

Developing the Life Quality Scale and Verifying its Psychometric Properties Among Inclusive Students in Kingdom of Saudi Arabia

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ABSTRACT This study aimed to develop the life quality scale and verify its psychometric properties among students enrolled in inclusive schools in the Kingdom of Saudi Arabia. To achieve the study objectives, the life quality scale was developed after reviewing previous studies and related scales, such as the World Health Organisation Quality of Life Brief Scale, Cummins Scale, and Mansy Scale. It consisted of 40 items, distributed into 5 domains. The study sample consisted of 69 male and female inclusive students. The study results showed that Cronbach's alpha value was 0.94, and the reliability coefficients were 0.89 for the scale as whole, which are considered high values. This indicates that the scale has high validity and reliability coefficients. The study results also indicated that the level of life quality among students was moderate, and there were no differences in the level of life quality according to the gender variable.

INTRODUCTION

Since ancient times, humans have sought to find different ways to provide means of luxury and facilitate their daily life, with the aim of improving its quality and providing the best capabilities that make their life easier. From this standpoint, many researchers and scientists have been interested in the concept of life quality and how to measure its level, trying to find all the ways that guarantee a good quality of life for a human in the light of the different circumstances that they may go through.

Studies on quality of life were limited to the fields of medicine, public health and psychiatry, but with the tremendous development, interest began to be placed on improving quality of life in various aspects, and the concept of quality of life became one of the most important concepts in positive psychology, and its importance increased due to its impact on well-being, happiness, academic achievement and satisfaction with life as a whole (Al-Ghaili and Othaman 2026).

The term 'quality of life' has recently received the attention of psychologists and mental health scientists, as it can be determined through an individual's negative or positive behaviours, experiences and expertise, wherein negative ones lead to decreasing the level of self-confidence, self-respect and self-appreciation, which negatively affects the individual's satisfaction with the life, while positive ones lead to increasing the level of hope and optimism among the individuals, which leads to stimulating their energies and abilities to work and be productive, and feeling satisfied with themselves and their life (Kidd 2008).

Many researchers and scholars have addressed the concept of life quality, whereas the World Health Organisation (WHO 2004) defined it as, "an individual's perceptions of their positions in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns". Hrtani (2014) defined it as, "an individu-

al's feeling of satisfaction and happiness through enjoying good physical and psychological health, establishing continuous family relationships and successful friendships". Jenkinson (2020) defined it as, "a complex and multidimensional concept (personal, economic, social, health, etc.), and achieving any progress in the life quality of the individual is linked to various elements that indicate the individual's interaction with the family, the community and the surrounding environment".

Quality of life is linked to the individual's ability to face daily difficulties and problems, try to find appropriate solutions, make the right decisions, and be able to live with these difficulties as a normal individual who is almost free of problems and psychological illnesses. Therefore, a good quality of life may be achieved by satisfying health, psychological, biological, social, and material needs, and the ability to deal with psychological stressors (Higgs 2007).

Quality of life is one of the important indicators of the effectiveness of services provided to people with disabilities and those inclusive with ordinary students, and the individual's satisfaction, sense of happiness, and desire for life. Therefore, disability greatly affects the concept of quality of life (Livneh 2016), as people with disabilities face major challenges in achieving the required well-being, social and economic independence, and a sense of life satisfaction (Smart et al. 2012).

Improving the quality of life has been linked to the factors that influence it, as the social, psychological and material support that people with disabilities receive clearly and significantly affects their quality of life, through participating in daily life activities, and acquiring special skills to reduce the impact of disability on their psychological, social and academic adaptation (Langer et al. 2019). Friedman and Rizzolo (2018) believe that there are many factors that help improving the quality of life for people with disabilities, such as providing them with permanent care, forming friendships and relationships with others, and support provided by the family, in addition, rehabilitation and support centers play a major role in improving their mental health and quality of life.

