

## Examining the Depressive Symptoms of 12-15 Year-Old Turkish Adolescents According To Play Variable

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**Abstract:** The aim of this research was to examine the depressive symptoms of Turkish adolescents according to play variable. The research sample consisted of 400 adolescents, 200 of whom play and 200 do not play after school. To determine the depressive symptoms of adolescents participated in the research, Beck Children Depression Inventory was used. In conclusion, the symptoms of depression in adolescents who didn't play after school were found to be high, whereas adolescences' feelings of depression that play after school in their free time were low. The depressive symptom was determined as high in adolescents whose play time was short. It is thought that the play being necessary in child's life is effective on the depressive symptoms.

**Key words:** Turkish Adolescence • Play • Depression

### INTRODUCTION

Physical activity is associated with increased risk of a wide variety of diseases such as cardiovascular, hypertension, type 2 diabetes, obesity and depression [1]. It is known that physical activity has positive effects on the physiological and psychological well-being of children and adolescents and it is believed to be important to the development and maintenance of health-related behavior patterns that will carry over into adulthood [2]. The benefits of being physically active are also thought to extend to psychological and sociological realms. Sport and exercise participation is often linked with such characteristics as attitudes and self-perceptions [3, 4] and with social interpersonal patterns [5]. In addition, it has been indicated that regular participation in sports and exercise are behaviors that are heavily influenced by observation of others who model these behaviors and by social reinforcement [6]. Physically active role modeling by parents and parental support and encouragement for physical activity are consistent correlates of children's physical activity [1, 5].

Depression is an awfully destructive trouble having long-term attacks, showing high chronic features, recurrence and repetition rates and causing serious physical and psycho-social skill loss [7]. The psychiatric trouble most frequently seen is depression. Everyone

may sometimes have troubles in life, but this may change into a symptom in somebody and this situation is a sign of illness [8]. Depression is one of the most frequently diagnosed psychiatric disorders in youth, with as many as 9% of children having experienced at least one episode of Diagnostic and Statistical Manual of Mental Disorders major depression by the age of 14 [9]. Prevalence rates for subsyndromal depressive symptoms are even greater, with between 10% and 30% of youth exceeding cutoff scores on self-report measures of depressive symptoms [10] and between 20% and 59% of youth experiencing prolonged periods of depressed mood [11]. Although a lot of researches have examined theories of the etiology of depression in adults, a few researches have tested. Given that children are at different stages of cognitive, emotional, behavioral and physical development than adults, it is essential that age related differences should be taken into account and promising etiological theories should be tested in both child and adult samples [12]. As in childhood, the masked symptoms are seen in early puberty, too. These may reveal as chagrin and unrest, fatigue and physical works, anger, temper tantrum, escapes, antisocial, negative and rebellious behaviors in various kinds, concentration difficulty, hiding behind people or being away from people. The basic theme in puberties is the experience of loss as in the adult depression. These losses may both become physical

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separations such as death and ending a friendship and illness, incompetence, the loss of body integrity sense such as becoming ugly, failure in reaching a goal or the loss of self-respect because of taking the responsibility of a shameful event and, these losses may cause depressive situation [13]. Puberty is a transitional period in which sexuality rises depending on development of sexual characters and body adapts to sexual development. In this transitional period, spiritual structure should also make adaptations to this physical change and cope with new conflicts as well as old ones increasing with change. Puberty period has become a focus of interest since it both carries the potential of being a beginning of adult depression [14] and is rather related to adolescent's suicide attempt. These two features make somebody think that adolescent depression is not different from adult depression [15]. Researchers studying adolescent depressed mood have demonstrated that depressed affect is associated with other serious consequences for adolescents, such as emotional and disruptive behavior, truancy, drug abuse and adolescent pregnancy and suicide attempts [16].

Although adulthood depression has received considerable research attention, adolescent depression has been studied much less. However, a review by Reynolds [17] revealed that large-scale community or school-based screenings of adolescents typically identify 8% to 18% of youth as showing significant depression symptom, with one in six adolescents who presented for psychiatric evaluation being diagnosed with a depression disorder. The need for research focused on understanding children's mental health has increased dramatically in the past decade [18, 19]. As shown in Figure 1, family environment factors such as marital and family conflict, parent stress and parent depression have been shown to be risk factors related to adolescent depression [20, 21].

