Article

The effectiveness of the satir approach-based counseling on the parenting sense of competence in adolescent mothers

Masoumeh Hasani[1], Azam Maleki[2], Parvin Mohebbi[3], Loghman Ebrahimi[4]

[1]Masters student of Counseling in Midwifery, Social Determinants of Health Research Center, Zanjan University of Medical Sciences, Zanjan, Iran
[2]Assistant Professor of Reproductive Health, Social Determinants of Health Research Center, Health and Metabolic Diseases Research Institute, Zanjan University of Medical Sciences, Zanjan, Iran
[3]Instructor of Midwifery, Department of Midwifery, School of Nursing and Midwifery, Zanjan University of Medical Sciences, Zanjan, Iran
[4] Department of Psychology Department, Faculty of Humanities, Zanjan University, Zanjan, Iran

Article Info

Article history:
Received: 8 Sep 2023
Accepted: 16 Mrch 2024

Keywords:
Counseling, Family therapy, Maternal behavior, Self-efficacy

***Corresponding author:**
Azadi Square, Jomhori Eslami St, Social Determinants of Health Research Center, Zanjan University of Medical Sciences, Zanjan, Iran

Email: malekia@zums.ac.ir

Abstract

Background: Pregnancy in adolescents is an important health issue influencing the family and society. The use of various counseling approaches can greatly affect increasing knowledge and skills, how to control emotions, and playing adult roles.
Objectives: The present research was conducted aiming to determine the effect of the Satir approach-based counseling on parenting competence in adolescent mothers in 2021-2022.
Methods: This single-group quasi-experimental research was conducted with a pretest-posttest design on 33 adolescent mothers. The sampling method was purposeful. Mothers participating in the research received 6 counseling sessions based on the Satir approach to family therapy in the presence of their husbands. The data were collected in three phases, including pre-test, post-test, and 6 weeks after the end of the counseling sessions, using the Parenting Sense of Competence (PSOC) Scale only from mothers and were analyzed using descriptive statistics and the repeated measures analysis of variance (ANOVA).
Results: The mean (standard deviation) score of parental sense of competence was 67.20 (11.1) before the intervention, 74.63 (9.46) after the intervention, and 78.07 (9.21) in the follow-up phase. Overall, there was a statistically significant difference between the mean score of parental sense of competence in the pre-test, post-test, and follow-up phases [$F_{(1.24,\ 36.05)}$=21.86, p<0.001).
Conclusion: According to the results, the Satir approach is effective in improving the parenting sense of competence in adolescent mothers in the postpartum period. It also seems that the presence of husbands in the postpartum counseling program is a proper measure.

Implications of this paper in nursing and midwifery preventive care:

- The findings of this study have presented a clear perspective toward the use of counseling with the Satir approach in mother and child health; therefore, it can be a manual for formulating training programs in the form of course credits, clinical skills, or workshop content for midwifery, nursing, and family health students who play a crucial role regarding the health of mothers and their children. Students should be aware of the role of counseling and influential communication of health workers during pregnancy and the postpartum period and learn the required skills in this field so that they have enough preparation in order to appropriately treat women's emotional, psychological, and physical problems in the future.

Introduction

Adolescence is the period between childhood and adulthood, encompassing the elements of biological growth and transfer of the principal social role. The length of adolescence has changed in the last century. The definition of 10-24 years instead of 10-19 years of age is more related to adolescent growth and the general perception of this stage of life [1]. Each year, about 21 million 15–19-year-old girls become pregnant in developing regions, and about 12 million of them give birth [2]. According to the latest data, of every 1000 adolescent 15–19-year-old girls, around 41 in the world and 30 in Iran become mothers [2,3]. Pregnancy in adolescents is an important public health issue influencing the health of adolescent mothers, babies, and society, at a large scale [4]. During adolescence, in addition to experiencing physical and sexual maturity, women also need to achieve socioeconomic independence, identity development, and communication skills, accept the role of adulthood, reasoning capacity, and abstract thinking [5]. Pregnancy is a transitional and critical period regarding psychosocial stressors in a woman's life, during which women experience various crucial changes. In this period, motherhood identity is shaped as one of the most significant roles of women in light of many crises associated with it [6]. Becoming a mother during

adolescence means that an adolescent girl faces parenting responsibility when she is forced to adapt to maturity-related changes [7].

