

Emotional Intelligence and Its Relationship with Mental Health among Third-Year Secondary School Students.

الذكاء العاطفي وعلاقته بالصحة النفسية لدى تلاميذ السنة الثالثة من التعليم الثانوي.

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Abstract : This study aimed to identify the relationship between emotional intelligence and mental health among third-year secondary school students, in addition to examining whether there are statistically significant differences attributable to the variables of gender and academic specialization. The study adopted a descriptive-correlational approach and included a sample of 110 male and female students from literary, scientific, and technical specializations, selected through a non-random sampling method. The results revealed a positive correlation between emotional intelligence and mental health. Statistically significant differences in emotional intelligence were found in favor of females. However, no significant differences were found in emotional intelligence or mental health based on academic specialization, and no significant differences in mental health were attributed to gender.

Keywords: Emotional Intelligence, Mental Health, Secondary Stage

الملخص : هدفت هذه الدراسة إلى فحص العلاقة بين الذكاء العاطفي والصحة النفسية لدى تلاميذ السنة الثالثة من التعليم الثانوي، كما سعت إلى تحديد ما إذا كانت هناك فروق ذات دلالة إحصائية في مستوى الذكاء العاطفي والصحة النفسية يمكن أن تُعزى إلى متغيري الجنس والتخصص الأكاديمي ولتحقيق أهداف الدراسة، استخدم الباحث المنهج الوصفي الارتباطي، حيث طُبّق مقياس الذكاء العاطفي المكوّن من 60 فقرة، ومقياس الصحة النفسية المكوّن من 56 فقرة وتكوّنت عينة الدراسة من 110 تلميذاً وتلميذة من تخصصات أدبية وعلمية وتقنية، وتم اختيار العينة بطريقة غير عشوائية، وقد أسفرت الدراسة عن النتائج التالية: توجد علاقة ارتباطية إيجابية بين الذكاء العاطفي والصحة النفسية لدى تلاميذ السنة الثالثة من التعليم الثانوي. كما توجد فروق ذات دلالة إحصائية في الذكاء العاطفي تُعزى لمتغير الجنس لصالح الإناث. ولا توجد فروق ذات دلالة إحصائية في الذكاء العاطفي تُعزى إلى التخصص الأكاديمي. كما لم تظهر فروق ذات دلالة إحصائية في الصحة النفسية تُعزى لمتغيري الجنس أو التخصص الأكاديمي.

الكلمات المفتاحية: الذكاء العاطفي، الصحة النفسية، المرحلة الثانوية

1. Research Problem

Life is a series of changes that require individuals to adapt in order to meet their needs, maintain balance, and avoid psychological distress. To achieve this, individuals must mobilize their personal abilities to cope with life's pressures and difficulties, interact effectively with their environment, work efficiently, and contribute meaningfully to society to realize the goals and purposes of life.

Mental health is a harmonious integration between an individual's cognitive and emotional development. This integration shapes the individual's responses that reflect emotional stability, personal and social adjustment, and self-actualization. The connection between the cognitive domain encompassing intelligence, creative thinking, and cognitive achievement and the emotional domain encompassing social and emotional factors such as inclinations, attitudes, and personal and social values produces responses that reveal the individual's efforts to achieve self-fulfillment. High levels of personal and social adjustment, as indicators of sound mental health, are manifested in behavior.

The ability to perceive, understand, express, and differentiate emotions is a uniquely human trait essential for social interaction. A lack of emotional awareness or expression is an obstacle to achieving mental health. It is fundamentally accepted that emotional expression, sharing emotions with others, and recognizing them is crucial for personality development and adds balance and meaning to life.

Recent research in the field of positive psychology has confirmed that promoting individuals' psychological functions rather than merely eliminating problems can significantly enhance their well-being. According to (Abdel Sattar 2003, p48) subjective well-being is better improved by developing psychological functions that increase individual adaptation and coping skills.

This requires a set of skills to confront and manage stress without letting it negatively affect one's life. Coping strategies differ among individuals; some use effective strategies, while others resort to maladaptive approaches. According to Gouda (2004), coping strategies serve two primary functions: regulating emotions and addressing the stress-causing problem.

Emotional intelligence is a crucial and integral component of human psychological structure. Studies have shown that emotional systems in humans are complex, resistant to change, and shape personality from an early age. Emotional intelligence is considered one of the most contemporary concepts in psychology and mental health. It has gained importance due to the evolving demands of modern life, which require individuals to possess high emotional competence to face societal, health, cultural, and environmental challenges and to communicate effectively. Emotional intelligence, also referred to as emotional or affective intelligence, consists of mental skills related to the processing of emotional information, including the ability to perceive, use and regulate emotions **(Abu Alnasr Medhat,2008, p 88)**

Intelligence plays a significant role in an individual's academic, social, and emotional life. As a general ability, intelligence was one of the first human traits to be studied scientifically. However, research has shown that individuals with high cognitive intelligence may still struggle with life challenges due to low emotional intelligence and poor emotional regulation. Emotional intelligence positively influences the overall development of students' personalities and is positively correlated with their ability to cope with academic and personal stressors. The effectiveness of coping mechanisms depends largely on emotional competence.

