ORİJİNAL ARAŞTIRMA ORIGINAL RESEARCH

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Determination of Child Abuse Potential and Related Factors of Mothers with Children with Down Syndrome: A Descriptive Study

Down Sendromlu Çocuğu Olan Annelerin Çocuk İstismarı Potansiyeli ve İlişkili Faktörlerin Belirlenmesi: Tanımlayıcı Çalışma

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This study titled "The Effect of Some Characteristics of Mothers' of Children with Down Syndrome on Abuse Awareness" was published as a master's thesis in 2019 by Damla Özçevik at Koç University Nursing Master's Program.

ABSTRACT Objective: Even though children with disabilities are exposed to abuse more than their peers, limited number of studies include the issue of children with disabilities. The purpose of this study was to identify abuse potential of mothers with Down syndrome children. Material and Methods: This study was conducted in a special education and rehabilitation centers for children with disabilities in İstanbul by using a cross-sectional design. In the process of data collection, two different types of forms were utilized: Participant Data Collection Form and Abuse Awareness Scale for Parents. The evaluation of data was handled through independent samples t-test, Mann-Whitney U test, Kruskal-Wallis H test, Bonferoni-corrected Mann-Whitney U test and multiple regression analysis. Results: It was identified that the difference between education of mothers, number of children, type of the family, occupation, perceived socio-economic status, perceived social support level, considering to be abused in childhood of mothers and the mean score of Abuse Awareness Scale for Parents were statistically significant. Conclusion: The abuse potential of mothers of children with Down syndrome was found out as medium level. It was determined that 53.7% of the abuse potential of the mothers were explained by four independent variables (family type, working status, perceived social support level and considering to be abused in childhood). In order to reduce the levels of abuse and increase the awareness of mothers, it is recommended that nurses, who are trained on child abuse and neglect, first provide training to mothers with extended or fragmented family type, the unemployed, and low perceived social support.

Keywords: Child abuse; nursing; Down syndrome; mother; abuse awareness

ÖZET Amaç: Engelli çocuklar, akranlarına göre istismarla daha fazla karşılaşmaşına karşın şınırlı şayıda çalışma engelli çocukları kapşamaktadır. Bu çalışmanın amacı, Down sendromlu çocuğu olan annelerin istismar potansiyeli riskini belirlemektir. Gereç ve Yöntemler: Bu çalışma, kesitsel bir tasarım kullanılarak İstanbul'da engelli çocuklar için özel eğitim ve rehabilitasyon merkezlerinde gerçekleştirildi. Veri toplama sürecinde 2 farklı form kullanılmıştır: Katılımcı Veri Toplama Formu ve Ebeveynler için Kötüye Kullanım Farkındalık Ölçeği. Verilerin değerlendirilmesi, bağımsız örneklem t-testi, Mann-Whitney U testi, Kruskal-Wallis H testi, Bonferoni düzeltmeli Mann-Whitney U testi ve çoklu regresyon analiziyle gerçekleştirilmiştir. Bulgular: Annelerin eğitim düzeyi, çocuk sayısı, aile tipi, mesleği, algılanan sosyoekonomik durumu, algılanan sosyal destek düzeyi ve çocukluğunda istismara uğradığını düşünme durumu ile Ebeveynler için Kötüye Kullanım Farkındalık Ölçeği puan ortalaması arasındaki farkın istatistiksel olarak anlamlı olduğu tespit edilmistir. Sonuc: Down sendromlu cocuğu olan annelerin istismar potansiyellerinin orta düzey olduğu belirlenmiştir. Annelerin istismar potansiyellerinin %53,7'si 4 bağımsız değişken (aile tipi, çalışma durumu, algılanan sosyal destek düzeyi ve annelerin çocukluğunda istismar edildiğini düşünme durumu) tarafından açıklandığı saptanmıştır. İstismar düzeylerini düşürmek ve annelerin farkındalığını artırmak için çocuk istismarı ve ihmali konusunda eğitim alan hemsirelerin, öncelikle genis veva parcalanmış aile tipindeki, çalışmayan ve algılanan sosyal desteği düşük annelere eğitim vermesi önerilir

