

Original Article

Comparison of adolescent mental health in Monogamy and Polygamy families

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Abstract

Background: Family shapes children's mental health and is a safe environment to ensure their mental health. This study aimed at comparing the mental health of adolescents in monogamy and polygamy families based on maternal psychological, economic, and social variables.

Methods: This is a causal-comparative study, which was carried out on all adolescents aged 14-18 years old in the monogamy and polygamy families of Saravan city in the academic year of 2020-2021 with their mothers. Two hundred forty people were selected by convenience sampling method. Goldberg and Hillier General Health Questionnaire, Ghodrat-Nama Socioeconomic Status Questionnaire, and Drogaitis Symptom Check list-90-Revised (SCL-90-R) were used. SPSS-26 was used to analyze the data. The results were analyzed using independent t-test, and multivariate analysis of variance.

Results: The results showed that there was a significant difference between the mental health of adolescents in monogamy and polygamy families ($P=0.034$). Adolescents in monogamy and polygamy families were significantly different in only one component of mental health which is hostility ($P<0.05$), but in terms of other components there were no significant differences ($P>0.05$). Adolescents in polygamy families had lower mental health than children of monogamy families with moderate mental symptoms ($P=0.003$). Moreover, the high socio-economic status of mothers brought about a significant difference in adolescents' mental health ($P=0.020$).

Conclusion: According to the results, the mental health and socio-economic status of mothers affect the mental health of adolescents, so comprehensive programs to promote mental health and attention to the socio-economic status of mothers can increase it in adolescents.

Keywords: Mental health; Monogamy; Polygamy; Socio-economic status.

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Introduction

Family is the most basic social unit and is an important place for the physical and mental development of individuals that can affect the growth of each member (1). Any change in the family is accompanied by changes in the functioning of the family, because the behavior of family members is a function of

other members, and since the family wants to create balance, any deviation from the rules of this institution by each member will lead to confrontation with other members. (2). By playing healthy and constructive roles, family members can contribute to the growth and health of the family, and reciprocally, the family organization, given

that it is a network of communication, can play an effective role in the mental health of its members, especially adolescents (3).

Adolescence is a critical period in the life of any individual that is associated with some changes in emotional, cognitive, and psychological dimensions (4). It is a critical period when risk factors while threatening mental and emotional health, can have an irreversible effect on their body (5). Adolescence can be associated with a wide range of mental disorders, including physical and cognitive health, mental functioning, social environment, family characteristics, and stressful life events (6). Family functioning is an effective factor in adolescents' problems. Lack of a proper emotional atmosphere, parents' anger and hostility towards their children, and their rejection or neglect of their children cause them to have many problems (7). One of the factors influencing the mental health of adolescents is polygamy in the family.

Polygamy is when a man marries several women (8). The arrival of a new member in the family is one of the changes in the family system. The resulting change overshadows the entire structure and functioning of the family, so that roles and responsibilities change and expectations are shattered. The arrival of a new spouse or child in the family finds the role of the mother's rival, which if it is not able to adapt to other members, and the resulting changes have many consequences for all family members (9). The members' influence on each other manifests itself in some ways, and is associated with the high prevalence of family problems such as spousal conflict, poor family communication and cohesion, negative feelings between siblings, etc. (1). In this case, the conditions created on the family environment can negatively affect the mental health of each family member.

Mental health is defined as being happy, having low stress levels, and having a positive mental state (10). Family conflicts and parental conflicts such as marital

disputes, low family intimacy and parental disorders reduce the mental health of family members (11). Some behavioral theories believe that women are less able to cope with stress and stressful situations and are therefore more prone to mental illness (12). Mothers have an important role in improving the living conditions and solving the problems of their children, which promotes the mental health of their children (13). Because children usually spend most of their time with their mothers; Therefore, it is the mother who has a strong and long-term impact on the child (14). The theory of family systems states that the actions of each member of the family cannot be understood in a vacuum; Rather, it should be examined in the context of the family. If the emotional atmosphere of the family is unfavorable, it will lead to many problems for the children (15). Parental compassion and emotional relationships are essential for children's mental development, the absence of which will have negative effects on their mental health (16). Therefore, the upbringing of children in homes that are full of conflicts between parents and family members, there is not enough supervision and control for children and children are constantly rejected by parents, which lead to obstacles and problems and stress, so their mental health is endangered (17). In addition, other factors in the family can affect the mental health of family members, especially adolescents, one of which is the socio-economic status of the family.

