



INVESTIGATING THE CORRELATION BETWEEN UNWANTED PREGNANCY AND BEHAVIORAL PROBLEMS IN CHILDREN

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ABSTRACT

Background and Aim: One of the most important stages in life, in which a person's personality is shaped, is childhood. Thus, considering the importance of children's behavioral problems, as well as the relationship between children's behavioral problems and maternal mental health, the aim of this study was to determine the correlation between unwanted pregnancy and behavioral problems in children aged 6 to 11 years.

Material and Method: The present study is an analytical cross-sectional research based on objective and non-random sampling. The study population included all public school elementary students in Tehran and eventually 240 students 6-11 years old were enrolled in the study. The study data was collected by demographic and obstetric and Achenbach child behavior checklist for ages 6-18 (CBCL) and was analyzed using SPSS version 22.

Results: The incidence of unwanted pregnancy was 13.3%. Among behavioral problems subscales, there was no significant relationship between two groups of wanted and unwanted pregnancies only in terms of isolation/ depression scale ($P=0.070$). The significant relationship between unwanted pregnancy and scales of internalizing behavior problems, externalizing behavior problems and overall scale ($P=0.008$, $P=0.001$ and $P=0.003$).

Conclusion: Mothers with unwanted pregnancies suffer from poor morale and feelings of helplessness and depression and these states directly affect the child eventually leading to an increase in internalizing and externalizing behavioral problems among children.

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Introduction

One of the most important stages in life, in which a person's personality is shaped, is childhood. (1) Children account for about 50% of the total population in developing countries. Behavioral problems in children refer to those problems that in addition to the lack of fit with the age of the child, are severe, chronic, or persistent and include external problems such as hyperactivity, inattention and aggression and internal problems such as fear, discomfort and health problems. (2) The overall performance of these children is affected in terms of education and behavior.

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(3, 4) These children suffer from behavioral problems and are often at higher risk of a series of problems, including social problems. (5,6) According to previous research, the prevalence of behavioral problems in children is different from 2-3% to 30%, but, on average, approximately 15-22% of them need treatment due to serious problems. (2,7)

Various factors are involved in the creation of children's behavioral problems such as low socioeconomic status,(8) emotional reactions and values of children, home and family, family environment, including parents' relationship to children, children towards each other and parents relationship towards each other,(9) number and gender of children, parents' level of education, parents working shifts and child's history of physical or mental disease,(10) time and method of feeding, birth order (first and last children are more vulnerable during development), parental relationship with parent-teacher association,(11) social support received by mothers, parental stress and maternal self-efficacy, Parents' mental problems.(12,13) As mentioned above, one of the most important factors in children's behavioral problems is maternal stress and mental problems and one factor that reduces the level of maternal mental health during pregnancy is unwanted pregnancy.(14,15) Unwanted pregnancy refers to a pregnancy that is considered as unwanted by the wife, husband or both of them. (16)

Unwanted pregnancy as an indicator of society health, affects the reproductive health in all areas classified as physical, psychological and social. (17) Approximately half of all pregnancies are unwanted annually in the US.(14) According to the results of Mihreman in 1996, the unwanted pregnancy as a psychological stress plays a greater role during child development so that this issue is a sign for risk of behavioral problems for both mother and child.(18) One of the adverse consequences of these pregnancies are more stress, less family support, postpartum depression, suicide, and increased risk of maternal and fetal mortality and reduced quality of baby and child care.(19)

According to the foregoing, the unwanted pregnancy impairs a person's mental health. On the other hand, according to an article published by Riahi et al, maternal mental disorders are highly correlated with behavioral problems in children.(11) Thus, considering the importance of children's behavioral problems, as well as the relationship between children's behavioral problems and maternal mental health, the aim of this study was to determine the correlation between unwanted pregnancy and behavioral problems in children aged 6 to 11 years studying in public schools in Tehran in 2015-2016 school year. This research will help us identify the role of the unwanted pregnancy in incidence of behavioral problems in children and develop strategies for prevention, diagnosis and treatment of children with behavior problems in children.

