

## The Relationship of Social Emotional Learning Skills and Computer Game Addiction of Middle School Students<sup>1</sup>

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## Abstract

This study aims to determine the levels of social emotional learning skills and computer game addiction of middle school students in terms of gender, school types and grade variables, and to examine whether there is a significant relationship between social emotional learning skills and computer game addiction. The participants of this correlational survey model study were 307 students. Social Emotional Learning Skills Scale and Children's Computer Game Addiction Scale were used in the study. The data were analyzed by t-test and Pearson Correlation analysis and linear regression. As a result of the research, it was found that social emotional learning skills were a better level in favor of female students, private schools and 5th graders. Computer game addiction was found a better level in male students than females, and there was no diference with school types and grades. There was a significant negative relationship between social emotional learning skills and computer game addiction levels at a moderate level (r=.37). In addition, it was revealed that participants' social emotional learning skills accounted for 14% of computer game addiction.

Keywords: Social emotional learning skills, computer game addiction, middle school students

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#### Introduction

One of the main purposes of education is to provide students with the necessary life skills in physical, cognitive, social and emotional areas by communicating with the social environment in which they live. Therefore, not only academic competencies but also emotional and social skills should be acquired through education. However, when the curricula of schools are examined, it is seen that cognitive skills are mostly emphasized but learning affective skills is not given much in the programs. So, it is necessary for people to develop social emotional learning skills, especially in the context of school and social life success.

Since cognitive learning is seen as the most important element that will shape students' future lives and is overemphasized, social and emotional gains have been left in the background (Elias, et.al, 1997). As a matter of fact, it is seen that young people in the early ages of adolescence face developmental difficulties within the framework of school, family and friend relationships that may directly affect their future developmental periods (Kabakçı, 2006). In recent studies, it has been emphasized that social emotional factors are at the root of the difficulties experienced by peers with each other and with their teachers in the school environment and lead to risky behaviors of young people.

As Türnüklü (2004) states, while some students come to school having acquired social and emotional skills such as self-expression, expressing their wishes and feelings, coping with intense emotions, anger management, listening skills, sharing and cooperation in their families, some students may come to school without acquiring these social skills. Therefore, these unacquired social skills and emotion management skills may cause various problems and conflicts in the classroom and school environments.

#### Social Emotional Learning and Social Emotional Learning Skills

Social emotional learning (SEL) refers to the acquisition of important skills and qualities that focus on the student's social, emotional, and academic development as a whole in order to achieve success in school and social life (Pasi, 2001). SEL is defined as the process of using children and young individuals' thoughts, feelings, and behaviors together in harmony in order for them to fulfill their responsibilities for life in a healthy way, to meet their individual and social needs, and to be productive people in the society (McCombs, 2004). Accordingly, SEL can also be defined as the ability to successfully fulfill life tasks such as interpersonal communication, problem solving, learning and adapting to developmental tasks and the ability to understand, express and manage one's social and emotional aspects (Romasz, Kantor & Elias, 2004). In other words, SEL is the process of acquiring and effectively applying the knowledge, attitudes and skills necessary in our lives, such as regulating one's relationships, establishing positive relationships, being aware of one's own emotions, expressing positive or negative emotions and behaviors appropriately, managing one's emotions, empathizing, problem solving, taking responsibility, defending one's individual rights, asking for help from others when necessary, and refusing requests that are against one's will (Aslan, Bascıllar & Karataş, 2022; OECD, 2018; Romasz, Kantor & Elias, 2004; Slovak & Fitzpatrick, 2015; Weissberg & Cascarino 2013; Zins & Elias, 2008).

SEL is a concept that refers to social and emotional skill development in order to make children's learning levels more effective (Weissberg, Resnik, Payton & O'Brien, 2003, as cited Kılıç & Alcı, 2022). Only students with social emotional learning skills can adapt the changing and developing social emotional and academic needs of today's society. Therefore, it is very important for children to gain the skills of learning motivation, integrating new information into their daily lives, communicating with other people both appropriately and effectively, making decisions by taking into account not only their own but also others' interests, and respecting others' perspectives and concerns (Aslan, Başcıllar & Karataş, 2022). In this context, social emotional learning enables children to be more successful and happy in school and daily life skills by affecting their behavior, attitude and academic performance (Zins & Elias, 2004). Social skills are the main factors that play a critical role in children's social and psychological development.

As Bozkurt Yükçü et al. (2021) stated, SELS have positive effects on variables such as academic achievement, school adaptation, prosocial behaviors, cooperation, self-efficacy, problem solving, psychological and social adaptation and self-control, as well as protective or reducing effects on variables such as bullying, aggression, depressive symptoms. A deficiency in social skills affects children at home, at school, in peer relationships and in every aspect of their lives. Lack of learning skills may result in children and youth engaging in risky behaviors (Elias, et.al, 1997, Romasz, Kantor & Elias, 2004). Lacking of SEL skills also causes negative consequences such as shyness, anxiety, aggression, inappropriate behaviors, depression, loneliness, introversion, social anxiety, substance abuse, adolescent delinquency and academic failure of children (Aslan, Başcıllar & Karataş, 2022). In this context, being adequate in the 21st century school environment will depend on the development of students' character, social emotional skills and academic competencies. As a matter of fact, in a report published by OECD (2015), training children with balanced development in social and emotional skills is shown among the important requirements of the 21st century.

