

Aggressive Behavior among Adolescents: Toward a Structural Approach to Understanding the Phenomenon and Developing a Multidimensional Scale in the Algerian Environment

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Abstract:

The study aimed to design a multidimensional scale of aggressive behavior among adolescents, with a focus on constructing a scientific tool that reflects the psychological and social structure of the phenomenon in the Algerian environment. The items of the scale ranged across 40 statements derived from six main formative dimensions: self-directed aggression, physical aggression, verbal aggression, aggression against property, hostile feelings, and anger outbursts, with a total of 18 principal components. The researcher sought to balance positive and negative items to ensure measurement accuracy, with the scale comprising 35 positive items and 5 negative items. A five-point rating scale was adopted, ranging from “Never applies” to “Always applies,” making the theoretical range of the scale from 40 to 200.

The results of the study showed that the scale possesses reliable psychometric properties in terms of validity and reliability, which qualifies it for use in the scientific diagnosis of aggressive behavior among adolescents. The study also confirms that the scale represents an initial version open to development, allowing for the integration of new dimensions such as the digital dimension of aggression in future studies, in a way that reflects contemporary changes in adolescents’ behavior and their interaction with the digital environment.

This research also lays the foundation for the development of comprehensive measurement tools that contribute to understanding the aggressive phenomenon in a multidimensional way and support educational and psychological interventions, thereby enhancing the ability of researchers and practitioners to deal with adolescents’ behaviors within their changing social and digital context.

Keywords: aggressive behavior, adolescents, digital aggression, multidimensional scales, Algeria.

1- Introduction:

The concept of aggression has been associated with sin since the first son of the father of humankind. It was he who initiated acts of killing and destruction arising from negative emotions and openly declared through jealousy and intense envy. Across successive historical eras and through civilizations whose stars eventually faded, the concepts of aggression and sin appeared through intersecting contextual molds. In Mesopotamian civilization, wars became its norm, and aggression was confined to others. In the time of the Pharaohs, the pharaoh appointed himself as “god,” and was therefore considered infallible and worthy of sanctification; sin for them was مخالفة the pharaoh. The

Greeks did not differ much from the Pharaonic path, as Greek myths narrated examples of punishments for those who violated the rights of the gods through the crime of sin. Hindu and Buddhist laws, on the other hand, showed that aggression is forbidden and is itself the essence of sin, represented in aggression against others in addition to violating laws and transgressing the societal value system. In the present time, aggression has taken on an imaginary digital form, becoming a digital specter that crosses continents through violent electronic games in general, which are the most devastating and destructive to the infrastructure of peoples. Shahid (2019) confirms that the prevalence rate of aggressive behaviors rises among adolescents, whether through witnessing daily violence in real life or in the virtual world through social media platforms and electronic gaming applications. Aggressive behaviors are also closely linked to this age stage, as confirmed by Hamdawi (2020), who stated that adolescence is one of the most important and sensitive developmental stages because it is a transitional phase that moves the individual from childhood to adulthood, during which comprehensive changes occur in all aspects:

(physical, mental, emotional, social). Psychologists generally agree that aggressive behavior in children is either the result of imitating the style by which they were treated within the family by their parents, or a means of venting retaliatory desires toward the parents by redirecting aggression toward others whom they are capable of attacking (Khattab, 2013).

2- Study Problem:

The problem of the current study lies in attempting to answer the following main question:

Can a multidimensional aggressive behavior scale for adolescents in the Algerian environment be developed with reliable psychometric properties?

3- Objectives of the Study: The current study aims to:

(a) Develop a multidimensional aggressive behavior scale for adolescents while taking into account the traditional dimensions of aggression and preparing the foundation for integrating the digital dimension in future studies.

(b) Calculate the psychometric indicators of the multidimensional aggressive behavior scale on a sample of adolescents in order to verify its reliability and scientific validity.

4- Importance of the Study:

4-1- Theoretical Importance:

The importance of the current study stems from the importance of the targeted group and its developmental stage, namely adolescence.