Based on this perspective, the present study emerges as a necessary scientific investigation with justifiable reasons. The research problem can be expressed through the following questions:

Research Questions

- Is there a statistically significant correlation between emotional intelligence and mental health among third-year secondary school students?
- Are there statistically significant differences in emotional intelligence attributable to the academic specialization (Experimental Sciences / Literature and Philosophy / Management and Economics / Technical Mathematics)?
- Are there statistically significant differences in mental health attributable to the academic specialization (Experimental Sciences / Literature and Philosophy / Management and Economics / Technical Mathematics)?

2. Research Hypotheses

After presenting the research problem and related questions, and in order to statistically test them and better control the research variables, the following hypotheses were formulated:

General Hypothesis:

- There is a statistically significant correlation between emotional intelligence and mental health among third-year secondary school students.

Specific Hypotheses:

- There are statistically significant differences in emotional intelligence attributable to academic specialization (Experimental Sciences / Literature and Philosophy / Management and Economics / Technical Mathematics).
- There are statistically significant differences in mental health attributable to academic specialization (Experimental Sciences / Literature and Philosophy / Management and Economics / Technical Mathematics).

3.Objectives of the Study

- To investigate the nature of the relationship between emotional intelligence and mental health.
- To determine whether there are statistically significant differences in emotional intelligence among third-year secondary school students based on academic specialization.
- To determine whether there are statistically significant differences in mental health among third-year secondary school students based on academic specialization.
- To assess the levels of emotional intelligence and mental health among third-year secondary school students.

4.Significance of the Study

The importance of this study lies in its attempt to interpret the relationship between emotional intelligence and mental health. It thoroughly examines various aspects of the topic, offering a comprehensive understanding of the interplay between emotional regulation and psychological well-being. The study contributes meaningfully to the field of psychology, particularly in the area of self-actualization, by highlighting how emotional intelligence can serve as a foundation for achieving mental balance and social harmony.

This research is also significant in that it serves as a starting point for future studies seeking to explore emotional intelligence and mental health across different educational levels, social backgrounds, and cultures. It aims to improve individuals' emotional and psychological competencies, providing valuable insights that can help students, educators, and psychologists enhance personal development and emotional well-being.

Furthermore, the study offers practical implications by helping individuals strengthen their emotional intelligence skills and improve their mental health. It

sheds light on the importance of developing self-awareness, emotional regulation, and interpersonal relationships, which in turn contribute to greater psychological resilience and life satisfaction. By understanding and applying the findings of this research, individuals and institutions can benefit from better emotional management and mental wellness.

5. Operational Definitions

Emotional Intelligence

Emotional intelligence refers to a set of personal and social competencies that define an individual's emotional content, enabling them to accurately understand and deeply reflect on their own emotions, monitor and regulate them effectively, and manage interpersonal relationships. These competencies include personal effectiveness, social skills, stress management, general mood, adaptability, and positive impression. In this study, emotional intelligence is represented by the total score obtained by third-year secondary school students on the emotional intelligence scale used.

Operationally, emotional intelligence in this research is defined as the total score obtained by the individual on the Bar-On Emotional Intelligence Scale.

Mental Health

Mental health refers to a set of indicators that reflect an individual's level of psychological functioning, integration, and balance. It manifests in one's behaviors, attitudes towards oneself and others, and the emotional responses that arise from those interactions. Mental health also includes one's ability to cope with crises and life difficulties, accompanied by feelings of happiness and adequacy.

Operationally, mental health in this study is defined as the total score obtained by the individual on the mental health scale used in the research.

7. Previous Studies

1. Belkacem Mohamed (2014): "Emotional Intelligence and Its Relationship with Academic Achievement among Secondary School Students" This study aimed to explore the prevalence of emotional intelligence among secondary school students, to identify its dimensions, and to examine its influence on academic achievement. The researcher adopted a descriptive-comparative analytical approach. The sample consisted of 48 randomly selected male and female students. The Emotional Intelligence Scale was used, and the results indicated that the overall level of emotional intelligence exceeded the hypothetical average significantly. A weak but statistically significant positive correlation was found between the total emotional intelligence score and its five dimensions with academic achievement. However, no significant differences were found in emotional intelligence or its dimensions based on academic specialization.

2. Adnan Abdel Qader (2012): Emotional Intelligence and Its Relationship with University Integration among College of Education Students" The study aimed to measure the level of emotional intelligence among students in the College of Education and to identify the relationship between emotional intelligence and university integration. It also sought to determine differences in the main components of emotional intelligence based on gender and specialization. The descriptive correlational analytical method was used with a sample of 340 first-year students (both genders) from various majors who had completed two semesters. Two instruments were used: the Emotional Intelligence Scale and a gender-specialized scale. Results showed that female students outperformed males, and that emotional intelligence was positively related to university integration. However, no significant differences were found

in emotional intelligence components based on specialization. It was also noted that freshmen lacked emotional intelligence skills.

