Peer Bullying and Self-Esteem in Turkish School-Age Children Who Stutter

Okul çağı Kekemelik tanılı Çocuklarda Akran Zorbalığı ve Benlik Saygısı

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Abstract

Background: This study aims to examine the prevalence of peer bullying among Turkish-speaking school-aged children who stutter (CWS) and to explore the relationships between exposure to bullying and self-esteem, depression, and anxiety symptoms in these children.

Materials and Methods: The study included a case group of 35 children diagnosed with stuttering and a control group of 35 children with fluent speech. A speech and language therapist assessed the children in the stuttering group using the Stuttering Severity Instrument. Additionally, all children were asked to complete the Rosenberg Self-Esteem Scale (RSES), the Olweus Bully/Victim Questionnaire, and the Revised-Child Anxiety and Depression Scale (RCADS).

Results: There was a significant relationship between peer bullying experiences, self-esteem, anxiety, and depression symptoms between both groups (p<0.05). CWS demonstrated greater susceptibility to peer bullying compared to the control group, and they scored higher on the RSES, indicating reduced self-esteem. Furthermore, it was found that symptom scores for depressive disorder, generalized anxiety disorder, and social anxiety disorder increased in stuttering children with low self-esteem.

Conclusions: Our study demonstrated that school-aged CWS exhibit lower self-esteem and more pronounced symptoms of anxiety and depressive disorders. We believe that healthcare professionals working with the school-age CWS should assess their self-esteem and engage them in activities aimed at enhancing self-esteem, as this may help prevent the development of secondary psychopathologies such as depressive disorder, anxiety disorder.

Keywords: Peer Bullying, Self-esteem, Stuttering, Children

Öz

Amaç: Çalışmamızda Türkçe konuşan, okul çağı kekemelik tanılı çocuklarda akran zorbalığının sıklığını ve zorbalığa maruz kalma ile çocukların benlik saygısı, depresyon ve kaygı belirtileri arasındaki ilişkiyi incelemeyi amaçladık.

Materyal ve Metod: Kekemelik tanısı konulan 35 çocuk olgu grubuna, konuşması akıcı olan 35 çocuk ise kontrol grubuna dahil edildi. Kekemelik tanısı olan çocuklara, dil ve konuşma terapisti tarafından Kekemelik Şiddet Değerlendirme Aracı-4 uygulanmıştır. Çocuklar tarafından doldurulması için Rosenberg Benlik Saygısı Envanteri, Olweus Akran Zorbalığı Anketi ve Çocukluk Çağı Anksiyete Depresyon Ölçeği verilmiştir.

Bulgular: Her iki grup arasında akran zorbalığı deneyimleri, benlik saygısı, depresyon ve kaygı belirtileri arasında anlamlı bir ilişki vardı (p<0.05). Kekemelik tanılı çocukların, akran zorbalığına daha sık maruz kaldıkları ve daha az benlik saygısına sahip oldukları saptandı. Ayrıca, benlik saygısı düşük olan kekemelik tanılı çocuklarda depresyon, yaygın anksiyete ve sosyal anksiyete belirti puanlarının daha yüksek olduğu saptandı.

Sonuç: Çalışmamız, okul çağı kekemelik tanılı çocukların akran zorbalığına daha sık maruz kaldıklarını, daha düşük benlik saygısına, daha çok kaygı ve depresyon belirtilerine sahip olduklarını gösterdi. Okul çağı kekemelik tanısı olan çocuklar ile çalışırken akran zorbalığı ve benlik saygısının değerlendirilmesinin faydalı olacağını düşünmekteyiz. Ayrıca bu çocukların, benlik saygısını arttırmaya yönelik aktivitelere dahil edilmelerinin depresif bozukluk, kaygı bozukluğu gibi ikincil psikopatolojilerin gelişimini önlemeye yardımcı olacağını düşünmekteyiz.

