THE PREVALENCE OF INTERNALIZING PROBLEMS AMONG CHILDREN AND ADOLESCENTS: A NATIONWIDE STUDY IN TÜRKİYE

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ABSTRACT

THE PREVALENCE OF INTERNALIZING PROBLEMS AMONG CHILDREN AND ADOLESCENTS: A NATIONWIDE STUDY IN TÜRKİYE

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This study aims to investigate the prevalence of internalizing behavior problems among children and adolescents in Türkiye. Gender, grade, and residency differences in internalizing behavior problems were also examined. The sample consisted of 5630 children and adolescents aged 6-17 and their mothers. Internalizing behavior problems were assessed through mothers' reports. The results of three-way factorial ANOVA implied that internalizing behavior problems increase with age. In addition, girls scored significantly higher on internalizing behavior problems than boys overall. Besides, the main effect of the residency was significant; participants in rural areas reported higher levels of internalizing behavior problems than participants in urban areas. Furthermore, findings showed that gender differences in internalizing behavior problems emerged during 8^{th} grade, with significantly higher scores for girls. There was no other significant interaction effect. The prevalence of internalizing behavior problems was found as 9.64%. The findings of the study were discussed in the context of the relevant literature, along with contributions, limitations, and implications.

Keywords: internalizing, gender difference, prevalence, child, adolescent

ÖZ

ÇOCUK VE ERGENLERDE İÇE YÖNELİM PROBLEMLERİNİN GÖRÜLME SIKLIĞI: TÜRKİYE TEMSİLİ ÖRNEKLEMDE BİR ÇALIŞMA

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Bu çalışma, Türkiye'de yaşayan çocuk ve ergenler arasında içe yönelim sorunlarının görülme sıklığını araştırmayı amaçlamaktadır. Çalışmada içe yönelim problemlerinin yaş, cinsiyet ve yerleşim yerine göre nasıl farklılaştığı da incelenmiştir. Çalışmanın örneklemi 6-17 yaş arası çocuklardan ve onların annelerinden oluşmaktadır. İçe yönelim problemleri anneler tarafından doldurulan ölçek ile değerlendirilmiştir. Yürütülen çok faktörlü varyans analizinin sonuçları içe yönelim problemlerinin yaş ile arttığını göstermektedir. Ayrıca, içe yönelim problemlerinin kızlar arasında daha yaygın olduğu görülmüştür. Bunlara ek olarak, kırsal alanlardaki katılımcılar, kentsel alanlardaki katılımcılara göre daha yüksek düzeyde içe yönelim sorunu bildirmişlerdir. Bulgular içe yönelim problemlerinde cinsiyet farklarının 8. sınıfta anlamlı hale geldiğini göstermiştir. İçe yönelim problemlerinin görülme sıklığı %9,6 olarak bulunmuştur. Sonuçlar ilgili alanyazın bağlamında, katkılar, kısıtlılıklar ve gelecek çalışmalar doğrultusunda tartışılmıştır.

Anahtar Kelimeler: içe yönelim problemleri, cinsiyet farkı, yaygınlık, çocuk, ergen

To my family

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
CBCL	Child Behavior Checklist
CI	Confidence Interval

CHAPTER 1

INTRODUCTION

1.1. Internalizing Behavior Problems

Internalizing problems is an umbrella term including emotion and mood disturbances characterized by depression, anxiety, somatic complaints, and social withdrawal (Achenbach, 1991). They emerge during childhood and adolescence (Bongers et al., 2003), and they are one of the most common psychopathologies at these ages (Staller, 2006; Zahn-Waxler et al., 2000).

Childhood and adolescence psychopathologies have impacts on individuals and society. Bronfenbrenner's Ecological Systems Theory (1981) states five interrelated systems that influence children's development: microsystem, mesosystem, exosystem, macrosystem, and chronosystem. This theory examines relationships between children and broader society. The microsystem is the first level that children contact with their immediate environment (e.g., parents, siblings, peers, etc.). There is a bidirectional relationship between the child and the environment in microsystems. That means the child not only is directly affected by the environment but also directly affects the environment. For example, Ashford et al. (2008) found that low socioeconomic status, parental psychopathology, and parenting stress predict internalizing problems in children. Additionally, because these systems are interrelated, a change or challenge in one system influences others. Based on this model, it is possible to say that internalizing behavior problems among children and adolescents lead to public health challenges. For instance, internalizing behavior problems are associated with higher use of tobacco, cannabis, and alcohol, self-harm, lower academic motivation (Gutman & Codiroli-McMaster, 2020), lower physical activity, and overeating (Jamnik & DilLalla, 2019). Besides, it was found that higher levels of internalizing behavior

problems during early childhood are significantly related to lower scores on cognitive ability and academic achievement during the first grade (Bub et al., 2007) and risk of school dropouts (Melkevik et al., 2016). Moreover, internalizing behavior problems in childhood and adolescence predict anxiety disorders, major depressive disorder, and suicidal behavior in adulthood (Herrenkohl et al., 2010; Pine et al., 1998). Therefore, it is crucial to understand internalizing problems in children and adolescents to protect the mental and physical health of individuals and societies.

Considering all of these, prevalence rates across countries were discussed in this study. In addition to prevalence rates, examining factors associated with internalizing behavior problems is essential. Internalizing behavior problems are significantly related to several factors, like socioeconomic status, age, gender, self-esteem, parenting behaviors (e.g., psychological control, affection), and peer attachment (Oliva et al., 2014). This study focused on the associations between internalizing behavior problems and three factors: age, gender, and residency. Therefore, studies that demonstrated the relationships between these factors and internalizing behavior problems were also summarized critically in the following sections.

1.2. Prevalence

According to the World Health Organization (2021) report, the prevalence of anxiety disorders was 3.6% among 10-14 years-old and 4.6% among 15-19 years-old adolescents. Also, the prevalence rate of depression was estimated as 1.1% for adolescents aged between 10-14 years; 2.8% for 15–19-year-olds. A meta-analysis study reported that the global prevalence of major depressive disorder among adolescents aged 10 to 19 years was 8% (Shorey et al., 2021). Similarly, in another study, the worldwide prevalence rates of anxiety disorders and depressive disorders among participants up to 18 years old were estimated as 6.5% and 2.6%, respectively (Polanczyk, 2015).

A number of studies examining the prevalence of internalizing behavior problems have been carried out across countries, and they vary in population and methodology.

Previous studies generally used two different approaches: categorical and dimensional. In the categorical approach, specific diagnostic criteria are used to determine the presence or absence of psychopathology, like a cut-off score; however, the dimensional approach concentrates on the severity and frequency of these problem behaviors (Moreland & Dumas, 2008). In addition to differences in approaches, aspects of internalizing behavior problems were assessed separately in most epidemiologic studies. In other words, researchers investigated internalizing behavior problems focused on the prevalence of depression and/or anxiety disorders. In the current study, findings from both categorical and dimensional approaches and the prevalence of anxiety and depressive disorders were summarized. Another issue in epidemiologic studies is that some researchers consider the impairments in functioning while assessing internalizing behavior problems; some do not. Besides, in some studies, the 6-month prevalence was estimated, while lifetime or 12-month prevalence was evaluated in others. Because of these issues, the reported prevalence rates may be quite different from each other.

1.2.1. Worldwide Prevalence

Drosopoulou et al. (2022) compared the 6-month prevalence of internalizing behavior problems among adolescents aged 14-18 in five European countries. They found the rate was the highest in Iceland (11.1%). It was followed by the Netherlands (10.7%), Spain (10.3%), and Greece (7.6%). The lowest prevalence rate for internalizing behavior problems was found in Romania (2.4%) in this study. Canals et al. (2019) also reported that the current prevalence of anxiety disorders among adolescents aged 9-to-12 years in Spain was 11.8%. The prevalence rate of internalizing behavior problems among Italian children and adolescents differed from 6.5% to 10.5% (Frigerio et al., 2009; Gritti et al., 2014). According to findings of a national survey carried out with children and adolescents 5-to-19 years old in England, 8.1% of them had anxiety and depressive disorders (Vizard et al., 2018). The results of an epidemiologic study conducted with a representative national sample aged 11-17 years in Germany showed that 6-month prevalence rates of depression and anxiety were 11.1% and 9.9%, respectively (Ravens-Sieberer et al., 2008). In another study, the prevalence of depression was reported as 8.2% among adolescents aged between 12-

17 in Germany (Wartberg et al., 2018). Wichstrøm et al. (2012) assessed the 3-month prevalence of psychiatric disorders. It was reported that 2% of preschoolers in Norway experience depression, and 1.5% of them suffer from anxiety disorders.

In addition to European countries, researchers in Asian countries also investigate the prevalence of internalizing behavior problems. Namely, in Vietnam, a nationwide study was conducted to determine the prevalence of internalizing behavior problems among children and adolescents aged 6-16 years, and the 6-month prevalence was estimated as 18.3% (Weiss et al., 2014). It was also found that 12.1% of children aged between 7-11 experienced internalizing behavior problems in Sri Lanka during the last six months (Ginige et al., 2014). The overall prevalence of internalizing behavior problems among primary school children in Hong Kong was estimated to be 11.4% (Siu, 2008). The prevalence ratio of internalizing behavior problems among adolescents in Taiwan was 15.9% (Yang et al., 2000). Also, a nationwide study in Taiwan indicated that 12% of adolescents experienced anxiety disorders, and 1.1% had depressive disorders in the last six months (Chen et al., 2019). In Bangladesh, the prevalence rates of depression and anxiety among adolescents between 13 and 18 years were reported as 26.5% and 18.1%, respectively (Islam et al., 2021). Similarly, the incidence rate of depression among adolescents aged 15-19 was 27% in Nepal (Gautam et al., 2021). The depression rate among children 7-10 years old in Yemen was 0.3%, and the rate of anxiety was 9.3% (Alyahri & Goodman, 2008). According to a cross-sectional study conducted with adolescents in Pakistan, the prevalence rate of depression and anxiety was 17.2% and 21.4%, respectively (Khalid et al., 2019). The prevalence of depression was 14.5%, and the prevalence of anxiety was 15% among youths aged 11-to-18 in India (Mishra et al., 2018). The 1-month prevalence of depressive disorders among Chinese children who were 6-14 years old was 2.8% (Zhong et al., 2013).

The prevalence rate of internalizing behavior problems is relatively high in Middle Eastern countries. The prevalence ratio of anxiety and depressive disorders among adolescents aged 13-18 in Jordan was 28.6% (Alslman et al., 2017). Among Qatari adolescents aged 14 to 19, the depression rate was 34.5% (Al-Kaabi et al., 2017). In Lebanon, the 30-day prevalence of anxiety and mood disorders among adolescents

aged 11-17 was 13.1% and 6.7%, respectively (Maalouf et al., 2016). In Israel, the prevalence of internalizing behavior problems among adolescents aged 14-17 was estimated as 8.1% (Farbstein et al., 2010).

Similar studies have been carried out in countries in Africa. For example, the 12-month prevalence of anxiety disorders was 15% among 13-18-year-old adolescents in Nigeria (Adewuya et al., 2007). In Uganda, the prevalence rate of anxiety disorders was 26.6% among children and adolescents aged 3 to 19 years (Abbo et al., 2013). The prevalence of depression and anxiety among adolescents 10-12 years old was 14% in South Africa (Cortina et al., 2013).