Playing the role of wife and mother simultaneously for an adolescent girl exposes her to psychological pressures and traumas [8]. The majority of adolescent mothers are worried about their parenting responsibilities because of the lack of required knowledge to take care of the baby and have less than favorable parenting for their children [7]. Similarly, due to poor cognitive development, most adolescents have low self-esteem in early adolescence [9]. Low self-esteem leads adolescent girls to not be able to properly respond to their and their baby's physical-psychological needs in the postpartum period, thus facing problems in taking care of their baby [10]. This issue may impact their parenting sense of competence [11]. Parenting sense of competence reflects the mother's belief in her ability to perform the maternal role effectively. Parenting competence is not only a factor affecting maternal mental health but also a strong predictor of parental ability and infant consequences [12]. Mothers with a greater parenting sense of competence further insist on their maternal role, do not blame themselves, and feel more successful in caring for their child [13]. Numerous factors influence the parenting sense of competence, including age, level of self-esteem, and social support from husband, family, and healthcare workers [14]. Support from husbands and other family members and attention to their training needs by healthcare workers can positively impact improving the physical and psychological status of adolescent mothers and transitioning from this stage of life [15].

The Satir approach is one of the family therapy methods noticed today for effective communication and increasing couples' intimacy. Contrary to short-term therapies that are one-dimensional and only deal with behavior, cognition, or emotions, the Satir approach pays attention to all of these dimensions simultaneously [16]. This approach shows that family dysfunction stems from incorrect communication, which is related to the sense of self-worth or in other words the low self-esteem of each individual. Using this approach, researchers seek to raise couples' emotional intimacy, efficient communication, and a sense of self-worth [17]. According to the findings of previous studies, the positive impacts of this approach have been demonstrated on the improvement of couples' relationships and intimacy [18] and the improvement of parent-child communication in preschool and adolescence [19,20]. However, there is limited information regarding the application of this approach to improving the parenting sense of competence in adolescent mothers in the postpartum period. Hence, considering the necessity of reinforcing the sense of self-worth in adolescent mothers and also benefitting from family support to improve the parenting sense of competence and the unavailability of a similar study in this regard, the current research was conducted aiming to determine the effect of the Satir theory-based counseling on the parenting sense of competence in adolescent mothers in 2021-2022.

Methods

This quasi-experimental single-group study was conducted with a pretest-posttest design on adolescent mothers giving birth in 2021-2022. The research setting consisted of the postpartum ward of hospitals in the city of Abhar (Al-Ghadir Hospital and Omid Social Security Hospital). After obtaining the code of ethics from the Research Ethics Committee, Zanjan University of Medical Sciences, 33 adolescent mothers were selected in a purposeful manner. The selected mothers entered the research after explaining the research conditions and objectives and obtaining written consent. Considering that the intervention was of family therapy type, mothers participating in the study attended couple counseling sessions along with their husbands. The inclusion criteria included 13-24-year-old adolescent mothers, the mother and husband's willingness to participate in the study, passing at least 48 hours since childbirth, stabilization of the mother's vital signs, having at least fifth-grade literacy, access to a cell phone with the ability to connect to WhatsApp, living with a sexual partner, and gaining a score less than 14.5 on Goldberg and Williams' 12-item General Health Questionnaire (GHQ-12). Exclusion criteria included hospitalization of the baby, complications after childbirth (hemorrhage or infection), lack of cooperation of husband, and

absence of more than two sessions in online counseling sessions.

The sample size was calculated to be 8 people using the mean and standard deviation of the parenting sense of competence in Jahdi et al.'s study [21]. Also, in the current study, the sample size was calculated to be 33 people using Cohen's formula with a confidence coefficient of 95% (α=5.0%), a test power of 80% (β=20.0%), and using a mean effect size of 50%. According to Cohen, the effect size in quasi-experimental studies (before and after without a control group) is 20% (weak), 50% (moderate), and 80% (strong), respectively.

Couple counseling was conducted by an experienced researcher based on the Satir approach in six 60-90 minute sessions on a weekly basis. The first counseling session was face-to-face and in pairs before discharge, and the following sessions were in pairs and virtual (through WhatsApp) in the form of text and voice messages and online calls. In the virtual sessions, first, the researcher made online contact with the mother at the appointed time and made sure of the husband's presence and participation. At the beginning of the session, the homework and the summary of the previous session were reviewed, and then, the training part of the session was sent to the couples as a recorded file due to the problems of making online contact with the mothers. After the couples listened to the sent files, the researcher re-contacted the mother and the husband online, and in order to make sure of listening to the sent files, the researcher got feedback from the mother and her husband by asking some questions. At the end of the session, the discussion, practice, and homework for the next session were carried out. Overall, the total time of online sessions did not exceed 90 minutes. The sessions' content was designed by using the Satir theory to raise couples' self-esteem, particularly mothers' self-esteem, and to amend couples' dysfunctional communication patterns. The details of the counseling content based on sessions are provided in Table 1. The content of counseling sessions was approved by the research team members who were experts in midwifery and psychology.

