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# Psychometric Properties of the Electronic Games Addiction Scale for Adolescent Students

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**Abstract:**

The study aimed to develop a scale with specific dimensions to measure electronic gaming addiction for adolescent students in the Arab context, with a particular focus on its suitability for the Saudi environment. The goal was to provide a standardized tool that researchers in the fields of psychometrics and behavioral sciences could utilize. A psychometric descriptive methodology was employed, and the sample consisted of (181) voluntarily participating male and female students from public schools in Saudi Arabia. Their ages ranged from (12 to 18) years, with a mean age of (16.14) years and a standard deviation of (1.4). The study assessed the scale's validity and reliability. The final version of the scale comprised (29) items distributed across five theoretically defined dimensions: (1) Social and Personal Relationships, (2) Academic and Educational Commitments, (3) Emotional and Affective Dimension, (4) Behavioral and Addictive Patterns, and (5) Cognitive Dimension and Impact on Thinking. The results demonstrated high validity indicators, including internal consistency validity and confirmatory factor validity, reflecting the appropriateness of the scale's theoretical structure. Reliability analysis also showed satisfactory outcomes using Cronbach's alpha coefficient, Guttman split-half reliability coefficient, and Composite Reliability (CR), confirming that the Electronic Gaming Addiction Scale for adolescent students possesses an acceptable degree of validity and reliability.

**Keywords**: Electronic Games Addiction Scale - Adolescent Students.

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**Introdcution:**

Play is a fundamental need for the development of children's and adolescents' cognitive, psychological, and physical abilities. It provides them with enjoyment, entertainment, human interaction, stimulation of imaginative and creative capacities, as well as an outlet for negative energies and a means of achieving relaxation. Game developers have capitalized on these human needs by creating and enhancing video games and other forms of electronic games to cater to these age groups, leading to the widespread presence of such games on mobile phones and computers. This development has generated enormous financial profits by offering games rich in puzzles, excitement, and suspense. However, these games have evolved into a form of addiction, which was officially recognized by the World Health Organization (WHO) in 2018. Meanwhile, many parents and educators have overlooked the dangers posed by these games, often due to their preoccupation with work, private life, emotional detachment from their children, lack of effective family communication, and the absence of stable social environments (Bashoushi, 2023).

The results of the study by Andre, et al. (2022) indicated that Gaming Disorder results in negative consequences due to excessive gaming, with social consequences being more prominent among boys and emotional consequences more prevalent among girls. Additionally, Attention Deficit Hyperactivity Disorder (ADHD) was found to be strongly associated with excessive video game consumption and its related consequences among girls. Moreover, Vukosavljevic-Gvozden, et al. (2015) defined electronic gaming addiction as a behavioral disorder in which an individual prioritizes playing electronic games over other previously engaged activities, demonstrating an inability to abstain from gaming, neglecting responsibilities, duties, and required tasks, and showing a decline in performance in fulfilling them adequately (p. 388). Lemmens, et al. (2009) also defined electronic gaming addiction as "the excessive and compulsive playing of electronic games, leading to social, emotional, and cognitive problems, while the individual continues to persist in gaming"(p. 78). Al-Anbari (2010), as cited in Hassan (2017), noted that children and adolescents staying up all night playing electronic games directly affects their personal efforts and functioning the following day. Moreover, he pointed out that the smaller the screen size of the television or computer, the more intensely the individual focuses on the screen, leading to eye strain and headaches. In addition, incorrect posture while playing — such as slouching or maintaining a poor neck position — can cause physical harm. Kirsh (2003) emphasized that adolescents are more susceptible to the negative consequences resulting from engaging in electronic gaming.