In the United States, the 12-month prevalence of anxiety disorders was estimated as 31.9%, and the prevalence of depressive disorders was estimated as 11.7% based on the national survey results among adolescents aged 13-to-18 (Merikangas et al., 2010). In Canada, parents reported a 6-month prevalence of anxiety and depressive disorders among children 4-to-11 years old as 8.72% and 1.09%, respectively (Georgiades et al., 2019). In the same study, adolescents aged 12-to-17 years were assessed separately. Based on the parents' report, the prevalence of anxiety disorders was 11.29%, and the prevalence of depressive disorders was 5.21%. The prevalence of depression was estimated as 5.2%, and the prevalence of anxiety was reported as 8.3% among children and adolescents aged from 4 to 18 in Chili (Vicente et al., 2012). In another study, the 12-month prevalence rates of depression and anxiety among adolescents aged 12 to 17 in Mexico were found as 5.3% and 29.8%, respectively (Benjet et al., 2009). Based on DSM-IV criteria, the prevalence of depressive disorders was 1% and 5.2% for anxiety disorders among 7-to-14 years old children in Brazil (Fleitlich-Bilyk & Goodman, 2004). In Puerto Rico, children and adolescents aged 4 to 17 were assessed, and the results showed that the 12-month prevalence of anxiety disorders was 9.5%, and the prevalence of depressive disorders was 4.1% among them (Canino et al., 2004). Sawyer et al. (2001) conducted a nationwide study with 4 to 17-year-olds in Australia, and the 6-month prevalence of internalizing behavior problems was 12.8%.

In sum, it is difficult to compare prevalence rates across countries due to methodological differences in studies. However, the results show that the prevalence

of internalizing behavior problems is remarkably high in almost all, mainly Middle Eastern and African countries. Also, studies conducted with adolescents reported higher prevalence rates, despite cultural differences. These findings suggest that internalizing behavior problems tend to increase with age in general.

1.2.2. Prevalence in Türkiye

Researchers in Türkiye were also concerned about the prevalence rate of internalizing behavior problems among children and adolescents. Only one study was carried out with a nationally representative sample to examine the prevalence of internalizing behavior problems in Türkiye. Erol and Şimşek (1998) assessed problem behaviors among a nationally representative community sample aged from 4-to-18 years. However, this study did not report the prevalence of internalizing behavior problems (M = 8.4, SD = 6.5); they only reported the total problem behavior among children and adolescents. In another study, researchers reported the 6-month prevalence of internalizing behavior problems among adolescents aged 11-18 years as 11.7% based on the previous data (Erol et al., 2010).

Most of the other studies were conducted with non-representative samples. For example, the prevalence of internalizing behavior problems among 217 adolescents aged 14-to-18 was estimated as 13.6% (Arslan, 2020). Kara and Selçuk (2020) assessed 409 children aged from 5.5 to 18, and they found the 6-month prevalence of internalizing behavior problems as 14.3%. In another study, the prevalence of mood and anxiety disorders among children and adolescents 6-14 years old in İzmir was 2.9% and 13.9%, respectively (Bilaç et al., 2014). In the same study, prevalence rates decreased to 1.4% and 2.6% for mood and anxiety if impairment in functioning was considered as a criterion. In Mardin, 66% of 444 high school students suffered from anxiety symptoms, and 37% had depressive symptoms based on the determined cut-off scores (Ceylan et al., 2003). Özkul and Partlak-Günüşen (2020) conducted an epidemiologic study with 755 high school children aged 14 to 18 years in İzmir to determine the prevalence of depressive symptoms. In this study, the prevalence of depressive symptoms experienced in the last two weeks was 41.9% based on the determined cut-off score. A similar study was conducted with high school students in

Eskişehir, and the prevalence of depression was 30.7% during the past two weeks (Unsal & Ayrancı, 2008). Similarly, Eskin et al. (2008) reported that the prevalence of depression was 17.5% among high school students in Aydın within the previous two weeks. Another study conducted with 792 students in Sivas showed that the prevalence of depressive symptoms was 7.8% among children aged between 9-11 years, and it was 6.2% among adolescents aged between 12-14 years (Ertekin-Pınar & Tel, 2012). Adana et al. (2015) reported depression prevalence among children aged 8-to-13 was 6.9% in Kars. In Konya, the prevalence of depression among 7602 elementary school students was 9.9% during the last two weeks (Bodur & Küçükkendirci, 2009). Toros et al. (2004) conducted a study with adolescents from 6th grade to 11th in Mersin, and they found the rate of depression as 12.5% based on the symptoms in the last two weeks. Demir et al. (2011) reported the prevalence of depression was 4.2% among adolescents aged 9-16 years in İstanbul.

To conclude, the prevalence rates of internalizing behavior problems in previous studies were quite heterogonous in Türkiye. These differences may be explained by the assessment tools used to assess internalizing behavior problems. Some scales included a limited number of items. For instance, Arslan (2020) used Youth Internalizing Behavior Screener (YIBS), a 10-item scale. In addition, some studies measured depression and anxiety separately by using clinical assessment tools such as Beck Depression Scale, Trait Anxiety Inventory, and Child Depression Scale (e.g., Ceylan et al., 2003; Özkul & Partlak-Günüşen, 2020). There are also studies that assessed internalizing behavior problems through the Child Behavior Checklist (e.g., Erol & Şimşek, 1998; Kara & Selçuk, 2020). However, Erol and Şimşek did not report the prevalence, and Kara and Selçuk (2020) carried out the study with 409 children. Additionally, most of the other studies were conducted with small sample sizes from a specific age group, like high school students or a particular city. Furthermore, the prevalence rate changed if considering the impairment in functioning criterion. Apart from these, time criteria also affect the reported prevalence rates in the studies. Because of these reasons, the previous results may not represent the general population. Therefore, the first aim of the present study was to investigate the prevalence rate of internalizing problems of children and adolescents in a nationally representative sample of Türkiye.

Moreover, similar to other countries, the prevalence rates in studies conducted with adolescents were higher in Türkiye. Based on these findings, the relationship between age and internalizing behavior problems was also examined in the next part.

1.3. Age and Internalizing Behavior Problems

Earlier studies investigating trajectories of internalizing problems from childhood to adolescence found an increase in the level of internalizing problems with age for both girls and boys (Bongers et al., 2003; Gutman & Codiroli-McMaster, 2020; Wang et al., 2018). It was also stated that the peak point of internalizing behavior problems is mid-to-late adolescence (Petersen et al., 2018).

Crijnen et al. (1997) compared the prevalence of internalizing behavior problems across 12 countries and found that the rate increased with age in all these countries. Other studies also supported the earlier findings. For example, it was found that internalizing behavior problems increased with age in the United States (Merikangas et al., 2010; Weine et al., 1995), Italy (Frigerio et al., 2009), the Netherlands (Drosopoulou et al., 2022), Greece (Roussos et al., 2001), and China (Ma et al., 2013; Weine et al., 1995). Additionally, the researchers reported that the rate of both depression and anxiety got higher with age in Jordan (Alslman et al., 2017; Dwekat et al., 2021) and Puerto Rico (Canino et al., 2004). In India, it was reported that depressive symptoms were more common among adolescents 15-19 years old than among 10-14 years old (Das et al., 2021). In addition, age was found to be a positive predictor of depression in Egypt (Afifi, 2006) and Germany (Wartberg et al., 2018).

The age factor was also considered in Turkish literature. For instance, Erol and Şimşek (1998) found that internalizing behavior problem scores were higher among older children than younger ones. Similarly, the rate of depression increased with age among elementary school students in Konya (Bodur & Küçükkendirci, 2009), İstanbul (Demir et al., 2011), and Mersin (Toros et al., 2004).

Overall, results indicated that internalizing behavior problems are positively associated with age in Türkiye and other countries. Age-related stressors might explain the positive relationship between age and internalizing behavior problems. Adolescents encounter major physical, emotional, and social changes and challenges during puberty. For instance, they experience school changes, and their relationships with peers and parents become more complicated. Due to these factors, adolescents manifest heightened distress levels compared to pre-adolescents in this transition period (Ge et al., 2001).

In Turkish literature, the number of studies focused on age differences in internalizing behavior problems is limited. Therefore, the present study investigates the relationship between age and internalizing behavior problems through a nationally representative sample.

Another factor that is significantly associated with internalizing behavior problems is gender. There is also an interaction between age and gender in internalizing behavior problems. Internalizing behavior problems tend to increase with age, especially for girls (Oliva et al., 2014). Accordingly, findings related to the role of gender in internalizing behavior problems were reviewed in the following part.

1.4. Gender and Internalizing Behavior Problems

Earlier studies on gender differences in the prevalence of internalizing behavior problems found various trends. Although the ratios differed across countries, the prevalence of internalizing behavior problems was generally higher among girls than boys. For example, Crijnen et al. (1997) stated that girls had more internalizing behavior problems than boys across 12 countries. Similarly, Rescorla et al. (2007a) compared internalizing behavior problems among children and adolescents aged 6-to-16 years across 31 societies. They found that girls experienced more internalizing problems than boys in most of these societies. In addition to these, it was found that girls tend to have higher scores on internalizing behavior problems than boys in Australia (Wang et al., 2018). Similarly, the rate of depression and anxiety was higher

among girls aged 4-to-17 years compared to boys in Puerto Rico (Canino et al., 2004). A similar pattern was found in Chili among children aged 4-to-18; the prevalence of anxiety and depressive disorders was significantly higher for girls than boys (Vicente et al., 2012). Also, among children and adolescents 3-to-19 years old in Uganda, girls' anxiety level was significantly higher than boys' (Abbo et al., 2013).

On the other hand, some studies did not find a gender difference in internalizing behaviors until adolescence (Bongers et al., 2003; Leve et al., 2005; Sterba et al., 2007). In this light, it was suggested that gender difference in internalizing behavior problems emerges during puberty and continues to increase until mid-to-late adolescence (Adkins et al., 2009; Hankin et al., 2016).

In the literature, a number of studies supported this claim. For example, the gender difference in internalizing behavior problems was not found among toddlers (Briggs-Gowan et al., 2006), preschool children (Kariuki et al., 2017), and 10–12-year-olds (Cortina et al., 2013). Similarly, the prevalence of internalizing behavior problems did not significantly differ for boys and girls 7- to 11-year-olds in Sri Lanka (Ginige et al., 2014). The ratio of depressive and anxiety disorders was similar for 6-year-old boys and girls in Brazil (Petresco et al., 2014). In Yemen, boys and girls aged 7-to-10 reported similar prevalence rates for depressive and anxiety disorders (Alyahri & Goodman, 2008).

Also, in the United Kingdom, it was found that there was no significant gender difference between boys' and girls' internalizing behavior problems until age 14 (Gutman & Codiroli-McMaster, 2020). However, girls were more likely to have higher internalizing behavior problems after that age than boys. Twenge and Nolen-Hoeksema (2002) indicated that the difference between depressive symptoms of girls and boys appeared at the age of 13; girls' scores were significantly higher than boys after that age. Additionally, in China, it was found that the depression rate was not significantly different for boys and girls aged 6 to 11, but the difference became significant at the age of 12 (Zhong et al., 2013).

Gender difference in internalizing behavior problems was apparent in studies conducted with adolescents in Israel (Farbstein et al., 2010), Iceland and Romania (Drosopoulou et al., 2022), Russia (Slobodskaya, 1999), and Greece (Roussos et al., 2001). The prevalence of anxiety and depressive disorders was also higher for female adolescents than males in Jordan (Alslman et al., 2017), India (Jha et al., 2017; Mishra et al., 2018), Mexico (Sèrvan-Mori, 2021) and the United States (Daly, 2022; Kessler et al., 2012; Merikangas et al., 2010). Consistently reported in other countries, depression was more common among female adolescents than males in Germany (Wartberg et al., 2018), Egypt (Afifi, 2006), and Qatar (Al-Kaabi et al., 2007). In Nigeria, girls aged 13-to-18 years reported significantly higher anxiety levels than boys (Adewuya et al., 2007).

There are several explanations for why adolescent girls experience higher internalizing behavior problems than boys. First, girls are exposed to more stressors than boys, such as sexual abuse (Cutler & Nolen-Hoeksema, 1991) and interpersonal conflicts with family members and peers (Hankin et al., 2007). These stress factors lead to a rise in internalizing behavior problems among adolescent girls (Ge et al., 1994). Second, their body shapes have changed after puberty due to weight gain, and they become dissatisfied with their body image (Marcotte et al., 2002). Third, identification with gender stereotypes increases with age for boys and girls due to the expectations of parents and society (Lapointe & Marcotte, 2000). Feminine stereotypes are linked with higher internalizing behavior problems (Nolen-Hoeksema & Girgus, 1994). Lastly, the coping styles of boys and girls are different. Girls use rumination as a coping style (Roelofs et al., 2009), while boys use distraction to deal with stressors (Broderick, 1998). All of these might increase girls' vulnerability to internalizing behavior problems in adolescence.