Anahtar Kelimeler: Akran zorbalığı, Benlik Saygısı, Çocuk, Kekemelik

Introduction

Stuttering is a communication disorder characterised by repetitions or prolongations of sounds, syllables, words, or hesitations or pauses that disrupt speech fluency. The American Psychiatric Association (APA) emphasizes that stuttering impacts multiple areas, including social communication, education and occupational functioning (1). Stuttering typically begins between the ages of 2 and 7, affecting 8-11% of children, and is more common in boys (2). Although most preschool children who begin stuttering recover naturally or with intervention, it is estimated that one-third continue to stutter throughout their school years and beyond (3). Recent research indicates that stuttering may be associated with various emotional and behavioural problems from childhood onwards (4, 5). Children who stutter (CWS) report experiencing more negative life events during early childhood (ages 3-4) compared to their fluent peers, including negative peer reactions in the preschool period, and higher rates of teasing, bullying, and communication difficulties during adolescence (6-8). Moreover, stuttering can limit individuals' communication skills, leading to feelings of loneliness and helplessness, and is frequently accompanied by social anxiety (4). It has also been suggested that the communicative participation of individuals with stuttering can be predicted by self-esteem, self-efficacy, and social support, in addition to the severity of speech fluency (9). Overall, the diagnosis of stuttering can profoundly impact an individual's emotional, behavioral, and cognitive well-being, regardless of age (4).

Peer bullying is conceptualized as a recurring manifestation of aggressive behavior perpetrated by an individual or group possessing greater strength or power against a comparatively weaker individual. The primary objective of such aggression is to inflict harm upon the target. Bullying can manifest in various forms, including physical bullying (e.g., pushing, hitting, kicking), verbal bullying (e.g., name-calling, teasing), cyberbullying and social or relational bullying (e.g., social exclusion, rejection from the peer group)(10). Children who stutter may encounter negative peer attitudes starting from the preschool period and throughout the school age (11). It has also been reported that children who stutter are more likely to be victims of peer bullying than their fluent peers (12). Exposure to peer bullying during these formative years can have profound effects on the academic, social, and emotional development of children who stutter. Such experiences may contribute to the onset of social anxiety, heightened fear of negative evaluation, and diminished self-confidence (11, 12). Children who stutter are frequently targeted by peers due to their speech differences, leading to social exclusion. This exclusion plays a significant role in the development of anxiety and depression symptoms within this population (13). Studies have demonstrated that children who stutter often perceive their communication abilities as inadequate, which fosters avoidance behaviors, undermines self-confidence, and elevates social anxiety levels. Repetitive and prolonged bullying, in particular, has been shown to negatively impact self-esteem and hinder the development of social skills (13,

14). Blood and Blood (2016) reported that individuals who experienced bullying during childhood were more likely to suffer from psychosocial issues in adulthood, including social anxiety, fear of negative evaluation, and reduced life satisfaction (14). Similarly, Bernarda and Norbury (2022) found that anxiety and depression symptoms in children who stutter were significantly associated with both a negative family mental health history and experiences of bullying. Their study further revealed that bullying exacerbates anxiety symptoms, while depression symptoms tend to become more pronounced with increasing age (13).

Considering the studies in the existing literature, this study aims to:

1. Investigate the prevalence of peer bullying among school-age children who stutter and present to child psychiatry clinics.
2. Examine the impact of peer bullying on the self-esteem of these children.
3. Explore the relationship between peer bullying and the symptoms of depression and anxiety disorders in these children.

Materials and Methods

Sample

Between October 2022 and January 2023, 35 children aged 8-12 years who applied to the child psychiatry outpatient clinic and were diagnosed with developmental stuttering as a result of psychiatric examination were included in the study. Children with a diagnosis of intellectual disability and autism spectrum disorder accompanying the diagnosis of stuttering, with any known neurological, metabolic or genetic disease, with acquired stuttering, whose parents did not agree to participate in the study and whose native language was not Turkish were not included in the study. The control group in the study consisted of 35 children who visited the pediatrics outpatient clinic. These children had no neurological, psychiatric, or genetic disorders, and their speech was natural and fluent. This case-control study was approved by the ethics committee of the Health Sciences University Erzurum Regional Training and Research Hospital (2022/17-159). Written and verbal information was given to the parents of all participants before the study and their consent was obtained.