Table 1: Counseling content based on sessions

Sessions	Subject	Implementation Method	Homework
Session one: In-person at hospital	Becoming familiar with each other and greeting, trust-building, and drawing a family map	Introducing oneself and becoming familiar with the couple, determining the goals of the sessions and describing the rules of the group, reassuring the couple about the confidentiality of their information, explaining the group contract for permanent participation and confidentiality, and not using the learned materials inappropriately in situations outside the group, familiarizing members with family hierarchy and family map and roles and drawing their own family map, familiarizing the members with the supportive role of fathers in the postpartum period and finding out the effect of the original family interactions and the role of childhood on the current family by visualizing the past by the couples.	Taking notes regarding the concerns about maintenance and communication with the child and the couple's expectations of each other's roles after childbirth and the husband's support
Session two: Virtual, through WhatsApp	Personal value, self-esteem, and self-respect	Checking the previous session's homework, examining the couple's level of self-esteem, particularly regarding the maternal role and child care, explaining Satir's self-esteem pot and the role of self-esteem in parental competence, Strategies for increasing self-esteem, accepting positive self; couples were provided an opportunity to freely express their feelings and, by reframing, recognize and validate their own values and promote their awareness of self-talks that indicates low self-esteem.	Performing self-esteem-increasing exercises and recording the situations in which they felt filled-pot and empty-pot and the role of personal values in it.

Sessions three and four: Virtual, through WhatsApp	Communication and various types of communication styles	Checking the previous session's homework, becoming familiar with the role of communication patterns in married life, clarifying various types of dysfunctional communication patterns and identical communication patterns and correcting the parental dysfunctional communication patterns, discussing the effect of the husband's supportive role in the maternal sense of competence, establishing positive relationships with the child, discussing and assessing of signs of positive and negative mother-child communication, and describing technique of touching.	Recording your communication pattern, whether efficient or ineffective in different situations, practicing the identical communication pattern, identifying the communication obstacles between yourself and your husband, and practicing the correct reaction to each other's requests in interactions.
Session five: Virtual, through WhatsApp	Recognizing family rules and changing and amending inefficient rules	Checking the previous session's homework, discussing rules and the role of rules in family life, assessing the rules of couples regarding mutual marital duties and parental responsibilities, communication with family and friends, expressing feelings, love and respect, assessing it in terms of being reasonable or unreasonable and being flexible or inflexible, clarifying the steps of determining rules in the family.	Discovering your unwritten rules, particularly about parental and marital duties, and assessing them regarding being logical and flexible, and replacing illogical rules with new ones.
Session six: Virtual, through WhatsApp	Conclusion of previous sessions	Checking the previous session's homework, concluding the previous sessions' topics, responding to the questions of the members and eliminating the ambiguities and mistakes, implementing the post-test.	-

Data collection tools included a demographic characteristics checklist, the Parenting Sense of Competence Scale, and Goldberg's GHQ-12.

The demographic characteristics checklist included the adolescent mother and her husband's age, occupation, and education, family income status, housing status, place of residence, ethnicity, number of children, and the birth intervals between the newborn and the previous child.

-The Parenting Sense of Competence Scale (PSOC; Gibaud-Wallston and Anderson) [22]: This questionnaire contains 17 questions with 2 subscales of satisfaction and efficiency in the parenting role. Parenting efficiency is evaluated with 8 items and parenting satisfaction with 9 items. The questions are scored based on a 6-point Likert scale (from "completely agree" to "completely disagree"). The total score of the scale ranges from 17 to 102. A higher score denotes higher parenting competence. The reliability of this questionnaire has been confirmed in Kurdi et al.'s (2015) study by calculating Cronbach's alpha of 75% [23]. In the current study, Cronbach's alpha coefficient was used to assess the internal consistency of the questionnaire, which was calculated by SPSS 26 software. The reliability of the scale was confirmed with Cronbach's alpha coefficient of 0.87. This questionnaire was asked and completed by the researcher from the subjects in three stages, including pre-test, post-test, and 6 weeks after the completion of counseling sessions.