There are two types of socioeconomic status, one of which is the economic and social status of others, which is widely measured by the three indicators of income, education and employment. In contrast, mental socio-economic status is the individual's perception of his position in relation to others (18). Higher education, higher financial resources and therefore higher socio-economic status, increase psychological well-being in various ways. In contrast, low socioeconomic status is likely to have a negative impact on well-being (19). Families with low

socioeconomic status are deprived in a variety of ways and suffer from a greater number of stressors related to finances, social relationships, job opportunities, and health problems that can potentially affect the mental health of adolescents in these families (20). Studies on adolescent mental health based on socio-economic status indicate socio-economic inequalities in the areas of adolescent mental health (21). In addition, in polygamous families, the economic situation of the family can be affected and cause several social and economic problems in the family (22).

If women enter into polygamy, willingly or unwillingly, they make changes in the structure, function, socio-economic status and relationships of family members. Members create problems for themselves, and other family members, including adolescents. As polygamy is common in areas of our country with problems for all family members, studies on the role of mental health and socioeconomic status of mothers of polygamous families that have a direct impact on the mental health of their children have not been reported. Therefore, this study was conducted to compare the mental health of adolescents in monogamous and polygamous families based on psychological, economic and social variables of mothers.

Methods

It was a descriptive causal-comparative study. The statistical population included all adolescent students between 14 and 18 years old who were members of the monogamy and polygamy families of Saravan city. They were studying in the academic year 2020-2021, along with their mothers. Available sampling was used and 240 people were determined as the sample size (23). They were divided into 4 groups of 60 people (Group1: Adolescents in polygamous families of 60 people; Group 2: Adolescents in monogamous families of 60 people; Group 3: Mothers of polygamous families of 60 people; Group 4: Mothers of monogamous families of 60

people). Adolescents in the monogamy family were selected from the same schools as polygamy adolescents, that is, similar schools, same age, and gender. Also, to select monogamous mothers based on ethnicity (Baluch) and age (30 to 55 years), they were paired with polygamous mothers.

The criteria for inclusion of adolescents in the study were age (14 to 18 years) and Baluch ethnicity, and also the criteria for exclusion of adolescents from school were dropout. The criteria for inclusion of mothers in the present study were no death of the spouse and no divorce, and also the criteria for exclusion of mothers from the study were lack of cooperation and not filling out a questionnaire. After collecting consent forms, the subjects were free to participate in the study. No subjects were pressured, threatened, or restricted from continuing to participate in the study, and, confidentiality was maintained if polygamy was concealed and adolescents' mental and emotional states were taken care of.

In this study, the school counselor or school principal gathered the students in one place. After introducing the research process by the researcher, each questionnaire was given full explanations and after filling in by the adolescents, they were collected. Distribution and explanations of questionnaires to mothers were done through adolescents due to the prevalence of Covid-19 disease and since it was not possible to bring mothers to schools.

Symptom Check list-90-Revised (SCL-90-R): This questionnaire was designed by Drogaitis (24) to determine the number of psychological symptoms (25). It is a psychiatric self-assessment checklist and has nine dimensions: physicalization with 12 items, obsessive-compulsive disorder (10 items), interpersonal sensitivity (9 items), depression (13 items), anxiety (10 items), hostility (6 items), phobic anxiety (7 items), paranoid thoughts (6 items) and psychosis (10 items). In addition to the factors scores, a general score or general symptom index (GSI) can also be obtained

by dividing the total raw scores (nine factors and additional questions) by 90, and the obtained score is the degree of psychological symptoms and distress (26). Akhavan Abiri and Shairi (27) obtained a Cronbach alpha coefficient of 0.68 for the whole questionnaire, For the components of somatization, it was 0.87, obsessive-compulsive disorder, 0.78, sensitivity in mutual relations, 0.79, depression, 0.88, anxiety, 0.84, hostility, 0.76, panic, 0.76, paranoid thoughts, 0.73 and psychosis, 0.79. In the present study, Cronbach alpha coefficient was 0.973.