On the other hand, some studies did not find significant gender differences in internalizing behavior problems among adolescents. For example, the prevalence of internalizing behavior problems did not differ between girls and boys aged 14-to-18 years in Spain, Greece, and the Netherlands based on adolescents' self-report (Drosopoulou et al., 2022). In addition to this, parents did not report significant gender differences among Swedish adolescents in the prevalence of internalizing behavior

problems (Bohlin & Janols, 2004). Similarly, parents of Canadian youth aged 12 to 17 indicated no significant gender difference regarding the prevalence rates of anxiety and depressive symptoms (Georgiades et al., 2019). However, in the same study, it was found that the rates were higher for girls based on the youth's self-report. This finding shows the importance of the source of information while assessing internalizing behavior problems.

The previous findings are also mixed in Turkish literature. Erol and Şimşek (1998) reported that the prevalence of internalizing behavior problems was higher for girls than boys among a representative Turkish sample aged 4-to-18 years based on reports of parents, teachers, and children. It was also found that girls aged 5.5 to 18 manifested higher levels of internalizing behavior problems than boys in the eastern part of Türkiye, according to caregivers' report (Kara & Selçuk, 2020). Also, Ulu and Fışıloğlu (2002) stated that girls aged 9 to 12 years had more internalizing behavior problems compared to boys based on teachers' reports. Still, there was no significant gender difference, according to parents' reports. Özakar-Akça et al. (2018) assessed adolescents aged 15-18 through self-report and found that depression and anxiety problems were more common for females than males in Türkiye. Similarly, some studies conducted with high school students indicated girls reported higher levels of depressive disorders than boys (Eskin et al., 2008; Özkul & Partlak-Günüşen, 2020). Also, the depression rate was higher among girls aged 12 to 16 than boys in Konya (Bodur & Küçükkendirci, 2009).

On the other hand, there was no gender difference in internalizing behavior problems among preschool children based on parent and teacher reports (Özbey & Alisinanoğlu, 2009; Topçu-Bilir & Sop, 2016). Similarly, gender difference was not found in depression and anxiety levels among third-grade students (Tosun & Zorlu, 2019). Bilaç et al. (2014) also failed to find any significant gender differences in the prevalence of depressive and anxiety disorders among elementary school students. The prevalence of depressive disorders did not differ between girls and boys aged 8-13 in Kars (Adana et al., 2015). These findings are consistent with the idea that gender differences in internalizing behavior problems emerge after puberty.

In sum, the results of studies focused on gender differences in internalizing behavior problems across countries are inconsistent due to methodological differences and sample characteristics. Therefore, the present study aims to address gender differences in internalizing behavior problems with a representative sample in Türkiye.

1.5. Residency and Internalizing Behavior Problems

In the literature, some studies specifically focused on the prevalence of internalizing behavior problems in rural areas. For instance, a meta-analysis study showed that the pooled prevalence of depression and anxiety among adolescents who live in rural parts of India was 27% and 26%, respectively (Rajkumar et al., 2022). Sèrvan-Mori et al. (2021) evaluated adolescents aged 14-20 years in rural parts of Mexico and found that 35.8% of them suffered from depressive or anxiety symptoms. Another study reported that the rate of depression among adolescents in rural Australia is 18% (Black et al., 2012). These rates were higher than rates in urban areas.

Rural areas have some disadvantages in terms of socioeconomic status, social and educational opportunities, health services, and environmental characteristics compared to urban areas (Dornan & Woodhead, 2015; Woldehanna et al., 2011). These disadvantages lead to a debate regarding whether mental health problems are more common in rural than urban areas (Quine et al., 2003; Rees et al., 2017). As an example, depression was more common among adolescents in rural than urban areas of Malaysia (Ang et al., 2019).

On the other hand, in Canada, depression was higher in urban than rural (Romans et al., 2011). Also, children living in rural areas in Brazil reported higher anxiety levels than their urban peers (Fleitlich-Bilyk & Goodman, 2004). In the literature, this difference is explained by low social support in urban areas, greater stress of urban life, and social isolation (Marsella, 1998; Mueller, 1981).

In contrast to studies that reported that the prevalence of internalizing behavior problems differed in rural and urban areas, most studies did not find significant

differences. For example, the prevalence of depression and anxiety between rural and urban areas among youth was not significant in the United States (Breslau et al., 2014; Hope & Bierman, 1998), China (Zhang et al., 2017), Belgium, France, Germany, Italy, Netherlands, and Spain (Kovess-Masféty et al., 2005), Puerto Rico (Canino et al., 2004), Yemen (Alyahri & Goodman, 2008). Similarly, there was no difference in the well-being of rural and urban children in Korea and Argentina (Rees et al., 2017). Area of residence was not significantly associated with the level of internalizing behavior problems among children and adolescents in India (Anikivi & Yenagi, 2019; Mishra et al., 2018), Sweeden (Bohlin & Janols, 2004), and Greece (Roussos et al., 2001). The anxiety levels of children living in urban did not differ from their peers living in rural areas in Australia (Lyneham & Rapee, 2007).

In Turkish literature, researchers compared internalizing behavior problems based on residency, and it was found that the prevalence of internalizing behavior problems was significantly higher among children who live in urban areas than in rural and suburban (Erol & Şimşek, 1998). To date, it was the only study that specifically examined the urban and rural differences in internalizing behavior problems among the Turkish sample. Therefore, the third aim of this study is to explore the association between residency and internalizing behavior problems in Türkiye.

The definition of urban and rural differs across countries. Population size and density are the main criteria for classifying an area as urban or rural in Türkiye (TURKSTAT, 2023). However, more comprehensive methods, including social and economic characteristics, were suggested for urban-rural classification (Gökyurt et al., 2015; Öğdül, 2010). The primary source of income is agriculture in rural areas in Türkiye (Alemdar et al., 2012). It is also known that the formal education levels of parents in rural areas are lower than in urban areas (Voicu & Vasile, 2010). Based on these findings and suggestions, in addition to population size and density, demographic and employment structure, environmental and social opportunities in the area, and distance to the urban center were also considered while dividing the districts into urban and rural in this study.

1.6. Current Study

Although some studies investigated the prevalence of internalizing behavior problems among Turkish children and adolescents, they have various limitations. First, most studies were conducted with a non-representative sample. Data were collected from only one city or only one age group. Second, clinical assessment tools were used in some of these studies, and their determined cut-off scores differed. Lastly, these studies assessed depression or anxiety separately rather than assessing internalizing behavior problems in general. In sum, the generalizability of the previous findings of these studies was low. Taken together, this study aims to investigate the prevalence of internalizing problems among children and adolescents in Türkiye.

Previous findings showed the significant impacts of gender, age, and residency on internalizing behavior problems. However, no recent study investigated these individual factors in Turkish literature with a nationally representative sample. Therefore, this study also aims to examine gender, age, and residency differences in internalizing behavior problems among Turkish children and adolescents. Another aim of the study is to determine the prevalence rate of internalizing behavior problems in Türkiye. The findings are essential to examine underlying mechanisms in internalizing behavior problems, mental health service needs, and the timing of interventions to prevent and treat internalizing behavior problems.

In the present study, based on the literature, the following hypotheses were tested:

(1) It was expected that older children would experience higher levels of internalizing behavior problems than younger children.

(2) It was expected that the girls would score higher on internalizing behavior problems than boys.

(3) It was expected that internalizing behavior problems would be greater among children and adolescents living in rural than in urban.

CHAPTER 2

METHOD

2.1. Sample

The present study was carried out as a part of a nationwide study funded by The Scientific and Technological Research Council of Türkiye (TÜBİTAK) and titled "The Effects of Parenting Attitudes and Parent-Child Interaction on Child and Adolescent Developmental Outcomes". The main aim of the project was to investigate the effects of parenting behaviors, beliefs, and attitudes on children's and adolescents' developmental outcomes. The sample was determined by the Turkish Statistical Institute (TURKSTAT), and time 1 data were collected from 186 schools in 61 cities in Türkiye. Inclusion criteria were children and adolescents living with his/her mother, being non-immigrants, and not having a diagnosis of developmental disorder. In the present study, 5630 children and adolescents from 1st to 11th grades and their mothers were included. 26.25% of them live in rural parts of Türkiye, and 73.75% live in urban areas. Detailed information regarding the demographic characteristics of children, adolescents, and mothers is presented in Table 1, Table 2, and Table 3.

Table 1

Demographic characteristics of children and adolescents

	Grade											
Gender	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Total**
Female	271	268	257	270	289	266	266	280	269	269	240	2945
Male	301	277	285	268	252	258	202	203	242	213	184	2685
Total	572	545	542	538	541	524	468	483	511	482	424	5630

Table 2

Residency information

		Grade											
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Total (%)**
Rural	**Female**	63	70	63	57	92	89	97	94	54	64	41	781 (13.87%)
	Male	64	75	73	48	88	85	70	61	57	37	39	697 (12.38%)
	Total	127	145	136	105	180	174	164	155	111	101	80	1478 (26.25%)
Urban	**Female**	208	198	194	213	197	177	172	186	215	205	199	2164 (38.44%)
	Male	237	202	212	220	164	173	132	142	185	176	145	1988 (35.31%)
	Total	445	400	406	433	361	350	304	328	400	381	344	4152 (73.75%)

2.2. Measures

2.2.1. Demographic Information Form

In this project, children and mothers completed two different comprehensive demographic information forms that include questions regarding their sociodemographic characteristics like the city they live in, age, gender, family (parents' education level, number of people in household, marital status, number of children, etc.) and socioeconomic status.

2.2.2. Child Internalizing Behavior Problems

Child Behavior Checklist (CBCL) was used to assess children's and adolescents' internalizing behavior problems through mothers' reports during the last six months. This scale was developed by Achenbach (1991) and revised by Achenbach and Rescorla (2001). Dümenci et al. (2004) adapted the revised version into Turkish. The scale consisted of 32 items rated on a 3-point Likert scale ranging from 0 = *not true* to 2 = *very true or often true* and three subscales (anxious/depressed, withdrawn/depressed, somatic complaints). Higher scores indicate higher levels of internalizing behavior problems. In this study, the total score from these three subscales was used. The test-retest reliability of the scale was reported as .82 (Erol &

Şimşek, 1998). In the present study, Cronbach's alpha value was found as .89 for the scale.

Table 3

Demographic characteristics of mothers

	N	%	Mean	SD
Age	5543		38.29	5.76
Education Level	5630			
Illiterate	146	2.59		
Literate but had no formal education	166	2.95		
Elementary school	1415	25.13		
Secondary school	987	17.53		
High school	1637	29.08		
College	1152	20.46		
Graduate	127	2.26		
Working Status	5630			
Working	1543	27.41		
Not working	4087	72.59		
Marital Status	5630			
Married	5274	93.68		
Divorced	229	4.07		
Lost her husband	68	1.21		
Second marriage	59	1.05		
Number of children	5625		2.62	1.15
Perceived SES level	5630		4.26	1.93
1	604	10.73		
2	581	10.32		
3	779	13.84		
4	785	13.94		
5	1529	27.16		
6	681	12.10		
7	429	7.62		
8	185	3.29		
9	28	0.50		
10	29	0.52		

2.3. Procedure

Before the data collection, the ethical approval for the project was obtained from the Middle East Technical University Human Subjects Ethics Committee. Permission from the Ministry of Education was also taken. The cities and schools where the data were collected were determined by the Turkish Statistical Institute (TURKSTAT). Trained project assistants contacted the administrations of these schools. First, they explained the aim and procedure of the project, and then they randomly selected one class for each grade level. An electronic informed consent link was sent to all parents in these classes with the help of teachers. Mothers who agreed to participate were sent a link for questionnaires to respond to through the Qualtrics system. Mothers who had more than one child in the selected school completed the questionnaire for only one of them. After mothers completed the questionnaires, the project team visited the schools and collected data from their children via tablet computers. All mothers and children were given small presents to thank them for participating.