A review of some previous studies that addressed the measurement of electronic gaming addiction reveals that various scales have been utilized. For instance, the study by Shaker, et al. (2023) examined the psychometric properties of an Electronic Gaming Addiction Scale. The results indicated that the scale demonstrated high levels of validity and reliability among adolescents, affirming the confidence in its application. The study by Amer, et al. (2023) developed a scale consisting of 40 items distributed across seven dimensions: Preoccupation, Tolerance, Mood Modification, Conflict, Problems, Withdrawal Symptoms, and Relapse. The results indicated that the Violent Electronic Gaming Addiction Scale demonstrated high levels of validity and reliability, confirming its suitability for application. In the study conducted by Mohamed (2022), the scale consisted of (50) items categorized under four main dimensions: Behavioral Disorder, Psychological Disorder, Health Disorder, and Cognitive Disorder. The psychometric properties, including validity and reliability, were assessed, and the results demonstrated the scale's high capability in measuring the intended constructs, along with strong reliability and applicability. Additionally, the study by Andre, et al. (2022) developed a Gaming Addiction Scale for adolescents to diagnose Gaming Disorder among teenagers. It aimed to explore gender differences within a clinical setting, with a particular focus on Attention Deficit Hyperactivity Disorder (ADHD). The results indicated that the scale possessed high levels of validity and reliability, confirming its suitability for application. The study by Aggarwal, et al. (2020) found a strong, statistically significant positive correlation between Internet Gaming Disorder and Attention Deficit Hyperactivity Disorder (ADHD), impulsivity, and anxiety. The study by Chaib, et al. (2020) examined the psychometric efficiency of the Electronic Gaming Addiction Questionnaire and its impact on adolescent behavior. The questionnaire consisted of (37) items distributed across seven domains: Academic, Social, Health, Physical, Violence, and Aggression. Validity and reliability were assessed using various methods, including discriminant validity (extreme group comparison) and Cronbach's alpha coefficient. The results were statistically significant at the (0.01) significance level, indicating that the questionnaire possesses high validity and reliability, making it suitable for application. The study by Al-Anzi (2020) investigated the reality of electronic gaming practices and the driving factors behind them. An Electronic Gaming Addiction Scale was applied, consisting of (58) items categorized into three main axes: The Reality of Electronic Gaming, Factors Influencing Electronic Gaming Addiction, and the Negative Effects Resulting from Electronic Gaming Addiction. Validity and reliability were assessed using various statistical methods, and the results demonstrated the scale's validity, reliability, and applicability for use. In contrast, the study by Mary, et al. (2019) indicated that exposure to electronic games could positively impact students' school values, such as academic excellence, efficient responsibility-taking, participation, and social awareness. The study by Bouchiban and Al-Ashraf (2019) found that children who engage in electronic gaming experience enjoyment and entertainment, with the majority preferring action and sports games. However, on the

other hand, electronic gaming had negative effects on their health, concentration levels, and academic achievement. The study by Khanmurzina, et al. (2019) revealed that individuals who engage in electronic gaming gain numerous benefits, such as learning English through interactions with friends from various countries worldwide. They also improve communication skills, meet new people from different cultures, and acquire knowledge about weapons and military combat. On the other hand, the study by Hani (2018) found that adolescents in secondary education excessively use electronic games for entertainment and leisure, especially adventure games. This excessive gaming had a significant impact on their academic performance and weakened their ability to manage time effectively.

It is evident from the above that electronic games have positive aspects, notably their effective impact on individuals, particularly children and adolescents. However, they also have negative aspects that can lead to behavioral disorders in cases of gaming addiction. This addiction is characterized by excessive preoccupation with games, neglecting academic matters in favor of enjoying these games, and spending long hours to achieve rewards within them. Such behavior negatively affects their ability to set achievable goals in real life, their ability to organize information, tools, and objects in order to achieve these goals, as well as their ability to comprehend and retain information after cognitively processing it. Additionally, it adversely impacts their ability to control impulsive reactions, regulate self-control, and provide appropriate emotional responses in different situations, while also hindering their ability to transition from one activity to another and adapt their responses with mental flexibility in various contexts.

As evident from the review of previous studies on electronic gaming addiction, they have focused on various age stages, including childhood and adolescence. This has enriched the theoretical framework of the current study and contributed to the design and construction of the present scale. To the best of the researchers' knowledge, there is no existing scale to measure electronic gaming addiction specifically for adolescent students in the Saudi environment. The problem of the current study is manifested in the severe scarcity of research and studies addressing electronic gaming addiction among middle and high school students. Additionally, there is no tool specifically designed to measure electronic gaming addiction for adolescent students in the Saudi environment. Therefore, there is an urgent need to construct and design a scale for measuring electronic gaming addiction among adolescent students in Saudi Arabia. Thus, the research problem is formulated in the following main question: Can a scale for measuring electronic gaming addiction be developed that possesses the appropriate psychometric properties for the Arab context in general, and the Saudi environment in particular, for adolescent student samples? To answer this question, the current study aimed to verify the following two hypotheses:

1- The Electronic Gaming Addiction Scale for adolescent students has validity.