Anahtar Kelimeler: Çocuk istismarı; hemşirelik; Down sendromu; anne; istismar farkındalığı

Child abuse which is also known as child maltreatment has been defined by World Health Organization (WHO) as "Child abuse or maltreatment constitutes all forms of physical and/or emotional illtreatment, sexual abuse, neglect or negligent treatment or commercial or other exploitation".¹ There are



four types of child abuse; physical, sexual, psychological, and neglect.¹ The literature on child abuse shows that there are risk factors associated with the child, family and society.² Many studies suggested that prevalence of abuse was higher towards disabled children than the healthy peers.^{3,4} Disabled children who are the most vulnerable in the overall population constitutes the large sum of percentage facing with abuse behaviors.5 Sullivan and Knutson revealed in their studies having a big sample that the rate of disabled children experience any kinds of abuse was four times higher than their healthy peers.³ The abuse rate of disabled children is at least three times higher than their healthy peers and it might vary in terms of type of the disability compared with their healthy peers.^{6,7} Even the type of abuse among those with the same kind of disability is not the same.⁸ In addition, children might encounter various burdens due to their disabilities.9 The presence of speech or physical handicap might obstruct both the protection from the abuse and reporting of undesired behaviors for the child.⁵ They might not talk about maltreatment or abuse since they had no reliable person around them.⁸ Those children might not know the "abusive" behaviors or not aware of encountering maltreatment.7

Not any differences or difficulties might be observed in the first years of their lives of children with Down syndrome when compared to other children. Even the characteristic appearance of their faces might not be differentiated for others.¹⁰ Difficulties might become apparent as the child with Down syndrome grows by uncontrolled behaviors, disobeying to rules, not meeting the expectations of parents.¹¹ In other words, developmental disabilities might become more clear as the child grows. Van Horne et al. identified in their cohort study carried out with children having or not having congenital defect between the ages of 2-10 that the risk of facing abuse was 32% more for children with Down syndrome than the children with congenital defect.¹¹ Mental retardation, adaptive behavioral problems, speech and language delay may be factors that increase the risk of abuse in children with Down syndrome in the context of disabled children.12

Another factor that increases the rate of abuse and neglect of children is parental risk factors. In the study of Mulder et al. it was stated that the effect of risk factors related to the mother may be greater than the effect of risk factors associated with the father.¹³ The reason for this situation can be explained by the fact that mothers are more concerned with their children emotionally and physically, especially in single-parent families, where children usually live with their mothers.¹³ Risk factors related to mothers are as follows; young parental age, low educational level, high number of children, unplanned pregnancy, parents are divorced, fragmented or extended family type, unemployment, low socio-economic level, low level of perceived social support and having a parent's childhood abuse experience.¹⁴⁻¹⁷

Consideration of risk factors for child abuse can enable early implementation of interventions to reduce the effects of abuse, such as screening, training and counseling.¹⁸ Nurses can prevent future negative consequences of abuse from reaching undesirable dimensions. Nurses, key members of the healthcare team, take the roles of leader and patient advocate.¹⁸ Developing parental abilities and strengthening families is an important task. Inevitably, there will be some cases of child abuse that cannot be prevented, but more positive outcomes for children and their families can be achieved by preventing some cases or at least reducing their negative effects.¹⁸

The aim of this study was to identify the effect of mother-related risk factors on the abuse of children with Down syndrome and the abuse potential of mothers. For this purpose, three questions were determined.

Research Question 1: Does the abuse potential of mothers vary in terms of socio-demographic characteristics (age of mothers, education, number children, planning status of pregnancy, type of the family, marital status, employment, perceived socio-economic status)?

Research Question 2: Are the abuse potential of mothers different in terms of perceived social support level?

Research Question 1: Are the abuse potential of mothers different in terms of considering to be abused in childhood?

MATERIAL AND METHODS

RESEARCH DESIGN

By using a cross-sectional design, it was conducted in five special education and rehabilitation center for children with disabilities in Istanbul.