CHAPTER 3

RESULTS

3.1. Data Screening

All analyses were run using Statistical Package for Social Science (SPSS) version 28 and JASP 0.17.2.1. Before the data analysis, missing values and outliers were checked. In total, 5996 mothers and 6216 children and adolescents were contacted for the project. However, 366 mothers did not answer any questions on the scale used to assess children's and adolescents' internalizing behavior problems in the present study; therefore, these participants were excluded. Univariate outliers were checked by creating z-scores. Z-scores exceeding cutoff points of -3.29 and +3.29 are considered outliers (Tabachnick & Fidell, 2013). In the present study, fifty-five cases exceeded the cut-off point of 3.29. Univariate outliers were transformed by adding .25 points to the raw score of the following most extreme case in the variable; in this way, outliers became less deviant, and their impacts were reduced (Tabachnick & Fidell, 2013). Also, Mahalanobis distance scores were used to determine multivariate outliers; and there were no multivariate outliers. In total, all analyses were conducted with 5630 participants.

3.2. Preliminary Analyses

A residency variable was created to compare internalizing behavior problems in urban and rural. After creating the variable, a one-way ANOVA was conducted to compare the demographic characteristics of participants living in urban and rural. The results showed that there was a significant difference between mothers' education levels (F (1, 5628) = 435.803, $p < .001$), perceived socioeconomic status (F (1, 5628) = 67.452,

$p < .001$), and neighborhood resources (F (1, 5628) = 811.014, $p < .001$) in rural and urban areas. Detailed information is given in Table 4.

Table 4

Means and standard deviations of demographic characteristics in rural and urban areas

Demographic characteristic	Residency	N	Mean	SD
Mothers' education level	Rural	1478	3.78	1.31
	Urban	4152	4.60	1.28
Perceived socioeconomic status	Rural	1478	3.91	1.91
	Urban	4152	4.39	1.92
Neighborhood resources	Rural	1478	1.72	.51
	Urban	4152	2.15	.49

3.3. Main Analyses

A three-way between-groups analysis of variance (ANOVA) was conducted to see the main and interaction effects of gender (female, male), residency (urban, rural), and grade (1^{st} to 11^{th}) on internalizing behavior problems.

Before starting the analyses, the normality assumption of ANOVA was checked based on skewness and kurtosis. The normality assumption was not met; skewness was 1.17, and kurtosis was 1.18, even after transforming the outliers. However, in the literature, skewness and kurtosis values between -1.5 and +1.5 are considered in the acceptable range (Tabachnick & Fidell, 2013). The homogeneity of variances assumption was also not met. Tabachnick and Fidell (2013) suggested the log and square root transformations to overcome unequal variances and non-normality issues in the dataset. However, they also argued that interpreting the transformed data is complex. Besides, researchers implied that unequal variances and non-normality result from the nature of the population in studies with large samples (Tabachnick & Fidell, 2013), and the transformation of variables to meet the assumptions might lead to changes in the nature of the data (Pek et al., 2017). Because transforming the data may affect the interpretation and generalizability of the results, analyses were conducted without the

transformation in the present study. As another option, Field (2009) recommended using the Games-Howell post-hoc procedure to get more reliable results when variances are unequal. Therefore, in this study, the Games-Howell test was run by using JASP.

3.3.1. Main Effects of Gender, Grade and Residency

The results of the 2x2x11 design factorial ANOVA are presented in Table 5. There was a statistically significant main effect of gender (F (1, 5586) = 79.06, $p < .001$, η_p^2 = .014). Specifically, girls (M = 13.44, SD = .18) experienced higher levels of internalizing behavior problems than boys (M = 11.15, SD = .19). The main effect of the grade was also significant (F (10, 5586) = 17.26, $p < .001$, η_p^2 = .030). In line with the expectations, the results indicated that internalizing behavior problems were greater among older children than younger ones (See Figure 1). As seen in Figure 1, internalizing behavior problem level was lowest among 1st grade students (M = 9.33, SD = .42), while it was highest among 9th grade students (M =14.63, SD = .44). The result of the post-hoc test is given in Table 6.

Table 5

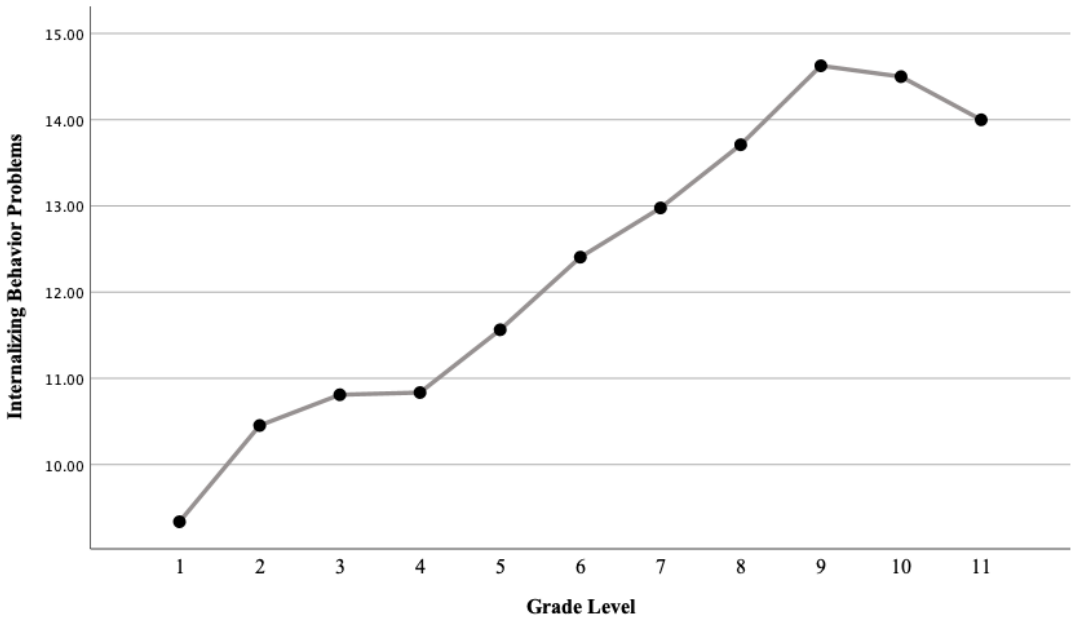
Three-way ANOVA results

Predictor	Sum of Squares	*df*	Mean Square	*F*	*p*	Partial η²
Grade	11792.627	10	1179.263	17.264	<.001	.030
Residency	1002.987	1	1002.987	14.683	<.001	.003
Gender	5400.386	1	5400.386	79.058	<.001	.014
Grade x Residency	845.942	10	84.594	1.238	.260	.002
Grade x Gender	3074.049	10	307.405	4.500	<.001	.008
Residency x Gender	105.685	1	105.685	1.547	.214	.000
Grade x Residency x Gender	907.946	10	90.795	1.329	.208	.002
Error	381574.170	5586	68.309			

Similarly, the main effect of residency was significant, F (1, 5586) = 14.68, $p < .001$, $\eta_p^2 = .003$. In other words, internalizing behavior problems were higher in rural areas (M = 12.79, SD = .22) than in urban areas (M = 11.80, SD = .13).

Figure 1

Estimated marginal means of internalizing behavior problems from 1st to 11th grade



3.3.2. Interaction Effects

The results indicated no significant interaction between grade and residency, F (10, 5586) = 1.24, $p = .26$, $\eta_p^2 = .002$. The interaction between residency and gender also was not significant, F (1, 5586) = 1.55, $p = .214$, $\eta_p^2 = .000$. Additionally, the interaction among grade, residency, and gender did not reach a significance level, F (10, 5586) = 1.33, $p = .208$, $\eta_p^2 = .002$. On the other hand, the interaction between gender and grade was statistically significant, F (10, 5586) = 4.50, $p < .000$, $\eta_p^2 = .008$. Although the internalizing problems were higher for girls than boys from 1st to 11th grades, the results implied that the gender difference became significant during 5th grade (See Figure 2). During the 6th and 7th grades, there was no gender difference in internalizing behavior problems among students. From 8th to 11th grade, internalizing behavior problems were significantly higher among girls than boys. Detailed pairwise comparison results are given in Table 7.

Table 6

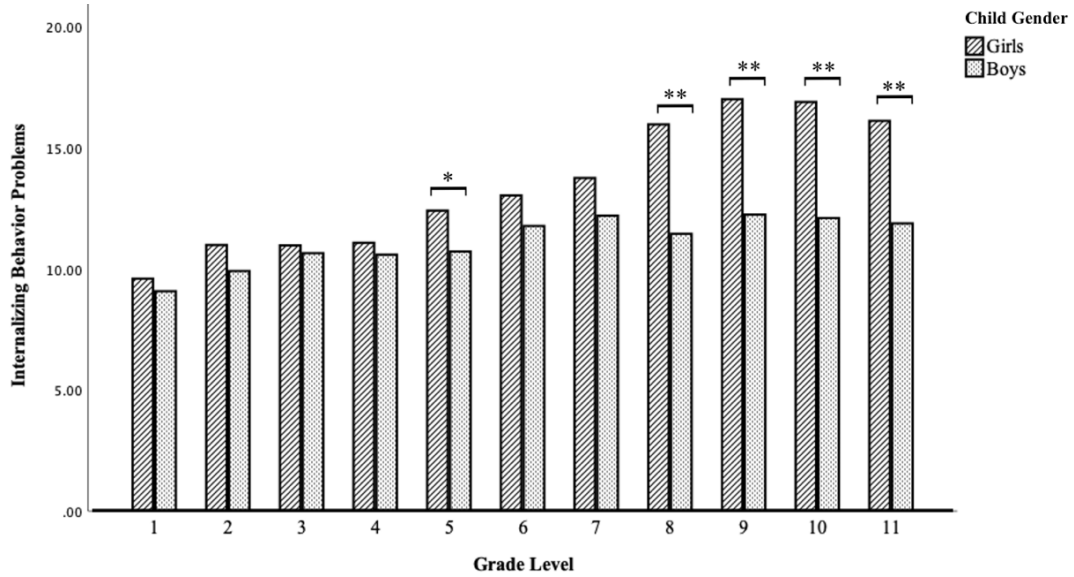
Games-Howell post-hoc comparison for grade levels

					95% CI	
Grade (I)	**Grade (J)**	**Mean Difference (I – J)**	**SE**	***p***	**Lower Bound**	**Upper Bound**
1	2	-1.106	.384	.131	-2.345	.133
	3	-1.549	.402	.006	-2.845	-.252
	4	-1.632	.401	.002	-2.925	-.339
	5	-2.820	.428	< .001	-4.202	-1.437
	6	-3.343	.446	< .001	-4.783	-1.904
	7	-3.980	.485	< .001	-5.548	-2.413
	8	-5.148	.489	< .001	-6.728	-3.568
	9	-5.362	.475	< .001	-6.896	-3.828
	10	-5.342	.499	< .001	-6.953	-3.730
	11	-5.661	.536	< .001	-7.393	-3.929
2	3	-.443	.443	.996	-1.872	.986
	4	-.526	.442	.984	-1.951	.900
	5	-1.713	.467	.012	-3.220	-.206
	6	-2.237	.483	< .001	-3.797	-.678
	7	-2.874	.520	< .001	-4.552	-1.196
	8	-4.042	.524	< .001	-5.732	-2.352
	9	-4.256	.510	< .001	-5.903	-2.609
	10	-4.236	.533	< .001	-5.955	-2.516
	11	-4.555	.568	< .001	-6.387	-2.722
3	4	-.083	.457	1.000	-1.559	1.392
	5	-1.271	.482	.014	-2.825	.284
	6	-1.794	.498	< .001	-3.400	-.189
	7	-2.432	.533	< .001	-4.152	-.711
	8	-3.599	.537	< .001	-5.331	-1.867
	9	-3.813	.524	< .001	-5.503	-2.122
	10	-3.793	.546	< .001	-5.554	-2.032
	11	-4.112	.580	.324	-5.983	-2.240
4	5	-1.188	.481	.025	-2.739	.364
	6	-1.711	.497	< .001	-3.314	-.109
	7	-2.348	.532	< .001	-4.066	-.630
	8	-3.516	.536	< .001	-5.246	-1.787
	9	-3.730	.523	.014	-5.417	-2.042
	10	-3.710	.545	< .001	-5.468	-1.951
	11	-4.029	.579	< .001	-5.898	-2.160

