Building and Applying the Reckless Thinking Scale among Students of the Faculties of Education for Humanities and Pure Sciences

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ABSTRACT

The research aimed to design, construct, and apply the Reckless Thinking Scale among students of the Faculties of Education for Humanities and Pure Sciences.

The sample consisted of (400) male and female students, selected by a stratified random method with equal distribution, from all academic stages of the Faculties of Education for Humanities and Pure Sciences, and to measure healthy thinking, a scale was built based on theoretical bridging (synthesis method), which consisted of (24) items.

The psychometric characteristics of the scale were extracted, including apparent honesty, which reached 95%, as well as the coefficient of consistency by the repeat method (0.83). The statistical techniques used were those provided by the Social Statistical Package (SPSS).

The results showed that the arithmetic average of the students' score was 58.22 with a standard deviation of 10.39, and when comparing the arithmetic mean of the students' score with the hypothetical average of performance (60) using the T scale for one sample, it was found that the calculated T value is equal to (3.24) which is greater than the tabular T value (1.96) at the significance level of (0.05) and the degree of freedom (399). This indicates a statistically significant difference, suggesting that the level of reckless thinking among students of the faculties of education for the humanities and pure sciences is lower than the hypothetical mean adopted in the study.

One of the most important conclusions is that societal values play a key role in curbing reckless thinking by strengthening external controls. One of the most important recommendations is to build family awareness programs: train families to support students' decision-making skills without curbing creativity, based on the theory of containment.

Panama has included field studies to measure impulsivity levels using tools such as the Whiteside & Lynam Scale to understand whether the absence of impulsive thinking is due to social repression or adaptive skills.

INTRODUCTION

A lot of researchers have been trying to figure out why kids make bad choices for a long time. Students at college are more likely to feel this way since they are stressed out about both their schoolwork and their personal lives. Experimental examinations of these patterns demonstrate the significance of psychological research in mitigating the adverse impact of these judgments. They help us understand where they come from and how to find ways to make cognitive resilience better. (Smith, 2020: 14)

Impulsivity, or acting without thinking, has an effect on how decisions are made. This is due to both neurological and environmental factors. Neuroimaging studies demonstrate that inhibition is impaired during adolescence owing to the prolonged development of the prefrontal cortex, hence increasing impulsivity and recklessness. When students are independent and under peer pressure at university, they often put off their schoolwork and engage in other risky, impulsive behaviors. Research indicates that psychological interventions such as

mindfulness programs and cognitive behavioral therapy (CBT) can be advantageous for individuals struggling with self-regulation. This is a great example of how scientific research can benefit those who have problems with this. (Johnson & Lee, 2019: 23)

The dominant social and cultural environments, together with neurodevelopmental processes, influence adolescents' inclination towards risk-taking behaviors. Steinberg's 2008 dual-systems theory highlights the difference between increased reward sensitivity and immature cognitive control in adolescence, a trend that continues throughout early adulthood. Universities are like little societies where people try out new ideas and methods of doing things. As a result, cheating and smoking are common. These findings have prompted numerous educational initiatives, including lectures, workshops conducted by faculty and students, and experiential learning modules, all designed to transform students' perceptions of risk and instruct them on the influence of scientific information on their behavior. (Steinberg, 2008: 78)

Not being able to plan is a systemic problem, not just a human flaw in planning. Some long-term studies demonstrate that children who don't know how to plan, organize, and manage their time efficiently are more likely to be stressed out all the time and do worse in school. This, in turn, makes things worse and worse. Integrating scientifically and empirically validated remedies into academic frameworks has the potential to address core issues rather than only superficial symptoms. Research supports institutional support measures, such as mandatory time management training, AI-driven planning tools, and supplementary activities. (Martinez et al., 2021: 45)

When we're fatigued, we tend to make decisions without thinking them through first. This indicates that intuitive thinking holds greater significance than rational thought. Kahneman's 2011 study on decision-making frameworks is important because it shows how mental or temporal constraints can make people rely more on heuristics, or System 1. This can cause people to make hasty and sometimes incorrect decisions at work or school. Some schools have used these findings to set up decision-making labs and teach students how to think about their own thinking so they can get better at analyzing things and uncover and cure cognitive biases (System 2). These works show that strong theoretical research can lead to new ways of teaching. (Kahneman 2011: 102)

Defining Terms

Theoretical definition of reckless thinking: "A cognitive mental process characterized by the dominance of intuitive processing over careful analytical thinking or consideration of consequences, and making hasty decisions in light of that processing, leading to ignoring potential risks and a tendency to act without planning and a full understanding of the consequences of actions."