The rapid epidemic-like spread of the targeted behavior and the multiplicity of its forms and patterns have made the diagnosis of its multiple aspects imperative.

4-2- Applied Importance:

(a) The current study aims to develop a multidimensional aggressive behavior scale and verify its psychometric efficiency.

(b) Research studies may adopt the multidimensional aggressive behavior scale in order to benefit from it in diagnosing the specified behavior of the same targeted group. This supports educational and psychological interventions and lays the groundwork for integrating the digital dimension into future assessments.

4-3- The Contemporary Structural Importance of the Scale:

Understanding aggression as a multidimensional structural concept allows aggressive behavior to be viewed as a hybrid structure that combines:

- emotions associated with anger and frustration,
- cognitive processes related to understanding social interactions,
- and interactive behaviors influenced by digital reality and real social interactions.

Accordingly, any scientific approach to measuring aggression among adolescents cannot be limited to traditional items alone, but must clearly include:

- cyberbullying,
- aggression through interactive games,
- digital defamation,
- social exclusion through social networks.

In this way, tools become capable of representing the psychological and social reality of the adolescent in a changing and fast-paced environment, while preserving the credibility of the results and their connection to the local Algerian context (ASJP, 2023; PubMed, 2021).

➤ Studies show that aggressive behavior in Algeria is affected by local factors such as:

- family and school pressures,
- differences in exposure to digital technology,
- social and cultural norms related to interaction with others.

Accordingly, designing multidimensional aggression scales in the Algerian environment must take into account the balance between the traditional, digital, and local cultural dimensions, in order to ensure that the research tool is capable of capturing the behavioral, emotional, and social diversity of adolescents.

5- Justifications for Designing a Multidimensional Aggressive Behavior Scale for Adolescents:

5-1- Scarcity of specialized tools: The Algerian research context lacks precise measurement tools for multidimensional aggressive behavior among schooled adolescents, especially in light of the contemporary social and cultural transformations that have affected patterns of behavior and communication among individuals.

5-2- Focus on the most influential aggressive contexts: The scale seeks to highlight the aggressive dimensions that are most present and influential in adolescents' lives, thereby allowing a more accurate and comprehensive assessment of the phenomenon.

5-3- Support for diagnosis and intervention: The scale contributes to diagnosing aggressive behavior through its various dimensions (self-directed aggression, physical aggression, verbal aggression, aggression against property, hostile feelings), which makes it possible to develop appropriate educational and psychological intervention programs for the target group.

5-4- Suitability to the developmental stage of adolescents: The scale targets adolescents within their developmental trajectory, while taking into account the psychological and social changes specific to this stage.

5-5- Flexibility of application: The scale can be used individually or collectively, making it a practical and flexible tool for researchers and practitioners in school or community contexts.

5-6- Potential for development and updating: The scale was designed as an initial model open to development, so that new dimensions of contemporary aggressive behavior, such as digital aggression or interactive dimensions in virtual environments, may be integrated in the future, reflecting the ongoing transformations in adolescents' lives.

6- Study Terms:

➤ Aggressive behavior:

Our focus on defining the concept of aggressive behavior leads us first to examine the concept of aggression. Linguistically, aggression is derived from the Arabic root meaning hostility and aggression, and refers to seeking evil, assault, or transgression (Al-Mu'jam Al-Wasit, 1985; Al-Mu'jam Al-Wajiz, 1982). It is also derived from the Latin concept (*agredir*), meaning moving toward attack and seeking battles, as well as the basic trait through which the individual's fundamental needs are secured (Hussein, 2000). Aqil (1977) also defines aggression in psychology dictionaries as hostile acts and feelings, and it is a drive aroused by frustration or caused by instinctive excitation. Mona Rashed (2002) defines aggression as the clash of an individual's forces with another person. It may be physical and include destructive activities such as hitting, biting, killing, and scratching.

Mamdouh (1990) defines aggression as an inner feeling of anger, resentment, and hostility, which is outwardly expressed in the form of an act or behavior intended to inflict harm and injury on others, and is sometimes directed toward the self, appearing in the form of verbal or physical aggression, and may also take the form of destruction or damage to things.