WHO (2004) has reached several procedures and methods to improve the quality of life for

people with disabilities, which include integrating people with disabilities into society and involving them in public activities, so that they do not feel frustrated and hopeless, as well as cooperating the family and society together to make their integration process successful. Many researchers and scientists have sought to develop standards and methods to measure the quality of life level among individuals, as WHO developed the initial form of the quality of life scale in 1996, then the developed and abbreviated version (WHOQOL-BREF) was issued in 2004, which includes four domains, namely, physical domain, psychological domain, social domain and environmental domain (WHO 2004). Globally, this scale has been used in many studies to measure the level of quality of life among individuals.

Most countries have been interested in the concept of quality of life, and how to improve for their individuals, which has positive effects on all psychological, social and economic aspects. One of the most important Arab countries that has been interested in quality of life is the Kingdom of Saudi Arabia, which sought through the Kingdom's Vision 2030 to make the Kingdom the best destination for living for both citizens and residents alike. In 2018, the Quality of Life Program was launched, as one of the most prominent programs of the vision directly related to the goals of sustainable development (Kingdom's Vision 2030 2018).

Many studies have addressed the quality of life scale and its development, such as the study of Mohamed (2011), which was conducted in Libya, wherein it aimed to verify the standard properties of the Quality of Life Percentile scale (WHOQOL-100), which was issued by WHO. It was applied to 150 individuals from Libyan society, including 100 healthy individuals and 50 cancer patients. The study results showed that the scale has good standard properties, and the indicators of validity of the correlation with the criterion and discriminant validity were satisfactory and significant.

Yahya (2016) conducted a study in Algeria that aimed to validate the quality of life scale of Kazem and Mansi among university students. To achieve the study objectives, the psychometric properties of the scale were verified and applied to a sample of 847 male and female stu-

dents. The study results showed that the scale had a high level of effectiveness, the validity and reliability indicators were acceptable and satisfactory.

Hamza and Hussein (2018) conducted a study that aimed to validate the abbreviated quality of life scale (WHOQOL-BREF), which was issued by WHO. It was applied to samples from the Algerian environment, including 200 individuals. The study results showed that the discriminant validity coefficients were high, with a value of $t = 25.26$, while the internal consistency validity coefficients ranged between 0.71-0.84, the Cronbach's alpha reliability coefficient was 0.88, and the split-half reliability coefficient was 0.82, which are considered high values and indicating that the scale is characterised by high validity and reliability coefficients.

Paskarini et al. (2019) conducted a study in Indonesia that aimed to reveal the relationship between independence and the quality of life among workers with disabilities resulting from an occupational accident. To achieve the study objectives, the quality of life scale and the independence scale were used. The study sample consisted of 182 people who had disabilities as a result of occupational accidents. The study results showed that the level of quality of life was moderate, while studying the impact of independence on the quality of life.

Algholeh (2019) conducted a study that aimed to evaluate the life quality level among students with disabilities at King Abdulaziz University in Saudi Arabia and the University of Jordan. To achieve the study objectives, the quality of life scale was used. The study sample consisted of 160 students with disabilities from the two universities. The study results showed that students at King Abdulaziz University had a moderate level of life quality, while their counterparts at the University of Jordan had a higher level of life quality. The students' evaluations differed according to the gender variable (males are higher than females), and the nature of the disability (visual impairment is higher than hearing impairment, freedom disabilities, and learning difficulties), and there is no difference according to the variable of years of study or level of study.

Al-Yami (2021) conducted a study in Saudi Arabia that aimed to reveal the psychometric properties of the abbreviated quality of life scale

(WHOQOL-BREF), which was issued by WHO. To achieve the study objectives, the Arabic version of scale which was developed by Abed Alkhalq (2008) was applied to a sample of 500 male and female students from Najran University. The study results showed that the scale has good internal and constructive validity and consistency, and it has high discrimination capabilities. Moreover, all reliability indicators using Cronbach's alpha coefficients and the split-half method were high, and there were no differences in the quality of life level according to the gender variable.

Al-Abedallat (2022) conducted a study that aimed to identify the quality of life among workers with disabilities in Jordan and its relationship to some variables. To achieve the study objectives, a quality of life scale was developed, consisting of 26 items. The study sample consisted of 154 working individuals with disabilities. The study results showed that the quality of life level among workers was moderate, and there were differences in the quality of life level according to the gender variable, in favour of females, according to the age variable, in favour of the age group of less than 30 years, according to the educational qualification variable, in favour of the category of secondary school and below, and according to the age of injury variable, in favour of the age group of 6-15 years, and more than 16 years.