General Health Questionnaire: It was developed by Goldberg & Hiller (28) to measure mental health. It has 4 sub-scales with 7 items for each (29). It has four subscales of physical symptoms, anxiety, depression and social dysfunction. A Likert scale from "not at all (0)" to "much higher than usual (4)" was used and the maximum score was 84 (30). The validity coefficients among students with three methods of retesting, split-half and Cronbach alpha were equal to 0.70, 0.96, and 0.90, respectively (31). In the present study, the Cronbach alpha coefficient of the questionnaire was 0.86.

Socio-Economic Status Questionnaire: The Socio-Economic Status Questionnaire (32) was used to assess the socio-economic status of individuals in the community. The content of this questionnaire includes 5 main questions that measure the components of income, economic class,

education and housing status. It also has 6 questions that include the demographic characteristics of individuals. Each main question has 5 options that are scored from very low = 1 to very high = 5, respectively. Eslami et al. (33) confirmed the face and content validity of this questionnaire by 12 sports experts. Moreover, using Cronbach's alpha test, the reliability of the questionnaire was 0.83. In the present study, the Cronbach alpha coefficient of the questionnaire was 0.72.

Data analysis was performed with SPSS version 26. The significance level was considered less than 0.05. Quantitative variables were reported as mean and standard deviation and independent t-test was used to compare the two groups and multivariate analysis of variance was used to examine mean differences.

Results

In the monogamy and polygamy families, 50 percent of the participants were boys and 50 percent were girls. The mean of mental health and socio-economic status of mothers, and children's mental health are shown in table 1.

The Kolmogorov-Smirnov test was used to examine normal distribution of children's mental health variables. The results showed that the level of significance of children's mental health in Monogamy and Polygamy families was more than 0.05 and the data of this variable were normally distributed in the two groups.

Table 1. Mean and standard deviation of the studied variables

Variable	Monogamy families, M ± SD		Polygamy families, M ± SD	
	Mothers	Children	Mothers	Children
Mental health	25.06 ± 9.10	1.07 ± 0.64	26.15 ± 11.14	1.34 ± 0.74
Maternal psychological	No symptoms	17.40 ± 4.47	15.04 ± 4.54	-
	Weak symptoms	29.21 ± 4.84	-	30.58 ± 5.90
	Moderate symptoms	43.20 ± 2.77	-	45.83 ± 3.25
Socio-economic status	Low	14.80 ± 2.16	-	13.23 ± 2.80
	Medium	14.89 ± 3.41	-	13.25 ± 3.33
	High	14.65 ± 2.85	-	12.09 ± 4.65

Table 2. Results of independent t-test in relation to adolescents' mental health according to family type

Variable	n	M	Mean differences	df	t	Sig.	
Mental health	Monogamy	60	1.07	-0.27	118	-2.14	0.034
	Polygamy	60	1.34				

The Homogeneity test of variance was considered as a prerequisite for multivariate analysis of variance. The results of Levene's test (Levene statistic = 1.175 and $p = 0.326$) confirmed the homogeneity of variance between groups.

Table 2 shows that the mean of adolescent mental health variable is different among adolescents in monogamy and polygamy families. This difference is significant according to the t-values obtained at 95% level ($P = 0.034$). Therefore, it can be argued that adolescents in the polygamy

families have lower mental health than adolescents in the monogamy families.