Theoretical Framework

The Deferred Gratification Model (Michel et al., 1972)

Walter Mischel's "marshmallow test" illustrates that individuals frequently achieve better life results by postponing immediate gratification in exchange for more substantial future benefits. This idea connects being impulsive to not being able to control one's urges and think about the future. Students who have trouble waiting for rewards may put their social lives ahead of their schoolwork, which could affect their GPA. Cognitive tactics, such as reappraisal (seeing the reward as less appealing) or distraction (focusing on long-term goals), affect the capacity to endure delays. Mischel's research highlights the importance of executive function in reducing impulsive thinking by linking current behaviors to their future outcomes. (Mischel et al., 1972: 206)

UPPS-P Model of Impulsivity (Whiteside & Nam, 2001)

The UPPS-P model divides impulsivity into five distinct dimensions:

A- Negative urgency: acting recklessly under the weight of distress (e.g., using drugs during stress).

B- Lack of advance planning: failure to consider consequences before acting (e.g., impulsive buying).

C- Lack of perseverance: The inability to focus on tasks (e.g., abandonment of long-term projects).

D- Thrill Seeking: Seeking new or exciting experiences (e.g., extreme sports).

E- Positive urgency: impulsive actions in positive moods (e.g., overspending when happy).

This model highlights that impulsive thinking is not a homogeneous trait, but rather a combination of emotional, cognitive, and motivational factors. For example, a student who exhibits (lack of advance planning) may miss classes without considering academic sanctions, while *excitement-seeking* may lead to risky social behaviors. The UPPS-P framework is widely used to design interventions that target specific subtypes of impulsivity. (Whiteside & Lynam, 2001: 672)

Dual Pathway Model for ADHD (Sonoga-Park, 2002)

The dual-pathway model (DPM) identifies executive dysfunction and delay aversion as two neural pathways that influence impulsivity and impulsive decision-making characteristics. The primary pathway is executive dysfunction. It happens when the prefrontal brain activity and cognitive control go down, which makes it hard to plan and stop yourself from doing things. The second strategy, known as delay aversion, is effective due to the heightened activity of individuals' reward systems, particularly the medial limbic circuit. This makes people look for quick pleasure to avoid the pain of waiting. Instead of studying, students who don't want to wait could prefer to do activities that make them happy right away, such using social media. Conversely, students with executive dysfunction may procrastinate on their assignments due to inadequate planning. The dual-pathway method greatly improves the diagnosis of attention deficit hyperactivity disorder (ADHD) and is equally applicable to impulsive thinking in situations that necessitate self-regulation and control. (Sonuga-Barke, 2002: 30)

Dual System Theory (Kahneman, 2011)

Kahneman states that System I is quick, instinctive, and based on feelings, whereas System II is more logical, methodical, and analytical. My approach is autonomous and depends on inferences, a concept Kahneman describes as "cognitive ease." This makes it easy to be biased, like thinking that short-term gains are better than they are. System II needs you to think about things on purpose, but it uses mental effort to process information. People think on the spur of the moment when System I takes over. For instance, students can choose to watch too much TV or use social media instead of studying for tests. System II considers the enduring consequences of examination dishonesty, such as academic sanctions, whereas System I focuses on immediate stress alleviation. This strategy stresses how important metacognitive tactics are for getting System II to work in high-pressure situations. (Kahneman, 2011: 20)

Research Methodology

The research aims to describe the measurement of reckless thinking among students of the faculties of education for the humanities and pure sciences. Accordingly, a descriptive research design was adopted, as it is appropriate for scale construction and psychometric validation. This design represents a foundational step that may inform future experimental or inferential studies based on the outcomes of the present research.