Procedure

Seventy children participating in the study underwent a standardized psychiatric interview based on the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-V) criteria (1). Additionally, a sociodemographic data form was completed for each child. Following these initial assessments, children suspected of having a fluency disorder were referred to speech-language pathologists for comprehensive evaluations.

During the speech-language pathology evaluations, which included unstructured play interaction lasting 20-30 minutes, a collaborative approach was employed. Child psychiatrists and speech-language pathologists worked together to obtain

speech samples and conduct clinical evaluations to confirm a diagnosis of childhood-onset fluency disorder (stuttering) using the DSM-5 criteria (1).

For a subset of 35 children diagnosed with stuttering by a speech-language pathologist, the Stuttering Severity Instrument-Fourth Edition (SSI-4) was administered to assess the severity of their stuttering. All participants, regardless of diagnosis, completed self-report questionnaires to measure self-esteem (*Rosenberg Self-Esteem Scale* [RSES]), bullying experiences (*Olweus Bully-Victim Questionnaire Revised Form* [OBVQ-R]), and anxiety and depression symptoms (*Revised Child Anxiety And Depression Scale* [RCADS]-Child version).

Data Collection Tools

Sociodemographic Data Form: This form was designed and applied by the researchers to collect information about the participants and their family members (age, gender, delivery time, gestational length, and family type).

Hollingshead-Redlich Scale: This scale assesses socioeconomic status (SES) based on parental occupation and educational attainment, classifying it into five levels. Scoring is based on the parent with the highest occupational and educational level, with Levels 1 and 2 indicating high SES, Level 3 representing middle SES, and Levels 4 and 5 indicating low SES (15).

Stuttering Severity Instrument- Fourth Edition (SSI-4): SSI-4, developed by Riley (2009), is used to assess the severity of stuttering by speech and language therapists (16). Three categories are evaluated: frequency, duration and secondary behaviors of stuttering. The scores from all categories are summed to obtain a total score that reflects the severity of stuttering. A total score of 0–10 indicates very mild stuttering severity; 11–16 indicates mild severity; 17–26 indicates moderate severity; 27–31 indicates severe severity; and a score of 32 or above indicates very severe stuttering severity. The Turkish validity and reliability study of the scale was conducted by Mutlu et al. (17).

Rosenberg Self-Esteem Scale (RSES): RSES was developed by Morris Rosenberg in 1965 (18). The first ten questions of the scale were used to measure self-esteem in the study. Five of these ten questions consist of positive and five of negative statements. The statements are answered in a 4-point Likert scale format ranging from "strongly agree" to "strongly disagree". High scores are consistent with low self-esteem. Turkish validity and reliability studies were conducted by Çuhadaroğlu et al. (19).

Olweus Bully – Victim Questionnaire Revised Form (OBVQ-R): OBVQ was developed in 1983 and revised in 1996 by Dan Olweus (20). The scale is a self-report scale prepared for children and adolescents between the ages of 8-16 to determine the bullying situations, the type of bullying and the nature of bullying behaviour, the child's seeking help for bullying, and the reactions of adults and third parties. The questionnaire, which consists of 39 items in total, includes a detailed definition or description of bullying. Turkish validity and reliability study of the questionnaire was conducted by Sipahi and Karababa (21).

Revised-Child Anxiety And Depression Scale (R-CADS)- Child version: It was developed to evaluate anxiety disorders and major depressive disorder in children and adolescents (22). Parent and child forms are available, the child form was used in this study. The subscales include generalised anxiety disorder, separation anxiety disorder, social anxiety disorder, panic disorder, obsessive-compulsive disorder and major depressive disorder. Turkish validity and reliability study was conducted by Görmez et al. (23).