Table 6 (cont'd)						
5	6	-.524	.519	.995	-2.199	1.151
	7	-1.161	.554	.580	-2.947	.625
	8	-2.329	.557	.002	-4.125	-.532
	9	-2.542	.545	< .001	-4.299	-.785
	10	-2.522	.566	< .001	-4.347	-.697
	11	-2.841	.598	< .001	-4.773	-.910
6	7	-.637	.567	.989	-2.467	1.193
	8	-1.805	.571	.060	-3.646	.036
	9	-2.018	.559	.014	-3.820	-.217
	10	-1.998	.579	.025	-3.867	-.130
	11	-2.317	.611	.007	-4.290	-.345
7	8	-1.168	.602	.691	-3.110	.774
	9	-1.381	.591	.408	-3.287	.524
	10	-1.361	.610	.483	-3.329	.607
	11	-1.680	.641	.238	-3.748	.387
8	9	-.214	.594	1.000	-2.129	1.702
	10	-.194	.613	1.000	-2.172	1.784
	11	-.513	.643	.999	-2.589	1.564
9	10	.020	.602	1.000	-1.922	1.962
	11	-.299	.633	1.000	-2.341	1.743
10	11	-.319	.651	1.000	-2.420	1.782

Figure 2

The bar graph of internalizing behavior problems among girls and boys from 1st to 11th grade



Note. * $p < .05$, ** $p < .001$

Table 7

Pairwise comparisons of grade level and gender

						95% CI	
Grade Level	**Gender**	**Marginal Mean**	**Mean Difference**	**Std. Error**	***p***	**Lower Bound**	**Upper Bound**
1	Female	9.600	.526	.832	.527	-1.105	2.157
	Male	9.074					
2	Female	10.992	1.077	.802	.179	-.494	2.648
	Male	9.916					
3	Female	10.971	.320	.821	.696	-1.288	1.929
	Male	10.650					
4	Female	11.084	.496	.902	.582	-1.272	2.264
	Male	10.588					
5	Female	12.409	1.689*	.755	.025	.209	3.170
	Male	10.720					
6	Female	13.038	1.264	.767	.099	-.239	2.767
	Male	11.774					
7	Female	13.755	1.556	.809	.054	-.030	3.142
	Male	12.199					
8	Female	15.970	4.520*	.821	< .001	2.911	6.129
	Male	11.450					
9	Female	17.007	4.762*	.887	< .001	3.023	6.502
	Male	12.245					
10	Female	16.897	4.794*	.953	< .001	2.925	6.662
	Male	12.103					
11	Female	16.120	4.241*	1.029	< .001	2.225	6.258
	Male	11.879					

* Mean difference is significant at the .05 level.

3.4. Prevalence of Internalizing Behavior Problems in Türkiye

In the present study, the 90th percentile was used as the cutoff criterion to determine the 6-month prevalence rate of internalizing behavior problems, as Achenbach and Rescorla (2001) suggested. In the dataset, the 90th percentile equaled a raw score of 24 on CBCL. Raw scores above 24 were considered in the clinical range. Based on this criterion, the 6-month prevalence of internalizing behavior problems among children and adolescents in Türkiye was found to be 9.64%. The prevalence rate was 12.23%

for girls and 6.82% for boys. The prevalence was also calculated based on school level, and rates were 4.28%, 11.36%, and 15.53% for elementary, middle, and high school students, respectively. Additionally, the prevalence of internalizing behavior problems was 11.03% in rural areas and 9.15% in urban areas.

CHAPTER 4

DISCUSSION

4.1. Overview

The present study assessed internalizing behavior problems among children and adolescents from 1st to 11th grade based on a representative sample of Türkiye. The present study hypothesized that older children would score higher on internalizing behavior problems than younger ones. The results were in line with the previous studies, and they supported the first hypothesis of the study; age had a significant main effect on internalizing behavior problems. The mean scores of internalizing behavior problems were higher among older children than younger children. Specifically, 9th grade students had the highest mean score in internalizing behavior problems. This increase might be explained by the transition from middle school to high school. During this transition process, their course loads increase, and they also need to create and maintain new relationships with their peers and teachers. An increase in the number of stressors brings about higher levels of internalizing behavior problems (Hankin et al., 2007).

Furthermore, as expected, the results showed that girls experienced higher levels of internalizing behavior problems than boys. This finding aligns with the previous studies (Leadbeater et al., 1999; Roza et al., 2003). The gender differences might be attributed to several factors. For example, girls are exposed to more stressors (peer, family, interpersonal, and romantic) and show greater stress reactivity than boys (Hankin et al., 2007; Rudolph, 2002). Also, cultural expectations are different for girls and boys. For instance, in Türkiye, gender stereotypes for females include being emotional, fragile, and dependent (Sakallı et al., 2018). During adolescence, pressure from society, parents and peers to conform to gender norms increases (Hill & Lynch,

1983). These unequal gender norms are related to higher levels of depression among girls (Koenig et al., 2021). Furthermore, girls experience higher peer victimization than boys (Lauritsen & Heimer, 2008). Verbal victimization and relational aggression are more common among girls, while boys experience physical violence mostly (Archer, 2004). Bullying and peer rejection are related to higher levels of internalizing behavior problems (Hoertel et al., 2012; Jenchura et al., 2017). These factors might increase the tendency of girls to internalizing behavior problems.

Additionally, the interaction effect of gender and grade was significant. Internalizing behavior problems did not change with age among boys while increasing for girls. Researchers claimed that gender difference in internalizing behavior problems emerges during puberty (Roza et al., 2003; Zahn-Waxler et al., 2000; Wesselhoeft et al., 2015). The results of this study demonstrated that girls were more prone to internalizing behavior problems than boys overall, and the gender difference reached to significance level after puberty. During puberty, adolescents experience emotional and social transition in addition to hormone changes (Mendle, 2014). An increase in hormonal levels, such as estradiol, predicted higher levels of internalizing behavior problems among girls (Angold et al., 1999). Also, body image concerns are more common among female adolescents than males (Ramos et al., 2019), and negative body image is significantly related to internalizing behavior problems during adolescence, especially for girls (Siegel, 2002). Interaction between these physical and social changes may make girls more sensitive to stressors. Also, researchers claimed that girls tend to use rumination as a coping style more than boys during adolescence (Muris et al., 2009), which is also related to higher levels of internalizing behavior problems (Alloy et al., 2016). These factors might foster the increase of internalizing behavior problems among girls.

Unexpectedly, a significant gender difference was found among 5th grade students in the present study. In the Turkish education system, it is the first year of middle school. That means 5th grade students have recently changed their schools, and they are in the adaptation process to a new school. Girls are more concerned about peer relationships and invest in friendships than boys (Rudolph, 2002); therefore, their vulnerability to internalizing behavior problems might increase during this adaptation process.

In the literature, findings related to the effects of residency on internalizing behavior problems were inconsistent. In contrast to prior research suggested that internalizing behavior problems were higher in urban than rural areas (Erol & Şimşek, 1998), the results of this study indicated that students living in rural areas had significantly scored higher on internalizing behavior problems than their peers living in urban. Preliminary analyses showed that perceived socioeconomic status was lower in rural areas than in urban. Low income was significantly related to higher levels of internalizing behavior problems (Ma et al., 2013); this might be an explanation for the difference. In addition, parenting styles differ in urban and rural; parents who live in rural areas show less positive parenting behavior than parents in urban areas (Miller & Votruba-Drzal, 2013). Evidence also showed that low parental support was associated with higher internalizing behavior problems (Bradley et al., 2001). Other reasons might be inadequate physical resources, limited social and educational opportunities, and lack of mental health care services in rural settings.

The interaction effect between gender and residency was not significant. Differences in internalizing behavior problems between girls and boys were not dependent upon the residence. The interaction effect between grade and residency was also insignificant.

In the present study, the prevalence of internalizing behavior problems was 9.84%, lower than previously reported prevalence rates. The reason might be methodological differences between studies. Most studies were conducted with smaller sample sizes. Also, internalizing behavior problems were measured using clinical assessment tools. Only one study assessed internalizing behavior problems with a nationally representative sample through Child Behavior Checklist, but researchers did not report the prevalence rate (Erol & Şimşek, 1998).

4.2. Strengths and Implications

The present study contributed to the literature by examining internalizing behavior problems among children and adolescents with a nationally representative sample in

Türkiye. The study has several strengths. The first one is that the study included participants from various cities, low to high socioeconomic status, and education levels. Previous studies were carried out with participants from one city or a specific age group. In addition, a reliable and valid instrument was used to assess internalizing behavior problems. Also, no recent study in Turkish literature compared levels of internalizing behavior problems regarding residency. Besides, this study reported the prevalence rate of internalizing behavior problems with a nationally representative sample.

The findings of the present study have important implications for future studies, policymakers, and mental health workers. Internalizing behavior problems during childhood predict anxiety and mood disorders in adulthood (Roza et al., 2003). Therefore, it is essential to develop prevention and intervention programs; and improve access to mental health services. The present study underlines some risk factors related to internalizing behavior problems. First, results indicated that internalizing behavior problems increase with age. From childhood to adolescents, children are faced with various stressors. However, they might not know how to cope with these stressors. Intervention and prevention programs focusing on improving children's and adolescents' emotion regulation and coping skills might be developed to support them in this transition process. These programs help to reduce the adverse effects of internalizing behavior problems on the youths' development in the long term. Also, the results point out that girls are at higher risk for internalizing behavior problems than boys, especially after puberty. This gender-based difference should be considered while developing prevention and intervention programs. Besides, as seen in the results, mothers living in rural areas reported that their children show greater internalizing behavior problems than in urban areas. This finding highlights the essential role of geographical location in mental health. There should be specific social policies and support programs for children and adolescents who live in rural areas. Furthermore, perceived support from peers, parents, and teachers has a buffering effect against internalizing behavior problems (Attar-Schwartz et al., 2019; O'Connor et al., 2011). Therefore, in addition to child-centered intervention programs, programs including parents and teachers would be beneficial.

4.3. Limitations and Future Directions

In addition to strengths and contributions, the study has several limitations. The first one is that internalizing behavior problems were assessed through mothers' reports only. Children's behaviors differ in various contexts, and mothers may not observe their children in out-of-home settings. Also, because internalizing behavior problems are directed inwardly rather than being disruptive to others, mothers may not recognize internalizing problem behaviors and underestimate the severity. In addition, gender differences may vary based on the source of information. For instance, while there was no gender difference according to teachers' reports, girls had higher scores in internalizing behavior problems than boys according to self and parents' reports (Rescorla et al., 2007a; Rescorla et al., 2014). Therefore, teachers' reports and self-reports may help to determine the prevalence of internalizing behavior problems more accurately. Secondly, specific criteria (e.g., SES, parents' education level, etc.) were used to classify residency as urban and rural rather than using national standards (population density) in Türkiye. Besides, residency categorization was made based on the locations of schools rather than participants' home addresses. Some children may attend schools in urban while they live in rural areas. These may lead to differences in the prevalence of internalizing behavior problems across geographic settings. Additionally, the Child Behavior Checklist (CBCL) has three syndrome scales: anxious/depressed, withdrawn/depressed, and somatic complaints. However, this study used the composite score to examine internalizing behavior problems. Previously, different trajectories were found for syndromes of CBCL among girls and boys (Bongers et al., 2003; Rescorla et al., 2007b). Therefore, examining the subtypes separately would provide detailed and accurate information regarding internalizing behavior problems.