There is no consensus in the literature on which skills constitute social emotional competencies (Kabakçı, 2006). Basic social emotional skills include sub-behaviors within themselves and require teaching various social emotional skills together. Social emotional skills are complex and require careful planning of the generalization process (Elksnin & Elksnin, 2006, as cited in Kabakçı & Totan, 2013). For this reason, social emotional learning skills are classified in many different ways. According to CASEL (Collaboration of Academics for Social Emotional Learning) (2005), there are five skills that make up the content of the programs. These are: self-awareness, social awareness, self-management, communication skills and decision-making. Kabakçı (2006), on the other hand, states that four skills are emphasized in the classifications made: communication skills, problem solving skills, self-esteem enhancing skills and coping with stress skills.

#### **Computer Game Addiction**

Another 21st century skill is information skills. In the information age, there is a need for creativity and innovation, critical thinking and problem solving, communication and collaboration, information literacy, media literacy and information, communication and technology literacy, flexibility and adaptability, initiative and self-management skills, social and intercultural skills, productivity and accountability skills, leadership and responsibility skills, which are called 21st century skills in line with technological, communicative and scientific developments (P21, 2019). However, especially in terms of information literacy, media literacy, information, communication and technology literacy of school-age children, students prefer to play games and surf social media (Aplin, 2013: Çelik & Ulusoy, 2019; Güney, 2020, Horzum, 2011; Inal & Kiraz, 2008; Lenhart et al, 2010; 2011; Torun, Akçay & Çoklar, 2015). For this reason, the American Academy of Pediatrics (as cited in Çakır, 2013) recommends that parents should limit the time their children spend in front of computers and other media, and direct their children to activities that provide and improve their physical fitness and creative games as much as possible.

As Torun et al (2015) emphasize, families are worried that some games are not suitable for children's age groups or that children cannot limit themselves in playing computer games and the extent of addiction. The types of games played or the child's level of addiction to games may cause the child to exhibit negative attitudes towards himself and his environment.

In Türkiye, in the reports of the Digital Games Workshop and Symposium published by the Ministry of Family and Social Policies in 2017, it was stated that computer games cause asocialization and decrease in communication within the family (İşçibaşı, 2011, as cited in Çelik & Ulusoy, 2019). Similarly, Yalçın Irmak (2014) stated that adolescents who exclude themselves from social environments by spending time in computer games and show asocial behavior characteristics tend to carry their game playing behaviors to the level of addiction.

Computer game addiction (CGA) is mostly seen in children and adolescents. One of the main reasons for this is the knowledge, skills and competencies of the z and alpha generations. Since these generations are intertwined with technology, they can easily adapt to the speed of information and time. Adolescents are more at risk of becoming addicted to computer games due to the influence of adolescence. Many factors play a role in the risk of game addiction. For example, adolescents'

decision-making abilities are not yet fully developed and the influence of peers and friends is very high during this period. In addition, easier access to digital tools and the child staying alone at home for a long time due to the parents' work (Küçük & Çakır, 2020) are among the factors that lead to addiction.

Computer or digital game addiction in children and adolescents can lead to negative changes in their lives both physically and psychosocially, and as a result, it can create a change in their social and emotional skills. In other words, CGA can cause various problems such as children and adolescents' inability to stop playing games, associating the game with real life, playing violent games, disrupting their lessons and other responsibilities as a result of long-term use, surfing age-inappropriate sites and fatigue caused by the time spent, sleep and attention disorders, indifference to the real world and preferring gaming to other activities. As Horzum (2011) states, game addiction negatively affects children's socialization and academic success. Indeed, Çelik and Ulusoy (2019) and Turgut (2016) also found that children spend less time with their family, friends, schoolwork and hobbies due to the time they spend on computer games.

Games and time spent on games can cause many losses in individual and social contexts. Many studies have shown that children who play too many digital games cannot cope with the problems they face, cannot provide self-control their academic achievement decreases, malnutrition, sleep disorders, depression, loneliness, anxiety, aggression communication problems with family and environment (Aslan, Başcıllar, & Karataş, 2022; Atak, 2021; Erden & Bulut, 2023; Şahin & Tuğrul, 2012; Tilki, 2021; Tsai et al., 2020). In this context, these results are also factors that affect children's social emotional skill levels.