PARTICIPANTS

The study universe included 158 mothers having a child with Down syndrome in five special education and rehabilitation centres in İstanbul. The number of participants was determined using G*Power 3.1 programme and it is required to reach 70 participants to excess 95% value; 5% significance level and 0.8 impact size (df=68; t=1.668). Any sampling method was used in this study and it was aimed to reach the whole universe of the study. The study included 109 mothers who fulfilled a self-report questionnaire on child maltreatment related behavior and attitudes. Inclusion criteria are as follows:

- Having children in the 4-6 age group,
- Volunteer in participating the study,

Able to read and understand the questionnaire in Turkish,

■ Mothers of children with Down syndrome who were in institutions at the time of the study.

MEASURES

Data Collection Form

The required data such as age of mothers, education, number children, family type, marital status, employment status, perceived socio-economic level, perceived social support level and considering to be abused in childhood of participant mothers were gathered through Participant Data Collection Form including 10 questions and prepared by the researcher complied with the literature. Moreover, following the preparation of the form the views of three expert faculties were asked. Socio-economic level was measured based on individual statement (low, mid, high). In a similar manner, perceived social support level was measured based on individual statement via a question (low, mid, high). After the researcher made the WHO's definition of child abuse, participants were asked a question "Do you think you were abused in your childhood?" and they were asked to response as "yes" or "no". Via face-to-face interviews, ten single questions were assessed including socio-demographic information (e.g., maternal education, marital status, employment or family type), social support and adverse childhood experiences. Mean child abuse potential was analyzed by using these variables.

Abuse Awareness Scale for Parents

In order to assess the abuse levels of mothers, Abuse Awareness Scale for Parents developed by Pekdogan was utilized.¹⁹ It was an 18-itemed, 5 Likert type tool including the expressions as "1=strongly disagree", "2=disagree", 3=undecided", "4=agree" and "5=totally agree". The items of the scale include imposing physical punishment to the child, the attitude towards the pounding scars in the body, ignoring the needs of the child and the manners towards the behaviors of the child on sexual matters.¹⁹ For example, "I will apply physical punishment if my child behaves negatively". 12th, 15th and 17th items of the scale need to be scored adversely. The lowest score of the scale is 18 and the highest one is 90. The scores between 18-42 mean low-level abuse; 42-66 mid-level and 66-90 high level of abuse.¹⁹ The validity and reliability of the scale were handled by Pekdoğan and Cronbach alpha internal consistency was found to be 0.98. In our study, the Cronbach alpha internal consistency was identified as 0.66.

DATA COLLECTION

After obtaining formal permissions, special education and rehabilitation center administrations were informed about the study. Then, mothers were interviewed and informed about the content of the study and asked for being a volunteer to participate in the study. Those mothers reporting to be a volunteer to participate verbally were delivered informed consent form. The data of this study were collected by face-toface interview method between 1 November and 25 December 2018. Data collection time has been determined as approximately 20 minutes for one participant.

ETHICAL CONSIDERATIONS

Ethics committee approval was obtained from Koç University Social Sciences Ethics Committee (approval number: 2018.192.IRB3.133). Five institutions were asked for the permission to conduct the study. Following the detailed explanation of the study to the participant mothers those who accepted to participate in the study, verbal and written approval was obtained. The study was conducted in accordance with the Declaration of Helsinki principles.

STATISTICAL ANALYSIS

The analysis of the data was assessed through SPSS version 24.0. When the distribution was homogenous, independent samples t-test was used, when it was not homogenous, non-parametric Mann-Whitney U test was utilized in pairwises, and Kruskal-Wallis H test was applied in more than pairwise groups. In statistically significant comparisons, Bonferoni corrected Mann-Whitney U tests were benefited to identify the group causing the difference. In addition, multiple regression analysis was made for comparisons of statistically significant differences. In the analysis of overall data, statistical significance value was accepted as 0.05.

RESULTS

CHARACTERISTICS OF SAMPLE

In our study, 60.6% of the participants were in 40+ age group, 55.0% of them were middle school or lower graduate and 35.8% of them had 2 children. It was determined that 59.6% of the mothers were intended to be pregnant, 67.0% of them had a nuclear family, 85.3% of them were married, 87.2% of them unemployed, 65.1% of them had mid-level of perceived socio-economic status and 53.2% of them were identified mid-level of perceived social support status. In addition, 64.2% of the mothers thought that they were never abused in childhood. In our study, the mean score of mothers from Abuse Awareness Scale for Parents was found as 57.40 ± 7.02 . Participant mothers got scores from the scale ranging between 34 and 72.