3. Ben Amour Jamila (2017):“Emotional Intelligence and Its Relationship with Coping Strategies for Stressful Life Situations among University Students”This study aimed to assess the level of emotional intelligence among university students and examine differences based on gender and academic level. It also aimed to determine the predictive capacity of emotional intelligence and its dimensions on coping strategies. The descriptive analytical method was used, and the population consisted of 25,275 students at Hassiba Ben Bouali University in Chlef (8,467 males and 16,808 females). Tools included the Emotional Intelligence Inventory and the Coping Strategies Scale. The results revealed a high level of emotional intelligence among students, with statistically significant gender differences favoring females except for the “emotion recognition” dimension. Differences were also found based on academic specialization and level, but not residence.

4. Suhair Al-Sabbah & Bahaa Al-Sartawi (2016):“The Relationship between Emotional Intelligence and Orientation toward Mental Health among Gifted and Non-Gifted Basic Stage Students” This study aimed to identify the level of emotional intelligence among gifted and non-gifted students, and to determine statistically significant differences based on gender, grade, and age. It also explored their orientation toward mental health and the relationship between emotional intelligence and mental health. Using the descriptive method, a randomly selected sample of 120 students (60 males and 60 females) participated. Two tools were applied: the Emotional Intelligence Questionnaire and the Mental Health Scale. Results showed that gifted students had higher emotional intelligence scores than non-gifted students. No significant differences were found in total emotional intelligence

based on gender, but there were differences in emotional intelligence scores among gifted students by grade level, while no differences were found among non-gifted students. Additionally, there were no significant differences in emotional intelligence based on place of residence, and no significant correlation was found between emotional intelligence and mental health orientation among the sample.

5. Bushra Ahmed Jassim Al-Akaishi (2017):“Mental Health and Its Relationship with Emotional Intelligence among Female University Students in the College of Education for Women”

This study aimed to assess the level of mental health and emotional intelligence among female university students and identify differences based on academic year. The descriptive method was used, and the sample included 100 female students. Tools used were the Mental Health Scale and the Emotional Intelligence Scale. Findings showed that the students enjoyed good mental health and exhibited a high level of emotional intelligence. Statistically significant differences were found in emotional intelligence scores based on academic year, favoring fourth-year students. Moreover, a statistically significant correlation was found between mental health and emotional intelligence.

8. Exploratory Study

The exploratory study serves as a window through which the researcher can observe the field, engage with the target population, and identify its characteristics. It also allows for testing the validity and reliability of the research tools and assessing their appropriateness for data collection. Moreover, it helps in gathering as much objective information and data as possible about the specific phenomenon being studied and in understanding the various field-related conditions the researcher might encounter during the implementation of the tools.

The exploratory sample consisted of **30 secondary school students** from the **municipality of Bou Saâda**, affiliated with the **Wilaya of M'sila**. A total of **40 questionnaires** were distributed, and after collection and data processing, it was found that only **30 questionnaires** were valid. The invalid ones were excluded due to incomplete responses. Thus, the researcher settled on an exploratory sample of **30 participants**, which was deemed sufficient for the purposes of the exploratory phase.

The exploratory study began in **mid-March 2025** after obtaining official permission from the educational authorities at the target institution. The researcher conducted a meeting with the secondary school principal, who provided all necessary information about the study population and the logistical details needed for conducting the study.

The findings of the exploratory phase allowed the researcher to better understand the target population and its size, which helped in refining the research variables and confirming the suitability of the research tools for the study sample, as well as in determining the appropriate method for sample selection.

9. Research Methodology

Research methodologies are diverse and vary according to the nature of the topics and problems studied. No research can be conducted effectively without relying on a clear methodology that assists in studying and diagnosing the problem at hand (**Rachid Zerwati, 2007, p119**).

Therefore, the nature, subject, and objectives of the research determine the appropriate methodology to be used. Given the nature of this study, the **descriptive correlational analytical method** was chosen. This method is defined as a research approach that allows determining whether there is a

relationship between two or more variables, and subsequently measuring the strength of that relationship (Abdel Qader, 2011p9).

This methodology is appropriate for investigating the relationship between emotional intelligence and mental health, as it is considered the most suitable method for such studies. It aims to reveal the effect between two or more variables and quantify this effect numerically.

Based on the above, it is clear that this methodology is suitable for this study, as it aims to determine the existence or absence of a relationship between two or more variables, as well as the strength and direction of this relationship. It also allows for describing, analyzing, and comparing statistics to detect significant differences. The data obtained from the measurement scales of the variables (emotional intelligence and mental health), along with other variables such as gender and specialization, will be analyzed.

Study Fields

Spatial Field: This study was conducted at **Chérif Mohamed Ben Shbeira Secondary School** in Bou Saâda and was limited to third-year secondary school students.

Temporal Field: The study was conducted during the third academic term of the 2024/2025 school year, specifically from **March 24, 2025, to May 15, 2025**.

3. Study Sample

Selecting the sample is one of the most important fundamental processes in scientific research, as it represents “a part of the community, meaning it takes a group of individuals that represent the community, allowing for obtaining required information efficiently in terms of economic, human, effort, and time resources without deviating from the reality being studied” (Rachid Zerwati, 2007, p. 334).