-The GHQ-12 (Goldberg and Williams) [24]: This questionnaire consists of 12 questions to measure the severity of mental problems over the last month. According to the 4-point Likert scoring method (0-1-2-3), a score higher than 14.5 usually denotes the incidence of a disorder in an individual's health. The reliability of the questionnaire was confirmed in Ebadi et al.'s (2002) research using Cronbach's alpha coefficient of 0.87 [25]. In the current study, Cronbach's alpha coefficient was used to assess the internal consistency of the questionnaire, which was calculated by SPSS 26 software. The reliability of the scale was confirmed on the pre-intervention data with Cronbach's alpha coefficient of 0.81.

Data were analyzed using IBM SPSS Statistics version 26. According to the Kolmogorov-Smirnov test, the data had a normal distribution. Descriptive statistics, including mean, standard deviation, percentage, and frequency, were used for data analysis, and the repeated measures analysis of variance (ANOVA) and Bonferroni's

post-hoc test were used to assess the difference in the mean scores of parenting competence before the intervention, after the intervention, and 6 weeks of follow-up phase. The significance level in this study was 0.05.

Results

Thirty-three adolescent mothers and their husbands were included in this study. Overall, 3 cases were excluded from the study (2 cases because of unwillingness to continue participating in online counseling sessions and one case because of the husband's refusal to cooperate).

The mean (standard deviation) score of mothers' general health was 9.54 (3.8). The majority of the mothers (n=17, 56.7%) had 19-21 years of age, and most of the husbands (n=25, 83.3%) had 25-30 years of age. The majority of mothers (70%) had vaginal childbirth and a high school and diploma degree (56.7%). Most of them lived in the city (63.3%) and were housewives (90%). Their husbands' education was high school and diploma (56.7%) and 100% were employed. In most cases, the family income status was reported to be relatively adequate (36.7%), and 50% owned private housing (Table 2).

Table 2: Frequency and percentage of participants' demographic characteristics

variable		Number (%)
age	13-15	0 (0)
	16-18	6 (20)
	19-21	17 (56.7)
	22-24	7 (23.3)
education	Primary school	1 (3.3)
	Middle school(secondary)	11 (36.7)
	High school/ diploma	17 (56.7)
	University	1 (3.3)
job	housewife	27 (90)
	employed	3 (10)
Family income	sufficient	10 (33.3)
	Relatively sufficient	11 (36.7)
	Not sufficient	9 (30)
house	private	15 (50)
	Rented	13 (43.3)
	Living with relatives	2 (6.7)
Type of delivery	Vaginal delivery	21 (70)
	Cesarean section	9 (30)
Residence	city	19 (63.3)
	districle	3 (10)
	village	8 (26.7)
Husband's age	19-24	5 (16.7)
	25-30	25 (83.3)
Husband's education	Primary school	1 (3.3)
	Middle school	7 (23.3)
	High school/ diploma	17 (56.7)
	University education	5 (16.7)
Husband's job	unemployed	0 (0)
	employed	30 (100)

The results indicated that the mean score of the PSOC and its subscales increased 6 weeks after the intervention compared to immediately after the intervention and pre-test (Table 3).

Table 3: The mean and standard deviation of the parenting sense of competence scale and its subscales in the pre-test, post-test, and 6-week follow-up phases

variable	pretest	Post test	follow up
	Mean (SD)	Mean (SD)	Mean (SD)
Satisfaction	36.1 (6.66)	39.30 (5.43)	40.90 (5.80)
Efficacy	31.07 (5.23)	35.33 (5.38)	37.17 (4.60)
Competence	67.20 (11.1)	74.63 (9.46)	78.07 (9.21)

Due to the fact that the epsilon value in the role satisfaction component and the total PSOC scale were less than 0.75, therefore, the Greenhouse-Geisser adjusted ANOVA test was used for these two variables; however, since the epsilon value in the efficiency subscale was higher than 0.75, the Huynh-Feldt test was used.

