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The Prevalence of Behavioral Problems Among Primary School Children in Outskirts of Mashhad City, Iran

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Abstract

Background: Planning to decrease mental health problems in children requires knowledge of the extent and type of behavioral problems in this age group. Given that children comprise a large proportion of the population in the outskirt areas of cities, evaluation of the prevalence of behavioral problems in children in outskirt areas could be effective in the prevention and treatment of mental disorders.

Objectives: The aim of this study, performed during year 2015, was to detect the prevalence of behavioral problems in children in the outskirt areas of Mashhad city, Iran.

Methods: This was a descriptive study. The study sample that was selected by the accessible sampling method consisted of 450 males, who were in the first to fifth grade. The instrument used to measure behavioral problems was the Achenbach child behavior checklist, which was completed by parents. The findings were analyzed by the SPSS 19 software using descriptive statistics.

Results: The prevalence of behavioral problems on elementary school males was 36.44% on outskirts of Mashhad. The most common behavioral problem was defiant behavioral problems with 23.11% prevalence and social problems with the lowest prevalence of 7.33%. On scholastic grades, the students of the second grade most commonly had behavioral problems with a prevalence of 25.6% and the students of the fifth grade least frequently had behavioral problems with a prevalence of 13.4%.

Conclusions: The prevalence of childhood behavioral problems in outskirts of Mashhad was large. These results suggest that more attention to children of outskirt areas and precise planning for reducing their behavioral problems is necessary.

Keywords: Behavioral Problems, Children, Outskirt Areas

1. Background

Child Mental health problems are common and cause high costs (1). If these behavioral and emotional problems are detected and treated at an early age, their possibility in turning to chronic disorders in adults will be reduced (2).

Emotional and behavioral problems in children can be defined as signs or symptoms that do not meet the criteria for a mental disorder but that cause a potential for development of disorders later in life (3). For example, aggression, disobedience, sleeping problems, nail biting, and anxiety are some of these emotional and behavioral problems. To provide adequate mental health services to children in the society, the first step is to identify the emotional and behavioral problems that children face (4). Thus, some studies have investigated the prevalence of behavioral problems and disorders in children. In one study, Iranian researchers investigated the prevalence of behavioral disorders among elementary students of Hamadan. In this study, 16% of students were diagnosed with behavioral disorders, which were more commonly found in males rather than females (5). Overall, the prevalence of behavioral disorders in children and adolescents in different studies have been reported from 10% to 42%, being more common among males (5-7).

Several types of factors may increase a child's vulnerability to mental health problems, including biological factors, genetic factors, psychosocial factors, and environmental factors (8). Marital discord, maternal psychopathology, paternal criminality, and parental death or separation from parents are some of environmental factors associated with increased psychological and behavioral problems in children (8-10). Environmental and psychological stressors in certain areas, such as outskirt areas of cities can be observed more frequently. The outskirt areas, regions that are away from the main areas of the city and their people encounter economic and social problems, such as poverty, addiction, and crime (8).

As a result, children living in these areas are exposed to greater behavior problems. Children exposed to violence and maltreated children have been shown to be at an increased risk of depressive and anxiety disorders, alcohol and drug abuse, and personality disorders (10-12). The results of one study indicated that children exposed to substance abusers more commonly had mental health problems when compared with the general population (13).

Poverty is another common risk factor for emotional and behavioral difficulties in children (12, 14). Takeuchi et al. (1991) analyzed longitudinal data from a national survey in the United States and reported that emotional and behavioral problems were greater in children of parents, who reported higher levels of financial stress (15). In another study, food insecurity was associated with greater behavioral problems (16).

It is important to note that children of families, who live in outskirt areas of cities, more than urban families, are exposed to risk factors, such as low income, lack of environmental security, and addicted parents. On average, around 33% of the population in large cities of the world are marginalized (17). Inadequate conditions forliving in outskirts have many consequences, one of which could be increased behavioral problems in children in these areas. Mashhad, as the second largest metropolis in the world of religious cities, is no exception because about 700,000 people of its population of 2 million live in the outskirts of the city (17).

Given that behavioral problems begin in half of cases before 14 years of age (18) and lead to impaired developmental, and interpersonal and education problems (19), an investigation of the mental health status of children in outskirt areas is very necessary. So far, no study has investigated the mental health of children in the outskirt cities of Iran. These findings are useful for effective therapeutic programs and prevention of mental disorders in different societies (20).

2. Objectives

The purpose of this study was to investigate the prevalence of behavioral problems in school-aged children in the outskirts of Mashhad. The focus of this study was on male students because according to the literature research, the prevalence of behavioral problems in males is higher than females (5, 6).