Social emotional learning affects students' behaviors, attitudes and academic performance, making them more successful and happy in school and daily life skills (Zins & Elias, 2004). It is also a very important concept in terms of preventing children from developing some risky behaviors and making them more harmonious individuals. Accordingly, children with high social emotional learning skills may represent more resistant behaviours to digital game addiction. In this context, social emotional learning may have an important contribution in preventing students' computer game addiction, so it is necessary to examine this connection. When the literature is examined, it is seen that the concepts of CGA and SELS are mostly handled separately, the number of articles conducted together (Aslan, Başçıllar & Karataş, 2022) is quite limited, and the research on this subject is mostly conducted as a postgraduate thesis (Tilki, 2021). The main purpose of this study is to examine the relationship between middle school students' social emotional learning skills and computer game addiction.

#### **Purpose of the Study**

The aim of the study is to examine the relationship between the social emotional skills and the computer game addiction. The following questions will be investigated in this study.

1. What is the level of Social Emotional Learning Skills (SELS) scores of middle school students? Is there any difference according to gender, school types and grades?

2. What is the level of Computer Game Addiction (CGA) scores of middle school students? Is there any difference according to gender, school types and grades?

3. Is there a significant relationship between SELS and CGA levels of 5th and 6th grade middle school students?

4. Are participants' social emotional learning skills a significant predictor of computer game addiction?

#### Method

## **Research Model**

Relational survey model was used in the study. Since the research aims to determine the existence of change between two or more variables, it is a correlational study for prediction

(Büyüköztürk, 2013; Karasar, 2020). In the study, it is examined by the correlation between total and sub-dimensions of social emotional learning skills and computer game addiction.

## Samples

The sample of the study consisted of 5th and 6th grade students attending private and public schools in a large city in the western region of Türkiye. A total of 307 students, 193 (62.9%) from private schools and 114 (37.1%) from public schools, took part in the study. The participants who voluntarily agreed to participate in the study on the day and time of the application were determined using the convenience sampling method (Cohen, Manion, & Morrison, 2007). Of these students, 46.9% (n=144) were female and 53.1% (n=163) were male. 45.6% of the participants were in the 5th grade and 54.4% (n=167) were in the 6th grade.

## **Data Collection Tools**

Demografic questions, as gender, school types and grades, the Social Emotional Learning Skills Scale and the Computer Game Addiction Scale for Children were used as data collection tools in the study.

## Social Emotional Learning Skills Scale

It was developed by Kabakçı (2006) to determine SELS. The scale consists of 40 items and four sub-dimensions: communication skills (9 items), problem solving skills (11 items), stress coping skills (10 items) and self-esteem enhancing skills (10 items). The reliability coefficients of the scale ranged between .73 and .85. The total Cronbach's alpha ( $\alpha$ ) reliability coefficient is .90. The results show that the scale is a valid and reliable instrument. The scale is graded on a four-point Likert scale as completely appropriate (4), quite appropriate (3), not very appropriate (2) and not at all appropriate (1) and is scored between 1-4. The lowest score that can be obtained from the scale is 40 points and the highest score is 160 points. All of the questions in the scale consist of positive statements. A high score compared to the average indicates competence in terms of social emotional learning skills, while a low score indicates that the individual perceives himself/herself as inadequate (Kabakçı, 2006; Kabakçı & Korkut-Owen, 2010). In this study, the reliability coefficients of the scale were calculated as total .905, communication skills .735, problem solving skills .843, stress coping skills .712 and self-esteem enhancing skills .857.

## Computer Game Addiction Scale for Children

It was developed by Horzum, Ayas, and Çakır Balta (2008) to measure children's CGA. It is a 5-point Likert-type self-report scale consisting of 21 items. All of these items are positive items for game addiction. The scale has four sub-dimensions. These factors are named "Can not giving up playing games", Associating computer games with real life", "Neglecting responsibilities because of computer games", and "Preferring playing on computer to other activities". The scale can be evaluated on the basis of total score and sub-dimensions. Scores that can be obtained from the scale are between 21-105, and the higher the scores, the higher the risk of addiction. While the total scores obtained from the scale are interpreted for middle and high school students, 21-39 points are considered as normal users, 40-72 points as problematic users and 73-130 points as computer game addicts. The internal consistency coefficient (Cronbach  $\alpha$  value) of the scale is .85. It was also observed that the Cronbach Alpha values of the factors were between .63 and .90. This indicates that the reliability is quite high. In this study, the total internal consistency coefficient (Cronbach  $\alpha$ ) of the scale was calculated as .936. The reliability coefficients of the sub-dimensions were calculated as .893, .759, .761 and .692, respectively.

## **Data Collection and Analysis**

The data were first analyzed in terms of whether they showed a normal distribution. SELS were found to be normal according to the Kolmogorov-Smirnov test (p>.05). For the CGA scale, normality was ensured by removing participants 244 and 302, which had extreme values, from the data set. The data were analyzed with independent sample t-test, Pearson correlation test, and linear regression analysis was used to reveal whether SELS predicted CGA.

This section presents the findings obtained as a result of the analysis of the data collected through the scales from the middle school students who participated in the study.