Fuad Al-Sayyid (1980) considers aggression to be the response that follows frustration. It refers to inflicting harm on another person, or even on the individual himself.

Al-Fanjari (1988) sees it as direct or indirect verbal or physical behavior that can be observed and measured, leading to harm or injury to the self, and believes that frustration leads to aggression.

Kafafi (1990) explains that aggression sometimes turns inward toward the self if the individual is unable to direct it toward the source of frustration because of its strength, and if he does not find another source onto which to displace his aggression.

As for aggressive behavior in terminological usage, the encyclopedic dictionary of psychology (Sillamy, 2001) defines it as any behavior that may cause physical or psychological harm to others. It is behavior that violates the social norms accepted in society, and may result in problems in relationships with others.

Rashad Mousa (2008) sees it as injustice and exceeding the limit; he attacked him, wronged him, and transgressed against him. It is said: he transgressed the right, violated the right, or exceeded the right; and the aggressor is the unjust one, the plural being aggressors.

Mohamed Amara (2007) defines aggressive behavior as behavior aimed at harming others, the self, or symbols that substitute for them. Aggressive behavior is compensation for the frustration felt by the aggressor.

Abdel Sattar (2012) sees aggressive behavior as a process of discharging the repressed emotions of the individual, which reduces further aggression. It is the inner feeling of anger, resentment, and hostility, which is outwardly expressed in the form of an act or behavior intended to inflict harm, injury, or something similar. It is sometimes directed toward the self and appears in every verbal or

physical aggression. Al-Qamsh (2007), on the other hand, believes that aggressive behavior is not innate, but inevitable; if a person cannot direct aggression toward others, he will direct it toward himself, where it returns to internal motives rooted in the unconscious. It was called (Eros): directing aggression outward as a means of self-protection. If this condition persists, the individual experiences frustration that results in aggressive behaviors capable of producing changes in reality until these changes become compatible with the experiences and concepts the individual holds (Radwan, 2007).

Al-Salih (2012) defined aggressive behavior in a path different from the previous definitions, seeing it as a behavioral manifestation of catharsis or projection of the acute emotional crises suffered by the individual, where the person tends toward destructive or aggressive behavior toward others.

Ben Hlelim (2014) considers aggressive behavior to be socially unacceptable behavior that can be observed and measured, appearing in the form of physical or verbal aggression, and characterized by continuity and repetition.

Khaled (2010) defines aggressive behavior as an attack or hostile act directed toward a person or thing, and as the expression of a desire to dominate other people. It is considered a response to frustration, meaning the desire to assault others, harm them, belittle them, and mock them in various ways with the aim of punishing them.

Wafiq (1999) explained that aggressive behavior in children results from feelings of frustration or from ongoing and constant psychological tensions within the family, or the separation of parents, or one of them being affected by psychological disorders, or the family's economic poverty.

Abdel Azim (2013) emphasized that aggressive behavior is an offensive behavior involving coercion and harm. It is thus an attacking impulse in which the person's control over his inner drives becomes weak. It is an impulse toward destruction and disruption.

Feshbach defined aggressive behavior as the result of one person harming another or destroying something. Thus, destructive behavior is a form of aggression directed toward objects (Al-Fasfous, 2006).

Al-Sayegh (2001) considers aggressive behavior one of the behavioral problems in schools. We often find some students inclined to assault, quarrel, and tease, and they find pleasure in doing so. This condition is often accompanied by emotions such as anger and frustration. These behavioral problems hinder students' psychological and social adjustment. Aggressive behavior among students takes many forms, including committing violations and inciting them, disobeying the teacher and refusing to carry out his orders, assaulting others by beating and insulting them, and destroying school furniture.