COMPARISON OF SOME CHARACTERISTICS OF MOTHERS WITH ABUSE LEVELS

The Abuse Awareness Scale for Parents mean scores according to some socio-demographic characteristics of the mothers are shown in Table 1. It was determined that education level of mothers, number of children and family type affected Abuse Awareness Scale for Parents scores (p<0.05). As the result of Bonferroni corrected Mann-Whitney U test; difference between mothers in the group of having one or two children and in the group of having 4+ children were identified as significant. In addition, the difference occurred between nuclear family and extended family groups and between nuclear family and fragmented family groups. It was determined that marital and employment status affected Abuse Awareness Scale for Parents scores (p<0.05). As the level of perceived socio-economic level increased, the mean scores of mothers from Abuse Awareness Scale for Parents decreased (p < 0.05). In order to figure out the reason of such a difference, Bonferroni corrected Mann-Whitney U test was implemented and it was found out that the difference was significant for all groups (low-mid; mid-high; low-high). As the perceived social support level increased the mean scores from Awareness Scale for Parents got reduced and the difference was detected as statistically significant (p<0.05). As the result of Bonferroni corrected Mann-Whitney U test, a significant difference was identified between groups (low-mid; mid-high; low-high). The mean scores of mothers who thought they were abused in childhood were higher than other group and the difference was detected as significant (p < 0.05).

Standard multiple regression analysis was realized in order to find out what extent independent variables explain the abuse levels of mothers (Table 2). It was figured out that 53.7% of mothers abuse levels were explained by family type, employment status, perceived social support level and abuse status in childhood (Adjusted R²=0.537, F=16.662, p<0.001). As the result of the analysis, the regression model used to identify mothers' abuse levels was accepted as significant (p<0.001).

DISCUSSION

The present study was carried out in order to identify the abuse potential of mothers having a child with Down syndrome and to determine the impact of some of its features on their abuse potential. This study determined that abuse levels of mothers having a child with Down syndrome was moderate.

Variables	Mean±SD	Test value	p value	
Age group				
20-29 years	62.00±7.01	KW=3.636	0.162	
30-39 years	57.65±7.49			
40+ years	56.71±6.65			
Education				
Middle school or lower	59.58±5.53	KW=24.479	0.000*	
High school	58.14±5.38			
University or higher	50.19±8.22			
Number of children				
1	55.05±8.26	KW=14.905	0.002*	
2	55.56±6.72			
3	58.30±6.36			
4+	62.00±4.90			
Pregnancy planning				
Planned	56.72±7.46	t=-1.232	0.221	
Unplanned	58.40±6.27			
Family type				
Nuclear	55.42±6.49	KW=21.452	0.000*	
Extended	61.22±5.68			
Fragmented	62.00±8.60			
Marital status				
Married	56.54±6.49	MWU=361.000	0.001*	
Single	62.37±8.14			
Employment status				
Employed	48.85±8.86	MWU=230.500	0.000*	
Unemployed	58.66±5.78			
Perceived socio-economic level				
Low	61.59±5.46	KW=23.038	0.000*	
Mid	56.73±5.33			
High	43.00±10.73			
Perceived social support level				
Low	61.48±6.50	KW=25.110	0.000*	
Mid	57.29±4.73			
High	50.27±8.54			
Abuse status in childhood				
Yes	62.74±5.21	t=7.170	0.000*	
No	54.42±6.10			

SD: Standard deviation; KW: Kruskal-Wallis H; MWU: Mann-Whitney U; t: Independent samples t. *p<0.05.