Al-Khamisi (2022) conducted a study in Yemen that aimed to validate the abbreviated quality of life scale (WHOQOL-BREF), which was issued by WHO. It was applied to a sample of Sana'a University students. To achieve the study objectives, the abbreviated quality of life scale which was translated by Abed Alkhalq (2008) was applied. The study sample consisted of 400 male and female students. The study results showed that the discriminant validity coefficients were high, as the internal consistency validity coefficients ranged between 0.302-0.515, while the Cronbach's alpha reliability coefficient for the scale was 0.880, and the reliability coefficient by the retest method was 0.886, which are considered high values and indicating that the scale is characterised by high validity and reliability coefficients. The results also indicated that there were no differences in the total score of the scale between males and females.

Ahmed et al. (2023) conducted a study in Egypt that aimed to prepare a quality of life scale for secondary school students, and verify its psychometric properties. The quality of life scale was applied to a sample of 159 male and female secondary school students, whose ages ranged between 17-18 years. The psychometric properties of the scale were verified by calculating internal consistency and the re-test method. The study results showed that the scale had a good degree of validity and internal consistency and a high degree of reliability, this indicates the validity of the scale in measuring the quality of life level among students.

Al-Attar et al. (2024) conducted a study aimed at developing a psychological quality of life scale for children with physical disabilities and verifying its psychometric properties. The study sample consisted of (130) children with physical disabilities, (64) males and (66) females, whose ages ranged between (9-12) years, with a mean age of (10.56) years and a standard deviation of (0.980). The psychological quality of life scale, which consisted of (40) items, was administered, and the psychometric efficiency of the scale was verified in terms of validity, reliability, and internal consistency. The results indicated that the psychological quality of life scale had high validity and reliability; therefore, it is suitable for application.

Abbas and Henni (2025) conducted a study aimed to prepare a scale for the quality of school life among first-year secondary school students in the district of Achaacha, Mostaganem Province (Algeria), for the 2017/2018 academic year, and to identify its psychometric properties. To achieve the research objectives, the scale was applied to a survey sample of 306 male and female students from the first year of secondary school, representing 30 percent of the study population, which was estimated at 1020. The appropriate statistical methods were used for the Statistical Package for Social Sciences (SPSS) version 22, to reveal the factorial structure of the scale through exploratory factor analysis using the basic components method according to orthogonal rotation using the varimax method and a latent root for a Kaiser Permanente criterion greater than one, then verifying the psychometric properties of the scale using factor analysis to determine factorial validity. The

internal consistency validity was calculated, while the stability of the scale was verified by Cronbach's alpha coefficient and the split-half method. The study results showed extracting six basic factors for the scale that explained (75%) of the total variance of the factors, and the scale enjoyed a high degree of validity and stability, indicating the strength and validity of the scale in measuring the level of quality of school life among the study sample.

Nasser and Adawi (2026) conducted a study aimed to standardize the Psychological Quality of Life Scale on a sample of secondary school students in the Galilee region and to examine its validity and reliability indicators in order to provide an appropriate instrument for use in the local Arab educational context. The study adopted a descriptive field-based approach. The initial version of the scale was administered to a pilot sample to ensure the clarity of the items and their cultural and linguistic appropriateness, and then the revised version was used to examine its psychometric properties. The scale consisted of 21 items distributed across six dimensions: self-acceptance and happiness, social relationships, autonomy, environmental adjustment and health, purpose in life, and personal growth and development. To verify validity, the instrument was reviewed by 10 expert judges, and item-total as well as item-domain correlation coefficients were calculated. The results showed appropriate evidence of content validity and construct validity. Reliability was calculated using Cronbach's alpha, split-half reliability, and the Spearman-Brown formula. The overall reliability coefficient reached 0.87, indicating a good level of internal consistency. The findings also revealed that most dimensions demonstrated acceptable reliability levels, whereas the environmental adjustment and health dimension showed weaker reliability under the split-half method, which led to relying on Cronbach's alpha for estimating its stability.