In conclusion, this study demonstrated the relationship between gender, age, residency and internalizing behavior problems among a nationally representative sample in Türkiye through mother-report. Considering the limitations, future studies may replicate the results with information from multiple reporters such as teachers, fathers, or youths' self-report. Also, there is a need for longitudinal research to understand the trajectories of internalizing behavior problems from childhood to adulthood for boys

and girls. Further research should examine the predictors of internalizing behaviors like peer acceptance, parenting behaviors, and emotion regulation skills in urban and rural settings by using multilevel analysis. These would be essential contributions to Turkish literature.

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APPENDICES

A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
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02 OCAK 2018

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof.Dr. Sibel KAZAK BERUMENT ve Yrd.Doç.Dr. Başak ŞAHİN ACAR;

"Ebeveynlik Tutumlarının ve Ebeveyn-Çocuk İletişim Özelliklerinin Çocuk ve Ergen Gelişimine Etkisi" başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay **2017-SOS-213** protokol numarası ile **01.09.2018-01.10.2021** tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ş. Halil TURAN
Başkan V

Prof. Dr. Ayhan SOL
Üye

Prof. Dr. Ayhan Gürbüz DEMİR
Üye

Doç. Dr. Yaşar KONDAKÇI
Üye

Doç. Dr. Zana ÇITAK
Üye

Yrd. Doç. Dr. Pınar KAYGAN
Üye

Yrd. Doç. Dr. Emre SELÇUK
Üye

B. TURKISH SUMMARY / TÜRKÇE ÖZET

1. GİRİŞ

1.1 İçe Yönelim Problemleri

İçe yönelim problemleri depresyon, kaygı, somatik yakınmalar ve sosyal içe dönüklüğü içermektedir (Achenbach, 1991). İçe yönelim problemleri çocukluk ve ergenlik döneminde ortaya çıkmaktadır (Bongers ve ark., 2003) ve bu yaşlarda en sık görülen psikopatolojilerden biridir (Staller, 2006; Zahn-Waxler ve ark., 2000).

Çocukluk ve ergenlik döneminde görülen psikopatolojiler hem bireyleri hem de toplumu etkilemektedir. İçe yönelim problemleri sigara ve alkol kullanımı, kendine zarar verme davranışı, düşük akademik motivasyon (Gutman ve Codiroli-McMaster, 2020), düşük fiziksel aktivite ve aşırı yeme davranışıyla pozitif ilişkilidir (Jamnik ve DilLalla, 2019). Ayrıca, çocukluk döneminde görülen içe yönelim problemleri yetişkinlik dönemindeki kaygı bozukluklarını, majör depresif bozukluğu ve intihar davranışını yordamaktadır (Herrenkohl ve ark., 2010; Pine ve ark., 1998). Bu nedenle, içe yönelim problemlerinin incelenmesi, bireylerin ve toplumun ruh ve beden sağlığının korunması açısından büyük önem taşımaktadır.

Mevcut çalışmada içe yönelim problemlerinin ülkeler arasındaki yaygınlık oranları ele alınmıştır. İçe yönelim problemleriyle ilişkili faktörlerin incelenmesi de önleme ve müdahale programları açısından önem arz etmektedir. İçe yönelim problemleri sosyoekonomik durum, yaş, cinsiyet, benlik saygısı, ebeveyn davranışları, arkadaşlara bağlanma gibi değişkenlerle ilişkilidir (Oliva ve ark., 2014). Bu çalışma içe yönelim problemleri ile yaş, cinsiyet ve yerleşim yeri arasındaki ilişkiye de odaklanmıştır. Bu faktörler arasındaki ilişkiyi inceleyen çalışmalar sonraki bölümlerde özetlenmiştir.

1.2. Görülme Sıklığı

Dünya Sağlık Örgütü'nün (2021) raporuna göre anksiyete bozukluklarının yaygınlığı 10-14 yaş arası ergenlerde %3,6, 15-19 yaş arası ergenlerde ise %4,6'dır. Ayrıca, 10-14 yaş arası ergenlerde depresyonun yaygınlık oranı %1,1, 15-19 yaşındakiler arasında ise %2,8'dir. Bir meta-analiz çalışması, 10 ile 19 yaş arası ergenler arasında majör depresif bozukluğun küresel yaygınlığının %8 olduğunu bildirmiştir (Shorey ve ark., 2021). 18 yaş ve altı katılımcılarla yürütülen benzer bir çalışmada anksiyete ve depresif bozukluklarının yaygınlık oranları sırasıyla %6,5 ve %2,6 olarak bildirilmiştir (Polanczyk, 2015).

Ülkeler arasında içe yönelim problemlerinin görülme sıklığını inceleyen bir dizi çalışma yapılmıştır. Bu çalışmalar örneklem ve metodoloji bakımından farklılık göstermektedir. Önceki çalışmalarda genellikle iki farklı yaklaşım kullanılmıştır: kategorik ve boyutsal. Kategorik yaklaşım, anormal davranışın varlığını veya yokluğunu belirlemek için belirli tanı kriterleri kullanırken, boyutsal yaklaşım problem davranışların şiddetinin ve sıklığının sürekliliğine odaklanır (Moreland ve Dumas, 2008). Yaklaşımlardaki farklılıklara ek olarak, çoğu epidemiyolojik çalışmada içe yönelim problemleri ayrı ayrı değerlendirilmiştir. Başka bir deyişle, araştırmacılar, depresyon ve/veya anksiyete bozukluklarının yaygınlığına odaklanmışlardır. Epidemiyolojik araştırmalardaki bir diğer konu da bazı araştırmacıların içe yönelim problemlerini değerlendirirken işlevsellikteki bozulmaları göz önünde bulundururken bazılarının bulundurmamasıdır. Ayrıca, alanyazındaki bazı çalışmalar son altı ay içerisindeki yaygınlığı değerlendirirken, bazı çalışmalar bir yıl içindeki görülme sıklığını ölçmüştür. Bu yöntemsel farklılıklar sebebiyle bildirilen görülme sıklığı oranları birbirinden oldukça farklıdır.

1.2.1. Dünya Çapında Görülme Sıklığı

Drosopoulou ve ark. (2022), beş ayrı Avrupa ülkesinde yaşayan 14-18 yaş arası ergenlerle yürüttüğü çalışmada içe yönelim problemlerinin görülme sıklığını araştırmıştır. Oranlar İzlanda, Hollanda, İspanya, Yunanistan ve Romanya için

sırasıyla %11,1, %10,7, %10,3, %7,6 ve %2,4 olarak bulunmuştur. Başka bir çalışmada Almanya'da 12-17 yaş arası ergenlerde depresyon yaygınlığı %8,2 olarak bildirilmiştir (Wartberg ve ark., 2018). İtalya'daki çocuk ve ergenler arasında içe yönelim problemlerinin görülme sıklığı %6,5 ile %10,5 arasında değişmektedir (Frigerio ve ark., 2009; Gritti ve ark., 2014).

Vietnam'da 6-16 yaş arası çocuk ve ergenlerle yürütülen bir çalışmada içe yönelim davranış problemlerinin görülme sıklığı %18,3 olarak bulunmuştur (Weiss ve ark., 2014). Bangladeş'te 13-18 yaş arası ergenlerde depresyon ve anksiyete yaygınlık oranları sırasıyla %26,5 ve %18,1 olarak bildirilmiştir (Islam ve ark., 2021). Ayrıca, Tayvan'da ülke çapında yapılan bir araştırma, ergenlerin %12'sinin anksiyete bozuklukları ve %1,1'inin depresif bozukluklar yaşadığını göstermiştir (Chen ve ark., 2019). Pakistan'da ergenlerle yapılan bir araştırmaya göre, depresyon ve anksiyete yaygınlık oranı sırasıyla %17,2 ve %21,4'tür (Khalid ve ark., 2019). Hindistan'da 11-18 yaş arası gençler arasında depresyon yaygınlığı %14,5, kaygı bozukluklarının yaygınlığı ise %15 olarak bulunmuştur (Mishra ve ark., 2018).

Ürdün'de 13-18 yaş arası ergenlerde anksiyete ve depresif bozuklukların görülme sıklığı %28,6'dır (Alslman ve ark., 2017). 14-19 yaşları arasındaki Katarlı ergenlerde depresyon görülme oranı %34,5'tir (Al-Kaabi ve ark., 2017). Lübnan'da 11-17 yaş arası ergenlerde anksiyete ve duygudurum bozukluklarının görülme sıklığı sırasıyla %13,1 ve %6,7 olarak bulunmuştur (Maalouf ve ark., 2016).

Nijerya'da 13-18 yaş arası ergenlerde anksiyete bozukluğu görülme oranı %15'tir (Adewuya ve ark., 2007). Şili'de 4-18 yaş arası çocuk ve ergenlerde depresyon görülme oranı %5,2, anksiyete bozukluklarının oranı ise %8,3 olarak bildirilmiştir (Vicente ve ark. 2012). Avustralya'da 4 ila 17 yaş arası çocuklarda içe yönelim problemlerinin görülme sıklığı %12,8'dir (Sawyer ve ark., 2001).

Özetle, geçmiş çalışmalardaki metodolojik farklılıklar nedeniyle ülkeler arasındaki yaygınlık oranlarını karşılaştırmak zordur. Bununla birlikte, sonuçlar, içe yönelim davranış problemlerinin başta Ortadoğu ve Afrika ülkeleri olmak üzere hemen hemen

bütün ülkelerde oldukça yüksek olduğunu göstermektedir. Ayrıca, ergenlerle yapılan araştırmalarda daha yüksek yaygınlık oranları bulunmuştur. Bu bulgular, içe yönelim problemlerinin yaşla birlikte artma eğiliminde olduğunu göstermektedir.

1.2.2. Türkiye'de Görülme Sıklığı

İçe yönelim problemlerinin görülme sıklığını araştıran çalışmalar Türkçe alanyazında da mevcuttur. 11-18 yaş arası ergenlerde içe yönelim problemlerinin görülme sıklığı %11,7 olarak bulunmuştur (Erol ve ark., 2010). Diğer çalışmaların çoğu temsili olmayan örneklemlerle yürütülmüştür. Örneğin, Kara ve Selçuk (2020), yaşları 5,5 ile 18 arasında değişen 409 çocuğu değerlendirmiş ve içe yönelim problemlerinin yaygınlığını %14,3 olarak bulmuşlardır. Başka bir çalışmada, İzmir'de yaşayan 6-14 yaş arası çocuk ve ergenler arasında duygudurum ve anksiyete bozukluklarının yaygınlığı sırasıyla %2,9 ve %13,9'dur (Bilaç ve ark., 2014). Mardin'de yaşayan 444 lise öğrencisinin %66'sında anksiyete, %37'sinde ise depresif belirtiler görülmüştür (Ceylan ve ark., 2003). İzmir'de yaşları 14-18 arasında değişen lise öğrencileriyle yapılan çalışmada depresif belirtilerin yaygınlığı %41,9 olarak bulunmuştur (Özkul ve Partlak-Günüşen, 2020). Benzer bir çalışma Eskişehir'deki lise öğrencilerinde yapılmış ve depresyon yaygınlığı %30,7 olarak saptanmıştır (Ünsal ve Ayrancı, 2008). Demir ve ark. (2011) İstanbul'da 9-16 yaş arası ergenlerde depresyon yaygınlığını %4,2 olarak bildirmiştir.

Sonuç olarak, Türkiye'de içe yönelim problemlerinin görülme sıklığını araştırmak amacıyla yürütülen çalışmalardan elde edilen oranlar birbirinden oldukça farklıdır. Ancak oranlar, Dünya genelinde olduğu gibi Türkiye'de de yüksektir.