Statistics

The data analysis was conducted using the SPSS 23.0 statistical program. Descriptive statistics of the evaluation results were presented as numbers and percentages for categorical variables, and as means, standard deviations, minimums, and maximums for numerical variables. The Kolmogorov-Smirnov test was employed to assess the suitability of the data for normal distribution conditions. For comparisons of numerical variables among three or more independent groups, the ANOVA test was used when the normal distribution condition was met, and the Kruskal-Wallis Analysis of Variance was used when it was not. To identify the source of significant differences between groups, the Bonferroni test, one of the post hoc test statistics, was utilized. The Spearman Correlation Test was applied to analyze the relationship between numerical variables in two groups. The Chi-square test was used to analyze differences in the rates of categorical variables among independent groups. Statistical significance was determined at the level of $p < 0.05$.

Results

The case group consisted of 35 children diagnosed with developmental stuttering (mean age: 10.97 ± 2.75 years), while the control group comprised 35 children with fluent speech and no psychiatric disorders (mean age: 11.2 ± 2.41 years). Among all participants, 67% (n=47) were male. There were no significant differences between the case and control groups regarding participant characteristics such as age, gender, gestational length, delivery type, family type, and socioeconomic status (p>0.05) (Table 1).

The mean age at the onset of stuttering, as reported by the families of children who stutter (CWS), was 4.75 ± 2.3 years. Forty-five point seven percent of these children experienced compensatory behaviors during their speech, and 42.8% experienced bullying by peers. The types of bullying encountered by CWS included verbal (n=11), social or relational (n=6), physical (n=4), and cyber (n=4) bullying. Additionally, five individuals were both victims and perpetrators of bullying (see Table 2). Among the children in the control group, 14.3% (n=5) reported experiencing peer bullying, with two of these children identified as both bullies and victims. Verbal bullying emerged as the most prevalent type of bullying within this group (Table 2).

Table 1. Sociodemographic characteristics of the participants

Variables		Children who stutter (CWS)	Children who do not stutter (CWNS)	*p value*
Age (years± SD)		10.97 ± 2.75	11.2 ± 2.41	0.713
Gender, Male n (%)		26 (74.2)	21 (60)	0.309
Gestational length n (%)	Premature	2 (4.8)	3 (8.5)	0.085
	Term	33 (94.2)	32 (91.4)	
Delivery type n (%)	Vaginal	20 (57.1)	23 (65.7)	0.661
	C/S	12 (34.2)	11 (31.4)	
Family type n (%)	Married	27 (77.1)	30 (85.7)	0.059
	Divorced	3 (8.5)	2 (5.7)	
	Extended	5 (14.2)	3 (8.57)	
SES* n (%)				0.074
	Low	19 (54.2)	13 (37.1)	
	Middle	10 (28.5)	12 (34.2)	
	High	6 (17.1)	10 (28.5)	
Family history of stuttering n (%)		14 (40)		
Mean age of onset of stuttering years± SD		4.75 ± 2.3		
Compansatory behaviour during stuttering, n(%)		16 (45.7)		

CWS: Children who stutter; CWNS: Children who do not stutter SD: standard deviation
*SES: Socioeconomic status

Table 2. Comparison of children who and who do not stutter according to peer victimization

Variables	Children who stutter	Children who do not stutter	p value
Victims n (%)	10 (28.6)	3 (8.6)	
Both victims and bullies n (%)	5 (14.3)	2 (5.7)	**0.029***
Neither victim nor bully n (%)	20 (57.1)	30 (85.7)	

*p < 0.05 is statistically significant.

The total SSI-4 score averaged 21.15 ± 8.6, with a stuttering frequency score of 11 ± 3.6, and a compensatory behavior score associated with stuttering of 5.5 ± 4.26. Among the children who stutter (CWS), 28.57% exhibited mild stuttering, 25.71% displayed moderate stuttering, and 8.57% had severe stuttering. No significant difference in stuttering severity was found between children subjected to peer bullying and those who were not (p> 0.05). However, an increase in social anxiety symptoms was observed in school-age children as the frequency of stuttering (i.e., the number of stuttered syllables in normal speech) increased (r = 0.678). No significant correlation was found between the SSI-4 scores and the Revised Children's Anxiety and Depression Scale (R-CADS) or the Rosenberg Self-Esteem Scale for the CWS (p> 0.05).