Method

This research is a cross-sectional analytical study. The study population included all public school elementary students in Tehran and eventually 240 students 6-11 years old were enrolled in the study. The parents of 6-11 year-old students who were studying in public schools in Tehran and had no particular physical and mental problems and volunteered to participate in the study, were invited to participate in the study. The intended schools were selected using multi-stage selection procedure among all public schools that were located in the northeast,

east and southeast of Tehran metropolitan. That is to say, initially, a list of the public schools is prepared. Then, from each geographical zone of Tehran, two top schools in terms of the (higher) population of their students are selected at randomly. So, a total of six schools are selected and then the convenience sampling method was carried out. That is to say, the researcher referred to the selected schools choice and completed the questionnaires for the parents of eligible individuals who were willing to participate in the study. Sampling was conducted from October to the end of February 2016. Data collection tool included a demographic characteristics and midwifery checklist and Achenbach child behavior checklist for ages 6-18 (CBCL). To determine level of the behavioral problems of children in this study, Achenbach child behavior checklist for ages 6-18 (CBCL) was used. Children's Behavior Questionnaire for parents consists of 113 c questions that are completed by parents, surrogate parents, teenagers and teachers. In this study, the parent form of the questionnaire was used that measures problems in three groups classified as internalizing, externalizing, and general. The above questionnaire was standardized by age and sex and its overall score ranges 0 to 120. This tool evaluates the problems of children and adolescents in eight factors, including anxiety / depression, isolation / depression, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior and aggressive behavior. Total scores over and below 60 are respectively considered as clinical behavior problem group and normal groups. (20) The psychometric characteristics of this questionnaire were evaluated in Iran in 1999. According to the study conducted on 204 patients, the sensitivity and specificity of the questionnaire was obtained equal to 98.5% and 79.1%, respectively. (16) In this study, test-retest reliability of Child Behavior Checklist 6–18 (CBCL; Achenbach) was obtained between 0.93 to 1%.

The significant level of $P < 0.05$ and test power of 0.80 was considered as the default. Mean & standard deviation and relative frequency & absolute frequency are respectively used for quantitative and qualitative data. Data analysis was carried out using chi-square test and Pearson correlation coefficient in SPSS v. 22.

Results

240 parents of children aged 6-11 years were interviewed. The response rate was 100%. Demographic and obstetric characteristics of the subjects are listed in Table 1.

Table 1. Socio-demographic characteristics of the participants

Variables		Mean	SD	n	%
Age of child		8.75	1.83		
Status of Education (Parent)	Primary school or lower			12	5
	Junior high school			49	20.40
	Senior high school			77	32.1
	College			102	42.5
Job status	Housewife			130	54.2
	Employed			55	22.9
	etc			55	22.9
Marital status	Frist marriage			232	85.92
	Remarriage			38	14.08
Monthly income (dollar)		375	30		
Sex of child	Boy			126	52.5

	Girl			114	47.5
Relationship with each other	Poorly			11	4.6
	Average			42	17.5
	Good			187	77.9
Relating to children	Poorly			7	2.9
	Average			30	12.5
	Good			203	84.6
Relationship with coaches	Poorly			23	9.6
	Average			54	22.5
	Good			163	67.9

The incidence of unwanted pregnancy was 13.3%, which as on the basis of classification of being unwanted from the sides of mother, father or both are 5.8%, 2.1% and 5.4% respectively. Among behavioral problems subscales, there was no significant relationship between two groups of wanted and unwanted pregnancies only in terms of isolation/ depression scale ($P=0.070$) Also, there was a significant statistical relationship between the scales of anxiety/ depression, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior and aggressive behavior and unwanted pregnancy (Table 2).

Table 2. Comparing the behavior problems subscale in two groups of wanted and unwanted pregnancies

Behavioral problems scales	Type of pregnancy				Confidence interval of 95%		P Value
	Unwanted pregnancy		Wanted pregnancies		Lower limit	Upper limit	
	Mean	SD	Mean	SD			
Anxiety /Depression	8.90	1.18	6.12	0.42	0.22	5.33	0.034
Isolation/depression	4.59	0.73	3.13	0.28	-0.12	3.04	0.070
Somatic complaints	6.15	1.22	3.23	0.34	0.96	4.8	0.004
Social problems	8.71	0.86	5.17	0.31	1.67	5.40	0.001
Thought problems	7.56	1.28	4.25	0.38	1.13	5.47	0.003
Attention problems	8	0.75	4.62	0.30	1.72	5.01	0.001
Rule-breaking behavior	8.18	1.44	4.73	0.42	1.04	5.85	0.005
Aggressive behavior	15.84	1.73	8.97	0.55	3.79	9.94	0.001

Table 3. shows the significant relationship between unwanted pregnancy and scales of internalizing behavior problems, externalizing behavior problems and overall scale ($P=0.008$, $P=0.001$ and $P=0.003$).