1.3. İçe Yönelim Problemleri ve Yaş

Alanyazında içe yönelim problemleri ve yaş arasındaki ilişkiyi inceleyen birçok çalışma vardır. Örneğin Amerika Birleşik Devletleri (Merikangas ve ark., 2010), İtalya (Frigerio ve ark., 2009), Hollanda (Drosopoulou ve ark., 2022), Yunanistan (Roussos ve ark., 2001), Almanya (Wartberg ve ark., 2018), Mısır (Afifi, 2006) ve Çin'de (Ma

ve ark., 2013; Weine ve ark., 1995) yürütülen çalışmalarda içe yönelim problemlerinin yaşla birlikte artış gösterdiği bulunmuştur. Ek olarak, araştırmacılar Ürdün'de (Alslman ve ark., 2017; Dwekat ve ark., 2021) ve Porto Riko'da (Canino ve ark., 2004) hem depresyon hem de kaygı bozukluklarının görülme sıklığının yaşla birlikte arttığını bildirmiştir.

Benzer çalışmalar Türkiye'de de yürütülmüştür. Örneğin, Erol ve Şimşek (1998) Türkiye temsili örneklemde içe yönelim problemlerinin yaş ile pozitif yönde ilişkili olduğunu bulmuştur. Konya (Bodur ve Küçükkendirci, 2009), İstanbul (Demir ve ark., 2011) ve Mersin'de yaşayan öğrenciler (Toros ve ark., 2004) arasında da içe yönelim problemlerinin yaş ile artış gösterdiği görülmüştür.

Özetle, alanyazındaki çalışmalar içe yönelim problemlerinin yaşla birlikte arttığının altını çizmektedir. Çocukluktan ergenliğe geçişte birçok fiziksel, duygusal ve sosyal değişim gerçekleşmektedir. Bu değişimlerin her biri birer stres faktörüdür ve stres faktörlerinin sayısındaki artış içe yönelim problemleriyle olumlu yönde ilişkilidir (Ge ve ark., 2001).

Türkçe alanyazında içe yönelim problemleri ve yaş arasındaki ilişkiye odaklanan araştırma sayısı sınırlıdır. Bu sebeple mevcut çalışmada bu ilişki Türkiye temsili bir örneklem aracılığı ile incelenmiştir.

İçe yönelim problemleriyle önemli ölçüde ilişkili olan bir diğer faktör cinsiyettir. Ayrıca cinsiyet ve yaş arasında da bir etkileşim vardır. Sonraki bölümde cinsiyetin içe yönelim problemleriyle ilişkisine yönelik bulgular özetlenmiştir.

1.4. İçe Yönelim Problemleri ve Cinsiyet

İçe yönelim problemleri ve cinsiyet arasındaki ilişki daha önceki çalışmalarda sıklıkla ele alınmıştır. Oranlar ülkeler arasında farklılık gösterse de içe yönelim problemleri genel olarak kızlar arasında daha yaygındır. Örneğin, Crijnen ve ark. (1997), 12 ülkede kızların erkeklerden daha fazla içe yönelim problemi yaşadığını belirtmiştir.

Avustralya (Wang ve ark., 2018), Porto Riko (Canino ve ark., 2004), Şili (Vicente ve ark., 2012) ve Uganda'da (Abbo ve ark., 2013) kızların erkeklerden daha fazla içe yönelim problemi yaşadığı görülmüştür.

Araştırmacılar içe yönelim problemlerinde cinsiyet farklılığının ergenlik döneminde ortaya çıktığını öne sürmüştür (Adkins ve ark., 2009; Hankin ve ark., 2016). Alanyazında bu görüşü destekleyen çok sayıda çalışma bulunmaktadır. Örneğin, okul öncesi çocuklarla yapılan çalışmalarda içe yönelim problemlerinde anlamlı bir cinsiyet farkı bulunamamıştır (Briggs-Gowan ve ark., 2006; Kariuki ve ark., 2017). Benzer şekilde, Sri Lanka (Ginive ve ark., 2014), Brezilya (Petresco ve ark., 2014) ve Yemen'de (Alyahri ve Goodman, 2008) ergenlik öncesi çocuklarla yürütülen çalışmaların sonuçlarına göre kızlar ve erkeklerin içe yönelim problemi düzeylerinde anlamlı bir fark yoktur. Ayrıca, Çin'de yürütülen bir çalışmada 6-11 yaş arası kız ve erkeklerin içe yönelim problemleri düzeyinde anlamlı bir fark olmadığı, cinsiyet farkının 12 yaşında anlamlı hale geldiği bulunmuştur (Zhong ve ark., 2013).

Ergenlerle yürütülen araştırmaların çoğunda içe yönelim problemlerinin kızlar arasında daha yaygın olduğu görülmüştür. Örneğin İsrail (Farbstein ve ark., 2010), İzlanda ve Romanya (Drosopoulou ve ark., 2022), Rusya (Slobodskaya, 1999), Ürdün (Alslman ve ark., 2017), Hindistan (Jha ve ark., 2017) ve Meksika'da (Sèrvan-Mori, 2021) kızlar erkeklerden anlamlı düzeyde daha yüksek içe yönelim problemi yaşadıklarını bildirmişlerdir.

Ergenlik döneminde ortaya çıkan bu cinsiyet farkı alanyazında birkaç farklı şekilde açıklanmıştır. Ergenlik döneminde kızlar erkeklerden daha fazla stres faktörüne maruz kalmaktadır (Hankin ve ark., 2007). Stres faktörlerindeki artış içe yönelim problemlerinin de artmasına sebep olmaktadır (Ge ve ark., 1994). Ayrıca ergenlik döneminde kızlar bedenlerinde yaşanan değişimler sebebiyle erkeklere kıyasla daha olumsuz bir beden algısına sahip olmaktadır (Marcotte ve ark., 2002). Ek olarak, yaşla birlikte kız ve erkekler toplumsal cinsiyet normlarına uyum sağlamaya başlamaktadır (Lapointe ve Marcotte, 2000). Feminen toplumsal cinsiyet normları içe yönelim problemleriyle olumlu yönde ilişkilidir (Nolen-Hoeksema ve Girgus, 1994). Son olarak, erkeklerin ve kızların stresle başa çıkmak için kullandıkları yöntemler

birbirinden farklıdır. Kızlar stresle başa çıkmak için çoğunlukla ruminasyonu kullanırken (Roelofs ve ark., 2009), erkekler dikkat dağıtma yöntemini kullanmaktadır (Broderick, 1998). Bu faktörlerin kızların içe yönelim problemlerine yatkınlığını artırabileceği düşünülmektedir.

Türkiye'deki çalışmaların bulguları da diğer ülkelerdeki sonuçlara benzerdir. Türkiye temsili bir örneklemle yürütülen çalışmada 4-18 yaş arası çocukların içe yönelim problemleri cinsiyet açısından incelenmiştir (Erol ve Şimşek, 1998). Sonuçlar içe yönelim problemlerinin kızlarda erkeklerden daha yüksek olduğunu göstermiştir. Ergenlerle yürütülen birçok araştırmada da benzer sonuçlar bulunmuştur (Bodur ve Küçükkendirci, 2009; Eskin ve ark., 2008; Özakar-Akça ve ark., 2018; Özkul ve Partlak-Günüşen, 2020). Ancak ergenlik öncesi dönemdeki çocuklarla yürütülen çalışmalarda anlamlı bir cinsiyet farkı bulunamamıştır. (Bilaç ve ark., 2014; Özbey ve Alisinanoğlu, 2009; Topçu-Bilir ve Sop, 2016; Tosun ve Zorlu, 2019). Bu bulgular içe yönelim problemlerinde cinsiyet farklılıklarının ergenlikten sonra ortaya çıktığı fikri ile tutarlıdır.

Özetle, geçmiş çalışmaların çoğu içe yönelim problemlerinin kızlar arasında daha sık görüldüğünü vurgulamaktadır. Ancak çalışmalar metodolojik açıdan birbirinden oldukça farklıdır. Alanyazında cinsiyet farklılıklarını Türkiye temsili örneklemde ele alan bir çalışma bulunmaktadır fakat ilgili çalışma güncel değildir. Bu sebeple, mevcut çalışma, Türkiye temsili bir örneklemle içe yönelim problemlerinde cinsiyet farklılıklarını incelemeyi amaçlamaktadır.

1.5. İçe Yönelim Problemleri ve Yerleşim Yeri

Kırsal alanlar, kentsel alanlara göre sosyoekonomik durum, sosyal ve eğitim olanakları, sağlık hizmetleri ve çevresel özellikler açısından bazı dezavantajlara sahiptir (Dornan ve Woodhead, 2015; Woldehanna ve ark., 2011). Bu dezavantajlar, ruh sağlığı sorunlarının kırsal alanlarda kente göre daha yaygın olup olmadığı tartışmasına yol açmaktadır (Quine ve ark., 2003; Rees ve ark., 2017). Örneğin, Malezya'nın kırsal kesimlerinde yaşayan ergenler arasında depresyonun kentsel

alanlara göre daha yaygındır (Ang ve ark., 2019). Öte yandan, Kanada'da depresyonun kentsel alanlarda kırsal alanlara göre daha yaygın olduğu bulunmuştur (Romans ve ark., 2011).

Alanyazındaki birçok araştırmada kentsel ve kırsal alanlarda içe yönelim problemlerinin yaygınlığı açısından anlamlı farklar bulunamamıştır. Örneğin Amerika Birleşik Devletleri (Breslau ve ark., 2014), Çin (Zhang ve ark., 2017); Porto Riko (Canino ve ark., 2004), Yemen (Alyahri ve Goodman, 2008), Hindistan (Mishra ve ark., 2018), Yunanistan (Roussos ve ark., 2001) ve İsveç'te (Bohlin ve Janols, 2017) kırsal ve kentsel alanlarda yaşayan çocukların içe yönelim problem düzeyleri arasında bir fark olmadığını görülmüştür.

Türkiye'de kır ve kent karşılaştırılması sadece bir çalışmada yapılmıştır (Erol ve Şimşek, 1998). Sonuçlar Türkiye'de içe yönelim problemlerinin kentsel alanlarda kırsal alanlardan daha yaygın olduğunu göstermiştir. Alanyazında başka güncel bir çalışma bulunmamaktadır. Bu nedenle, bu çalışmanın üçüncü amacı, Türkiye'de içe yönelim problemlerinin kırsal ve kentsel alanlarda nasıl farklılaştığını incelemektir.

1.6. Mevcut Çalışma

Alanyazında Türkiye'deki çocuk ve ergenler arasında içe yönelim problemlerinin görülme sıklığını araştıran çalışmalar vardır ancak bu çalışmaların çeşitli sınırlılıkları bulunmaktadır. İlk olarak, çalışmaların çoğu temsili olmayan örneklemlerle yürütülmüştür. İkincisi, çalışmaların bazılarında klinik değerlendirme ölçekleri kullanılmıştır. Bunlara ek olarak, çalışmaların çoğunda anksiyete ve depresyon ayrı ayrı değerlendirilmiştir. Özetle, önceki çalışmaların sonuçlarının genellenebilirliği düşüktür. Ayrıca, yakın zamanda yapılan hiçbir çalışma yaş, cinsiyet ve yerleşim yeri faktörlerinin içe yönelim problemleriyle ilişkisini Türkiye temsili bir örneklemde incelememiştir. Bütün bunlar göz önüne alınarak mevcut çalışma Türkiye'deki çocuk ve ergenler arasında içe yönelim problemlerinin görülme sıklığını araştırmayı amaçlamaktadır. Çalışmanın bir diğer amacı ise içe yönelim problemlerinde cinsiyet,

yaş ve yerleşim yeri farklılıklarını incelemektedir. Çalışmanın bulguları müdahale ve önleme programlarının zamanlamasını anlamak açısından önemlidir.

Bu çalışmada aşağıdaki hipotezler test edilmiştir:

(1) İçe yönelim problemlerinin yaş ile artış göstermesi beklenmektedir.

(2) Kızların erkeklerden daha yüksek düzeyde içe yönelim problemi bildirmesi beklenmektedir.

(3) İçe yönelim problemlerinin kırsal alanlarda yaşayan çocuk ve ergenler arasında kentsel alanda yaşayanlardan daha yüksek olması beklenmektedir.