Al-Ghaili and Othaman (2026) conducted a study aimed to examine the psychometric properties of the Yemeni version of World Health Organization Quality of Life 100-item scale (WHOQOL-100) for Yemeni university students in Sana'a. A descriptive research design was adopted, utilizing the WHOQOL-100 scale that was translated into Arabic and adapted for the

Yemeni context. The scale was administered to a sample of (1,004) students from public and private universities in Sana'a during the academic year 2022/2023. The study found that the Yemeni version of the WHOQOL-100 showed strong psychometric properties, including content and construct validity, and high reliability. Content validity was supported by over 80 percent expert agreement, with four culturally inappropriate items removed. Construct validity was confirmed through internal consistency and discriminant validity. Reliability was high, with Cronbach's alpha at (0.96) for the general domain, (0.81-0.93) for main domains, and (0.59-0.90) for subdomains. The adapted Yemeni version included (96) items. The results indicated that the QoL level was higher than medium among university students. The highest levels were autonomy and religious beliefs, while the public relations and the environmental domains were the lowest ones.

By reviewing previous studies, it is clear that the objectives and the goals of these studies are different, whereas some of them aimed to verify the psychometric properties of the quality of life scale, such as the study of Mohamed (2011) and Al-Yami (2021), and some others aimed to validate the quality of life scale, such as the study of Yahya (2016), Hamza and Hussein (2018), and Al-Khamisi (2022), and some studies aimed to evaluate the quality of life among people with disabilities' such as the study of Algholeh (2019) and Al-Abedallat (2022).

Comparing the current study with previous studies, this one is distinct from others wherein it addressed the development of a scale to measure the quality of life among inclusive students. It is noted, to the best of the researchers' knowledge, that there are few previous studies that dealt with this topic, especially in the Saudi environment, which enhances the conduct of this study, especially in the light of the scarcity of studies in this field. It is expected that this study will have a place among previous studies, and a starting point for further studies in other fields for a group of students that have not received attention, which helps in providing support and assistance to this group, to help them achieve their ambitions, and provide a supportive social environment for them.

Study Objectives

The study sought to achieve the following objectives:

1. Verify the validity and reliability significance of the quality of life scale, which was developed by researchers when applied to a sample of inclusive students in inclusion schools in Hail city.
2. Identify the level of quality of life among inclusive students in inclusion schools in Hail city.
3. Detect the differences in the level of quality of life among inclusive students in inclusion schools in Hail city according to the gender variable.

Study Problem

The topic of quality of life is a very important topic, especially for inclusive students, as they face many difficulties in the learning and teaching process, and adapting to the environment around them, in addition to many factors affecting their quality of life. In line with global trends in studying and improving the quality of life among inclusive students, the researchers wanted to develop a scale to measure the quality of life among inclusive students in Hail city in the Kingdom of Saudi Arabia. In the light of the Kingdom of Saudi Arabia's interest in improving the quality of life, therefore it launched the Quality of Life Program in 2018, with the goal to improve the quality of life of the individual and the family by creating the necessary environment to support and develop new options that enhance the participation of citizens, residents and visitors in cultural, recreational, sports, tourism and other appropriate activities that contribute to enhancing the quality of life of the individual and the family (Kingdom's Vision 2030 2018).

Some studies have shown that individuals with disabilities had a moderate level of quality of life, which negatively affects other aspects of their lives, such as the study of Paskarini et al. (2019) and Al-Abedallat (2022), in addition other studies have indicated that students at King Abdulaziz University had a moderate level of the quality of life as a study by Algholeh (2019). Hence the importance of measuring the level of quality of life among inclusive students, and

developing a scale that suits their characteristics and features. Based on the above, researchers were interested in conducting this study, which aims to develop a scale for quality of life and verify its psychometric properties among inclusive students in inclusion schools in the Kingdom of Saudi Arabia.

Study Questions

The study sought to answer the following research questions:

1. What are the validity and reliability significance of the quality of life scale which was developed by researchers when applied to a sample of inclusive students in inclusion schools in Hail city?
2. What is the level of quality of life among inclusive students in inclusion schools in Hail city?
3. Are there statistically significant differences at the level of significance ($\alpha=0.05$) in the level of quality of life among inclusive students in inclusion schools in Hail city according to the gender variable?