Table3. The relationship between unwanted pregnancy and Achenbach's behavior problems scales

Variables	Internalizing behavior problems		Externalizing behavior problems		Overall scale	
	Mean \pm SD	P Value	Mean \pm SD	P Value	Mean \pm SD	P Value
Unwanted pregnancy	72.56 \pm 8.73	0.003	19.65 \pm 3.01	0.008	24.03 \pm 3.06	0.001
Wanted pregnancy	43.16 \pm 2.93		12.49 \pm 0.95		13.70 \pm 0.92	

Discussion

This study examined the incidence of unwanted pregnancy and its relation to behavioral problems in children aged 6 to 11 years. Prevalence of unwanted pregnancy was 13.3%. The findings revealed that unwanted children have more behavior problems. In a study by David et al, unwanted children had significant differences in terms of psychological development as compared to their sisters and brothers. This difference was increased over time, but it was decreased at the age of 30 years. (21) These findings are similar to findings of studies in Sweden. (22,23)

Austin attributed one of the causes of behavioral problems in children to exposure to harmful events, such as parental abuse, negligence and violence.(24) Kubicka et al. also concluded in their study that those mothers with unwanted pregnancies suffer more from psychological disorders and thus directly affect psychological disorders of their children.(25) The results of another study aimed to evaluate and compare unwanted children with siblings, showed that the quality of life these children is at a lower level than their siblings and suffered from higher incidence of behavioral problems.(26) In the present study, there was a significant correlation between the scales of anxiety/ depression, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior and aggressive behavior and unwanted pregnancy. Based on the foregoing, it can be concluded that mothers with unwanted pregnancies suffer from lower morale, feelings of helplessness and depression. They are more likely to have postpartum depression and these states directly affect the child. (27, 28)

Young kids get their energy from their mothers and depressed mothers are not able to respond to their children's needs. As a result, this will cause behavioral problems in children. (29) In this regard, Green also suggests that the maternal trauma leads to sentimental, emotional disorders and education problems in children. If the mother has severe depression or panic disorder, her child will be more likely to have behavioral and emotional problems. Maternal depression is associated with depression, social phobia, separation anxiety, multiple anxiety disorder or reduced social performance in children (30) In this study, there was significant difference between two groups of wanted and unwanted pregnancies in terms of overall behavioral problems, externalizing and internalizing behavior problems in children. Various studies have shown that the overall behavior problems, externalizing and internalizing behavior problems were prevalent in children maternal of depressed mothers suffering from psychological disorders. (31) Since the unwanted pregnancy leads to increased rates of depression, it can directly affect the incidence of behavioral problems in children.

It seems that it is high of importance to make decisions for the child and to emphasize on how to deal with this phenomenon by parents in training programs and premarital counseling(with an emphasis on how to face with unwanted birth and mitigate its impacts on families and children). Training and treatment programs, which are developed to prevent the atmosphere caused by the unwanted birth in a family and the feeling of the unwanted individual can reduce some pathology , social problems and etc. Also, considering the importance of the issue, it seems necessary to implement a more extensive study with larger sample size of families with unwanted children and preferably a project at the national level.

Conclusion

Mothers with unwanted pregnancies suffer from poor morale and feelings of helplessness and depression and these states directly affect the child eventually leading to an increase in internalizing and externalizing behavioral problems among children.

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Reference

1. Albalushi RM, Sohrabi MR, Kolahi AA. (2012). Clients' satisfaction with primary health care in Muscat. *International journal of preventive medicine* .3(10)713-717.
2. Zareei E, Majidi S, Anisi S, Bay V. (2014). Achievement of health sector evolution objectives in the vaginal delivery promotion plan: A study in a large public hospital in Tehran. *Journal of Health in the Field*; 3(2): 27-32. (Persian)
3. Williams B. (1994). Patient satisfaction. A valid concept? *Social science & medicine*. 38(4) 509-516.
4. Baker R. (1990). Development of a questionnaire to assess patients' satisfaction with consultations in general practice. *Br J Gen Pract*. 40(341)487-490.
5. Fitzpatrick R. (1991). Surveys of patient's satisfaction: I--Important general considerations. *Bmj*.302 (6781) 887-889.
6. Sandin-Bojo AK, Kvist LJ, Berg M, Larsson BW. (2011). what is could be better: Swedish womans perceptions of their intrapartal care during planned vaginal birth. *Int J Health Care Qual Assur*; 24(1): 81-95.
7. Jafari F, Johari Z, Zaeri F, Ramezan Khani A, Siyah Z. (2004). Satisfaction and its influencing factors referred Health Centers. *Journal of Shahed university*; 14(66): 15-22. (Persian)
8. World Health Organization. *The World Health Report 2000; Improving performance*, Geneva. 2000.
9. Gronroos E, Pajukari A. Job satisfaction of the radiological department's staff. *Europ J Radiograph* 2009; 1(4):133-38.
10. Miller J, Bahamon C, Lorenz L and Atkinson K. *Management strategies for improving health services*. Boston. 2002; p: 467-506.
11. Malik ME, Nawab S, Naeem B, Danish Q. Job satisfaction and organizational commitment of university teachers in public sector of Pakistan. *International J Business Management* 2010; 5 (6): 17-26.
12. Aflatoniyani MR, Aflatoniyani B, Abbasi R. (2008). Investigation of fruition rate and satisfaction of population from Baghodrat health center. *Journal of qualitative Research in Health Sciences*. 2011; 11 (1 and 2):25-31. (Persian)
13. Safi MH, Fereydounfar AA, Arshi SH. Quality of Primary Health Services in the Clinics of Shomal Health Center of Tehran. *Community Health* 2014; 1(1):54-61. (Persian)
14. Kousha A, Bagheri Sh, Janati A, Asghari Jafar Abadi M, Farahbakhsh M. Comparative study of job satisfaction among health and treatment sectors' staffs, East Azarbaijan. *Iranian J Military Med* 2012; 14(2): 105-12.