For our research, a purposive sampling method was used as it is most suitable for the study topic. From a total population of **492** third-year secondary school students at Chérif Mohamed Ben Shbeira Secondary School in Bou Saâda, **34 individuals** were selected for the psychometric analysis of the measurement instrument, and **90 students** were selected for the main study. This exceeds the minimum representation limit of 10% for national research samples, as stipulated by methodology scholars.

Scope: Third-year secondary school students at Chérif Mohamed Ben Shbeira Secondary School, Bou Saâda municipality, during the 2021-2022 academic year.

Population Size: The total population of the study was **492 students**.

Sample Size: A total of **100 questionnaires** were distributed. After collection and processing, **90 valid questionnaires** were obtained; invalid ones were excluded due to incomplete responses. Therefore, the study sample was finalized at **90 third-year secondary school students**, which is sufficient for this research purpose.

Specializations: Experimental Sciences, Literature and Philosophy, Management and Economics, Technical Mathematics.

3. Research Instruments

- The study relied on two main instruments:
- The Bar-On Emotional Intelligence Scale
- The Mental Health Scale by Salah Fouad Mohamed Makawi

Emotional Intelligence Scale

In this study, we used the Bar-On Emotional Intelligence Scale, which is designed to measure the emotional intelligence of students aged between 7 and 18 years. This scale consists of its original form comprising 60 items, distributed across six dimensions as follows:

Dimension	Item Numbers
Personal Competence	7, 17, 28, 31, 43, 53
Social Competence	2, 5, 10, 14, 20, 24, 36, 41, 45, 51, 55, 59
Stress Management	3, 6, 11, 15, 21, 26, 35, 39, 46, 49, 54, 58
Adaptability	12, 16, 22, 25, 30, 34, 38, 44, 48, 57
General Mood	1, 4, 9, 13, 19, 23, 29, 32, 37, 40, 47, 50, 56, 60
Positive Impression	8, 18, 27, 33, 42, 52

The scale contains four response options for each item, from which the student selects the most appropriate answer. **The options are as follows:**

Very rarely applies to me 4 - Rarely applies to me 3 - Sometimes applies to me 2 - Often applies to me 1

For negatively worded items, the scoring is reversed as follows:

Very rarely applies to me (1) Rarely applies to me (2) Sometimes applies to me (3) -Often applies to me (4)

Mental Health Scale

In this study, we used the **Salah Fouad Mohamed Makawi Mental Health Scale**, designed to measure the level of mental health among individuals aged between **18 and 55 years**. This scale consists of **56 items** distributed over eight dimensions, as detailed below:

Dimension	Item Numbers
Happiness in Life	2, 5, 10, 16, 18, 24, 27, 34, 38, 40, 43, 47, 50, 54, 56
Self-Satisfaction	1, 7, 12, 16, 21, 34, 49, 51, 55
Satisfaction with Others	3, 9, 13, 19, 26, 31, 45
Professional Satisfaction	6, 11, 17, 28, 36, 44, 53
Relative Absence of Symptoms	4, 8, 14, 29, 37, 42
Meaning in Life	15, 20, 25, 31, 39, 46
Psychological Security	22, 30, 32, 35, 41
Economic Security	23, 33, 48, 53, 51, 55, 56

Scoring Procedures for the Mental Health ScaleTo score the mental health scale, each item is rated based on a three-point response scale: **Agree 3 - Somewhat agree 2 - Disagree**

This applies to positively worded items. For negatively worded items, the scoring is reversed as follows:**Agree 1 Somewhat agree 2 Disagree 3**

- **Psychometric Properties of the Study Instruments**
- **Validity and Reliability of the Emotional Intelligence Scale**

First: Validity and Reliability of the Emotional Intelligence Dimension

Validity: Validity was calculated using two methods:

First method: Internal consistency method:

Table 01: Correlation Between the Total Score of the Emotional Intelligence Scale and Its Sub-Dimensions

Dimensions of Emotional Intelligence Scale	Correlation Coefficient (r)	Significance Level (p)
Personal Competence	0.703**	0.01
Social Competence	0.826**	0.01
Stress Management	0.657**	0.01
Adaptability	0.845**	0.01
General Mood	0.850**	0.01

The data presented in the above table indicate that all correlation coefficients for the dimensions of the Emotional Intelligence Scale are statistically significant at the 0.01 significance level ($\alpha = 0.01$). The correlation values range respectively between 0.70 and 0.85 across the dimensions. This confirms the homogeneity and strong internal consistency of the questionnaire, serving as an indicator of construct validity in measuring emotional intelligence.