## Findings on Social Emotional Learning Skills of Middle School Students

The total scores of Social Emotional Learning Skills of middle school students are given in Table 1.

| Distribution of Students' Total Scores of Social Emotional Learning Skills |     |        |       |        |       |     |  |  |  |
|--|-----|--------|-------|--------|-------|-----|--|--|--|
| SELS   | Ν   | X      | Min   | Max    | SD    | SEM |  |  |  |
| Communication  | 307 | 28.17  | 15.00 | 36.00  | 4.54  | .25 |  |  |  |
| Problem Solving  | 307 | 35.70  | 17.00 | 44.00  | 5.46  | .31 |  |  |  |
| Coping with Stress   | 307 | 25.96  | 10.00 | 54.00  | 5.62  | .32 |  |  |  |
| Self-esteem  | 307 | 34.85  | 13.00 | 40.00  | 5.01  | .28 |  |  |  |
| TOTAL  | 307 | 124.70 | 76.00 | 167.00 | 16.31 | .93 |  |  |  |

As seen in Table 1, the total (x=124.70, sd=16.31) and sub-dimension scores of SELS of middle school students were found to be at a high level. Accordingly, it can be said that middle school students' social emotional skills are quite high. Sub-dimension scores were calculated by independent sample t-test and the results are given in Table 2.

Table 2

Table 1.

Distribution of Students' Social Emotional Learning Skill Scores According to Gender

| SELS             | Gender | Ν   | X      | SD    | t     | р    |
|------------------|--------|-----|--------|-------|-------|------|
| Communication    | Female | 144 | 29.63  | 4.09  | 5.52  | .000 |
|                  | Male   | 163 | 26.88  | 4.53  |       |      |
| Problem Solving  | Female | 144 | 36.38  | 5.24  | 2.06  | .040 |
|                  | Male   | 163 | 35.10  | 5.59  |       |      |
| C :1 C           | Female | 144 | 26.96  | 6.08  | 2.95  | .003 |
| Cope with Stress | Male   | 163 | 25.08  | 5.04  |       |      |
| Calf anta and    | Female | 144 | 34.51  | 5.21  | -1.11 | .266 |
| Sen-esteem       | Male   | 163 | 35.15  | 4.83  |       |      |
| TOTAL            | Female | 144 | 127.50 | 16.51 | 2.85  | .005 |
| IUIAL            | Male   | 163 | 122.22 | 15,78 |       |      |

As seen in Table 2, all averages of female students were higher than male students except for self-esteem. Accordingly, female students obtained higher scores than male students. However, it can be said that male participants also have a high level of these skills.

The SELS scores of the participants according to their schools were analyzed by t-test and the findings are given in Table 3.

| Distribution of Students SELS Scores According to School Types |                 |     |        |       |       |      |  |  |
|--|-----------------|-----|--------|-------|-------|------|--|--|
| SELS   | School<br>Types | Ν   | X      | SD    | t     | р    |  |  |
| Communication  | Public          | 114 | 26.91  | 4.47  | -3,81 | .000 |  |  |
| Communication  | Private         | 193 | 28.92  | 4.42  |       |      |  |  |
| Problem Solving  | Public          | 114 | 34.38  | 5.51  | -3.30 | .003 |  |  |
|  | Private         | 193 | 36.48  | 5.29  |       |      |  |  |
| Cono with Strass   | Public          | 114 | 24.06  | 4.53  | -4.71 | .000 |  |  |
| Cope with Stress   | Private         | 193 | 27.09  | 5.53  |       |      |  |  |
| Calf actoria   | Public          | 114 | 33.76  | 5.32  | -2.96 | .003 |  |  |
| Sen-esteem   | Private         | 193 | 35.49  | 4.72  |       |      |  |  |
|  | Public          | 114 | 119.12 | 15.11 | -4.76 | .000 |  |  |
| IUIAL  | Private         | 193 | 128.00 | 16.13 |       |      |  |  |

Table 3 Distribution of Students' SFLS Scores According to School Types

As shown in Table 3, the total and sub-dimension scores of the students attending private schools are higher than those of the participants attending public schools. However, the scores of the students in public schools are also high level. In this context, it can be said that middle school students have high social emotional learning skills.

A t-test was applied to examine whether there was a differentiation according to the participants' grades and the findings are presented in Table 4.

#### Table 4

| Distribution of Stu | idents' Social | Emotional   | Learning   | Skill Scores / | According to | Grades |
|---------------------|----------------|-------------|------------|----------------|--------------|--------|
| Distribution of Sil | acrus sociai   | Linononai . | Dearning , |                | iccoraing io | Oraco  |

| SELS             | Grades    | Ν   | Χ      | SD    | t    | р    |
|------------------|-----------|-----|--------|-------|------|------|
| Communication    | 5th grade | 140 | 28.62  | 4.77  | 1.60 | .110 |
| Communication    | 6th grade | 167 | 27.79  | 4.31  |      |      |
| Problem Solving  | 5th grade | 140 | 36.65  | 5.29  | 2.80 | .005 |
|                  | 6th grade | 167 | 34.91  | 5.49  |      |      |
| Cono with Strace | 5th grade | 140 | 27.10  | 6.05  | 3.30 | .001 |
| Cope with Stress | 6th grade | 167 | 25.01  | 5.06  |      |      |
| Salf astaam      | 5th grade | 140 | 35.28  | 5.09  | 1.38 | .169 |
| Self-esteem      | 6th grade | 167 | 34.49  | 4.93  |      |      |
| TOTAT            | 5th grade | 140 | 127.66 | 17.48 | 2.95 | .003 |
| IUIAL            | 6th grade | 167 | 122.21 | 14.87 |      |      |