➤ **Previous Studies:**

The topic of aggressive behavior has attracted the attention of many studies, which we will attempt to clarify by way of example rather than limitation. We find the study of Al-Fanjari (1983), entitled: "A Comparative Study of Manifestations of Aggression between Rural and Urban Areas," which aimed to identify forms of aggressive behavior among children in both rural and urban areas in the Arab Republic of Egypt on a sample of 440 children aged 6–12 years. The study concluded that rural children were more aggressive than urban children. It also found statistically significant differences in aggressive behavior between males and females in favor of males (Amara, 2008).

The study of Al-Makhlai (1988), "Aggressive Behavior and Its Relationship to Values," aimed to reveal the relationship between aggressive behavior and six patterns of values: religious values, cognitive values, social values, economic values, and political values, and to determine the extent to

which they are affected by a number of demographic variables: sex, place of residence, cumulative average, and academic level, on a sample of 669 male and female students from Yarmouk University. The results of the study indicated no difference in aggressive behavior and its relationship to the six values (Zraqa, 2013).

The study of Marjan (1990), “Levels of Aggression and Its Motives among Segments of Egyptian Youth,” aimed to identify the levels of aggression and its motives among segments of Egyptian youth. The study sample consisted of 100 individuals divided into two groups: 70 normal individuals and 30 aggressive individuals. The results showed no relationship between the individual’s level of education and his relation to levels of aggression; that is, educational level neither decreases nor increases aggressiveness (Zraqa, 2013).

The study of Jibril (1994), “Aggression among University Students and the Effect of Certain Methods in Reducing Its Severity,” aimed to study aggression among community college students and the effect of certain methods in reducing its severity. The sample consisted of 134 male and female students. The results showed:

- ✓ No significant differences among sample members according to academic level.
- ✓ No significant differences among sample members according to age, sex, or place of residence.
- ✓ The existence of differences in aggression according to family size in favor of large families.

The study of Abboud (1994) aimed to reveal the relationship between aggression and some methods of socialization of children as perceived by parents, and it resulted in the existence of a positive correlational relationship.

The study of Al-Azbawi (1998), “Parental Treatment and Its Relationship to Aggressiveness among Sons and Daughters in the Age Group (11–15 years),” aimed to identify the parental treatment methods that lead to its reduction and to reveal the nature of gender differences in aggressiveness, as well as to study parental treatment methods and aggressiveness according to different social and cultural levels. The study sample consisted of 413 male and female preparatory-stage students in Giza Governorate. The researcher used in this study the children’s opinions scale on parental treatment, the aggressiveness scale, and the social and economic level form. The results showed a correlational relationship between parental treatment and aggressiveness among sons and daughters in this age group.

The study of Al-Humaidi (2004), entitled “Aggressive Behavior and Its Relationship to Parental Treatment Methods among a Sample of Preparatory Stage Students in the State of Qatar.”

The study aimed to identify aggressive behavior and its relationship to parental treatment styles. The study targeted (834 male and female students) selected randomly. The results revealed differences in parental treatment styles according to the variables of: (gender / grade / marital status).

Study by Al-Humaidi (2004): Aggressive behavior: a comparative study between males and females in the age stage (8–16 years). The study aimed to reveal the differences between the two sexes and among the different age stages in aggressive behavior. The study consisted of (1423) participants: (229) from the primary stage, (453) from the preparatory stage, and (491) from the secondary stage. Their ages ranged between (8–16 years) and they belonged to different social and economic levels. The researcher used the aggressive behavior scale for children of both sexes. Among the statistical methods used was the Pearson correlation coefficient. The results showed that males are more aggressive than females.

Study by Abdullah Al-Nujaimi (2017): The relationship between aggressive behavior scores and psychological skills among secondary school students. The study aimed to examine the relationship

between aggressive behavior scores and psychological skills. It adopted the comparative causal method and included a sample of (278) secondary school students distributed into two groups selected purposively. The researchers used two scales: (the aggressive behavior scale and the psychological skills scale). The study found a negative relationship between the total score on the aggressive behavior scale and each dimension of the psychological skills dimensions.