It is known that physical activity makes positive changes in respiratory, circulatory, skeletal and other organic systems. The people doing physical activity regularly were observed to give much faster neural-muscular system reactions and have higher physical work capacity values as compared to sedentary people at the same age [22]. Children are always in growth and development process and in need of movement. The importance of movement development programs applied in this term is stressed by many researchers [23]. An increase is observed in physical activity, physical development and social skills of children participating in

sports organizations [24]. In a research reporting the physical fitness of children living in city in America, it is stressed that cardiovascular problems occur in adulthood as long as no care is given on children's activity levels' being high and the point of giving importance on activity programs in childhood is emphasized [25]. The child gets relaxed with play and continues his personal development by playing his role in the relations with individuals around [26].

Being exposed to the stressful life experiences, familial and psycho-social reasons in children may be initiators of depression [27]. The secondary school students in Turkey are subjected to a general exam at the end of year with the aim of measuring success and placing the students to a high school according to the exam score. To get a high score in these exams, some students attend to private classes in their spare times after school; and some students do not attend because of familial and economical reasons. The fears of failure in the exam and the anxiety caused by that fear have been found to affect the individuals in several ways negatively [28]. When compared with the students who do not attend to private classes, students who attend have so little time for the games that it makes us think they may have more depression levels.

Games played willingly and with pleasure, help the child's physical, emotional and social development. It is the most effective learning process for the child and is thought to be necessary for the child's life. Game is an activity taking place in every term of life [29]. In researches carried out, a parallel relation has been found between game and cognitive development [30]. Developing the concepts such as expressing himself, self-confidence, personality, self-respect; game is a part of real life for the child and adolescent. It is thought that not keeping enough time for the game necessary in child's life results in some negative feelings since parents and educators limit child's spare time only to study, private class and school because of the future anxiety. The aim of the study is to examine the depressive symptoms of Turkish adolescents with regard to the game variable.

## **MATERIALS AND METHODS**

In the research, 400 adolescents, 200 of whom attend the private class after school and 200 of whom don't attend and whose average age was  $13.41 \pm 0.904$ , participated voluntarily.

The reason why the age of students in the research was determined as 12-14 is that this age group students were the ones who would take an exam to enter a good high school and also that the time students attending a private class spent for game was so little was found remarkable. With the thought of that time's being little for the game would result in negative feelings; depressive symptoms were examined in a group of students depending on game periods.

All adolescent students in the research (n=400) passed their time between 8 p.m and 1 p.m. at the school. The experimental group (No Play Group) (n=200) was consisted of students attending a private class between 2 p.m. and 5 p.m. after school. As for the play group (n=200), it was consisted of adolescents passing their leisure time after school freely. The control group was called as Play group since they had more time for the game because they didn't attend a private class. With the aim of determining the time spent for the game, all participants were asked how much time they spent for the game in a day via information data forms. The control group (No Play Group) not attending a private class was evaluated in terms of the period they spent in their free-time activities without a specific game Schedule.

In the research, "Personal Information Form" improved by the researcher was used to determine the characteristics of the adolescence and "Beck Children's Depression Inventory" improved by [31, 32] was used to determine the perception levels of adolescents.

The depressive symptoms of children were evaluated via CDO. The depression scale for children is a self-evaluation scale that can be applied to 6-17 year-old children. The scale is filled reading to the child or being read by the child. Three different options are included for each item in the scale consisting of 27 items. The child is asked to choose the most suitable sentence for himself for the last two weeks. For instance, 1. I sometimes feel sad. 2. I often feel sad. 3. I always feel sad. Each item takes 0.1 or 2 score according to the volume of symptom.

The maximum score is 54. If the score is high, it means the depression is evenly high. The cutoff score is suggested 19. [32]. In our country, validity and reliability studies were carried out by Öy [33] reported test-retest reliability of depression scale for children as 0.70 and internal consistency as 0.80 in his study.

All statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS for Windows; SPSS, Inc., Chicago, IL). Standard statistical methods were used for the calculation of frequency and percent. The Kolmogorov-Smirnov test was used to determine if dependent variables were normally distributed. The Levine test was used to determine if there was homogeneity of variance. Mann-Whitney U and unpaired t-tests were used to determine significant differences for each dependent variable. For all analyses, the criterion for significance was set at an alpha level of  $p < 0.05$ .

## RESULTS AND DISCUSSION

When Table 1 is examined, the adolescents participated in the research are examined in terms of play variable, it has been found that there is significant difference between depression and play after school variable ( $p < 0.05$ ). Whereas depression scores of adolescents playing are low, depression scores of adolescents who do not play after school but study have been determined high. The play time of the students in the research was examined and significant difference was found between groups. It was determined that the play time of students attending a private class after school was low and the play time of students not attending a private class was high.

When Table 2 is examined, a significant difference between depressive symptoms and the age variable of adolescents participated in research has been found ( $p < 0.05$ ). Depression average of 12 year-old children has been determined higher than the average of 14 year-old children.

Table 1: Examining the adolescents participated in research according to play, gender and play time variables

Variables	N	Mean	Std.	Dev.	Mean Difference	t	P
Free time after school	Not playing	202	14.27	4.647	4.282	10.056	0.000*
	Playing	200	9.99	3.850			
Gender	Female	197	12.01	4.942	0.268	0.563	0.574
	Male	205	12.27	4.612			
Play time	Attending a private class	202	1.79	.710	.823	11.262	0.000*
	Not attending a private class	200	2.62	.755			

Table 2: Demographic Features of Adolescence

Variables		N	Mean	Std. Deviation	Mean Square	F	P	Difference
Age	12 age	70	13.53	4.824	92.330	4.149	0.007*	12-14 age
	13 age	148	12.49	4.393				
	14 age	162	11.40	4.855				
	15 age	22	10.86	5.427				
Income level	500 TL/250 Euro	56	11.18	3.491	68.642	3.076	0.016*	Over 1500TL/ Over750 Euro- 500 TL/250 Euro, Over 1500TL/ Over750 Euro- 700 TL/350 Euro
	700 TL/350 Euro	143	11.64	4.846				
	1000 TL/500 Euro	80	12.04	5.023				
	1500 TL/750 Euro	84	12.83	5.046				
	Over 1500TL/ Over750 Euro	39	14.08	4.433				
Educational level of Father	Primary-Secondary school	185	11.30	4.773	117.669	5.334	0.001*	Primary -Secondary School, High School, College, University
	High school	103	12.22	4.408				
	College	42	14.10	5.230				
	University	72	13.06	4.571				
Educational level of mother	Primary-Secondary school	278	11.77	4.839	55.860	2.480	0.061	
	High school	92	13.26	4.477				
	College	13	11.31	5.329				
	University	19	12.68	4.177				
Sleep time	6 hours	36	10.53	4.520	69.883	3.134	0.015*	6-9 hours
	7 hours	101	11.66	4.906				
	8 hours	153	12.64	5.011				
	9 hours	95	12.84	4.286				
	10 hours	17	10.00	3.428				
Play time	1 hour	76	14.39	5.104	204.932	9.575	0.000*	1-2, 1-3, 1-4 hour
	2 hours	202	11.60	4.760				
	3 hours	91	12.27	4.061				
	4 hours	33	9.880	4.052				

A significant difference has been found between income level and depression ( $p < 0.05$ ). The depressive symptoms of child whose family income is 500 TL/250 Euro has been found to be lower than the children whose family income is over 1500 TL/750 Euro. The depression scores of children having high income level have been found to be higher than the scores of children having low income level.

A significant difference has been found between depression and father's educational level ( $p < 0.05$ ). The depression scores of children whose fathers are high school and university graduates have been determined higher than the scores of children whose fathers are primary school graduates.

Significant difference has been found between sleep time and depressive symptoms ( $p < 0.05$ ). While depression scores of children whose sleep time is 6 hours are low, depression scores of children whose sleep time is 9 hours have been found to be high.