2. YÖNTEM

2.1. Örneklem

Bu çalışma, TÜBİTAK tarafından desteklenen "Ebeveyn Tutumlarının ve Ebeveyn-Çocuk İletişim Özelliklerinin Çocuk ve Ergen Gelişimine Etkisi" başlıklı projenin parçası kapsamında yürütülmüştür. Projenin örneklemi Türkiye İstatistik Kurumu (TÜİK) tarafından belirlenmiş ve 1. zaman verisi 61 ildeki 186 farklı okuldan toplanmıştır. Bu çalışmaya 6-17 yaş arasındaki 5630 çocuk ve ergen ve onların anneleri dahil edilmiştir. Katılımcıların 2945'i kız, 2685'i ise erkek öğrencilerden oluşmaktadır. Çalışmaya katılan öğrencilerin %26,25'i kırsal alanlarda, %73,75'i ise kentsel alanlarda yaşamaktadır.

2.2. Ölçekler

2.2.1 Demografik Bilgi Formu

Proje kapsamında annelere ve çocuklara iki ayrı detaylı demografik bilgi formu verilmiştir. Bu çalışmada çocukların yaşı ve cinsiyeti ile ilgili bilgiler kullanılmıştır.

2.2.2. Çocuk İçe Yönelim Problemleri

Çocuk ve ergenlerin içe yönelim problemlerini değerlendirmek amacı ile Çocuk Davranış Kontrol Listesi (Achenback ve Rescorla, 2001; Dümenci ve ark., 2004) kullanılmıştır. Ölçek 32 madde ve üç alt ölçekten oluşmaktadır. Mevcut çalışmada ölçek anneler tarafından doldurulmuştur ve alt ölçeklerden elde edilen toplam puan kullanılmıştır. Bu çalışmanın örnekleminde ölçeğin iç tutarlılığı .89 olarak bulunmuştur.

2.3. İşlem

Veri toplamaya başlamadan önce proje için etik izin ODTÜ İnsan Araştırmaları Etik Kurulu'ndan alınmıştır. Ayrıca Milli Eğitim Bakanlığından da resmi izin alınmıştır. Veri toplanacak okullar TÜİK tarafından belirlenmiştir. Proje ekibi bu okulların müdür ve müdür yardımcılarına ulaşarak projenin amacını ve veri toplama sürecini detaylıca anlatmışlardır. Sonrasında her sınıf düzeyinden rastgele birer şube seçilmiş ve bu sınıftaki öğrencilerin velilerine onam formu gönderilmiştir. Çalışmaya katılmayı kabul eden anneler ölçekleri Qualtrics aracılığı ile çevrimiçi olarak doldurmuşlardır.

3. BULGULAR

3.1. Çok Faktörlü Varyans Analizi Sonuçları

Yaş, cinsiyet ve yerleşim yerinin içe yönelim problemleri ile ilişkisini test etmek amacı ile çok yönlü varyans analizi yürütülmüştür. Sonuçlar cinsiyetin, yaşın ve yerleşim yerinin ana etkilerinin anlamlı olduğunu göstermiştir. Kızların içe yönelim problemleri ölçeğinden aldığı puanlar erkeklerin aldığı puanlardan daha yüksektir. Ayrıca içe yönelim problemleri yaşla birlikte artış gösterdiği bulunmuştur. En yüksek puanı 9. sınıf öğrencileri almıştır. Bunlara ek olarak, analiz sonuçları kırsal alanlarda yaşayan çocukların kentsel alanlarda yaşayanlardan daha yüksek seviyede içe yönelim problemi deneyimlediklerini göstermektedir. Sonuçlara göre, cinsiyet ve yaş faktörlerinin etkileşiminin içe yönelim problemleri üzerindeki etkisi anlamlıdır. Her

sınıf düzeyinde kızlar erkeklerden daha yüksek seviyede içe yönelim problemi bildirmiştir ancak bu cinsiyet farkı 8. sınıf ve sonrasında istatistiksel olarak anlamı hale gelmektedir. Diğer etkileşim değişkenleri anlamlı değildir.

3.2. Görülme Sıklığı

Türkiye'deki çocuk ve ergenlerde içe yönelim problemlerinin son altı ay içerisindeki görülme sıklığı %9,64 olarak bulunmuştur. Görülme sıklığı kızlar arasında %12,23; erkekler arasında ise %6,82'dir. Okul düzeyine göre karşılaştırma yapıldığında ilkokul, ortaokul ve lise öğrencileri arasında görülme sıklığı sırasıyla %4,28, %11,36 ve %15,53'tür. Ayrıca, içe yönelim problemlerinin görülme sıklığı kırsal alanda yaşayanlar arasında %11,03, kentte yaşayanlar arasında ise %9,15'tir.

4. TARTIŞMA

4.1. Yaş, Cinsiyet ve Yerleşim Yeri Farklılıkları

Bu çalışma, Türkiye'yi temsil eden bir örneklemde 6-17 yaş arasındaki çocuk ve ergenlerin yaşadığı içe yönelim problemlerini incelemiştir. Sonuçlar, içe yönelim problemlerinin yaşla birlikte artış gösterdiğinin altını çizmektedir. Bu bulgu alanyazındaki diğer sonuçlarla benzerdir. 9. sınıf öğrencileri en yüksek puanı almıştır. Bu artış ortaokuldan liseye geçişle açıklanabilir. Geçiş sürecinde öğrencilerin ders yükleri artmaktadır ve öğrenciler yeni bir çevreye uyum sağlamak zorundadırlar. Stres faktörlerinin sayısındaki artış, içe yönelim problemlerinde artışa neden olmaktadır (Hankin ve ark., 2007). Ayrıca, sonuçlara göre, içe yönelim problemlerinde anlamlı bir cinsiyet farkı vardır; kızlar erkeklerden daha yüksek puan almışlardır. Cinsiyet farklılıkları birkaç faktöre bağlanabilir. İlk olarak, kızlar erkeklere göre daha fazla stres faktörüne maruz kalmakta ve erkeklerden daha fazla stres tepkisi göstermektedirler (Hankin ve ark., 2007; Rudolph, 2002). Ayrıca, kültürel beklentiler kızlar ve erkekler için farklıdır. Örneğin Türkiye'de kadınlara yönelik toplumsal cinsiyet kalıp yargıları arasında duygusal, kırılgan ve bağımlı olmak yer almaktadır

(Sakallı ve ark., 2018). Eşit olmayan cinsiyet normları, kızlar arasında daha yüksek depresyon seviyeleri ile ilişkilidir (Koenig ve ark., 2021).

Mevcut çalışmada yaş ve cinsiyetin etkileşim etkisinin istatistiksel olarak anlamlı olduğu görülmüştür. Araştırmacılar içe yönelim problemlerinde cinsiyet farklılığının ergenlik döneminde ortaya çıktığını iddia etmektedirler (Roza ve ark., 2003; Zahn-Waxler ve ark., 2000; Wesselhoeft ve ark., 2015). Mevcut çalışmanın sonuçları, kızların içe yönelim problemlerine erkeklere kıyasla daha yatkın olduğunu ve cinsiyet farkının ergenlikten sonra anlamlı hale geldiğini göstermektedir. Ergenlik döneminde ortaya çıkan cinsiyet farklılıklarının birkaç sebebi olabileceği tartışılmıştır. İlk olarak hormon seviyesindeki artış kızlar arasında içe yönelim problemlerini yordamaktadır (Angold ve ark., 1999). Ayrıca, ergenlik döneminde beden algısı ile ilgili kaygılar kızlar arasında daha yaygındır (Ramos ve ark., 2019), olumsuz beden algısı içe yönelim problemleriyle pozitif yönde ilişkilidir (Siegel, 2002). Bunlara ek olarak, kızların ve erkeklerin stresle başa çıkmak için kullandığı yöntemler farklıdır. Araştırmacılar kızların stresle başa çıkma stratejisi olarak ruminasyonu kullandığını (Muris ve ark., 2009) ve ruminasyonun içe yönelim problemlerindeki artışı yordadığını bulmuşlardır (Alloy ve ark., 2016).

4.2. Çalışmanın Güçlü Yönleri ve Alanyazına Katkıları

Mevcut çalışma, Türkiye temsili bir örneklemle çocuk ve ergenlerin deneyimlediği içe yönelim problemlerini inceleyerek literatüre katkıda bulunmuştur. Bu çalışma Türkiye'nin çeşitli il ve ilçelerinde yaşayan, farklı sosyoekonomik ve eğitim seviyelerine sahip katılımcılarla yürütülmüştür. Bu sebeple sonuçların genellenebilirliği yüksektir. Ayrıca, Türkçe alanyazında içe yönelim problemlerini kır ve kent açısından karşılaştıran güncel bir çalışma bulunmamaktadır. Bunlara ek olarak, mevcut çalışma içe yönelim problemlerinin ulusal bir örneklemde görülme sıklığını raporlamıştır.

Bu çalışmanın bulguları, ruh sağlığı çalışanları için önem arz etmektedir. Çocukluk dönemindeki içe yönelim problemleri yetişkinlikte kaygı ve duygudurum

bozukluklarını yordamaktadır (Roza ve ark., 2003). Bu sebeple içe yönelim problemlerine odaklanan önleme ve müdahale programları geliştirmek elzemdir. Mevcut çalışmanın bulguları içe yönelim problemlerinin yaşla birlikte arttığını göstermektedir. Ayrıca, bu çalışmada içe yönelim problemleri açısından kızların daha yüksek risk altında olduğu görülmektedir. Cinsiyet farklılıkları ergenlik döneminde ortaya çıkmaktadır. Bunlara ek olarak, içe yönelim problemleri kırsal alanda yaşayan çocuk ve ergenler arasında kentte yaşayanlara kıyasla daha yaygındır. İlgili programlar geliştirilirken yaş, cinsiyet ve yerleşim yeri farklılıkları göz önünde bulundurulmalıdır.

4.3. Çalışmanın Sınırlılıkları ve Gelecek Çalışmalar İçin Öneriler

Çalışmanın güçlü yönlerine ve alanyazına katkılarına ek olarak çeşitli sınırlılıkları vardır. İlk olarak, mevcut çalışmada içe yönelim problemleri anne bildirimine dayanarak değerlendirilmiştir. Çocukların davranışları farklı ortamlarda değişiklik gösterebilmektedir, ancak anneler çocuklarını ev dışı ortamlarda gözlemleme şansı bulamayabilir. İçe yönelim problemleri bilgi kaynağına göre değişiklik gösterebilmektedir, bu sebeple birden fazla kişiden bilgi almak çocukların içe yönelim problemleri hakkında daha doğru bir değerlendirme yapılmasına yardımcı olacaktır. Mevcut çalışmada kırsal ve kent ayrımı yapılırken ulusal standartlar yerine alanyazında önerilen belli kriterler göz önüne alınmıştır. Ayrıca, yerleşim yeri sınıflandırması katılımcıların ev adresleri yerine okul adreslerine göre yapılmıştır. Bunlara ek olarak, içe yönelim problemleri değerlendirilirken alt ölçekler ayrı ayrı değerlendirilmek yerine ölçekten elde edilen toplam puan kullanılmıştır. İçe yönelim problemlerinin alt tiplerinin ayrıca incelenmesi içe yönelim problemleriyle ilgili daha detaylı bir bilgi sağlayacaktır.

Sonuç olarak, bu çalışma Türkiye temsili bir örneklemde cinsiyet, yaş, yerleşim yeri ve içe yönelim problemlerinin arasındaki ilişkiyi incelemiştir. Gelecek çalışmalar, bulguları içe yönelim problemlerini birden fazla bilgi kaynağı aracılığıyla değerlendirerek tekrarlamalıdır. Ayrıca içe yönelim problemlerini daha iyi anlamak için boylamsal çalışmalara ihtiyaç vardır. Gelecek araştırmaların içe yönelim problemlerinin yordayıcılarını incelemesi alanyazına önemli katkılar sağlayacaktır.

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