It was found that the mean scores of the fifth graders in problem solving skills, coping with stress skills and total scores were statistically better than the sixth graders. They also obtained higher scores in communication and self-esteem enhancing skills, although not statistically significant. In this case, it can be stated that fifth grade students have higher social emotional learning skills than sixth grade students.

#### Findings on Computer Game Addiction of Middle School Students

In this section, findings related to CGA are presented. The total and sub-dimension scores of the participants regarding CGA are given in Table 5.

#### Table 5

Distribution of Students' Total and Sub-Dimension Scores of Computer Game Addiction

| CGA                                 | Ν   | X     | Min   | Max    | SD    | SEM |
|-------------------------------------|-----|-------|-------|--------|-------|-----|
| Can't give up playing games         | 307 | 21.19 | 10.00 | 50.00  | 9.75  | .55 |
| Associating PC games with real life | 307 | 7.43  | 4.00  | 20.00  | 3.74  | .21 |
| Negleceting responsibilities        | 307 | 5.68  | 3.00  | 15.00  | 2.84  | .16 |
| Preference playing on PC            | 307 | 7.94  | 4.00  | 20.00  | 3.68  | .21 |
| TOTAL                               | 307 | 41.51 | 21.00 | 101.00 | 17.35 | .99 |

As seen in Table 5, when the sub-dimension and total scores are analyzed, it can be said that the participants are at the level of problematic users. Students' CGA was analyzed according to gender and the findings are given in Table 6.

#### Table 6

Distribution of Students' Computer Game Addiction Scores by Gender

| CGA                            | Gender | N   | Х     | SD    | t     | р    |
|--------------------------------|--------|-----|-------|-------|-------|------|
| Con't give up playing games    | Female | 144 | 17.65 | 8.00  | -6.43 | .000 |
| Can't give up playing games    | Male   | 163 | 24.32 | 10.11 |       |      |
| Associating PC games with real | Female | 144 | 6.10  | 2.88  | -6.30 | .000 |
| life                           | Male   | 163 | 8.60  | 4.01  |       |      |
| Naglogating responsibilities   | Female | 144 | 4.85  | 2.36  | -5.07 | .000 |
| Regreecting responsionnees     | Male   | 163 | 6.41  | 3.03  |       |      |
| Preference playing on PC       | Female | 144 | 6.76  | 3.11  | -5.58 | .000 |
| reference playing on re        | Male   | 163 | 8.98  | 3.84  |       |      |
| ΤΟΤΑΙ                          | Female | 144 | 34.81 | 13.91 | -6.83 | .000 |
| IUIAL                          | Male   | 163 | 47.30 | 18.00 |       |      |

As shown in Table 6, the sub-dimension and total scores of male students were higher than those of female students. According to this finding, female participants are normal users and male students are problematic users.

CGA was analyzed according to the school types the participants attended and the findings are given in Table 7.

#### Table 7

| Distribution of | f Students' Co | mnuter Game  | Addiction | Scores Ac | cording to | School Types  |
|-----------------|----------------|--------------|-----------|-----------|------------|---------------|
| Distribution 0  | Sinuchis CO    | inplace Gume | manunun   | 500105110 | coraing io | School I ypes |

| CGA                                 | School<br>Types | Ν   | X     | SD    | t     | р    |
|-------------------------------------|-----------------|-----|-------|-------|-------|------|
| Can't give up playing               | Public          | 114 | 22.22 | 10.14 | 1.416 | .158 |
| games                               | Private         | 193 | 20.59 | 9.49  |       |      |
| Associating PC games with real life | Public          | 114 | 7.54  | 3.66  | .413  | .680 |
|                                     | Private         | 193 | 7.36  | 3.79  |       |      |
| Negleceting                         | Public          | 114 | 5.92  | 3.12  | 1.123 | .262 |
| responsibilities                    | Private         | 193 | 5.54  | 2.66  |       |      |
| Preference playing on               | Public          | 114 | 7.93  | 3.85  | 010   | .992 |
| PC                                  | Private         | 193 | 7.94  | 3.59  |       |      |
| τοτλι                               | Public          | 114 | 42.60 | 18.24 | .877  | .392 |
| IOIAL                               | Private         | 193 | 40.79 | 16.83 |       |      |

As is seen on Table 7, CGA scores does not differ according to school types. Accordingly, CGA is independent of the school variable. In other words, all children studying in public and private schools are problematic users.

CGA of the students was analyzed by t-test according to grades and the findings are given in Table 8.