Study by Tariq Brahim (2014): The effect of the physical education session in detecting aggressive behavior among fourth-year middle school students. The study aimed to detect aggressive behavior (physical and verbal) among fourth-year middle school students during the physical education session. The study sample was selected by the cluster random method and consisted of (260 students). The researcher constructed the study tool and used the descriptive analytical method. He also used the following statistical methods: (arithmetic mean and standard deviation). The study found a moderate level of physical aggressive behavior (2.14) and verbal aggressive behavior (2.26).

Study by Al-Shammari (2003): Self-esteem and its relationship to aggressive behavior among fourth-year middle school students in the city of Riyadh. The study aimed to measure aggressive behavior among children and showed that it appears more frequently among males, and that the degree of aggressive behavior tends to rise as children advance in school grades.

Study by Bouchachi (2013): Aggressive behavior and its relationship to psychosocial adjustment among university students. The study aimed to examine the relationship between aggressive behavior and psychological and social adjustment among university students. The descriptive analytical method was adopted, and the research sample consisted of (340 students) selected by stratified random sampling. The Buss and Perry scale was applied. The study concluded that there are statistically significant differences in aggressive behavior between the sexes in favor of males, and that there are no statistically significant differences in psychosocial adjustment between the sexes. It also found a statistically significant negative relationship between aggressive behavior and psychological and social adjustment among students.

Study by Aissou and Bouchirbi (2020): School violence and its relationship to irrational ideas among middle school students. The study aimed to identify the relationship between school violence and irrational ideas among middle school students in Algeria. The descriptive correlational method was used on a random sample of (102) middle school students using a school violence scale and another scale to measure irrational ideas. The study found a relationship between school violence and irrational ideas among middle school students, and no differences in irrational ideas attributable to the gender variable.

Study by Faiqa Muhammad Badr (2008): Parental treatment style and self-concept, and the relationship of each to aggressive behavior. The study was conducted in public schools in the city of Jeddah. It aimed to identify the nature of the perception of a sample of primary school girls regarding parental acceptance or rejection of their aggressive behavior. The study sample consisted of (174 students) from the third and sixth primary grades. The results showed differences in the level of aggressive behavior among the sample members, and a high correlational relationship between the schoolgirls' perception of parental acceptance and the low level of aggressive behavior (Majid, 2008).

It should also be noted that recent studies indicate that aggressive behavior is associated with several psychological, social, and family factors. A recent study on juvenile delinquents showed that physical aggression, verbal aggression, anger, and hostility are the most common forms, and that they were associated with some family and social characteristics such as economic level and type of housing. In another context, recent studies showed that aggression is associated with depression, anxiety, and exposure to violence, and that it may increase in stressful or unsupportive environments, while some

preventive interventions such as physical activity contribute to reducing it (Maamir and Koussa, 2019).

Method and Procedures:

1- Introduction to the scale:

The multidimensional aggressive behavior scale for adolescents is a tool designed by the researcher to measure aggressive behavior, and it targets the adolescent category. In designing it, the researcher relied on Festinger's cognitive dissonance theory, as well as on a careful examination of the theoretical literature focused on aggressive behavior on the one hand, and the set of scales designed within the same framework on the other. The scale items were then formulated. In formulating the items, the researcher took into account that they should be: clear, understandable, open to only one interpretation, that is, unidirectional in interpretation, not combining two ideas, and concise to the extent permitted by the phenomenon intended to be measured (Melhem, 2000).

2- Description of the scale:

The scale consisted of (40 items) procedurally derived from (6) formative dimensions:

- 1- Self-directed aggression
- 2- Physical aggression
- 3- Verbal aggression
- 4- Aggression against property
- 5- Hostile feelings
- 6- Outbursts of anger

Dimension	Components
1- Self-Directed Aggression	Tearing clothes / biting nails / pulling the body
2- Physical Aggression	Hitting / punching / pushing
3- Verbal Aggression	Insulting / shouting / offensive words
4- Aggression Toward Property	Vandalism / theft / arson
5- Hostile Feelings	Grudge / hatred of others / resentment
6- Anger Outbursts	Mood swings / excessive sensitivity / impulsive reaction for trivial reasons

consisting of (18 main components), reflecting the set of items capable of measuring multidimensional aggressive behavior in the targeted group.