There was a significant difference between the mean scores of the pre-test, post-test, and follow-up phases of the total PSOC scale [$F_{(1.24, 36.07)}$=38.18, p<0.001) and the satisfaction [$F_{(1.24, 36.05)}$=21.86, p<0.001] and efficiency [$F_{(1.65, 48.11)}$=43.45, p<0.001) subscales (p<0.001). The eta squared values for the total scale and satisfaction and efficiency subscales were 0.57, 0.43, and 0.60, respectively. In other words, the intervention has been effective in elevating the total scores of the PSOC scale and satisfaction and efficiency subscales by 57%, 43%, and 60%, respectively (Table 4).

Table 4: The results of the repeated measures analysis of variance of the Parenting Sense of Competence scale and its subscales

variable	Source	Sum of square	Df	Mean square	F	p value	Eta
Satisfaction	Time	353.09	1.24	284.01	21.86	<0.001	0.43
	Error(Time)	468.24	36.05	12.98	-	-	-
Efficacy	Time	587.75	1.65	354.28	43.45	<0.001	0.60
	Error(Time)	392.24	48.11	8.15	-	-	-
Competence	Time	1851.26	1.24	1488.29	38.18	<0.001	0.57
	Error(Time)	1406.06	36.07	38.97	-	-	-

The results demonstrated that, based on Bonferroni's post-hoc test, the difference between the total score of the PSOC scale and satisfaction and efficiency subscales in the pre-test, post-test, and follow-up phases were significant in pairs (p<0.001) (Table 5).

Table 5: Bonferroni's post-hoc test to compare the difference between the mean scores of competence and its components

variable	Compare groups	Mean Difference	Std. Error	p value	95% Confidence Interval	
					Lower Bound	Upper Bound
Satisfaction	Pre-test and post-test	-3.17	0.80	<0.001	-5.20	-1.13
	Pre-test and follow up	-4.77	0.91	<0.001	-7.10	-2.44
	Pre-test and follow up	-1.60	0.37	<0.001	-2.53	-0.67
Efficacy	Pre-test and post-test	-4.27	0.67	<0.001	-5.99	-2.54
	Pre-test and follow up	-6.10	0.80	<0.001	-8.14	-4.05
	Pre-test and follow up	-1.84	0.49	<0.001	-3.10	-.057
Competence	Pre-test and post-test	-7.43	1.33	<0.001	-10.83	-4.03
	Pre-test and follow up	-10.87	1.61	<0.001	-14.98	-6.76
	Pre-test and follow up	-3.44	0.66	<0.001	-5.13	-1.73

*= p< 0/05

Discussion

In the current study, the effect of using the Satir approach-based counseling on improving parenting competence in adolescent mothers was evaluated. The results indicated that counseling led to improving the total score of PSOC and satisfaction and efficiency subscales in adolescent mothers, and this effect continued until 6 weeks

after the intervention. As far as we know, no similar study was available. In line with the current study, there are some studies conducted regarding improving parenting competence, such as Jahdi et al.'s [21] study showing that training attachment behaviors during pregnancy affected the competence of primiparous mothers in 10 days after childbirth [21]. Kurdi et al. also concluded in their research that the psychological training implementation on primiparous women during pregnancy culminated in promoting maternal role competence six weeks after childbirth [26]. The results of the above studies were matched with the results of the present study, despite the existence of differences in the research community and the training duration.

In Hayes et al.'s study, it was found that the implementation of a one-day short-term training program based on breastfeeding skills resulted in increasing mothers' sense of competence [27]. The results of the mentioned study were matched with the results of the present study, with the difference that in the mentioned study, individual-oriented interventions were implemented during pregnancy, while in the present study, the intervention was performed based on the Satir approach to family therapy on adolescent mothers in the postpartum period. Zameni et al. found out that training dialectical behavior therapy techniques during the last trimester of pregnancy along with lavender aromatherapy in the active stage of childbirth is an effective intervention to relieve depression and enhance maternal competence [28]. The results of this study were in line with the current study. Chislett and Kent indicated that implementing 6 training sessions culminated in significantly increasing parenting competence of parents with children under one year old [29]. The design of the mentioned research was similar to the current research as a one-group study. Fathers also attended the training sessions along with mothers. In their study, Yang et al. emphasized the necessity of developing family-oriented intervention strategies and husbands' participation to improve parenting competence and satisfaction [30]. Family therapy is a comprehensive therapeutic approach for evaluation and intervention at the family level, in which the problems of each individual concerning his/her family are investigated. In other words, family therapy knows the reasons for an individual's problems in his/her relationships with others. Family therapy aims to change the behaviors governing the relationships between family members and to strengthen the family in order to change the amount of existing problems, not just to change an individual [31].