2- The Electronic Gaming Addiction Scale for adolescent students has reliability.

The aim of the current study is to construct and design a scale for measuring electronic gaming addiction for adolescent students in the Saudi environment and to verify its psychometric properties (validity and reliability) using appropriate statistical methods. This is particularly important as previous studies that aimed to measure electronic gaming addiction were designed for samples that differ in nature and characteristics from the current sample.

The significance of this study lies in designing a scale to measure electronic gaming addiction among adolescent students in Saudi Arabia, which is valid, reliable, and suitable for scientific use in future research and studies related to its content. This scale will serve as a practical and valuable measurement tool for research on electronic gaming addiction for adolescent students. This implies the availability of a tool to assess the level of gaming addiction among adolescents, supporting the field of psychometrics and contributing to the enrichment of the Arabic library with a scale for electronic gaming addiction. Additionally, it will benefit future studies in this field.

In light of the literature and previous studies, the researchers defined electronic gaming addiction operationally as: "The preoccupation with electronic games, preferring them over social relationships

with others, neglecting studying and academic assignments, difficulty concentrating on studies, and an inability to manage time. This is accompanied by the feeling of enjoyment when continuing to play electronic games, along with various emotions, and engaging in long hours of play with enjoyment and a strong will to achieve rewards in the games or escape from real-life pressures. The beliefs influencing thinking view gaming as a source of accomplishment, experience, challenge, and adventure, which enhances self-confidence and prevents feelings of loneliness." Based on this definition, the main dimensions that were relied upon in constructing the Electronic Gaming Addiction Scale for the current study are as follows:

1- **Social and Personal Relationships Dimension:** This refers to the preoccupation with electronic games and preferring them over spending time with family or friends, thereby neglecting social relationships.

2- **Academic and Study Commitments Dimension:** This refers to neglecting studying, procrastinating on academic assignments, difficulty concentrating on studies, and the inability to manage time due to excessive gaming.

3- **Emotional and Affective Dimension:** This refers to the feeling of enjoyment when continuing to play electronic games, frustration when prevented from playing, and experiencing emotional distress upon losing in electronic games.

4- **Behavioral and Addictive Dimension:** This refers to engaging in the behavior of playing electronic games for long hours with enjoyment and strong willpower, aiming to achieve rewards in the games or escape from real-life pressures.

5- **Cognitive Dimension and Impact on Thinking:** This refers to beliefs about playing electronic games that influence thinking, viewing gaming as a source of accomplishment, experience, challenge, and adventure, disconnected from reality. This belief boosts self-confidence and prevents feelings of loneliness.

**Methodology :**

The psychometric descriptive approach was adopted. The participants were volunteers from intermediate and secondary school students from several schools in the Kingdom of Saudi Arabia. The sample consisted of (181) students (including 115 females and 66 males), with ages ranging from (12 to 18) years (M = 16.14), (SD = 1.4). Participation in the study was voluntary, and informed consent was obtained from all participants. The scale was administered to the students during the 2024 academic year.

**Description of the Electronic Gaming Addiction Scale for Adolescent Students:**

Referring to the literature and previous studies in the field of electronic gaming addiction and related scales, such as the studies by (Bashoushi, 2023), (Shaker, et al., 2023), (Amer, et al., 2023), (Mohammad, 2022), (Andre, F., et al., 2022), (Bashan, 2021), (Shaib, et al., 2020), (Al-Anzi, 2020), (Abdelmonem & Osman, 2021), and (Hassan, 2017), the researchers were able to design this scale according to the operational definition of electronic gaming addiction by reviewing these previous studies that addressed this concept and the scales used to measure it. The main dimensions included in the scale used in the current study were identified.

The items of the Electronic Gaming Addiction Scale for adolescent students, which fall under each dimension, were formulated. The scale consists of (29) items distributed across **five** dimensions:

Social and Personal Relationships Dimension: Includes 4 items (1–4).

Academic and Study Commitments Dimension: Includes 6 items (5–10).

Emotional and Affective Dimension: Includes 6 items (11–16).

Behavioral and Addictive Dimension: Includes 7 items (17–23).

Cognitive Dimension and Impact on Thinking: Includes 6 items (24–29).

It is important to note that all items are positively worded.