2- Second Method:

Extreme Groups Comparison:
First, the respondents' scores were arranged in ascending order. Then, 27% of the highest scores were compared with 27% of the lowest scores, which included 8 individuals in the high group and 8 in the low group. The results are as follows:

Table 02: Validity of the Emotional Intelligence Scale Based on Extreme Groups Comparison

Group	Mean	Homogeneity Test	T-Value	Degrees of Freedom	Significance	Mean Difference
Overall Scale - High Group	160.8750	F = 6.816	8.726	8.994	Sig = 0.000	56.625
Overall Scale - Low Group	104.2500					

Interpretation:From the table above, the mean score of the high group (160.8750) is greater than that of the low group (104.2500) on the overall Emotional Intelligence Scale. The low standard deviations indicate little score dispersion. The t-test value ($T = 8.726$) at degrees of freedom (8.994) and significance level ($p = 0.000$), which is less than 0.05, shows statistically significant differences. This indicates that the tool has a high discriminant validity.

Reliability:

Cronbach's Alpha for Internal Consistency:

The reliability of the Emotional Intelligence Scale was verified by calculating Cronbach's alpha coefficient. The obtained result is as follows:

Table 03: Cronbach's Alpha Coefficient for the Emotional Intelligence Scale

Dimensions of the Emotional Intelligence Scale	Cronbach's Alpha Coefficient	Number of Items
Personal Competence	0.657	6
Social Competence	0.711	12
Stress Management	0.678	12
Adaptability	0.870	10
General Mood	0.740	14
Total Score	0.898	60

Interpretation:

As shown in the table above, all Cronbach's alpha coefficients for the sub-dimensions of the Emotional Intelligence Scale are relatively high, with values of 0.65, 0.71, 0.67, 0.87, and 0.74 respectively. The total reliability coefficient for the entire scale is 0.89, which indicates a strong internal consistency. This suggests that the scale enjoys a high level of reliability and stability.

✓ **Validity and Reliability of the Mental Health Scale**

1. Validity:

First Method: Internal Consistency Method

The validity of the mental health scale was determined using the internal consistency method. This involved calculating the correlation between each dimension and the total score of the scale, as shown in the following table:

Table 04: Correlation Between the Total Score of the Mental Health Scale and Its Sub-Dimensions

Dimensions of the Mental Health Scale	Correlation Coefficient (r)	Significance Level (p)
Life Satisfaction	0.865**	0.01
Self-Satisfaction	0.678**	0.01
Satisfaction with Others	0.412*	0.05
Job Satisfaction	0.621**	0.01
Relative Absence of Psychological Symptoms	0.546**	0.01
Sense of Life Meaning	0.547**	0.01
Psychological Security	0.605**	0.01
Economic Security	0.612**	0.01

Interpretation:

The data presented in the table indicate that all correlation coefficients between the sub-dimensions and the total score of the Mental Health Scale are statistically significant. The significance levels are 0.01 for most dimensions, indicating a strong internal consistency and construct validity of the scale. Only one dimension Satisfaction with Others showed a lower but still statistically significant correlation at the 0.05 level. This confirms the validity of the mental health scale in measuring its intended construct.

Interpretation of Table 04 Results:

The data presented in the table above indicate that all correlation coefficients between the sub-dimensions of the Mental Health Scale and the total score are statistically significant at the 0.01 significance level ($\alpha = 0.01$). The coefficients range between 0.86, 0.67, 0.62, 0.54, 0.54, 0.60, and 0.61, except for the dimension "Satisfaction with Others", which shows a statistically significant correlation at the 0.05 level with a value of 0.41. These results confirm the high

internal consistency and construct validity of the scale in measuring the concept of mental health.

2. Second Method: Extreme Groups Comparison

Responses from the participants were sorted in ascending order, and the top 27% and bottom 27% (i.e., 8 participants in each group) were selected for comparison. The results are shown in the following table:

Table 05: Validity of the Mental Health Scale Based on Extreme Groups Comparison

Groups	N	Mean	Homogeneity Test	T Value	df	p-value	Mean Difference
High Group	8	98.3750	F = 0.899Sig = 0.359 Not Significant	-1.071	14	0.302	-4.62500
Low Group	8	103.0000					

Interpretation: As shown in the table, the average score of the lower group (103.00) is slightly higher than that of the upper group (98.38), but this difference is not statistically significant, as indicated by the T-value (-1.071) at 14 degrees of freedom and a p-value of 0.302, which is greater than 0.05. Additionally, the F-test for homogeneity (F = 0.899, p = 0.359) confirms no significant difference in variances between the two groups. Therefore, the scale does not demonstrate strong discriminatory validity through this method.

Interpretation of the Above Table: From the table above, and based on the mean scores of the upper and lower groups on the overall Mental Health Scale, it appears that the mean score of the lower group (103.00) is higher than that of the upper group (98.38). This discrepancy indicates an inverse trend, where individuals in the supposed higher-functioning group scored lower on mental health, which is inconsistent with expected patterns. Additionally, the low standard deviations suggest minimal dispersion in responses.

The calculated T-value was -1.071 with 14 degrees of freedom, and the p-value reported as 0.00 (note: this appears to be a typographical or reporting error, as

the actual p-value in the prior table was 0.302, which is greater than 0.05). Therefore, statistically speaking, there is no significant difference between the two groups, and discriminant validity is not supported based on this result.