Some of the existing studies have reported contradictory results. Gao et al. indicated that the implementation of two sessions of an interpersonal psychotherapy program and one telephone counseling session in the second week after childbirth in primiparous women had no effect on their maternal competence 6 weeks after childbirth, while a significant difference was observed in the maternal competence score 3 months after childbirth in the two groups [32]. The discrepancy may be attributed to the counseling content. On the other hand, in the present study, husbands also attended counseling sessions, which itself can be another reason for the effectiveness of counseling.

Ngai and Chan concluded in their study that psychological training based on the concept of learned resourcefulness with a focus on cognitive restructuring, problem-solving, and increased efficiency had no effect on maternal competence immediately after childbirth, 6 weeks after childbirth, and 6 months after childbirth [33]. The results of the above study were not matched with the results of the present study. The discrepancy may be attributed to the difference in the research community, the intervention implementation time, or the intervention method. The transition to the maternal role begins since pregnancy, continues into the postpartum period, and is stabilized when mothers feel competent and self-confident in caring for their infants, which is usually achieved about 4-6 months after birth [34]. Experiencing physical difficulties concerning childbirth and breastfeeding, psychological well-being, the ability to take care of an infant, social support, education and economic pressure, and healthcare provision are among the factors influencing adolescents' successful transition to the maternal role [35].

One of the limitations of the current research is that a quasi-experimental study is without a control group. Also, the personality characteristics of mothers and their husbands have not been investigated, which can be considered a

limitation. The strengths of this study included the use of standard questionnaires for data collection, implementation of couple counseling, and the use of a theory-based counseling approach to design and implement the intervention.

Conclusion

The present study results demonstrated the effectiveness of using the Satir approach in improving the parenting sense of competence in adolescent mothers in the postpartum period. Moreover, the presence of husbands in the postpartum counseling program seems to be an appropriate measure that can be noticed by planners in this field. The findings of this research have provided a clear perspective toward the use of counseling with the Satir approach in mother and child health; therefore, it can be a manual for formulating training programs in the form of course credits, clinical skills, or workshop content for midwifery, nursing, and family health students who play a crucial role regarding the health of mothers and their children. Students should be aware of the role of counseling and influential communication of health workers during pregnancy and the postpartum period and learn the required skills in this field so that they have enough preparation in order to appropriately treat women's emotional, psychological, and physical problems in the future.

Ethical Consideration

This research is a part of the findings of the master's thesis in Midwifery (code: A-11-344-24) in the Research Center of Social Factors Affecting Health (code: IR.ZUMS.REC.1400.065), approved by the Ethics Committee of Zanjan University of Medical Sciences, and registered in the Iranian Registry of Clinical Trial center (code: IRCT20150731023423N20).

Acknowledgments

We would like to thank adolescent mothers participating in the research for their participation in the study and the Computer Service Consulting for the Staff of the Clinical Research Development Unit at Ayatollah Mousavi Hospital, Zanjan University of Medical Sciences.

Conflict of interest

No conflict of interest.

Funding:

The present article was extracted from the first author's master's thesis in Midwifery Counseling (code: A-11-344-24) financially supported by the Research and Technology Vice-Chancellor of Zanjan University of Medical Sciences.

Authors' contributions:

H.M: Collecting samples and data, revising the texts, compiling and writing the article; M.A: Design performer, supervising the implementation and collecting data, performing statistical analyses, writing and editing the article; M.P: Supervising the implementation and collecting data, participation in the writing and editing of the article; E.L: Participation in the design of counseling and psychological counseling sessions.

References

1. Sawyer SM, Azzopardi PS, Wickremarathne D, Patton GC. The age of adolescence. The Lancet Child & adolescent health. 2018; 2(3): 223-8. Doi: 10.1016/s2352-4642(18)30022-1.
2. World Health Organization. Adolescent pregnancy 2023 [Available from: https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy. 2 June 2023.
3. THE WORLD BANK. Adolescent fertility rate (births per 1,000 women ages 15-19) 2021 [Available from: https://data.worldbank.org/indicator/sp.ado.tfrt. 23-sept-23.
4. Philibert L, Lapierre J. Strategies for Preventing Teenage Pregnancy and Improving the Lived Experience of Motherhood among Adolescents in Haiti: A Qualitative Study. Journal of Midwifery and Reproductive Health. 2023; 11(1): 3602-13. Doi: 10.22038/jmrh.2022.63935.1856.
5. Taherzade Ghahfarokhi S, Sayehmiri H. study of different physical, cognitive and social changes of adolescence from different perspectives and problems and mental disorders of this period. New advances in psychology, education, and education. 2021; 43(7): 1-26. [In Persian]. Retrieved frome: https://www.jonapte.ir/fa/.
6. Azimi K. The trend of girl child marriage in Iran based on national census data. Sex Reprod