Research Community

The current research population consists of (10045) male and female students from the College of Education for Humanities and Pure Sciences for the morning study and for the academic year (2024-2025). * ⁽7208) male and female students from the College of Education for Humanities, and (2837) male and female students from the College of Education for Pure Sciences. A stratified random sample of 400 was drawn from it.

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* The researcher obtained this statistic from the Studies, Planning and Follow-up Division at the Presidency of the University of Mosul under the task facilitation book No. 3/2/12522 dated 7/11/2024.

Research Tool

The tool is the means by which information is collected, and similar to the sister social sciences in which a set of research methods originated, psychology followed suit by developing and integrating qualitative research methods that allow for more expression on the part of the participants, the truthfulness of the information extracted by the researchers in the research, and a more responsive relationship with them in the research practice. These approaches respond to human subjectivity and its meanings beyond the boundaries of existing knowledge, and since the development of methodological pluralism imposes moral obligations deeply rooted in the identity of psychology, this pluralism promotes scientific rigor and the truth of psychological knowledge. (Mertens, 2015: 296), and the tools of the current research include the following:

Reckless Thinking Scale

Based on the definition, dimensions of impulsive thinking were formulated that were presented to experts as basic components of that concept, and the percentage of experts agreed on the dimensions (95%), as well as determining the relative importance of each dimension. These dimensions also included (24) paragraphs to form the scale of reckless thinking in its initial form of four dimensions, which are as follows: impulsivity, risk-taking, lack of planning, and haste in making decisions.

Psychometric properties of the scale

This concept in the psychological literature indicates the correlation of the basic qualities specified in the model of the theory adopted to construct the tool with the standard statistical characteristics of that tool, including: multiple correlations, the stability of the tool and the methods of measuring them, and the extent to which the scores of the tool are consistent with respect to the measured trait, to integrate the information that will in essence constitute the validity of that tool. (Markus & Denny, 2013: 63-64). These characteristics include:

Face Validity

This type of honesty refers to how the test looks appropriate to the purpose for which it was designed, it relates to the familiarity and desired image of the test, in terms of the type of vocabulary, how it is formulated, and the clarity of these vocabulary, as well as the test instructions, the time of the test, and the degree of objectivity it has. (Shehata, 2012: 168), and the apparent truthfulness of the scale was extracted by presenting it to a group of experts and specialists in educational and psychological sciences to express their opinion on the validity of the scale, the relative importance of each of its dimensions, and the ability of its paragraphs to measure the reckless thinking of the research sample. All experts agreed on the validity of the paragraphs of the scale and their suitability to measure the phenomenon under study, and after taking their observations and opinions, the paragraphs were accepted and obtained a percentage of agreement 95%.

Statistical analysis of the test items.

Tests and measures are based on the principles of modern measurement theory by linking the standard characteristics of the instrument (coefficients of difficulty and distinction) with the levels of the measured attribute, as it seeks to analyze the statistical analysis of each paragraph to find out its distinctive characteristics (Habib & Sadiq, 2018: 359-360). Therefore, this analysis aims to verify the validity of the paragraphs of the scale through the following methods:

After determining the upper and lower groups, the discriminating power of each of the items of the Health Thinking Scale was calculated using the (t-test) of two independent samples to calculate the average scores of the upper group with the average scores of the lower group for each of the (24) items of the scale, the paragraphs

that obtained the calculated (t-value) (1.960) or more were considered as distinct items because they are statistically significant [*] At the level of (0.05) and at the degree of freedom [*](216). Table 1 shows this.