The results of Table 3 showed that the component of hostility in adolescents of monogamy and polygamous families was significantly different ($P < 0.05$), but other components of mental health including physicalization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, phobic anxiety, paranoid thoughts and psychosis were not significantly different ($P > 0.05$).

Table 3. Comparison test of the mean of the two independent groups to compare the SCL90-R subscales in the two sample groups (n=60)

	Group	M ± SD	Mean Difference	t	df	Sig.
somatization	Monogamy	1.01±.700	-.23750	-1.716	118	.089
	Polygamy	1.25±.811				
Obsessive-compulsive	Monogamy	1.23±.703	-.11000	-.842	118	.402
	Polygamy	1.34±.728				
Interpersonal sensitivity	Monogamy	1.30±.826	-.25000	-1.748	118	.083
	Polygamy	1.55±.737				
depression	Monogamy	1.10±.860	-.20897	-1.321	118	.189
	Polygamy	1.31±.872				
anxiety	Monogamy	.99±.804	-.17667	-1.173	118	.243
	Polygamy	1.17±.844				
hostility	Monogamy	1.08±.772	-.45000	-2.684	118	.008
	Polygamy	1.53±1.04				
Phobic anxiety	Monogamy	.85±.762	-.24286	-1.636	118	.105
	Polygamy	1.09±.860				
Paranoid ideation	Monogamy	1.35±.840	-.15278	-.937	118	.351
	Polygamy	1.50±.943				
psychoticism	Monogamy	.92±.743	-.12500	-.859	118	.392
	Polygamy	1.05±.848				

Table 4 shows the effects of family type and maternal mental health on adolescent mental health and also the interaction effect of two factors. The results of the analysis of variance showed that there is a significant effect on family type ($F = 9.90$, effect size = 0.08 and $p = 0.002$). There is no significant main effect in terms of maternal mental health ($F = 1.598$, $p = 0.207$). Moreover, the side effect that is the interaction of family type factors with mental health is not seen ($F = 2.960$, $p = 0.056$). Due to the difference in the type of family, which is a two-way factor (monogamy and polygamy), the researchers used the group t-test to find out the source of the difference.

The effects of family type and mothers' socioeconomic status on adolescents' mental health, as well as the interaction effect of two factors are shown in table 4. The results of the analysis of variance showed that there was a significant main effect for family type ($F = 10.74$, effect size = 0.086 , and $P = 0.001$). There is no significant main effect in terms of socio-economic status of mothers ($F = 1.44$, $P = 241$). Furthermore, a side effect was observed which is the interaction of family type factors with the socio-economic status of mothers ($F = 4.32$, $P = 0.015$). This result shows that the two factors of family type and socio-economic status of mothers in the interaction also affect the mental health of adolescents. Due to the differences in the type of family, which was a two-way factor

(monogamous and polygamous), the t-test was used to find out the source of the difference.

The results of the Independent sample t-test in Table 5 indicated that the source of the difference in adolescent mental health between monogamous and polygamous families is in the group where mothers have moderate symptoms of mental health. In this group, there is a difference between the mental health of children who are members of the monogamy and polygamy families ($P = 0.003$). Given that the lower the mean score on the mental health test, the more mentally healthy people are, children of mothers of monogamy families with moderate mental symptoms are healthier than children of mothers in the polygamy families.

Also, the results of the independent groups revealed that the source of the difference in adolescent mental health between monogamous and polygamous families was in the group of mothers with high socio-economic status. Therefore, there is a significant difference between the mental health of adolescents who are members of monogamy and polygamy families ($P = 0.020$). According to the findings, adolescents in the monogamy families whose mothers are in high socioeconomic status have better mental health than adolescents in the polygamy families.