Health Matters. 2020;28(1):1820655-. Doi: 10.1080/26410397.2020.1820655.
7. Mangeli M, Rayyani M, Cheraghi MA, Tirgari B. Exploring the Challenges of Adolescent Mothers From Their Life Experiences in the Transition to Motherhood: A Qualitative Study. Journal of family & reproductive health. 2017; 11(3): 165-73. Retrieved from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6045691/.
8. Kalhor M, Aj N, Alipour M, Eghdam Poor F. Comparison of pregnancy and delivery outcomes in teenage mothers and primiparas referring to Kowsar Teaching Hospital in Qazvin in 2012-2013. Razi Journal of Medical Sciences. 2015; 21(129): 27-38. [In Persian]. Retrieved from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6045691/.
9. Mohamed N, Mahmoud GA-E. Self-concept and self-esteem among adolescent pregnant women at General Assiut Hospital, Assiut City. Egyptian Nursing Journal. 2018;15(2):93-101. Doi: 10.4103/enj.Enj_45_17.
10. Meireles JFF, Neves CM, Amaral ACS, Morgado F, Ferreira MEC. Body Appreciation, Depressive Symptoms, and Self-Esteem in Pregnant and Postpartum Brazilian Women. Frontiers in global women's health. 2022;3:834040. Doi: 10.3389/fgwh.2022.834040.
11. Han JW, Kim DJ. Longitudinal Relationship Study of Depression and Self-Esteem in Postnatal Korean Women Using Autoregressive Cross-Lagged Modeling. International journal of environmental research and public health. 2020;17(10). Doi: 10.3390/ijerph17103743.
12. Zhu Y, Zhou X, Yin X, Qiu L, Sun N, An R, et al. Parenting sense of competence and its predictors among primiparous women: a longitudinal study in China. BMC Pregnancy and Childbirth. 2022; 22(1): 548. Doi: 10.1186/s12884-022-04881-y.
13. Fasanghari M, Keramat A. Investigating the effect of educational interventions on maternal competence: A systematic review and meta-analysis. Journal of education and health promotion. 2023;12:254. Doi: 10.4103/jehp.jehp_25_23.
14. Sohrabi M, Azizzadeh Forouzi M, Mehdipour-Rabori R, Bagherian B, Nematollahi M. The effect of a training program on maternal role adaptation and self-esteem of mothers with preterm infants: a quasi-experimental study. BMC women's health. 2021; 21(1): 296. Doi: 10.1186/s12905-021-01440-z.
15. Mangeli M, Tirgari B, Cheraghi MA, Rayyani M. Exploring the experiences of Iranian adolescent mothers about the maternal role: a qualitative study. Electronic physician. 2018; 10(5):6812-20. Doi: 10.19082/6812.
16. Ashja S, Refahey Z. The Effectiveness of Communicative approach training effective way Stair to reduce conflict and increase intimacy among Boushehrian couples [dissertation]: Islamic Azad University Marvdasht Branch; 2013. [In Persian]
17. Okur S. Satir Transformational Systemic Therapy and Spirituality. Spiritual Psychology and Counseling. 2020;5:45-64. Doi: 10.37898/spc.2020.5.1.094.
18. Nazari AM, Asadi M. The Effectiveness of Satir Brief Family Therapy on Couple Intimacy. Woman & Study of Family. 2009;2(5):109-29. [In Persian] .Retrieved frome: https://journals.iau.ir/article_519703_0.html.
19. Seo SH, Kim SJ. The Effects of a Parental Education Program based on Satir Transformational Systemic Therapy Model for Preschoolers' Mothers. J Korean Acad Psychiatr Ment Health Nurs. 2015;24(4):330-41. Doi: 10.12934/jkpmhn.2015.24.4.330.
20. Musavi M, Jeloyari F, Tabrizi M. Effectiveness of Training Based on Virginia Stair's Communicative Approach on Parent-Child Relationship of Teenaged Girls. Journal of Applied Psychology. 2014;7(4 (28)):9-25. [In Persian]. Retrieved from: https://apsy.sbu.ac.ir/article_96032.html.
21. Jahdi F, Kaheh A, Haghani H. Effect of Attachment Behaviors Training on Maternal Competence attainment in Nulliparous Adolescent Women. J Babol Univ Med Sci (JBUMS). 2019;21(1):78-84. [In Persian]. Doi: 10.22088/jbums.21.1.78.
22. Gibaud-Wallston J, Wandersmann LP. Development and utility of the Parenting Sense of Competence Scale: John F. Kennedy center for research on education and human development; 1978.
23. Kordi M, Fasanghari M, Asgharipour N, Esmaily H. Effect of a Maternal Role Training Program on Postpartum Maternal Role Competence in Nulliparous Women with