According to the research results, abuse levels of university graduate mothers were found statistically lower than other (middle school or lower or high school graduate) mothers. Many studies in the literature demonstrated that lower education among parents imposed a risk of potential abuse behaviors for children.^{15,16} In the study by Malik carried out with 200 participant children between the ages of 8-12, it

was put forth that lower level educated mothers' potential for abuse was higher than other groups.²⁰ Koç et al. examined 89 abuse diagnosed children and determined that 68.5% of mothers were primary school graduate.²¹ Mothers with lower level of education might be considered as they were not in the conscience of psychological or physical punisment as "abuse" and/or had negative impact (physical,

TABLE 2: Standard multiple regression analysis for mothers' abuse levels (n=109).								
	В	β	t value	p value	Adjusted R ²	F		
Stable	64.134		11.945	0.000***	0.537	16.662		
Number of children	0.234	0.033	0.430	0.668				
Education	-0.355	-0.069	-0.835	0.406				
Marital status	-1.571	-0.079	-0.839	0.404				
Family type	2.224	0.203	2.102	0.038*				
Employment status	4.341	0.208	2.828	0.006**				
Perceived socio-economic level	-1.274	-0.098	-1.066	0.289				
Perceived social support level	-2.456	-0.235	-2.748	0.007**				
Abuse status in childhood	-5.176	-0.355	-4.588	0.000***				

*p<0.05; **p<0.01; ***p<0.001.

psychological and mental) on the health of their children.

According to our research results, it was determined that mothers with 4+ children got the highest scores from that implies as the number of children increased the level of abuse rises accordingly. In the present study, abuse levels of mothers having 4+ children was found significantly higher than that of mothers having one or two children. When the literature is examined, it is shown that mothers with more children have higher levels of abuse.²⁰ In a study examining 220 abuse cases' family characteristics in Saudi Arabia, it was pointed out that 30% of abused children had 4 or more siblings.²² In another study carried out in Egypt, it was expressed that mothers with more children performed abuse behaviors more often.²³ In the study carried out in Iran with a sample group of 261 mothers of 2-12 years children, it was determined that mothers having less children had negative attitudes towards child abuse.²⁴ As the number of children increased, mothers might experience various difficulties to meet the needs of children properly or fight between siblings might break out easily. Thus, it is thought that mothers might implement some kinds of punishment methods to over such fights.

In this study, the abuse level of mothers having a nuclear family was shown as lower than other family types. Almuneef et al. as certained in the study examining the family profiles of abuse cases and carried out in Saudi Arabia that children living in an extended family carried the risk of exposing neglect 1.5 times higher than the others living in a nuclear family.²² Altiparmak et al. suggested that mothers abusing their children physically and emotionally had an extended type of family.¹⁷ Koç et al. similarly pointed out in their study focusing on demographic characteristics of 89 abuse-diagnosed children that 37% of the children had a fragmented family.²¹ Such findings are similar to ours.

According to our research results, it was determined that abuse levels of single/divorced mothers were higher than married counterparts. In the study by Ono and Honda with Japanese mothers, it was pointed out that children of single or unmarried mothers were under more risk of abuse than others.²⁵ The study conducted in Saudi Arabia examining the data of Child Protection Center, it was demonstrated that 13.2% of 220 abused children stated their parents as divorced thus being a single parent increases the risk of physical abuse 2.8 times more.²² The other study conducted with 1,480 parents by Guterman et al. pointed out that married mothers performed less punitive behaviors or physical abuse than the single or unmarried mothers.²⁶ Taking over the role of parenting on her own increased the risk of abuse due to such stressors as lack of financial sources or insufficient amount of emotional support.14

According to our research results, it was determined that abuse levels of unemployed mothers were higher than employed counterparts. Almuneef et al. stated in the study examining 220 abuse cases of children that just 15 of them responded that their mothers were employed.²² The study of Christoffersen and DePanfilis revealed that unemployed mothers neglect their children 2.5 times and abuse them emotionally 2.8 times more.²⁷ In their meta-analysis study, Stith et al. emphasized that the relation between employment status of the parent and neglect was at the midlevel.²⁸ Pekdoğan reported a negative significant relation between employment status of parent and abuse rates.²⁹ Altıparmak et al. announced in their study that unemployed mothers abuse their children more emotionally.¹⁷ In the study, examining demographic characteristics of abuse-diagnosed children in İzmir, Turkey, by Koç et al. it was shown that 68.5% of the mothers were housewives.²¹ It is more likely that unemployed mothers encountered financial burden and experience stress and low level selfconfidence accordingly.³⁰ The studies on the issue revealed that stress is a factor increasing the risk of abuse.^{16,31} In our study, majority of mothers (87.2%) were unemployed. So, it might cause financial burden that is a source of stress leading potential for child abuse.