3. Materials and Methods

3.1. Participants

This study was based on the descriptive method. The study population consisted of 4570 males, aged 7 to 11 years old, living in one of Mashhad's outskirt areas. Through accessible sampling method, 450 children, whose parents referred to 4 health centers in the North Tabarsi area, were selected. The sample size was determined based on a previous research. In the current study, children's behavior problems were recorded through the completion of Achenbach child behavior checklist (CBCL) by parents. It should be noted that additional information on how to plan, objectives, design, and data confidentiality were provided for the parents. Before participation, parents gave their informed consent. The inclusion criteria in this study were age of 7 to 11 years old and studying in public and normal schools in outskirt areas of Mashhad city. Exclusion criteria included the presence of intellectual disability, blindness, and deafness.

3.2. Instruments

3.2.1. Demographic Inventory

This contains 7 questions about student's demographic information, such as age, education, father's occupation, mother's occupation, father and mother's education level.

3.2.2. Child Behavior Checklist (CBCL)

The child behavior checklist for ages 6 to 18 was used to assess behavioral problems. The CBCL is a questionnaire developed in the United States, in which parents evaluate their child's behaviors (21). Two areas are assessed, including competences and behavioral/emotional problems. The competence items of CBCL measure the child's abilities. The competence items were not used in the present study. The second area consisted of 113 problem items that parents rated as follows, 0 = not true, 1 = somewhat or sometimes true, or 2 = very true or often true, based on the past 6 months. The items included 8 syndromes, 3 scales (internalizing, externalizing, and total problems), and 6 DSM-oriented scales (4). In this study, the second part of the check list that included 113 questions, was related to behavioral emotional problems and physical health of children, which were completed by parents (21). Raw item scores were converted to T-scores, which are classified as normal, borderline or clinical (13). High test-retest reliability and strong internal consistency were reported by Achenbach and Rescorla (21). A Cronbach's alpha in a range of 0.48 to 0.75 was calculated for 8 subscales in Iran (22). Findings showed that the Persian version of CBCL had good reliability (22).

3.3. Statistical analysis

The statistical analysis was performed with the SPSS software, version 19.0. To describe the data, measures of central tendency, variation, and frequency distribution were used.

4. Results

The average age of participants was 9.02 years with standard deviation of 1.32 years. Median of grades was third class. The proportion of students in each of the second, third, and fourth grade was 22% and in each of the first and fifth grade was 16%.

As the results on Table 1 show, 49% of fathers had high school education, and 43% of mothers had elementary education.

As the results of Table 2 show, 36.44% of students were in the clinical range with a variety of behavioral problems, 8.44% of students were in the borderline range, and 55.11% of students were in the normal range.

The results of Table 3 show that the second grade had the highest prevalence of behavioral problems among education grades with a prevalence of 25.6%, and the fifth grade had the lowest prevalence with a prevalence of 13.6%.

The most common behavioral problem in the clinical range was oppositional behavior problems with a prevalence of 23.11% (from DSM-oriented scales). The second most common behavioral problem on DSM-oriented scales was conduct problems with a prevalence of 20.44%. These results are reported on Table 4.

As shown in Table 5, the most common behavioral problems in the clinical domain inexperience-oriented scales was offence behaviors with a prevalence of 22.22%; it had the highest frequency among students after oppositional behavior. Social problems had the lowest frequency in students.

5. Discussion

The present study included an estimation of behavioral problems prevalence among male children, aged 7 to 11 years from outskirts of Mashhad city. This study estimated a prevalence rate of 36.44% among male children. The rate was similar to the study results in Brazil. Bordin et al. (2009) reported that 36.9% of poor children aged between 6 and 17 years in urban areas had one of anxiety, depression, offence disorders or both (8). In another study, the rate of prevalence of behavior problems among primary school children of Brazil was reported as 32.5% (23). In Iran, only 1 research reported the prevalence of behavior problems in children as 31%, which was consistent with the current study results (7). A large number of studies in other countries have reported the prevalence of behavior problems as less than that estimated in the current study. Many studies in Iran have reported the prevalence of behavior disorders as 10% (24) and 16.1% (5) in primary school children. The rate of prevalence in other countries was less than what was obtained in this study; for example, 7% in Bergen of Norway (20), 8% in Scotland (25), and 15% in Nigeria (26). It should be noted that all of these studies focused on urban areas, so that no study had reviewed the rates of childhood behavioral problems in the outskirts of Iran, while the number of studies from other parts of the world are also very scarce. As stated, only a few results of previous studies are consistent with the results of the current study. Considering the doubled or tripled results of the current study compared to other studies from Iran and other countries, it could be said that the difference in results is associated with special features of outskirts and high traumatic factors, such as family conflict, poverty, parental substance abuse, and low levels of parental education. Overall, the difference in psychological, social, and familial conditions of children's life could cause various levels of behavioral problems (27). Using different tools to measure behavioral problems in a variety studies could be another influential factor, regarding the difference in rates.