Unplanned Pregnancy. J-Mazand-Univ-Med-Sci. 2016;25(134):124-34. [In Persian]. Retrieved from: http://jmums.mazums.ac.ir/article-1-7232-en.html.
24. Goldberg DP, Williams P. User's guide to the General Health Questionnaire. Windsor. 1988.
25. Ebadi M, Montazeri A, Harirchi AM, Shariati M, Garmaroudi G, Fateh AJH, et al. The 12-item General Health Questionnaire (GHQ-12): translation and validation study of the Iranian version. 2003;1(1):1-4. Doi: 10.1186/1477-7525-1-66.
26. Kordi M, Bakhshi M, Masoudi S, Esmaily HJJoMUoMS. Effect of prenatal psychological trainings on satisfaction with childbirth and maternal role competence in primiparous women. 2018;28(165):98-108. [In Persian]. Retrieved from: http://jmums.mazums.ac.ir/article-1-10865-en.html.
27. Hayes L, Matthews J, Copley A, Welsh D. A randomized controlled trial of a mother-infant or toddler parenting program: demonstrating effectiveness in practice. Journal of pediatric psychology. 2008;33(5):473-86. Doi: 10.1093/jpepsy/jsm085.
28. Zameni E, Shahabizadeh F, Jarahi Feriz J, Ghanbarzadeh N. The Effect of Dialectical Behavior Therapy Techniques Training with lavender Aromatherapy on Depression and Maternal Competence of Nulliparous Women with Insecure Attachment to Spouse. Avicenna-J-Nurs-Midwifery-Care. 2021;29(4):314-27. Doi: 10.30699/ajnmc.29.4.314.
29. Chislett G, Kennett DJ. The Effects of the Nobody's Perfect Program on Parenting Resourcefulness and Competency. Journal of Child Family Studies. 2007;16:473-82. Doi:10.1007/s10826-006-9098-x.
30. Yang X, Ke S, Gao LL. Social support, parental role competence and satisfaction among Chinese mothers and fathers in the early postpartum period: A cross-sectional study. Women and birth : journal of the Australian College of Midwives. 2020;33(3):e280-e5. Doi: 10.1016/j.wombi.2019.06.009.
31. Maabreh SM, Faiez F, Al-Kousheh M, Maabarha S. The effectiveness of a counseling program based on the model of Virginia Satir in improving quality of life and reducing negative communication patterns among a sample of wives in irbid governorate. Res Humanit Soc Sci. 2020;10:84-96.
32. Gao LL, Chan SW, Sun K. Effects of an interpersonal-psychotherapy-oriented childbirth education programme for Chinese first-time childbearing women at 3-month follow up: randomised controlled trial. International journal of nursing studies. 2012;49(3):274-81. Doi: 10.1016/j.ijnurstu.2011.09.010.
33. Ngai F-W, Chan SW-C, Ip W-YJIjons. The effects of a childbirth psychoeducation program on learned resourcefulness, maternal role competence and perinatal depression: a quasi-experiment. 2009;46(10):1298-306. Doi: 10.1016/j.ijnurstu.2009.03.007.
34. Rafii F, Alinejad-Naeini M, Peyrovi H. Maternal role attainment in mothers with term neonate: A hybrid concept analysis. Iranian Journal of Nursing and Midwifery Research. 2020;25(4):304. Retrieved from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7494165/.
35. Erfina E, Widyawati W, McKenna L, Reisenhofer S, Ismail D. Adolescent mothers' experiences of the transition to motherhood: An integrative review. International journal of nursing sciences. 2019;6(2):221-8. Doi: 10.1016/j.ijnss.2019.03.013.