In our study, as the perceived socio-economic level increased the risk of abuse towards children reduced. Studies have reported that the potential for child abuse will increase as socioeconomic decreases.^{25,32} In another study carried out in Egypt with 210 participant mothers, it was reported that the abuse risk of those mothers experiencing financial burden was 6.6 times more.²³ Stith et al. stated that high level of socio-economic status was a little bit protective for physical abuse.28 Raissian and Bullinger suggested that even a slight increase in the minimum wage had a negative impact on child abuse.33 Mothers with lower perceived socio-economic status might experience difficulties in meeting the needs of their children due to the lack of financial sources. That might cause stress and leads to an increasing risk for child abuse.

Our study proved that the mean scores of mothers with lower and mid perceived social support level were higher than high-level mothers that meant they abuse their children more. As the level of perceived social support rose, the abuse rates decreased significantly. The study by Ajduković et al. with a sample group of 746 Croatian mothers expressed that a decrease in the level of perceived social support leaded to an increase in the potential of child abuse.¹⁶ In another study carried out in Japan, it was determined

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that mothers having a lower level of social support had a big potential for child abuse.²⁵ It was also emphasized in the study conducted in Croatia that one of the most important factors increasing the risk of physical abuse was the low-level of perceived social support.³² Those findings are considered to be compatible with our study.

Literature shows that parents' having abuse history at the childhood period impose a risk factor for child abuse.^{30,34} In our research, it was put forth that abuse levels of mothers thinking to be abused in childhood period was higher than that of thinking not to be abused. In their study, Helmy et al. demonstrated that 59% of mothers were abused by their parents and 12.7% of them abuse their own children physically.³⁵ Some of mothers who thought that were abused during childhood believed that they were disciplined through physical or verbal abuse and they might accept performing the same to their children as normal to ensure discipline.

LIMITATIONS

The present study had various limitations. A limitation of this study is that the study sample is taken only from five institutions in İstanbul. Another limitation of the study was the perceived social support level and past experiences of mothers on abuse were determined with a single question based on individual statements. However, the results of our study draw attention to the child abuse potential in mothers of children with Down syndrome in Turkey.

CONCLUSION

This study determined that abuse levels of mothers having a child with Down syndrome was moderate.

It was determined that 53.7% of the abuse potential of the mothers were explained by four independent variables (family type, working status, perceived social support level and considering to be abused in childhood). In order to reduce the levels of abuse and increase the awareness of mothers, it is recommended that nurses, who are trained on child abuse and neglect, first provide training to mothers with extended or fragmented family type, the unemployed, and low perceived social support.

RECOMMENDATIONS

In order to reduce abuse levels and increase the awareness of mothers; nurses, being educated on child abuse and neglect, should provide education to mothers primarily to those with extended or fragmented families, unemployed, low perceived social support level, had past experiences on abuse using active methods in special education and rehabilitation centers. Civil involvement projects should be organized in order to raise awareness on the issue. The present study was carried out in five institutions located in İstanbul. Thus, it is recommended that crosssectional epidemiological studies, focusing on children with Down syndrome registered to all the special education and rehabilitation centers in Turkey, should be conducted in order to identify the abuse prevalence of children with Down syndrome in our country.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Damla Özçevik Subaşı, Ayşe Ferda Ocakçı; Design: Damla Özçevik Subaşı, Ayşe Ferda Ocakçı; Control/Supervision: Ayşe Ferda Ocakçı; Data Collection and/or Processing: Damla Özçevik Subaşı; Analysis and/or Interpretation: Damla Özçevik Subaşı; Literature Review: Damla Özçevik Subaşı; Writing the Article: Damla Özçevik Subaşı; Critical Review: Ayşe Ferda Ocakçı; References and Fundings: Damla Özçevik Subaşı, Ayşe Ferda Ocakçı.

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