The researcher relied in formulating the items of her scale on the Likert method, where the items are presented to the respondent, who is asked to determine the answer that applies to him or her by choosing one alternative from among several alternatives with varying weights (Samara, 1989).

The scale targets adolescents in a way that is consistent with their varying developmental characteristics.

Dimension -	Paragraphs -
1- Self-Aggression	33-25-22-20-5-2-1
2- Physical Aggression	34-24-23-6-4-3
3- Verbal Aggression	28-27-26-11-10-9
4- Aggression Toward Possessions	38-36-30-29-16-15-12-8
5- Hostile Feelings	40-37-35-32-31-17-14-13-7
6- Anger Outbursts	39-19-21-18
	39-19-21-18

The criteria observed when formulating the scale items:

- That they should be appropriate to the characteristics of the developmental stage.
- Avoiding ambiguity and tending toward simplicity and clarity.
- That the items should be written in the first-person form.
- Each item should focus on one specific idea in order to avoid the adolescent falling into guessing while answering.

3- Scale instructions:

- The instructions aim to explain the idea of the scale in its simplest form in order to facilitate the administration process. This is because clear and understandable instructions contribute to raising the coefficients of (validity and reliability) and the objectivity of the scale (Al-Samarrai, 1982).
- The researcher respected the characteristics of the category targeted by the study, as the instructions, as previously mentioned, were progressive in comprehension, easy in wording and structure.
- It is clarified that the work consists of a set of statements or items proposed by the researcher.
- The adolescent is asked to read the statements (items) carefully and attentively.
- The response is given by identifying what applies to him or her exactly through reading the statements.
- Choosing one of the proposed answer alternatives that applies to him or her exactly.

Placing the mark (✓) in the designated place for that.

Answer Options.					Item
Never applies	Does not apply	Sometimes applies	Fully applies	Always applies	

- Inviting the adolescent to kindly record his or her personal information in the designated table

- The examinee's personal information table:

<input type="checkbox"/> - Institution:
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☐- Examinee:
☐- Gender:	Male ☐ -☐- Female
☐- Age:.
☐- Educational Level:
☐- Economic Level:	☐- Low ☐- Medium ☐- High

- Thanking the adolescent for his or her cooperation with the researcher and for answering the scale items.
- The researcher also sought to include an illustrative example to facilitate answering, taking into account that it should be in the same wording style as the scale items, but placed outside the body of the instrument in order to avoid the confusion that the examinee might fall into while answering.

Answer Options.					Item
Always applies	Fully applies	Sometimes applies	Does not apply	Never applies	
✓			1- I enjoy reading meaningful stories		

4-Scale scoring key:

- The researcher sought to combine both positive and negative items in formulating the scale items, as illustrated in the table below:

Positive Items	Negative Items
19-18-17-16-15-14-13-12-11-10-9-8-7-6-5-4-3-2-1 35-34-33-32-31-29-28-27-26-25-24-23-22	39-38-37-30-11

- The scoring of the multidimensional aggressive behavior scale for adolescents was based on the nature of the items on the one hand and the five-point scale of alternatives on the other hand, which we will illustrate through the table below:

Answer Options					Item
Always applies	Fully applies	Sometimes applies	Does not apply	Never applies	
5	4	3	2	1	Positive
1	2	3	4	5	Negative

*** The theoretical range of the scale:**

- The theoretical range is determined by referring to the number of scores obtained by the respondent, which is based on the number of items and the weights specified above. Accordingly, the theoretical range of the scale is determined as: (40–200)

6- Results of the study:

Scholars of measurement and evaluation indicate that validity and reliability are among the most important controlling conditions that must be available in psychological tests, so that the scale provides results that can be trusted and relied upon in diagnosis and in making sound decisions (Laajilat, 2005).