Evaluation of the participants using the R-CADS revealed that both total and subscale scores were significantly higher in children diagnosed with stuttering compared to the control group (p <0.05) (see Table 3). The Rosenberg Self-Esteem Scale (RSES) also indicated lower self-esteem in children who stutter (CWS) (p<0.05) (see Table 3). Additionally, stuttering children who experienced peer bullying had significantly higher RSES scores, indicating lower self-esteem than stuttering children who are not exposed to peer bullying. Furthermore, it was found that symptom scores for depressive disorder, generalized anxiety disorder, and social anxiety disorder increased in stuttering children with low self-esteem, with correlation coefficients of r = 0.705, r = 0.428, and r = 0.389, respectively.

Table 3. Comparison of RCADS and RSES Scale Scores of CWS and CWNS

Variables	Children who stutter (CWS)	Children who do not stutter (CWNS)	p value
R-CADS Child			
Separation Anxiety Disorder	5.5±3.92	3.85±2.45	**0.002***
Generalized Anxiety Disorder	7.46±4.81	4.2±2.45	**0.002***
Panic Disorder	6.65 ±4.78	3.08±2.62	**0.007***
Social Anxiety Disorder	10.23 ± 7.18	4.91±3.68	**0.009***
Obsessive Compulsive Disorder	5.84±3.89	3.48±2.54	**0.006***
Major Depressive Disorder	7.57±5.74	4.42±2.93	**<0.001***
Total Anxiety score	35.73±20.6	19.71±9.84	**<0.001***
Total Depression and Anxiety Score	42.88±25.39	24.08±12.04	**0.001***
RSES			
Rosenberg Self-esteem Scale	2.2±1.36	1.08±0.7	**0.001***

CWS: Children who stutter; CWNS: Children who do not stutter; R-CADS: Revised-Child Anxiety And Depression Scale; RSES: Rosenberg Self-esteem Scale; *p < 0.05 is statistically significant.

Discussion

The study revealed that school-aged children diagnosed with stuttering experience peer bullying more frequently than their fluent-speaking peers. Additionally, children who stutter are subjected to peer bullying exhibit lower self-esteem and more pronounced symptoms of depression, generalized anxiety disorder, and social anxiety disorder.

Existing literature consistently indicates that CWS are at a heightened risk of peer bullying compared to their fluent-speaking peers (12). A study involving 276 adults with a history of stuttering reported that 83% had experienced peer bullying during their school years (24). Similarly, research on adolescents found that 44.4% of individuals who stutter had been bullied by peers, in contrast to only 9.2% of their fluent-speaking peers (9.2%) (25). A Turkish study by Kara and Karamete (2018) found an even higher prevalence, with 84% of adults who stutter recalling experiences of peer bullying during their school years, with verbal bullying being the most common form, significantly affecting their emotional, social, academic, and professional lives (26). Moreover, Kılıçaslan et al. (2022) reported that CWS were approximately three times more likely to experience peer bullying than their fluent-speaking peers, with a bullying prevalence of 52.5% in CWS compared to 27.8% in children with fluent speech (27). In the present study, 45.7% of the 35 school-aged children diagnosed with stuttering reported peer bullying, a rate consistent with previous findings (27); albeit slightly lower than that reported by Kara and Karamete (2018) (26). The discrepancy may result from methodological differences, recall bias, or variations in the measurement scales used. Importantly, our findings revealed that the severity of stuttering did not correlate with the likelihood of experiencing peer bullying. Verbal bullying, such as teasing and name-calling, as well as social or relational bullying, including exclusion from social settings and group rejection, are more commonly observed in children who stutter (14). Consistent with the existing literature, our study identified verbal bullying as the most prevalent type, followed by social bullying. Consequently, we recommend targeted monitoring and intervention programs to prevent peer bullying in CWS, irrespective of stuttering severity.