To score the scale, The researchers used the Likert method to organize the scale items into a list based on the graduated rating system. Accordingly, a three-point Likert-type rating system was employed, with weighted response alternatives for each item as follows: Applicable (3 points), To some extent applicable (2 points), and Not applicable (1 point), and the maximum possible score on the scale is (87), indicating a high level of electronic gaming addiction among the students in the current sample. Conversely, the minimum possible score is (29), indicating a low level of electronic gaming addiction.

**Results:**

The Psychometric Properties of the **Electronic Gaming Addiction** Scale:

**Validity:**

**A**- Content Validity (Expert Judgment):

The initial version of the Electronic Games Addiction Scale for adolescents was reviewed by a panel of nine (9) experts specializing in psychology, mental health, psychological counseling, and curriculum and instruction. The objective was to evaluate the items in terms of their relevance to each dimension of the scale, their validity in representing the constructs being measured, the clarity of their wording, linguistic accuracy, and their appropriateness for the Saudi context. Minor modifications were made based on the experts' feedback. The expert review process resulted in the final version of the scale, which consisted of 29 items distributed across five dimensions.

:**B**. Internal Consistency Validity

Internal consistency of the scale was verified by calculating the correlation coefficients between the score of each item and the total score of the dimension to which the item belongs. Additionally, the correlation coefficients between the score of each dimension and the total score of the entire scale were computed. Tables (1) and (2) present the results of these analyses:

**Table 1**: Correlation Coefficients Between Each Item Score and the Total Score of Its Corresponding Dimension

| **Dimension** | **Item No.** | **Correlation Coefficient** | **Dimension** | **Item No.** | **Correlation Coefficient** |
|---|---|---|---|---|---|
| Social and personal relationships | 1 | **0.82 | Academic and study commitments | 1 | **0.87 |
| | 2 | **0.83 | | 2 | **0.75 |
| | 3 | **0.79 | | 3 | **0.85 |
| | 4 | **0.78 | | 4 | **0.83 |
| | _____ | _____ | | 5 | **0.79 |
| | _____ | _____ | | 6 | **0.83 |
| emotional and affective | 1 | **0.71 | Behavioral and addictive | 1 | **0.79 |
| | 2 | **0.83 | | 2 | **0.83 |
| | 3 | **0.80 | | 3 | **0.82 |
| | 4 | **0.78 | | 4 | **0.87 |

| Dimension | Item No. | Correlation Coefficient | Dimension | Item No. | Correlation Coefficient |
|---|---|---|---|---|---|
| | 5 | **0.88 | | 5 | **0.84 |
| | 6 | **0.83 | | 6 | **0.77 |
| | ——— | ——— | | 7 | **0.84 |
| Cognitive and influence on thinking | 1 | **0.85 | | | |
| | 2 | **0.77 | | | |
| | 3 | **0.86 | | | |
| | 4 | **0.87 | | | |
| | 5 | **0.76 | | | |
| | 6 | **0.78 | | | |

**** indicates statistical significance at the (0.01) level**

**Table 2**: Correlation coefficients between the sum of each dimension and the total sum of the scale

| Dimension | Correlation coefficient of the scale |
|---|---|
| Social and personal relationships | **0.86 |
| Academic and study commitments | **0.87 |
| emotional and affective | **0.93 |
| Behavioral and addictive | **0.96 |
| Cognitive and influence on thinking | **0.87 |