Table (1) Parameters of the paragraphs of the Reckless Thinking Scale using the Extreme Sample Method

Paragraph Number	Lower Group (108)		Top Group (108)		Value (t-test)
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation	
1.	1.57	0.76	3.16	0.97	18.80
2.	1.99	0.82	3.05	0.94	12.42
3.	1.31	0.70	2.20	1.18	9.57
4.	1.52	0.78	2.89	1.01	15.76
5.	1.78	0.99	3.06	1.01	13.24
6.	2.18	0.99	3.16	0.91	10.68
7.	1.90	0.94	2.91	1.04	10.54
8.	2.39	1.07	3.07	0.98	6.93
9.	2.77	1.06	3.06	0.94	3.07
10.	2.61	1.15	3.24	0.89	6.33
11.	1.56	0.88	2.99	1.14	14.47
12.	1.33	0.78	2.52	1.08	13.00
13.	2.41	1.05	2.97	1.02	5.66
14.	1.64	0.74	3.14	0.95	18.31
15.	2.25	1.02	3.19	0.93	10.05
16.	1.88	0.96	3.19	0.88	14.84
17.	2.76	1.09	3.19	1.00	4.22
18.	2.13	0.95	3.12	1.00	10.53
19.	1.58	0.81	2.98	0.96	16.33
20.	1.66	0.88	2.94	0.98	14.30

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[*] The term "statistically significant" refers to a statistical result that indicates that measured data from individuals shows an effect or relationship (MacBride, 2018:26)

[*] It is symbolized by the symbol (df), and is called the degree of freedom of variance of the sample, which is the number of degrees in the sample that have freedom of change in all but one degree that does not have freedom of change, and its mathematical formula is: (df = n-1) (Privitera, 2019: 249).

21.	1.49	0.75	2.74	1.05	14.21
22.	1.81	0.80	2.96	0.97	13.41
23.	1.61	0.88	2.69	1.04	11.66
24.	1.44	0.75	2.75	1.06	14.79

∗ The tabular value of (t) at the degree of freedom (214) and the significance level of (0.05) is equal to (1.96).

Internal consistency method of items.

Internal consistency refers to the extent to which a group of similar elements are related to each other for the paragraphs of the scale. Technically, internal consistency is determined by the degree of interrelationships between the subjects' responses to a set of relevant scale items or a set of subscales with the overall score of the scale, and to create a reliable test, the scale items must be significantly related to each other, then They are retained, while those with low correlations are dropped. (AL-Ogaidi, 2020: 144), and for the purpose of calculating the internal consistency of the scale, the researcher applied the scale to a random stratified sample of (400) male and female students from the faculties of education for humanities and pure sciences, then according to the correlation coefficients between the items of the scale, between the total score, between the paragraphs of each field with the total score of the field, and finally between the score of each field with each other and the total score of the scale. To know the significance of the correlation coefficients, the (t) test was used.by comparing the calculated values of (t) with the tabular value of (t) of (1.960) at the significance level of (0.05) and the degree of freedom (2014) it was found that all the paragraphs are statistically significant, and the internal consistency of the paragraphs of the reckless thinking test was verified through the following methods:

Finding the relationship between the paragraph score and the overall score of the scale

The researcher used the internal test represented by the total score of the scale to extract the validity of the construction, as the honesty of the paragraphs is extracted by most researchers in psychometrics empirically by calculating the correlation coefficient between the scores of the paragraph and the total score of the scale, which is a strong indicator of the internal consistency of the scale. Cronbach's alpha coefficient is calculated based on the correlations between the score of each paragraph separately and the total result obtained from the scale (total correlations between paragraphs). (Brough, 2019: 51), and for the purpose of identifying the significance of the values of the correlation coefficient, the value of (t) was calculated as a significance as the correlation factor, and it was found that the calculated value of (t) is greater than the value of (t) of (1.960) at the level of significance (0.05) and degree of freedom (399), and Table (2) shows this.