Table 8

| CGA                  | Class     | Ν   | Χ     | SD    | t     | р    |
|----------------------|-----------|-----|-------|-------|-------|------|
| Can't give up        | 5th grade | 140 | 20.83 | 10.08 | 59    | .555 |
| playing games        | 6th grade | 167 | 21.49 | 9.48  |       |      |
| Associating PC       | 5th grade | 140 | 7.32  | 3.79  | 43    | .665 |
| games with real life | 6th grade | 167 | 7.51  | 3.71  |       |      |
| Negleceting          | 5th grade | 140 | 5.47  | 2.71  | -1.16 | .247 |
| responsibilities     | 6th grade | 167 | 5.85  | 2.94  |       |      |
| Preference playing   | 5th grade | 140 | 8.01  | 3.88  | .32   | .752 |
| on PC                | 6th grade | 167 | 7.88  | 3.52  |       |      |
| TOTAT                | 5th grade | 140 | 40.99 | 17.42 | 43    | .664 |
| IUIAL                | 6th grade | 166 | 41.86 | 17.34 |       |      |

Distribution of Students' Computer Game Addiction Scores According to Grades

As shown in Table 8, CGA scores does not show a significant change according to the grade levels, so it can be said that game addiction is independent of the grade variable.

# The Relationship between Social Emotional Learning Skills and Computer Game Addiction

The results of Pearson correlation analysis applied to determine whether there is a significant relationship between SELS and CGA levels of middle school students are given in Tables 9 and 10.

Table 9

The relationship between Social Emotional Learning Skills and Computer Game Addiction

| Scales | SELS  | CGA |  |
|--------|-------|-----|--|
| SELS   | 1     |     |  |
| CGA    | -,368 | 1   |  |

Table 10

The relationship between sub-dimentions of SELS and CGA

| Scales                       | С      | PS     | CS     | SE    | CGGS    | APGR   | NR     | PPP |
|------------------------------|--------|--------|--------|-------|---------|--------|--------|-----|
| Communication                | 1      |        |        |       |         |        |        |     |
| Problem Solving              | .583** | 1      |        |       |         |        |        |     |
| Coping with Stress           | .571** | .632** | 1      |       |         |        |        |     |
| Self-esteem                  | .355** | .464** | .359** | 1     |         |        |        |     |
| Can't give up playing games  | 319**  | 321**  | 296**  | 229** | 1       |        |        |     |
| Associating PC games with    | 245**  | 251**  | 195**  | 105   | .810**. | 1      |        |     |
| real life                    |        |        |        |       |         |        |        |     |
| Negleceting responsibilities | 322**  | 310**  | 274**  | 218** | .848**  | .771** | 1      |     |
| Preference playing on PC     | 324**  | 281**  | 254**  | 141*  | .687**  | .655** | .695** | 1   |
|                              |        |        |        |       |         |        |        |     |

\* p<.05, \*\*p<.001

When Tables 9 and 10 are analyzed, it is seen that there is a significant negative relationship between SELS and CGA at medium level (r=.37, p<0.01). In terms of sub-dimensions; there are negative relationships (p<.05; p<.001) at medium and low levels with the CGA sub-dimensions of SELS sub-dimensions scores. In this case, it can be said that as social emotional learning skills increase, students' computer game addiction decreases.

### Social Emotional Learning Skills Predicting Computer Game Addiction

As a result of the linear regression analysis conducted to reveal how participants' SELS predict CGA, a significant relationship was observed between SELS and CGA (R=0.368, R2=0.136), and social emotional learning skills were found to be a significant predictor of computer game addiction (F(1-302)=47.45). SELS explained 14% of CGA. The significance test of the coefficient of the main predictor variable in the regression equation (B=-.368) also shows that computer game addiction is a significant predictor (p<0.01). According to the regression analysis results, the regression equation predicting computer game addiction is as follows:

Social emotional learning skills= (-,368 X computer game addiction) + 139,253

#### **Discussion, Conclusion and Recommedation**

In this study, which investigated the relationship between SELS and CGA of middle school students, the results related to SELS will be given first and then the results of CGA will be given. When the SELS of the participants were examined, it was determined that the total and communication skills, problem solving skills, stress coping skills and self-esteem enhancing skills levels were found to be quite high. These findings are supported by various research findings (Durualp, 2014; Kabakçı, 2006; Kabakçı & Korkut, 2008; Kutluay Çelik, 2014; Melikoğlu, 2020; Öztürk, 2017; Tilki, 2021) that students have high/good social emotional learning skills. When analyzed in terms of sub-dimensions, although higher values were obtained in the current study, similar findings were obtained with the studies conducted by Tilki (2021) and Kabakçı (2006). The fact that SELS were found to be high indicates that middle school students can be more successful and happy in both school and social life (Bozkurt Yükcü & et al, 2021; Zins & Elias, 2004).