15. Hosseini SH, Baaem AH, Mousavi M. (2005). According to experience and evaluate the performance of health service users ' satisfaction with the performance of health centers in Kashan Viduja. E National Conference and the first International Conference. 1(1): 32-45.
16. Cohen, G. 1996. Age and health status in a patient satisfaction survey. *Social science & medicine*. 42(7) 1085-1093.
17. Nemati F, Mohammadnejad E, Tabatabaei A, Ehsani SR, Sajjadi A, Hajjiesmaeilipor A. (2014). Satisfaction rate of hospitalized patients in teaching hospitals with presented services. *Journal of Medicine Ethics*; 7(28): 29-50. (Persian)
18. Krueger P, Brazil K, Lohfeld L, Edward HG, Lewis D, Tjam E. Organization specific predictors of job satisfaction: Findings from a Canadian multi-site quality of work cross-sectional survey. *BMC Health Serv Res* 2002; 2(6).
19. Yami A, Hamza L, Hassan A, Jira C, Sudhakar M. Job satisfaction and its determinants among health workers in JIMMA University specialized hospital, southwest Ethiopia. *Ethiopian J Health Sci* 2011; special issue: 19-27.
20. Khosravi AK, Homan HA, Shokri A. (2006). Examine the feasibility, reliability, validity and norm finding scale behavioral problems in preschool children. *Archive of SID*. 33-49.
21. David HP. Born unwanted, 35 years later: The Prague study. *Reproductive health matters*. 2006 May 31; 14(27):181-90.
22. David HP, Dytrych Z, Matejcek Z, et al (editors). *Born Unwanted: Developmental Effects of Denied Abortion*. New York: Springer, 1988; Prague: Avicenum, 1988; Mexico City: EDAMEX, 1991.
23. H Forssman, I Thuwe" One hundred and twenty children born after application for therapeutic abortion refused". *Acta Psychiatrica Scandinavica*, 42 (1966), pp. 71–88.
24. Austin L. *Mental Health Needs of Youth in Foster Care: Challenges and Strategies*. Q Mag Nat CASA Assoc; 2004. 20(4): 6-13.
25. Kubicka L, Roth Z, Dytrych Z, et al. The mental health of adults born from unwanted pregnancies, their siblings, and matched controls: a 35-year follow-up study from Prague, Czech Republic. *Journal of Nervous and Mental Disease* 2002; 190:653–62 and 2003; 191:137.
26. Barber JS, East PL. Children's experiences after the unintended birth of a sibling. *Demography*. 2011 Feb 1; 48(1):101-25.
27. Tenkku, L.E., Flick, L.H., Homan, S., Cook, C.A.L., Campbell, C. and McSweeney, M., 2009. Psychiatric disorders among low-income women and unintended pregnancies. *Women's health issues*, 19(5), pp.313-324.
28. Schmiedege, S. and Russo, N.F., 2005. Depression and unwanted first pregnancy: longitudinal cohort study. *Bmj*, 331(7528), p.1303.
29. Reardon, D.C. and Cogle, J.R., 2002. Depression and unintended pregnancy in the National Longitudinal Survey of Youth: a cohort study. *BMj*, 324(7330), pp.151-152.
30. BBC News. Mother's anxiety affects baby's brain. Accessed October 28/2010. Available from: <http://news.bbc.co.uk/1/hi/health/1517520.stm>.
31. Meadows SO, Mclanahan SS, Brooks-Gunn J. Parental depression and anxiety and early childhood behavior problems across family types. *J Marriage Fam* 2007; 69(5): 1162-77