & Omidi, R. Quality of life: a proxy for social development. Tehran: Shirazeh pub. 2008.
- 23. Diner, H. R., & Paul, S.. The Jews of the United States, 1654 to 2000. Univ of California Press, 2004.
- 24. Fati, L.; Motabi, F.; Mohammad Khani, S. & kazemzadeh, M. Life skills training. Tehran: Danzheh Pub, 2010.
- 25.Oliver, Ch. D; Larson, B.C. & Oliver, C. D. Forest stand dynamics. New York: Wiley, 1996.
- 26.Botvin. G, J., Mihalie ,s: F & Grotpeter. J.K. History and description of life skills blue prints for violence prenanshion. Book Five: Life skills training. boclder, Co.: Center for the study and prevention of drug a hous. 1998.
- 27. Srikala, B. & Kishore, K.V. "Empowering adolscents with life skills education in schools-school mental health program: Does it work?". Indian J psychiatry, 2010.52, 344-349.
- 28. Esmaeili, M. Investigation into the effect of life skills training and parenting styles on self-steam of Ardabil students. Unpublished M.A. dissertation. 2001.
- 29.Gottman, J. Emotional Intelligence, Introduction taken from the book raising an Emotionally Intelligent Child. Journalism Quarterly, 1997.N 60, 615-621.
- 30. Visser, W. "The emergence of corporate citizenship in South Africa: A ten-year review of key influences, Milestones and Trends 1994-

- 2004". Journal of corporate citizenship .2005.18, 95-105.
- 31.Baqaei M, G. & Malekpour, M. Effectiveness of life skills training on anxiety, exhilaration and anger management among adolescences with physical-motor disability. Research in Exceptional Children, 2011.Vol. 6, pp. 559-576.
- 32. Albertin, R.M., Kapp, C.A. & Croenewald, C.J. Patterns of empowerment in individuals through the course of a life skills program. Journal of studies in the education of adults. 2004.33(2), 760-780.
- 33.Qasemi, S. Effect of life skills training on mental health and happiness among inmates. M.A. dissertation. Zanjan Islamic Azad University.2013.
- 34. Young, D.R. Philips, J.A. Yu, T & Haythomth Waite, J.A. "Effects of a life skills intervention for increasing physical activity in adolescent girls". Arch pediatr Adolese Med. 2006 .160. 1255-1261.
- 35. Patrick, S., Sells, J. N., Giordano, F. G. & Follerud, T.R. Intimacy, differentiation, and personality variables as predictors of marital satisfaction. The Family Journal, 2007.15; 359-367.
- 36.Cordova, J. V., Gee, C. B., & Warren, L. Z. Emotional skillfulness in marriage: Intimacy as a mediator of the relationship between emotional skillfulness and marital satisfaction. Journal of Social and Clinical Psychology, 2005.24(2), 218-235.
- 37.Bholghasemi, Sh. The effect of religious rites on youth mental health. Journal of Islam and Educational Research, 2012.1 (1).
- 38.Fatemi, S.M.; Davoodi, R.; Fesharaki, M. & Golafshani, A. Relationship between life skills and domestic violence. Quarterly Journal of Social Welfare, 2011.Vol. 43.231-241.
- 39. Abbasi, A.; Jalilpour, N.; Kamkar, A.; Baqerizadeh, Q. & Moamed, F. Effect of life skills training on marital satisfaction among employed married women. Quarterly journal of Gift of Knowledge, 2011. Vol. 66.

- 40. Yarmohammadian, A.; Bonekdar H, N. & Asgari, K. Effect of emotional intelligence training and life skills training on marital adjustment among newly married couples. Journal of Research into Applied Psychology, 2011.12(44), pp. 3-13.
- 41.Mehrabizadeh, M.; Hossienpour, M. & Mahdizadeh, L. Effect of life skills training on marital adjustment among married women aged between 20-40. Quarterly Journal of Research into Teaching and Learning, 2010.Vol. 58.147-152.