A significant difference has been found between adolescents' depressive symptoms and daily play time ( $p > 0.05$ ). While depression scores of children whose play time is 1 hour are high, depression scores of children whose play time is 2, 3, 4 hours have been found to be low. A depressive symptom has been determined as high in children having short play time.

In this research, the depressive symptom of 12-15 year-old Turkish adolescents was examined according to the play variable.

As seen in Table 1, the adolescents participated in research were examined according to the play variable, a significant difference has been found between depression and play after school variable ( $p < 0.05$ ). The play time of the students in the research was examined and significant difference was found between groups. It was determined that the play time of students attending a private class after school was low and the play time of students not attending a private class was high. While the depressive

symptoms of adolescents playing is low, the depressive symptoms of adolescents who do not play but study after school has been determined to be high. The place of play in child's life is an indisputable truth. The reason why the depressive symptoms of the group that does not play is high shows that Turkish adolescents spend their free time after school studying and do not spend time for enjoyable activities and play.

Hankin *et al.* [34] found gender differences in clinical depression beginning at age 13 years and increasing most rapidly between 15 and 18 years of age. Both the incidence and the gender difference in rates of depression increase following puberty to the levels found in adults, with the prevalence of depression among girls being about twice than among boys [34, 35]. Duggal *et al.* [36], in a sample of 168 children and adolescents, found that the interaction of gender and maternal depression was significantly predictive of adolescent depression, with maternal depression being more predictive for females, consistent with other research findings [21]. Although these results concur with those reported in other studies [37], there was no evidence that adolescents' gender had a moderating effect on the relations among parental attachment, internalizing behaviors and teacher academic worries about the middle school transition. Thus, the mediation model tested in this study was applied in the same way to both genders. Heath and Camarena [38] found that, in this 3-year long study, the depressed affect of early adolescent boys and girls was studied with the purpose of distinguishing among those adolescents with chronic, as compared to episodic, depressed affect and those without elevated levels of depressed mood during that developmental stage. Variable-centered analyses indicated a general pattern of stability in depressed affect across early adolescence both for boys and for girls. Person-centered analyses, however, revealed five separate patterns of depressed affect across early adolescence. The depressed affect categories showed patterns of stability for most early adolescents, patterns of change for fewer early adolescents and gender differences only in the smaller subgroups of early adolescents who showed patterns of change in depressed affect. Case-level analyses focused on adolescents with elevated depressed affect to distinguish ways in which the daily lives of adolescents with episodic depressed affect differed from the daily lives of adolescents with chronically depressed affect.

When Table 2 was examined, it has been found that there is significant difference between depressive symptoms and age variable of adolescents participating

in the research ( $p < 0.05$ ). Depression average of 12 year-old children has been determined to be higher than the average of 14 year-old children. The reason why 12 year-old adolescents' depressive symptoms are higher than other age groups is that it is the beginning of puberty and physical development that is thought to affect the psychology.

Jenkins *et al.* [39] found that sons of fathers with more education reported more paternal intimate support than did sons of less educated fathers; daughters showed the opposite pattern, which generates questions for further research. Bond *et al.* [21] in a cross-sectional study of 8,984 adolescents (Grades 7, 9 and 11), reported that the strongest predictor of adolescent depression was family conflict. Similarly, Seiffge-Krenke *et al.* [20], in a study comparing 36 clinical adolescents to 41 controls, reported that the clinical adolescents attributed their psychopathology to parent conflict. Marital conflict, a specific type of family conflict, has been reported as a risk factor for children because it impacts the nature of the parent-child relationship [40] and may lead to maladaptive interactions of aggression or hostility towards the child [41]. However, identifying the role of marital conflict in relation to subsequent adolescent depressive symptom requires further research.

Significant difference has been found between income level and depression. The depressive symptoms of child whose family income is TL.500 has been found to be lower than the adolescents whose family income is TL.1500 and over. The depression scores of adolescents having high family income level have been found to be higher than the scores of children having low family income level. It is thought that showing more tolerance about free-time activities to the Turkish adolescents in families having high socio-economic level, getting his way, some psychological problems such as dissatisfaction provoke the depressive situation.