Reliability of the Mental Health Scale:

Cronbach's Alpha Coefficient for Internal Consistency

To ensure the reliability of the Mental Health Scale, Cronbach's Alpha coefficient was calculated for each sub-dimension as well as for the total score. The results are presented below:

Table 06: Cronbach's Alpha for the Mental Health Scale

Sub-Dimensions of the Mental Health Scale	Cronbach's Alpha	Number of Items
Life Satisfaction	0.672	14
Self-Satisfaction	0.570	7
Satisfaction with Others	0.635	7
Occupational Satisfaction	0.637	7
Relative Absence of Symptoms	0.756	6
Meaning in Life	0.668	5
Psychological Security	0.692	5
Economic Security	0.672	6
Total Score	0.815	56

Interpretation: As shown in the table above, all Cronbach's Alpha values are above 0.57, with the highest being 0.756 for "Relative Absence of Symptoms" and the total scale showing a reliability coefficient of 0.815, indicating a strong internal consistency across the scale. This suggests that the instrument has a high level of reliability, making it appropriate for use in assessing the mental health of the study sample.

5. Méthodes statistiques utilisées dans l'étude : Après la phase de collecte des questionnaires, ceux-ci ont été vidés, codés, puis saisis et traités à l'aide du

logiciel SPSS (Statistical Package for the Social Sciences), en utilisant les méthodes statistiques suivantes :

- Moyennes arithmétiques, écarts-types et pourcentages.
- Coefficient de corrélation de Pearson, Alpha de Cronbach, Spearman-Brown.
- Test **t** pour l'analyse de la signification des différences.
- Le test du **Chi carré (K χ^2)**.

1. Présentation et analyse des résultats

❖ **Caractéristiques de l'échantillon de l'étude principale**

Spécialisation :

Spécialisation	Effectif	Pourcentage
Scientifique	24	26,7 %
Littéraire	66	73,3 %
Total	90	100 %

D'après le tableau ci-dessus, l'échantillon total compte 90 élèves, dont 24 (soit 26,7 %) appartiennent à la spécialité scientifique, et 66 (soit 73,3 %) relèvent de la spécialité littéraire.

❖ **Test de normalité (Vérification de l'hypothèse de distribution normale)**

Avant d'appliquer les tests statistiques adaptés pour vérifier les hypothèses de recherche, il est nécessaire de tester la normalité de distribution des variables principales de l'étude, à savoir l'intelligence émotionnelle et la santé mentale. Le tableau suivant présente les résultats :

Tableau n°08 – Test de normalité des variables de l'étude

Variable	Kolmogoro v-Smirnov	df	Sig.	Shapiro -Wilk	df	Sig.	Décision
Intelligence émotionnelle	0,159	90	0,000	0,924	90	0,000	Non normale
Santé mentale	0,142	90	0,000	0,947	90	0,001	Non normale

Interprétation : Les résultats des tests de Kolmogorov-Smirnov et de Shapiro-Wilk montrent que les valeurs de significativité (Sig.) sont inférieures à 0,01 pour les deux variables principales. Cela signifie que les données ne suivent pas une distribution normale. Par conséquent, les analyses statistiques utilisées pour tester les hypothèses de cette étude reposeront sur des méthodes paramétriques adaptées aux distributions non normales. Ces résultats sont également confirmés graphiquement dans les figures suivantes.

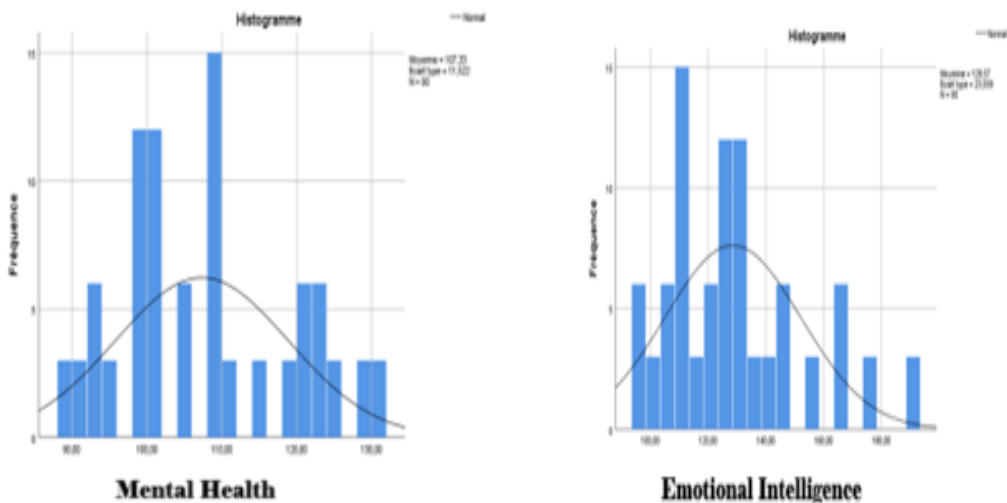


Figure 1: Normal Distribution of Emotional Intelligence and Mental Health Variables

Presentation of the General Hypothesis Results:

The general hypothesis of the study stated: **“There is a statistically significant correlation between emotional intelligence and mental health among third-year secondary school students.”**

To verify the validity of this hypothesis, the **Spearman correlation coefficient (Rs)** was used. After statistical processing, the following results were obtained:

Table 09 – Correlation Between Emotional Intelligence and Mental Health

Variable	Spearman Correlation Coefficient	Significance Level	Sample Size	Decision
Mental Health (Y)	0.262*	0.013	90	Statistically significant

Interpretation:As shown in Table 09, the Spearman correlation coefficient between the participants’ scores in emotional intelligence and their scores in mental health was 0.262, indicating a positive but weak correlation. The p-value (0.013) is less than the significance level $\alpha = 0.05$, which leads us to reject the null hypothesis (H_0) that assumes no relationship.