Table (2) Correlation coefficients for each item of the Reckless Thinking Scale with the total score of the scale

Paragraph Number	The relationship between the paragraph and the total score of the correlation coefficient	(T-test) for correlation coefficients
1.	0.56	13.59
2.	0.46	10.45
3.	0.35	7.50
4.	0.50	11.64
5.	0.44	9.83
6.	0.41	9.07
7.	0.38	8.10

8.	0.26	5.35
9.	0.14	2.72
10.	0.24	4.82
11.	0.46	10.39
12.	0.45	9.91
13.	0.22	4.43
14.	0.53	12.50
15.	0.35	7.50
16.	0.45	10.14
17.	0.17	3.53
18.	0.38	8.15
19.	0.52	12.24
20.	0.47	10.59
21.	0.46	10.36
22.	0.45	9.97
23.	0.45	10.00
24.	0.48	11.03

∗ The tabular value is equal to (1.96).

Reliability of the scale

The rescaling method of consistency measures the temporal stability of the scale. In this method, the scale is administered for the same sample on two different occasions. This type of stability is used to assess the consistency of the scale over time (time stability). This approach assumes that there will be no significant change in the structure measured between the two occasions by administering the same procedure on two different occasions. The researchers obtain two sets of scores. The correlation coefficient calculated for these two sets of scores is the consistency coefficient. (Verma, 2019: 47), and accordingly, the researchers extracted the stability of the scale by re-scaling on a sample of (100) male and female students, and after (15) days, the same scale was reapplied to the members of the stability sample themselves, and the value of the correlation coefficient between the scores of the first measurement and the scores of the second measurement was (0.83), and in this type of estimation, we can determine the extent of reliability in the possibility of generalizing the results from the degree obtained by the individual.

Correcting the Reckless Thinking Scale

Correction means setting a score for the examinee's response on each of the paragraphs of the scale and then adding the scores to find the total score. The scale was corrected according to the method prepared by the researcher as more appropriate than others, as the one who sets the scale is the one who has the key to correction (Rabih and Khatam, 2008: 206), while the weights and alternatives of the response on the paragraphs of the scale were four alternatives, which are "applies to me a lot," "applies to me to a moderate degree, applies to me a little,

does not apply to me). The lowest score was (24) and the highest score was (96), with a hypothetical average of (60), and Figure (1) shows this.
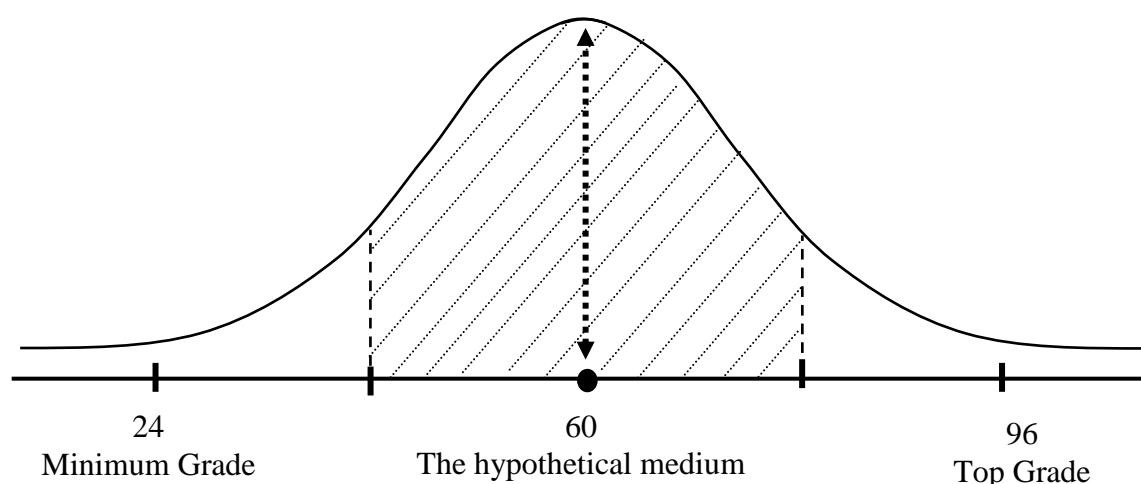

Figure 1: represents the minimum, maximum, and average hypothetical values for Reckless thinking.