Duchesne *et al.* [42] found that this study examines how attachment to mother and father predicts worries about academic demands and relationships with teachers generated by the transition from elementary to middle school through its contribution to adolescents' emotional problems (depression and anxiety). The results of analyses based on structural equation modeling showed that attachment to mother predicts adolescents' teacher-academic worries about the middle school transition through anxiety symptoms. There are many research findings reporting that the quality of the communication with parents is so important that it may affect individual's whole life psychologically. In their research over 88

American women, Rohner and Khaleque [43] found a relation between individuals' psychologic evaluations and the perception of parents' acceptance-rejection behavior in childhood. According to this, depending on their parents' behaviors in childhood, women have expectations towards people around in adulthood, as well and form their relations according to these expectations.

No significant difference has been found between depressive symptoms and number of siblings and mother's educational level variables ( $p < 0.05$ ). It has been determined that number of siblings and mother's educational level does not affect depressive symptom.

A significant difference has been found between depression and father's educational level. The depression scores of children whose fathers are high school and university graduates have been determined higher than the scores of children whose fathers are primary school graduates. Education level's being high in the family is thought to increase the academic expectations from child and create negative feelings in child.

Significant difference has been found between sleep time and depression symptoms. While depression scores of children whose sleep time is 6 hours are low, depression scores of children whose sleep time is 9 hours have been found to be high. Physical and mental activities, some factors such as depression and stress are effective over individual's sleep time. Hormonal factors (menstrual cycle, hormone therapies and menopause) are shown as the reason of relation between sleep and emotion situation disorders [44]. It is thought that the reason why the depressive symptom is high in the adolescents who have more time to sleep is due to functions of hormonal system, depending on the fast physiologic development.

A significant difference has been found between depressive symptoms and daily play time of adolescents ( $p > 0.05$ ). While depression scores of adolescents whose play time is 1 hour are high, depression scores of children whose play time is 2, 3, 4 hours have been found to be low. Depressive symptom has been determined as high in children having short play time. Being the first step for physical, cognitive, lingual, emotional and social development, play in which children participate fondly and with pleasure is thought to keep the individual away from the negative feelings.

Mazza and Reynolds [19] found the longitudinal relationship of early elementary predictors to adolescent depression 7 years later 938 students. Results showed that the risk factors predominately in the individual characteristic group (depression, anxiety and antisocial behavior) were predictive of depression 7 years later.

Gender differences among the longitudinal risk factors were also found in relation to adolescent depression. Discussion of the results focuses on the practice of children's mental health assessment and implications for the development of prevention and intervention programs for depression. A number of other researchers have found similar risk factors associated with symptoms of adolescent depressed mood. Those researchers have linked adolescent depressed affect to poor parent relations and peer rejection, moving from one school to another [35], lower academic motivation [45] and economic difficulties [46]. Previous research has demonstrated that parents play a significant role in their children's developing self-understanding and emotional and behavioral adjustment [47]. In the research carried out by Bruner they specifically examined this process within co-constructed family narratives, because narratives are the ways in which we make sense of and create meaning from personal experiences [48]. Although our sample at follow-up was small, this is the first study to examine longitudinal gendered patterns of interaction within family co-constructed narratives in relation to adolescents' well-being. Clearly, the roles that mothers and fathers play in their sons' and daughters' lives are different, although these differences are not yet well understood [49]. Fasting and Pfister [50] reported that at least some parts of Turkey are changing in that the younger generation is more active in sports. In addition, parents encourage their children to participate in sports. However, due to different cultural expectations, participation in regular sports and exercise may be limited for Turkish girls and women. To our knowledge no studies have examined age and gender differences in physical activity level of adolescents in Turkey. Results of the research indicate that relations between parental emotion talk within family narratives and children's subsequent self-esteem and adjustment differ by gender of parent, by gender of adolescent and by the emotional valence of the event.

Existing in all age terms of child and being an element that prepares the child for life, play has an indisputable importance. Children's playing in free time after school will enable them to express themselves, discover their abilities and improve themselves sophisticatedly. It is thought that time's being short or almost never for play in childhood causes some psychological problems in child. Being a necessary element for child's life, play is thought to be effective on depressive symptoms. Game is thought as important for Turkish adolescents in evaluating spare time after school in terms of preventing negative feelings and behaviors.

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