- - **Validity**

- **Face validity:** The face validity of the tool is evident through the clarity of its items and the extent of their suitability for the purpose for which they were designed on the one hand, and on the other hand through the results of the preliminary application of the scale to a sample of adolescents consisting of (30 adolescents), who showed an understanding of the scale items.
- **Statistical validity**

- Self-validity:

It is the square root of Cronbach’s alpha reliability coefficient, which was estimated at: (0.95), and this is a very high degree of reliability indicating the validity of the scale.

- Discriminant validity (extreme comparison validity):

The sample scores were arranged in descending order, and the percentage of (33%) from both ends of the ranking was identified, and the “t” test was applied to two equal groups. The results are shown in the following table:

A table showing: The results of calculating the extreme comparison validity of the scale among the individuals of the pilot study sample (N = 30):

Category	N	Mean	Std. Deviation	Calculated t	Degrees of Freedom	Sig. value	Significance Level
Upper group	9	98.88	26.86	4.83	16	0.00	0.01
Lower group	9	54.77	5.35				

- Through the results shown in the table, we note that the arithmetic mean of the upper group reached (98.88) with a standard deviation of (26.86), whereas the arithmetic mean of the lower group reached (54.77) with a standard deviation of (5.35). The calculated “t” value reached (4.83), and by calculating the degree of freedom, which was estimated at (16), the value of (sig) reached (0.00). It was observed that there are statistically significant differences at the significance level of 0.01.

-Calculation of internal consistency validity:

It is the degree of consistency of the scale items in measuring the trait intended to be measured, namely the multidimensional aggressive behavior scale for adolescents. Internal consistency was verified through the correlation of the item score with the total score, and the correlation of the scale dimensions with one another.

Table showing: Correlation coefficients between the item score and the total score of the scale.

R Value	Item No.	R Value	Item No.
0.37*	21	0.51*	1
0.46*	22	0.72**	2
0.48*	23	0.72**	3
0.37*	24	0.71**	4
0.64**	25	0.69**	5
0.76**	26	0.68**	6
0.82**	27	0.72**	7
0.48*	28	0.76**	8
0.66**	29	0.85**	9
0.68**	30	0.65**	10
0.47*	31	0.76**	11
0.41*	32	0.68**	12
0.37*	33	0.38*	13
0.64**	34	0.76**	14
0.72**	35	0.78**	15
0.41*	36	0.65**	16
0.61**	37	0.61**	17
0.48*	38	0.71**	18
0.76**	39	0.67**	19
0.41*	40	0.45*	20

The correlation coefficients between the score of each statement and the total score of the dimension to which it belongs ranged between: (0.37–0.85), and they are statistically significant correlation coefficients at the level of (0.01), which indicates internal consistency validity.

➤ **Reliability**

-Calculation of reliability using Cronbach’s Alpha coefficient:

In order to verify the reliability of the scale, it was calculated using the Cronbach’s Alpha equation for internal consistency, because we want to know the extent of consistency of the items of the aggressive behavior scale for adolescents. Also, the number of alternatives is more than two. Accordingly, we can apply the Cronbach’s Alpha equation. Its value for all the items of the scale reached (0.91), and the results are shown in the table below.

Table showing: The value of Cronbach’s Alpha coefficient for the scale.

Cronbach's Alpha	Number of Items	Variable
0.91	40	Aggressive Behavior

➤ We note from the table that the reliability coefficient is estimated at (0.91), which is higher than (0.70); therefore, the items are considered reliable. Accordingly, the scale was adopted.

- Calculation of reliability using the split-half method and the correlation coefficient

Table showing: The value of the reliability coefficient using the split-half method.

Significance Level	Correlation Coefficient (After Adjustment)	Correlation Coefficient (Before Adjustment)	Variable
Significant at 0.01	0.91	0.84	Aggressive Behavior

➤ We note from the table that the correlation coefficient before adjustment was estimated at (0.84), and the correlation coefficient after adjustment was estimated at (0.91), which is significant at (0.01). Accordingly, it can be said that the scale has a reliable degree of reliability.