Table 4. Results of multifactorial variance test of adolescent mental health by family type, maternal mental health and socio-economic status

Source	Varivale	Sum of squares	Mean of squares	df	F	P Eta	Sig.
Family type		4.592	4.592	1	9.90	0.080	0.002
Mental health	Adolescent mental health	1.482	0.741	2	1.598	0.027	0.207
Family type * mental health		2.745	1.372	2	2.960	0.049	0.056
Family type		4.894	4.894	1	10.74	0.086	0.001
Socio-economic status	Adolescent mental health	1.312	0.656	2	1.44	0.025	0.241
Family type * socio-economic status		3.940	1.970	2	4.32	0.071	0.015

Table 5. Adolescent mental health t-test between monogamous and polygamous families

Adolescents mental health	Group	n	M	Mean differences	t	df	Sig.
Moderate symptoms of maternal mental health	Monogamy	60	0.824	-1.21	-4.04	9	0.003
	Polygamy	60	2.03				
High socio-economic status	Monogamy	26	2.48	0.43	2.41	48	0.020
	Polygamy	23	2.04				

Discussion

This study aimed at comparing adolescent mental health in monogamy and polygamy families based on psychological, economic and social variables of mothers. The results showed that adolescents in the polygamy families had lower mental health than adolescents in the monogamy families, which was consistent with the findings of Etemadi and Ebrahimi (9), Al-Sharfi (34) And Shaiful Bahari et al. (35) are in line. It was not consistent with the results of Hamdan et al. (36). They believed that it is the cultural environment that determines the impact on the growth of children in polygamous families. When children grow up in a place where polygamy is the norm, the family structure itself receives no detrimental effect. The reason for the inconsistency of this study with Hamdan et al. (36) seems to be that in the society of their research, polygamy was the norm and its acceptance by society has not had a detrimental effect on the performance and mental health of polygamy family members. Owuamonam (37) has conflicting opinions about the role of polygamy in building warm family relationships (social support networks) at home. While there is a suspicion of its negative impact due to jealousy and unhealthy competition between the children of the spouses, there are logical reasons that polygamy may provide a source of social support and increase the general mental health of the home. Explaining the results, it can be said that the reason that mental health in adolescents in the polygamy family is lower, goes back to a family environment full of tension, competition and lack of attention.

The findings of this study showed that adolescents who were members of polygamous families were worse off in the hostility component than adolescents who were members of monogamous families, but there was no significant difference in terms of other components including physicalization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, phobic anxiety, paranoid thoughts and psychosis, there were no significant differences. This result is consistent with the research of Etemadi and Ebrahimi (9), Al-Karnawi et al. (38) and Al-Karnawi and Slonim-Novo (39). Jafari et al. (40) believed that excessive parental support prevents adolescents from learning social skills and behavioral patterns, and more basic skills such as responsibility, behavioral stability, observance of the rules of community life, and consideration for others do not develop in them. Therefore, weakness in these skills can pave the way for the emergence, transformation, occurrence and reinforcement of maladaptive and antisocial behaviors such as aggression. It seems that because adolescents in polygamous families are overly supported by their mothers in their relationships with their parents, they have not mastered social skills and good relationships, so they use maladaptive patterns such as aggression to bring about their needs.

The results also revealed that there was no significant difference between phobia, depression and paranoid thoughts of adolescents in the monogamous and polygamous families, which is consistent with Etemadi and Ebrahimi (9) research.

But it was not consistent with the research of Al-Karnawi et al. (38) and Al-Karnawi and Slonim-Novo (39) as the results showed that adolescents in polygamous families were worse off than monogamous families in terms of depression and paranoid thoughts. Etemadi and Ebrahimi (9) found that the persistence and recurrence of conflicts increase the risk of creating a sense of insecurity in children and, if they continue, cause irreparable harm to the children; Injuries that can affect him in the form of aggression or in the form of depression, lack of self-confidence, etc. in his future life. Thus, it seems that in both types of families, the substances mentioned in the family are not seen to manifest themselves in the form of phobia, depression and paranoid thoughts of adolescents.