RESULTS

Measuring Reckless Thinking

To achieve the goal and after processing the data statistically, the results showed that the arithmetic average of the students' score reached (58.22) with a standard deviation of (10.39) and when comparing the arithmetic mean of the students' score with the hypothetical average of performance of (60) and using the T scale for one sample, it was found that the calculated T value is equal to (3.24) which is greater than the tabular T value (1.96) at the significance level of (0)05) and a degree of freedom (399). The obtained T-value indicates the presence of a statistically significant difference between the arithmetic mean of the sample and the hypothetical mean, reflecting a relatively lower level of reckless thinking among students of the faculties of education for the humanities and pure sciences, and Table (3) shows this.

Table (3) Results of the T-Scale for the Significance of Reckless Thinking

Number	Hypothetical Average	Arithmetic Average	Standard deviation	T-value		Significance level at (0.05)
400	60	58.22	10.39	Calculated	Tabularity	function
				3.24	1.96	

The researcher attributes the result of this descriptive study to the current cultural and social framework. Iraqi society is often characterized by strong familial togetherness and well-established social standards, which contribute to the creation of external regulatory systems that control individual conduct. Within this context, kids are frequently taught to conform to communal standards concerning responsibility, academic dedication, and the avoidance of actions that could endanger personal or familial reputation. Consequently, the comparatively diminished level of reckless thinking identified in the current sample might be considered a manifestation of these contextual factors, as deduced from the descriptive analysis of the study's findings, rather than as a direct causal effect empirically tested.

For several years, the city of Mosul has been in military war, social unrest, and major structural changes that have had a big impact on the lives of its citizens, particularly university students. In this kind of situation, being exposed to uncertainty and possible danger over and over again may make people less sensitive to rapid rewards and more likely to make decisions that are careful and take time. From a descriptive and interpretive standpoint,

this pattern might be perceived as a manifestation of adaptive cognitive orientation, wherein pupils recognize that impulsive risk-taking can lead to significant and irreversible repercussions in unstable environments. This view aligns with the delay-aversion aspect of the dual-pathway model (Sonuga-Barke), suggesting that individuals facing significant environmental costs may progressively prefer regulated and strategic decisions over rapid rewards. Moreover, the conservative cultural framework of Iraqi society—especially pronounced in Mosul—stresses social conformity, accountability, and the avoidance of actions deemed detrimental to individual or communal stability. These cultural norms may help keep people from doing harmful things to obtain a thrill, which in turn keeps them from acting recklessly. These explanations come from a careful reading of the descriptive results of the current study. They are not based on empirical evidence but rather on contextual interpretations. This pattern is shown in Figure 2.
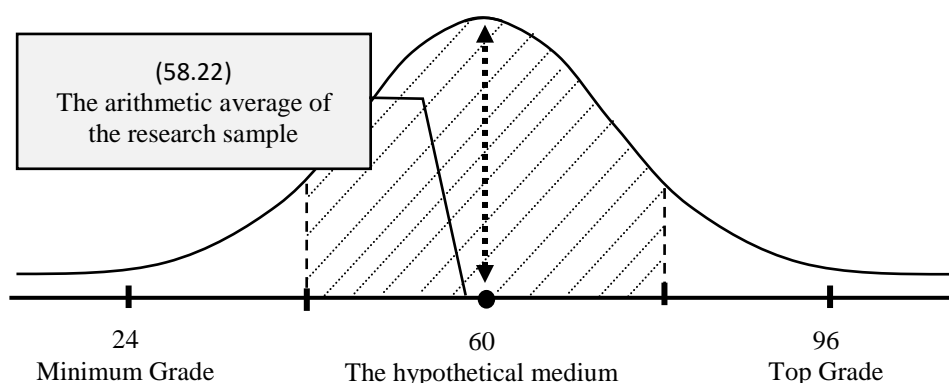

Figure 2: The level of reckless thinking among the research sample

CONCLUSION

Societal values play a key role in curbing reckless thinking by strengthening external controls. On the other hand, difficult environmental conditions (such as war) may lead individuals to adopt survival strategies based on caution and planning. The rigorous educational system also promotes analytical thinking at the expense of impulsivity.

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