Recent research indicates that peer bullying can contribute to various emotional and behavioral problems in individuals with stuttering (11, 25). Davis et al. (2002) observed that children who stutter experience greater social exclusion in peer interactions (28). Additionally, children with stuttering are at increased risk for both peer bullying and anxiety disorders, suggesting a bidirectional relationship between heightened anxiety symptoms and experiences of bullying (29). Adolescents with stuttering have been found to exhibit lower self-esteem compared to fluent adolescents, potentially linked to their experiences of peer bullying (25, 30). Adolescents with stuttering have been found to exhibit lower self-esteem compared to fluent adolescents, potentially linked to their experiences of peer bullying (14). Con

sistent with these findings, the present study demonstrated that school-aged CWS subjected to peer bullying exhibited lower self-esteem and more pronounced symptoms of depressive disorder, generalized anxiety disorder, and social anxiety disorder. These results underscore the importance of implementing interventions aimed at fostering the positive attributes of children who stutter and providing opportunities for them to demonstrate these strengths in peer settings. Such initiatives may mitigate the risk of psychiatric symptoms by enhancing self-esteem and promoting social acceptance.

In addition to the impact of peer bullying, our study highlights the elevated levels of anxiety and depressive symptoms in school-aged CWS. Previous research has established a link between stuttering and emotional or behavioral difficulties in children, which may stem from shared genetic etiology, neurobiological vulnerabilities, decreased self-efficacy, increased social rejection, and internalized stigma (4, 31). Prior studies have reported that anxiety disorders are frequently comorbid with stuttering, while depressive disorders occur less commonly. Anxiety has been shown to exacerbate speech disfluencies by increasing pause duration, fostering negative communication attitudes, and reinforcing social avoidance behaviors (32, 33). A study examining school-aged CWS found significant differences in depressive symptoms and state anxiety, though not in trait anxiety (27). Consistent with these findings, the present study demonstrated that anxiety levels and depressive symptoms are more intense in school-age CWS compared to the CWNS. Additionally, an increase in social anxiety symptoms was observed with higher frequencies of stuttering (measured by the number of syllables stuttered in normal speech) in school-aged CWS ($r = 0.678$). Given these findings, it is evident that school-aged CWS are at an elevated risk for symptoms of anxiety and depressive disorders. Consequently, follow-up by child psychiatry and the provision of psychosocial support are critical in the treatment and management of school-age CWS.

Limitations

One of the limitations of our study is that the sample group consisted of children diagnosed with stuttering who were actively seeking treatment. This selection may have led to an increased frequency of psychopathology among the participants. Future research should involve community samples to obtain a more representative understanding of stuttering's impact on psychopathology. Another limitation is that comorbid conditions such as attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), and others, which may coexist with stuttering, were not evaluated. Studies with larger sample sizes, that include an assessment of these comorbid conditions are needed to provide a more comprehensive analysis. Additionally, the scales used in our study were based on self-reports from

the participants. Future studies would benefit from incorporating scales that rely on feedback from parents or teachers to provide a more rounded perspective. Despite these limitations, we believe our study contributes significantly to the literature on school-age children with stuttering and their experiences with peer bullying.

Conclusion

Our study found that school-age children diagnosed with stuttering exhibit more frequent symptoms of anxiety and depressive disorders and experience high rates of peer bullying compared to their fluent-speaking peers. Furthermore, stuttering children who were bullied showed lower self-esteem and more severe symptoms of depressive disorder, generalized anxiety disorder, and social anxiety disorder. Based on these findings, we recommend providing comprehensive psychosocial support for all school-age children with stuttering. Additionally, fostering their positive attributes, raising awareness about stuttering, and implementing school-based bullying prevention programs are essential. Such measures could significantly contribute to the well-being of children with stuttering.

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