In this study, SELS of middle school students show a significant difference in terms of gender. Accordingly, the SELS of girls' are significantly higher than those of male participants. In previous studies (Bozkurt Yükçü, et al, 2021; Durualp, 2014; Kabakçı, 2006; Kabakçı & Korkut, 2008; 2010; Tilki, 2021), girls' SELS were found better than male students. In addition, it was found that females' total SELS, communication skills, problem solving skills and coping with stress skill levels were significantly higher than males. Likewise, in the study conducted by Tilki (2021), the scores obtained by female students in SELS other than the skills that increase self-esteem skills are significantly higher

than the scores obtained by male students. In this context, the findings of the present study and the aforementioned studies overlap. Durualp (2014) found that the values of female students were significantly higher than male participants in total and all sub-dimensions. Kabakçı and Totan (2013) found that female students' total, communication skills and problem solving skills scores were significantly higher. Kabakçı and Korkut (2010) found that female students obtained better scores in terms of total SEL skills and communication skills scores compared to male students, and Kutluay Çelik (2014) found that there was a significant difference in favor of female students in the total SELS, problem solving skills and communication skills sub-dimensions of middle school students. Öztürk (2017) found that there was a significant difference in favor of female students in the sub-dimensions of communication skills and problem solving skills. In Candan's (2018) study, only communication skills were found to be in favor of females. On the other hand, some studies have also found that social emotional learning skills are independent of gender (Kutluay Çelik, 2014; Melikoğlu, 2020).

In this study, females' communication skills were found to be higher than their male peers. Since the maturation of the language center in the brain is faster in girls than in males, it is known that girls learn to speak earlier. It is argued that language development, which forms the basis of communication, is more advanced in girls and that they respond more to verbal stimuli (Durualp, 2014). It has also been stated that this result may be related to cultural factors (Candan, 2018), social expectations and families training styles (Kabakçı & Korkut, 2008). To summarize, this may be explained by the higher expression and empathy skills of female students.

In the present study, problem solving skills of female students were found to be higher than those of male participants. Considering that girls use more problem-solving strategies in conflict resolution and males use more aggressive behaviors (Atıcı, 2007, as cited in Karapinar & Arslan, 2020), it can be considered natural that girls have higher problem-solving skills.

In this study, femeles were found to have higher coping skills than males. While coping with stress, girls share more with their parents, siblings and friends (Churney, 2000, as cited in Durualp, 2014), and thus receive more social support. Therefore, it can be said that female students are more successful in coping with stress.

The total and sub-dimension scores of SELS of the participants studying in private schools were found to be higher than the participants in public schools. The fact that the number of students in private schools is lower than in public schools, teacher-student communication is stronger, and more and different types of activities are organized may have increased the SEL skill levels of the participants. As a matter of fact, in the study conducted by Ağırkan (2021), it was determined that SEL levels were found to be better in schools with high participation in scientific, sports and artistic activities, low number of students, positive teacher-student relations, low discipline rate and counselors, which strengthens this conclusion.

When the level of SELS of the participants according to their grade levels was analyzed, it was determined that the mean scores of the fifth graders in problem solving skills, coping with stress skills and total SELS were significantly higher than the mean scores of the sixth graders. They also obtained higher scores in communication and self-esteem skills, although not statistically significant. In this case, it can be stated that fifth grade students have higher social emotional learning skills than sixth grade students. Accordingly, the total mean scores of SEL skills decrease as the grade level increases.

Similar findings were obtained in studies conducted by Candan (2018), Kabakçı (2006), Kabakçı and Korkut (2008) and Durualp (2014). In Durualp's (2014) study, it was revealed that adolescents' problem solving, coping with stress, skills that increase self-esteem and total SELS differed significantly according to the grades they studied, and this finding was in favor of 6th graders. Accordingly, although all values are at a high level, SEL skills decrease as the grade level decreases. This may be due to the fact that adolescence-specific behaviors are experienced more intensely in the sixth grade. As Pedük (2011, as cited in Durualp, 2014) emphasized, social emotional learning skills in upper grades may have been found at a lower level due to the fact that adolescents experience their emotions most intensely in this period, their emotions show rapid ups and downs, and there are contrasts between their emotions and behaviors. In addition, the fact that classroom teachers,

especially in primary school, attach importance to the personal, social and emotional development of their students, work on their expression skills, provide them with the necessary environment and direct them to various activities may be the reason why these skills were found to be higher in the first years of middle school. In addition, while academic achievement of children and adolescents is seriously emphasized especially in middle school, inadequate attention is paid to their social and emotional development (Türnüklü, 2004). In contrast to the aforementioned research findings, Kabakçı and Totan (2013) found that problem solving skills, coping with stress skills, self-esteem skills and total SELS did not differ to grades, whereas communication skills were significantly lower in 6th graders than in 7th and 8th graders. An in-depth examination of this result may contribute to the literature.

In this study, it was found that middle school students' CGA was at the "problematic user" level. In the study conducted by Atak (2020), middle school students' digital game addiction was found to be at a low-risk level, and in the studies of Can Bilgin (2015), Güllü, et. al, (2012) and Özdemir and Karaboğa (2021), it was found in the risk group. These findings support each other. On the other hand, digital game addiction was found at a medium level in Talan and Kalınkara's (2020) study, and digital game addiction of middle school students was found at a low level in the studies conducted by Şahin and Tuğrul (2012), Korkmaz and Korkmaz (2019) and Tilki (2021).