➤ **Conclusion and suggestions:**

The scale’s possession of good psychometric indicators allows its use in fields of study and research in the psychological field:

- 1- Standardizing the multidimensional aggressive behavior scale for children in educational institutions.
- 2- Conducting a factorial study of the multidimensional aggressive behavior scale on a broader target population to measure the same trait.
- 3- It can generally be said that aggressive behavior among adolescents today is no longer a simple phenomenon that can be measured only through traditional items, but has become a complex and multidimensional phenomenon in which emotions, social cognition, and digital interactions interplay. Therefore, developing multidimensional structural measurement tools that include both digital and traditional aggression represents a scientific and ethical necessity to ensure a comprehensive understanding of aggression among adolescents in Algeria and to provide accurate and effective educational and psychological interventions.

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Multidimensional Aggressive Behavior Scale for Adolescents

Dr. Fatima al-Zahra Hadj Sabri

■- Dear student...

Dear female student.

■ Greetings, and thereafter (...)

Before you is a set of statements (items). Please read them carefully and answer each of them according to what applies to you exactly, by placing a (□) mark in front of the answer that truthfully expresses what applies to you in one of the ratings.

■ Illustrative example:

□ I like hanging out in the streets	□ Alternatives				
	□ Does not apply at all	□ Does not apply	□ Sometimes applies	□ Applies a lot	□ Always applies
	<input checked="" type="checkbox"/>				

■ We kindly ask you, dear student, to record your personal information in the space designated for that.

-■School:
-■Student:
-■Gender:

-□Level:
-□Date of Birth:

Thank you for your cooperation... May God grant you success.

Dr. Fatima Al-Zahra Haj Sabri

No.	Items	Response Alternatives				
		Does Not Apply at All	Does Not Apply	Sometimes Applies	Often Applies	Always Applies
01	• My mother gets angry because I tear my clothes.					
02	• I deliberately hurt myself.					
03	• I feel happy when I get into fights at school.					
04	• I like pushing and shoving in crowded places.					
05	• I suffer from sores on my fingers.					
06	• I hit everyone I meet.					
07	• I think about suicide.					
08	• I break the chairs in my classroom.					
09	• My way of speaking is impolite.					
10	• Everyone knows me for my shouting.					
11	• I do not like those who insult others.					
12	• I enjoy setting fires everywhere.					
13	• I envy my classmates.					
14	• I prefer insulting my friends to maintain my status.					
15	• I enjoy ruining anything beautiful.					
16	• I join my peers in thefts in our neighborhood.					

17	• I enjoy insulting others.					
18	• I get angry over the slightest things.					
19	• I distrust everyone around me.					
20	• I suffer from biting my lips.					
21	• When a certain situation bothers me, I lash out at everyone around me.					
22	• I use scissors to tear the clothes I am wearing.					
23	• I like biting my sisters when I get upset with them.					
24	• I am punished harshly because I hurt my classmates.					
25	• I think about cutting my veins.					
26	• When I get angry with my classmate, I insult him harshly.					
27	• I prefer shouting as a way of talking to others.					
28	• I feel that God will punish me because of the obscene words I use.					
29	• I strongly prefer stealing my classmates' things.					

No.	Items	Response Alternatives				
		Does Not Apply at All	Does Not Apply	Applies Sometimes	Applies Often	Always Applies
30	<input type="checkbox"/> - I am very afraid of setting fires.					
31	<input type="checkbox"/> - I like everyone to live in misery.					
32	<input type="checkbox"/> - I feel that life has no taste.					
33	<input type="checkbox"/> - My father punishes me severely because I bite my nails.					
34	<input type="checkbox"/> - Hurting others protects me.					

35	<input type="checkbox"/> - I like to be happy alone in this life.					
36	<input type="checkbox"/> - I always plan with my classmates to vandalize the school.					
37	<input type="checkbox"/> - I believe that life is optimism.					
38	<input type="checkbox"/> - Stealing is a shameful act.					
39	<input type="checkbox"/> - I tend to cry quickly.					
40	<input type="checkbox"/> - I wish that blessings would disappear from all people.					