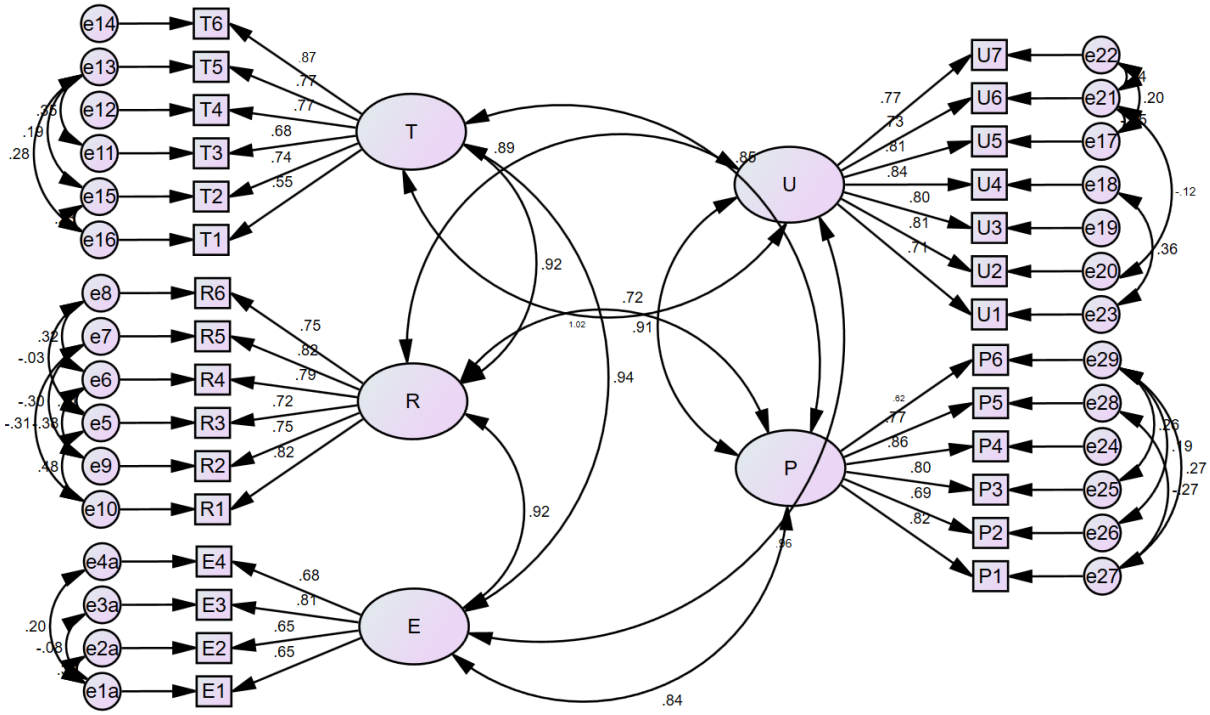
**** indicates statistical significance at the (0.01) level**

Tables (1) and (2) provide evidence of the scale's internal consistency validity. Item-total correlations for each item within its designated subscale were statistically significant at the ( 0.01) level, with correlation coefficients ranging from (0.71 - 0.88). These values reflect a high degree of coherence between the items and their underlying theoretical constructs, indicating that each item contributes meaningfully to the measurement of its intended dimension. Importantly, no items demonstrated weak or non-significant correlations that would necessitate exclusion or revision, supporting the structural integrity and construct alignment of the scale.

**C**. Confirmatory Factor Validity (CFA):

To assess construct validity, the researchers employed Confirmatory Factor Analysis (CFA) directly, without conducting an Exploratory Factor Analysis (EFA), based on the existence of a predefined theoretical framework specifying the hypothesized dimensions of the scale and the item assignments to each dimension. The theoretical structure was supported by expert judgment indicators and internal consistency coefficients, which validated the initial classification and contributed to the confirmation of the instrument's theoretical foundation.

The following figure and tables present the results of the confirmatory factor analysis.




**First:** Model fit quality indicators:

**Table 3**: The quality indicators of conformity with the assertive factor analysis of the **Electronic Gaming Addiction** Scale

| **The indicator** | Chi-square/df | RMSEA | CFI | TLI | IFI |
|---|---|---|---|---|---|
| **Value** | 2.101 | 0.07 | 0.911 | 0.895 | 0.912 |

Table (3) reflects the high degree of compatibility of the hypothesized model with the experimental data, as the goodness-of-fit indices were within the standard limits recognized in the scientific literature. This is a strong indicator of the suitability of the proposed structural model and supports the theoretical hypothesis on which the scale was built. The low value of $\chi^2$/df and the high fit indices CFI, TLI, IFI, along with the low value of the RMSEA index, all represent statistical evidence that enhances the validity of the factorial structure of the scale and indicates that the relationships between the dimensions and statements represent the hypothesized structure of the measured concept well.

**Second:** Standardized Measurement Coefficients (**Standardized Estimates**):

**Table 4** : Standard measurement coefficients

| **Dimension** | **Item No.** | **Factor Loadings** | **Dimension** | **Item No.** | **Factor Loadings** |
|---|---|---|---|---|---|
| Social and personal | 1 | ***0.650 | Academic and study | 1 | ***0.818 |
| | 2 | ***0.654 | | 2 | ***0.748 |