The findings also indicated that there was no significant difference between the components of mental health including physicalization, obsessive-compulsive disorder, interpersonal sensitivity, anxiety and psychosis of adolescents in monogamous and polygamous families which was not consistent with the results of Etemadi and Ebrahimi (9), Al-kernawi et al (38) and Al-Karnawi and Slonim-Novo (39). In explaining the inconsistency, it can be said that due to the cultural and ethnic differences, polygamy is more accepted in the present study; Therefore, these adolescents are less stressed by people in the community. In explaining no difference between adolescents in two types of family in terms of physicalization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, phobic anxiety, and psychosis, it seems that most of the people believe that in Polygamy families, members experience a higher level of stress, which has enabled these people to be equipped with appropriate coping skills to respond appropriately to stress.

The results showed that adolescents in monogamy families whose mothers have

moderate mental symptoms have better mental health than adolescents in polygamy families. According to Shaifol Bahari et al. (35) which showed that women in polygamy families are more likely to experience depression than the monogamy families, and children with polygamy parents had significantly higher overall disease symptoms than children in the monogamy families. There also were in line with the results of Al-Sharfi (34) and Al-Krenawi & Kanat-Maymon (41) who showed that family performance and members of the polygamy family face more problems. Moreover, in the polygamy family, mothers who have moderate levels of psychological symptoms that can lead to more psychological problems in the family, may have more mental problems over competition with the first spouse over resources, capital, and social status and they are more likely to pass these problems to children.

The results revealed that adolescents in monogamy families whose mothers have high socioeconomic status have better mental health than adolescents in polygamy families, with the results of the combined meta-analysis of Shaifol Bahari et al. (35) showing that economic status also plays a role in family functioning and children's mental health. Unfortunately, the children found that their parents' polygamy marriages had worsened their family's economic status and family functioning. These were not consistent with the research of Hamdan et al. (36) which showed that considering socio-economic factors, there was no difference between the children of polygamy and the children of monogamy marriages for any of the psychological scales. Reiss et al. (20) believe that stressful life situations related to socioeconomic status in childhood and adolescence effects They have a long-term effect on children's mental health. The better mental health of adolescents in Monogamy families whose mothers have high socioeconomic status can be explained by the fact that in these families mothers are less affected by the

stresses of economic and social status, resulting in less stress. The results of the present study were not in line with the research of Hamdan et al. (36), which is related to the cultural and ethnic differences in the two samples of the research that caused their results to be different from each other. This may be due to the time interval of about 11 years between the two studies, which has made such a difference by changing the variety of needs, types of communication and expectations. They stated that most polygamous marriages take place in families with high socio-economic power. The existence of lower mental health of adolescents in polygamous families can indicate competition and disputes over resources between family members and mothers, which have a lower impact on adolescents as mental health.

Due to the fact that the statistical population of this study were adolescents who were in the period of identity acquisition, they were not sensitive to their family Polygamy identity and in some cases denied this identity, so they did not have the necessary cooperation with the researcher.

Conclusion

According to the results, adolescents in monogamous families had better mental health than in the polygamous families. Adolescents in the polygamy families had lower levels of mental health than adolescents in monogamy families with mothers with moderate mental symptoms. They had less mental health. On the other hand, adolescents in the monogamy family whose mothers had high socioeconomic status showed better mental health than adolescents in the polygamy family. Since the mental health and socio-economic status of mothers affect the mental health of adolescents, so comprehensive programs to promote mental health and attention to the socio-economic status of mothers can increase mental health in adolescents.

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Authors' contribution

Study conception and design: Khosravi Shastan A, Rajaei AR; data collection: Khosravi Shastan A; analysis and interpretation of results: Teymouri S; draft manuscript preparation: Khosravi Shastan A, Teymouri S; final version of the manuscript: All authors approved.

Ethical considerations

The study was approved by the ethics committee of Islamic Azad University, Torbat-e Jam Branch with code IR.IAU.TJ.REC.1400.003. The study was done after obtaining written informed consent from the participants. Moreover, confidentiality of subjects' information was respected and none of the participants were forced or restricted to continue participating in the study.

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Conflicts of interest

The authors declare that have no conflict of interest.

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