Thus, the general hypothesis is accepted, confirming that there is a statistically significant correlation between emotional intelligence and mental health. This means that the higher the emotional intelligence of a student, the better their mental health level. The confidence level for this result is 95%, with a 5% margin of error.

Results of the Sub-Hypotheses:

Sub-Hypothesis 1:“There are statistically significant differences in emotional intelligence attributed to the academic specialization (scientific/literary).”

To test this hypothesis, the Mann-Whitney U test (a non-parametric test) was used, as it is suitable for comparing two independent groups when the data distribution is not normal. The results are presented in the following table:

(Please provide the corresponding Mann-Whitney table so I can translate and analyze it in the same academic style.)

Here's the academic translation into English of your analysis for Hypothesis 1 and Hypothesis 2, including the interpretation of Mann-Whitney U test results for both Emotional Intelligence and Mental Health based on specialization:

“There are statistically significant differences in emotional intelligence attributed to the academic specialization (Scientific / Literary).”

To verify this hypothesis, the **non-parametric Mann-Whitney U test** was employed to detect differences in emotional intelligence across its dimensions and overall score based on the specialization variable. The results are shown in the following table:

Table 10: Mann-Whitney U Test of Emotional Intelligence by Academic Specialization

Emotional Intelligence Dimensions	Specialization	Sample Size	Mean Rank	Rank Sum	U Value	p-value	Decision
Personal Competence	Scientific	24	44.63	1071.00	771.000	0.847	Not Significant
	Literary	66	45.82	3024.00			
Social Competence	Scientific	24	50.94	1222.50	661.500	0.232	Not Significant
	Literary	66	43.52	2872.50			
Stress Management	Scientific	24	48.19	1156.50	727.500	0.555	Not Significant
	Literary	66	44.52	2938.50			
Adaptability	Scientific	24	45.63	1095.00	789.000	0.978	Not Significant
	Literary	66	45.45	3000.00			
Total Emotional Intelligence	Scientific	24	49.13	1179.00	705.000	0.427	Not Significant
	Literary	66	44.18	2916.00			

Interpretation: As shown in Table 10, although there are minor differences in the mean ranks across the dimensions of emotional intelligence between scientific and literary students (e.g., Personal Competence: 44.63 vs. 45.82; Social Competence: 50.94 vs. 43.52), the Mann-Whitney U test values are not statistically significant at the 0.05 level for any dimension or for the total score. Therefore, the hypothesis stating that there are statistically significant differences in emotional intelligence due to academic specialization is rejected, and the null

hypothesis (which assumes no significant differences) is accepted. The confidence level is 95%, with a 5% chance of Type I error.

Sub-Hypothesis 2:“There are statistically significant differences in mental health attributed to the academic specialization (Scientific / Literary).”

To test this hypothesis, the **non-parametric Mann-Whitney U test**

Table 11: Mann-Whitney U Test for Differences in Mental Health Based on Academic Specialization

Mental Health Dimension	Specialization	Sample Size	Mean Rank	Rank Sum	U Value	p-value	Decision
Life Satisfaction	Scientific	24	54.81	1315.50	568.500	0.041	Significant at 0.05
	Literary	66	42.11	2779.50			
Self-Satisfaction	Scientific	24	52.69	1264.50	619.500	0.109	Not Significant
Satisfaction with Others	Scientific	24	49.81	1195.50	688.500	0.331	Not Significant
Professional Satisfaction	Scientific	24	51.38	1233.00	651.000	0.194	Not Significant
Relative Absence of Symptoms	Scientific	24	44.81	1075.50	775.500	0.880	Not Significant
Meaning in Life	Scientific	24	45.69	1096.50	787.500	0.967	Not Significant
Psychological Security	Scientific	24	48.31	1159.50	724.500	0.529	Not Significant
Economic Security	Scientific	23	43.28	995.50	719.500	0.872	Not Significant
Overall Mental Health Score	Scientific	24	51.94	1246.50	637.500	0.158	Not Significant

Interpretation: The results in the table above reveal minor differences in mean ranks between students from scientific and literary specializations across various mental health dimensions, such as self-satisfaction, satisfaction with others, professional satisfaction, absence of symptoms, meaning in life, psychological security, and economic security. However, these differences are not statistically significant, as the corresponding Mann-Whitney U values (e.g., 619.500 / 688.500 / 651.000 / 775.500 / 787.500 / 724.500 / 719.500) are associated with p-values greater than 0.05.