| Dimension | Item No. | Factor Loadings | Dimension | Item No. | Factor Loadings |
|---|---|---|---|---|---|
| relationships | 3 | ***0.807 | commitments | 3 | ***0.725 |
| | 4 | ***0.683 | | 4 | ***0.790 |
| | _____ | _____ | | 5 | ***0.825 |
| | _____ | _____ | | 6 | ***0.752 |
| emotional and affective | 1 | ***0.553 | Behavioral and addictive | 1 | ***0.714 |
| | 2 | ***0.741 | | 2 | ***0.809 |
| | 3 | ***0.677 | | 3 | ***0.803 |
| | 4 | ***0.774 | | 4 | ***0.835 |
| | 5 | ***0.773 | | 5 | ***0.811 |
| | 6 | ***0.872 | | 6 | ***0.731 |
| | _____ | _____ | | 7 | ***0.774 |
| Cognitive and influence on thinking | 1 | ***0.816 | | | |
| | 2 | ***0.695 | | | |
| | 3 | ***0.802 | | | |
| | 4 | ***0.857 | | | |
| | 5 | ***0.773 | | | |
| | 6 | ***0.619 | | | |

**** indicates statistical significance at the (0.01) level**

The results of Table (4) show that all statements exhibited statistically significant standard factor loadings at the (0.001) level, reflecting the strength of the correlation between the statements and the scale's dimensions and confirming the internal validity of the construct.

**Reliability:**

The researchers assessed the reliability of the scale by calculating Cronbach's alpha coefficients for each subscale as well as for the overall scale. Additionally, split-half reliability was employed, and the Composite Reliability (CR) coefficient was computed for each subscale individually. Table (5) presents the results of these reliability analyses.

**Table 5** : Reliability coefficients of Electronic Gaming Addiction scale

| Dimensions | | Reliability coefficient (Cronbach's alpha) | Split-half reliability using Guttman | Composite stability coefficient (CR) |
|---|---|---|---|---|
| 1 | Social and personal relationships | 0.82 | 0.80 | 0.79 |
| 2 | Academic and study | 0.90 | 0.83 | 0.89 |

| | | | | |
|---|---|---|---|---|
| | commitments | | | |
| 3 | emotional and affective | 0.89 | 0.89 | 0.88 |
| 4 | Behavioral and addictive | 0.92 | 0.89 | 0.92 |
| 5 | Cognitive and influence on thinking | 0.90 | 0.91 | 0.89 |
| The scale as a whole | | 0.97 | 0.93 | ———————— |

The results of Table (5) show that the reliability coefficients according to Cronbach's alpha ranged between (0.82) and (0.92) for all dimensions, and the reliability coefficient for the scale as a whole reached (0.97), while the values of the reliability coefficients using the Guttman split-half method ranged between (0.80) and (0.91) for all dimensions, and the reliability coefficient for the scale as a whole reached (0.93). The composite reliability coefficients (CR) for the dimensions ranged between (0.79) and (0.92), which are also acceptable according to the recommended minimum (0.60), as indicated by Hair et al. (2019), which supports the quality of the structural consistency of the factors within the confirmatory factor analysis model. These results enhance the reliability of the scale in accurately and stably measuring electronic game addiction.

**Discussion:**

It is clear from Tables 1 and 2 that: Correlation coefficients between the dimension scores and the total scale score also indicate strong, statistically significant correlations at the (0.01) level, with values ranging between 0.86 and 0.96. This reflects the consistency of the sub-dimensions with the overall construct of the scale and enhances the construct validity of the scale.

The results support the findings of Hair et al. (2019) and DeVellis (2016), who stated that good correlation coefficients between a statement and its dimension, as well as between dimensions and the overall scale, are important indicators of internal consistency validity and contribute to confirming the soundness of the instrument's theoretical construct.

Based on the aforementioned validity verification procedures of various types—starting with the validity of arbitrators, moving on to internal consistency validity, and ending with structural validity through confirmatory factor analysis—it is clear that the electronic game addiction scale for adolescent students possesses an appropriate degree of validity, qualifying it for research and academic use in the Saudi environment. These results also enhance confidence in the theoretical construction of the scale and the distribution of statements across its five dimensions.

Furthermore, The results from Table (5) indicate that they reinforce the reliability of the scale in accurately and consistently measuring Electronic Gaming Addiction.

These results are consistent with the findings of the studies of (Shaker et al., 2023), (Amer et al., 2023), (Andre, et al., 2022), (Muhammad, 2022), (Shaib, 2020), (Al-Anzi, 2020), that the scale has accurate validity and reliability and is suitable for application.