The CGA levels of the participants show a significant difference according to gender and this situation is in favor of male students. In this context, it was determined that female students were normal users and male students were problematic users. In parallel with this study, in many other studies examining the difference of computer game addiction on the gender variable, significant differences between gender and computer addiction were found in favor of male students. In a study conducted by Chang and Kim (2020) on elementary, middle and high school students, they found that male students were more addicted than girls. For example, studies (Aksel, 2018; Can Bilgin, 2015; Deniz, 2021; Gönültaş & Atıcı, 2014; Güllü, et al, 2012; Güvendi, et al, 2019; Hazar & Hazar, 2017; Horzum, 2011; Ko, et al, 2005; Korkmaz & Korkmaz, 2019; Öcalan, 2019; Özdemir & Karaboğa, 2021; Sherry 2001; Tilki, 2021), it was revealed that males play computer games more than females and show more addiction to computer games. The fact that males' CGA is higher can be explained by the fact that they are more interested and curious about technology, they are less restricted and more free compared to females. In addition, considering that parents are more tolerant towards males, it can be predicted that they spend longer time in front of the computer. This conclusion is supported by Mustafaoğlu and Yasacı's (2018) findings that boys between the ages of 7-15 play games for more time than girls. However, there are also findings in the literature that computer/digital game addiction levels do not differ according to gender (Tas, Eker, & Anlı, 2014). The fact that there are games designed for every gender and every segment of the society and that the devices are easily accessible by everyone can be seen as one of the important reasons for the studies that do not find a difference in digital game addiction related to gender variable (Tilki, 2021).

It can be said that the computer game addiction of the participants did not show a significant difference according to their grade levels, so it can be said that game addiction is independent of the grade variable. In the studies conducted by Can Bilgin (2015), Güllü, et al (2012), Şahin and Tuğrul (2012) and Taş, Eker and Anlı (2014), it was found that there was no significant change according to the classes. These studies support each others' results.

In this study, it is determined that there is a negative and moderately significant relationship between middle school students' SELS and CGA. In terms of sub-dimensions, there are negative relationships between SEL sub-dimensions and CGA sub-dimensions at medium and low levels. In his study, Tilki (2021) found negative, medium and low level relationships between SELS and total and sub-dimensions of CGA. In this case, it can be concluded that as SELS increase, students' CGA will decrease. Accordingly, as the level of CGA increases, SELS decreases. In other words, it is thought that students with better social emotional skills may reduce the risk of computer game addiction since their communication, problem solving, coping with stress and self-esteem enhancing skills will be satisfactory. In the study conducted by Atak (2020), it was concluded that social skills decreased due to the increase in the level of digital game addiction. In the study conducted by Zamani, et al, (2010), the negative social skills scores of the participants who were addicted to games were found to be significantly better level. In the study of Aslan, Başçılar, and Karataş (2022), in which different

measurement tools were applied, both positive and negative strong relationships were found between the levels of game addiction and social skills of children who play digital games and the subdimensions of positive and negative social behaviors. In this context, it can be said that these studies and this study support each other.

As a result of the linear regression analysis conducted to reveal how the participants' social emotional learning skills predicted computer game addiction, a significant relationship is observed between SELS skills and CGA, and it is seen that SELS are a significant predictor of CGA. Accordingly, social emotional learning skills explained 14% of computer game addiction. Tilki (2021) also reported that CGA explained 26% of stress coping skills, 21% of problem solving skills, and 11% of communication skills. However, these results suggest that there are other factors affecting computer game addiction.

In conclusion, it can be said that students' social emotional learning skills are quite high level, computer game addiction is problematic level and there is a moderate negative relationship between them. It is determined that there is a negative and moderately significant relationship between middle school students' SELS and CGA. In terms of sub-dimensions, there are also negative relationships between SELS and CGA at medium and low levels.

## Recommendations

The following suggestions were developed in line with the findings of the research.

- Since the social emotional learning skills of male students are lower than those of female students, it is recommended that they should participate in environments where they can interact with other students.
- Guiding students to different social activities both in schools and in the family is considered important in terms of reducing computer game addiction. For example, families can create opportunities for adolescents to establish positive friendships and for adolescents to meet their friends in appropriate environments.
- Since male students are "problematic users", it is necessary to limit the time they spend playing computer/digital games.
- Families can participate in social activities at home and in different environments where they can spend time with their children. So the children can play less computer games and also their social emotional skills can be developed.
- Students who are thought to be likely to be addicted to digital games can be identified with measurement tools and directed to different talent areas such as music, theater, sports, etc. with the support of stakeholders such as school administration, parent-teacher association, school guidance unit, teachers, etc.
- The research was conducted in middle schools in a province in western Türkiye. Studies similar to this study can be conducted in different school types and grades in various regions of Türkiye.

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