Consistent with previous reports (7, 24, 27), the current study found differences in prevalence of behavioral problems amongst different education grades, so that second-grade students had the greatest amount of difficulty and fifth graders had the least difficulties. Increase of behavioral problems in the early years of primary school children could be due to poor compatibility with the school environment and failure to effectively communicate with teachers and classmates. With child's growth and greater awareness of how to manage problems, the amount of damage will be reduced. Based on the results, oppositional behavior problems, offensive behavior, and conduct problems were the most common behavioral problems in students of outskirts of Mashhad. The results support the findings of Murray et al. (28) and Heiervang et al., (20). Risk factors, such as physical abuse, physical punishment, and mental health problems in parents, single parent families, and poor socioeconomic conditions increase problems, such as conduct disorder and oppositional behavior in children (28). The evidence supports the finding that children living in low-income families are more vulnerable to the development of anti-social behavior, oppositional behavior, and conduct problems than other children (29) because they encounter stressful events, environmental deprivation, family conflicts, migration, and violence (30, 31). These experiences have detrimental effects on children's development and lead to greater vulnerability to mental health problems (29).

In summary, the present study indicated that the prevalence of behavior problems, for example offensive behavior, oppositional behavior and conduct problem, in children of outskirts is higher than other children.

Given that conduct problems and oppositional behavior during childhood could lead to antisocial personality disorder and criminal behavior in adults, comprehen-

Table 1. Education Level of Parents of Primary School Children In Outskirts of Mashhad City-Iran

Education Level	Illiterate, %	Elementary, %	High school, %	Licensee, %
Father	18	30	49	3
Mother	35	43	21.5	0.5

Table 2. Comparison of Students of Primary School Children in Outskirts of Mashhad City Regarding Behavioral Total Problems Scale

Scale	Clinical		Borderline		Normal	
	No.	%	No.	%	No.	%
Total problems	164	36.44	38	8.44	248	55.11

Table 3. Comparison of Prevalence of Behavioral Problems on Education Grades of Primary School Children in Outskirts of Mashhad City

Scale	First Grade		Second Grade		Third Grade		Fourth Grade		Fifth Grade	
	No.	%	No.	%	No.	%	No.	%	No.	%
Total problems	32	19.5	42	25.6	30	18.3	38	23.2	22	13.4

Table 4. The Prevalence of Behavioral Problems Primary School Children in Outskirts of Mashhad City in DSM-Oriented Scales

Behavioral Problems	Clinical		Borderline		Normal	
	No.	%	No.	%	No.	%
Affective	63	14	22	4.8	365	81.11
Anxiety	49	10.88	29	6.44	372	82.66
Somatic	42	9.33	0	0	408	90.66
ADHD	58	12.88	25	5.55	367	81.55
Oppositional	104	23.11	0	0	346	76.88
Conduct	92	20.44	55	12.22	303	67.33

Table 5. The Prevalence of Behavioral Problems of Primary School Children in Outskirts of Mashhad City in Experience-Oriented Scales

Behavioral Problems	Clinical		Borderline		Normal	
	No.	%	No.	%	No.	%
Anxiety/depression	049	1088	39	08.66	362	80.44
Withdrawn/depression	037	0008.22	51	11.33	392	87.11
Somatic	052	0011.55	91	20.22	307	68.22
Social	033	0007.33	55	12.22	362	80.44
Thinking	038	0008.4	16	03.55	396	88
Attention	077	0017.11	31	06.88	349	77.55
Offence	100	0022.22	38	08.44	312	69.33
Aggression	080	0017.77	41	09.11	329	73.11

sive research and planning for the treatment of disorders are necessary. The current study had a number of limitations. First, since the participants consisted of only males of Mashhad's outskirts, the result may not be generalized to child populations of other outskirts of cities. Considering that the children's behavioral problems questionnaire was completed by parents, the mental health of parents may have affected the rate of children's behavior problems. For example, a mother with depression may report her child's natural behavior as a hyperactive behavior. In this regard, further studies are suggested to investigate the parents' mental health and psychological assessment of children, simultaneously.

5.1. Conclusion

The prevalence of behavioral problems was 36.44% among males aged 7 to 11 years old in the outskirts of Mashhad. This rate of prevalence was relatively high in this region compared to other developing countries and other parts of Iran.

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Footnotes

Authors' Contribution: Imanolah Bigdeli, Zeynab Abdolahzadeh, and Ali Mashhadi conceived and designed the evaluation. Zeynab Abdolahzadeh collected the data. Imanolah Bigdeli, Zeynab Abdolahzadeh and Ali Mashhadi interpreted the data and drafted the manuscript. All authors revised the manuscript critically for important intellectual content, and read, and approved the final manuscript.

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