**Conclusion:**

The Electronic Games Addiction Scale for Adolescent Students was prepared and designed with the aim of measuring electronic games addiction for adolescent students, and increasing understanding of the psychometric properties of the scale in the presence of specific dimensions for it. It was standardized on a sample of volunteer participants in some schools in the Kingdom of Saudi Arabia from male and female students in the intermediate and secondary stages, numbering (181) male and female students, with (115) females and (66) males, their ages ranged between (12-18) years with an average age of (16.14)

years and a standard deviation of (1.4). Validity and reliability coefficients were calculated until the scale came out in its final form with a high degree of validity and reliability and is suitable for application to adolescent students in the intermediate and secondary stages. The importance of this psychometric study is due to the fact that there is no specific research tool to measure electronic games addiction among adolescent students that enhances the literature and knowledge available in the scope of this topic. In addition, The current study provides a reference point for independent studies. The implications of the current research findings suggest that researchers should use it to conduct studies related to the topic of Electronic Games Addiction for adolescent students. It is recommended that this scale be utilized in the field of psychological measurement and that further scientific research be conducted on the topic of Electronic Games Addiction for adolescent students.

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**Appendix**

**Electronic game addiction scale for adolescent students**

**Prepared**

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**Preliminary Data:**

Age:

Gender: ( ) Male ( ) Female

Educational level: ( ) Intermediate ( ) Secondary

Grade: ( ) First ( ) Second ( ) Third

Place of residence: ( ) City ( ) Village

**Instructions:**

Please read the statements carefully and answer them based on your perspective with accuracy and attention to detail. Note that there are no right or wrong answers. We assure you that the information will be used solely for scientific research purposes. We sincerely thank you in advance for your cooperation.

The Researchers,,,

| Dimensions | No. | Items | Applicable | To some extent applicable | Not applicable |
|---|---|---|---|---|---|
| Social and personal | 1 | I prefer playing electronic games rather than spending time with my family. | | | |

| | | | | | |
|---|---|---|---|---|---|
| relationships | 2 | I spend more time with my friends in electronic games than with my friends in real life. | | | |
| | 3 | My social relationships are rare due to my preoccupation with electronic games. | | | |
| | 4 | I play electronic games while I'm with others. | | | |
| Academic and study commitments | 5 | I neglect my studies because I play electronic games. | | | |
| | 6 | I feel like I'm spending more time than I plan to play electronic games. | | | |
| | 7 | I postpone doing my schoolwork due to my preoccupation with electronic games. | | | |
| | 8 | I withhold my test scores from my family if they are bad because I play electronic games. | | | |
| | 9 | I'm looking for excuses to stay home so I can play electronic games. | | | |
| | 10 | I feel difficult to concentrate on my studies because I am constantly thinking about electronic games. | | | |
| emotional and affective | 11 | I enjoy a lot when I play electronic games. | | | |
| | 12 | I feel very upset when I can't play due to internet or device issue. | | | |
| | 13 | I feel frustrated or sad when I lose in electronic games. | | | |
| | 14 | I hide from my parents the real amount of time I spend playing electronic games. | | | |
| | 15 | I get upset when someone harasses me while I'm playing electronic games. | | | |
| | 16 | I feel empty and anxious when I cannot play electronic games for a long time. | | | |
| Behavioral and addictive | 17 | I feel that I cannot stop playing electronic games even if I want to. | | | |
| | 18 | I spend long periods of time playing electronic games without noticing how much time has passed. | | | |
| | 19 | I find more enjoyment in electronic games than in any other activity. | | | |
| | 20 | I constantly feel the need to play electronic games even when I don’t have time. | | | |

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| | 21 | I spend long hours trying to win in an electronic game. | | | |
| | 22 | When I feel stressed or anxious, I turn to electronic games to escape from reality. | | | |
| | 23 | My strong will is evident in my continued gaming even when I feel tired. | | | |
| Cognitive and influence on thinking | 24 | I feel that electronic games give me a sense of achievement and victory. | | | |
| | 25 | I have extensive knowledge and experience in electronic games. | | | |
| | 26 | I feel more confident in myself when I achieve success in electronic games. | | | |
| | 27 | Playing electronic games makes me feel less lonely. | | | |
| | 28 | I get of my thoughts are drawn into the world of electronic games, distancing me from reality. | | | |
| | 29 | I believe that electronic games give me a sense of challenge and adventure. | | | |