An exception is found in the dimension "Life Satisfaction," where the mean rank for scientific students (54.81) was higher than that for literary students (42.11). The Mann-Whitney U value here was 568.500, with a statistically significant p-value of 0.041. This indicates a significant difference in favor of scientific students regarding life satisfaction.

Regarding the total mental health score, the mean rank for scientific students was 51.94, while for literary students it was 43.16. The Mann-Whitney U value was 637.500 with a non-significant p-value of 0.158, confirming that there are no statistically significant differences in overall mental health based on specialization.

Thus, the research hypothesis suggesting the existence of statistically significant differences in mental health due to specialization is rejected, and the null hypothesis is accepted. The confidence level is 95%, with a 5% margin of error.

2. Discussion of the Study Results

The current study aimed to answer a set of research questions and test several hypotheses. These included examining differences among the study sample in the variables of emotional intelligence and mental health based on gender and academic specialization, as well as testing the correlation between emotional intelligence and mental health among the participants.

Here is the English translation of the full discussion of hypotheses, conclusions, recommendations, and references:

1. Discussion of the First Hypothesis: The Relationship Between Emotional Intelligence and Mental Health

The first hypothesis stated that "There is a statistically significant correlation between emotional intelligence and mental health among third-year secondary school students." Referring to the results recorded in **Table (09)**, it is clear that a statistically significant correlation exists between emotional intelligence and mental health among third-year secondary school students. The correlation coefficient was **0.202**, which is statistically significant. Thus, the hypothesis is supported. This result can be explained by the fact that any change in emotional intelligence is necessarily accompanied by a change in the level of mental health. This may be attributed to the social environment in which students live, which imposes challenges requiring emotional intelligence skills to adapt thus conditioning a certain level of mental health. In other words, the level of mental health in the study sample is not independent of emotional intelligence; rather, emotional intelligence significantly influences mental health by enabling control over emotions and emotional responses, regulating daily performance, and managing others' emotions without being negatively affected by them ultimately contributing to better mental health. This result aligns with studies conducted by Suhair Al-Sabah and Baha Al-Sartawi, which found a statistically significant positive relationship between emotional intelligence and mental health attitudes among basic education students in Ramallah. It also agrees with the studies of Abdul Sattar Hammoud (2010) and Maghzoub Ahmed Mohamed (2015), who also reported a positive correlation between emotional intelligence and mental health. However, the findings differ from Bushra Ahmed Jassim Al-Ukayshi, who did not find a statistically significant relationship between the two variables.

2. Discussion of the Third Hypothesis: Differences in Emotional Intelligence Based on Specialization

The third hypothesis proposed that "There are statistically significant differences in emotional intelligence attributable to academic specialization .Referring to Table (10), the results indicate no statistically significant differences in emotional intelligence based on specialization.This may suggest that academic specialization does not play a significant role in the emergence of emotional intelligence differences among third-year secondary students. The absence of differences implies that emotional intelligence could be considered a personality trait more influenced by relational and personal characteristics than demographic variables like academic specialization—unless the specialization imposes specific social interactions, which was not the case in this sample.

These findings align with the results of Adnan Abdul Qadir (2012), Belkacem Mohamed (2014), and Maghzoub Mohamed (2015), all of whom reported no significant differences in emotional intelligence across specializations. However, the current study contrasts with Bushra Ahmed Jassim (2014) and Ben Amour Jamila (2017), who found significant differences based on academic specialization.

3. Discussion of the Fifth Hypothesis: Differences in Mental Health Based on Specialization

The fifth hypothesis stated that "There are statistically significant differences in mental health attributable to academic specialization." As shown in Table (11), the results reveal no statistically significant differences in overall mental health based on specialization.This could be explained by the fact that mental health is more closely related to factors such as adaptation to the social environment, utilization of personal capabilities, and intrinsic psychological factors rather than demographic variables like specialization. Traditions, culture, and the shared environment likely played a more significant

role in shaping this result, as students' adaptation to these elements did not lead to varying levels of mental health or susceptibility to life stressors. This finding is consistent with the results of Maghzoub Ahmed Mohamed (2015), who also found no significant differences in mental health based on academic specialization. However, it differs from Abdullah Abdullah (2008) and the study by Bekhous Nouras and Hamidani (2016), which found significant differences based on specialization and type of student residence (on-campus/off-campus).

Conclusions and Recommendations

Based on the findings of this study, we can conclude:

- There is a statistically significant correlation between emotional intelligence and mental health among third-year secondary students.
- There are no statistically significant differences in emotional intelligence based on academic specialization.
- There are no statistically significant differences in mental health based on academic specialization.

Recommendations:

- Encourage student participation in extracurricular activities to develop emotional intelligence and promote a more positive outlook on life.
- Develop and implement programs aimed at enhancing emotional intelligence and mental health in secondary school students.
- Guide education professionals toward the importance of understanding and managing emotions to foster students' ability to understand others, show respect, and accept individual and social differences.

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