Study Significance

The importance of the study is highlighted through two aspects, which are as follows.

Theoretical Significance

The importance of the study lies in providing theoretical literature and information related to quality of life and developing a scale for quality of life, which will benefit other researchers. This study will also provide a scale that measures the level of quality of life, this will help researchers and scholars to take this study as a reference for theoretical literature and the scale to conduct other studies related to quality of life among inclusive students. The importance of the theoretical study also appears through the study sample, which is inclusive students in inclusion schools, giving a clear idea about the importance of this category, as well as the importance of the role of staff in psychological counselling centers to help this category adapt to the different requirements of life according to their quality of life.

Practical Significance

The importance of the study lies in helping the specialists to develop guidance, training and rehabilitation programs for inclusive students, which help them facing life's difficulties, and working to raise their quality of life, in addition to the fact that the study provided a scale to measure the quality of life among inclusive students. It is hoped that the study's results and recommendations will open research prospects for scholars and those interested in this field.

Study Terms

The study included the following terms:

- ♦ **The Quality of Life:** An individuals' perceptions of their positions in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns (WHO 2019). It is measured procedurally by the degree that the inclusive student obtains on the quality of life scale which is used in this study.
- ♦ **Inclusive Students:** The students who suffer from hearing, visual or motor disabilities, who are enrolled in Hail city's schools in the Kingdom of Saudi Arabia, and the appropriate educational environment is prepared to educate them according to their abilities, and to involve them in school activities with ordinary students.

Study Limits

The limits of the study were as follows:

- ♦ **Human Limits:** The study was limited to a sample of inclusive students in inclusion schools in Hail city in the Kingdom of Saudi Arabia.
- ♦ **Spatial Limits:** This study was conducted in Hail city in the Kingdom of Saudi Arabia.
- ♦ **Temporal Limits:** This study was implemented in the second semester of the academic year 2023-2024.

METHODOLOGY

In this study, the descriptive analytical approach was used, as it is the most appropriate

approach to the study problem, its questions and objectives. The developed scale was distributed to the sample members after verifying its psychometric properties, collecting and analysing data quantitatively, and answering the study questions that were raised, to ultimately come up with recommendations that match the results of the study.

Study Population and Sample

The study population consisted of all inclusive students into inclusion schools in Hail city in the Kingdom of Saudi Arabia. A representative sample of the study population was chosen by intentional method, amounting to 69 male and female students with special needs who were inclusive into inclusion schools in elementary and secondary schools in Hail region in the Kingdom of Saudi Arabia, as Al Ghafiqi Elementary School, Al Khalidiya Elementary School, Abi Dharr Al Ghafari Elementary School, Sky of Knowledge Private Schools.

Study Tools

To achieve the study objectives, a quality of life scale was developed, after reviewing previous studies and related scales, such as the World Health Organisation Quality of Life Scale, Cummins Scale, and Mansy Scale. The developed scale consisted of 40 items, distributed into five domains of the physical life quality (9 items), the psychological and the emotional life quality (12 items), the family and social life quality (8 items), the environmental life quality (4 items), and the academic life quality (7 items). The respondent marked (x) in front of each item in accordance with personal conviction, through a gradual scale of five degrees, according to the five-point Likert scale, which are: strongly agree (5) scores, agree (4) scores, neutral (3) scores, disagree (2) scores, and strongly disagree (1) scores. These scores are applied to all positive items, while the scoring is reversed in negative items. Since the scale consists of 40 items, the lowest score that the respondent can obtain is 40 and the highest score is 200. The judgment criterion was distributed on arithmetic means to determine the level of quality of life as, low (less than 1 -2.33), moderate (from 2.34 - 3.67), and high (from 3.68 -5 or more).

Statistical Analysis

The (SPSS) program was used for statistical analysis including arithmetic mean, standard deviation, Cronbach's alpha coefficient, Pearson's correlation coefficient, and one-way analysis of variance.

RESULTS AND DISCUSSION

Research Question 1: *What are the validity and reliability significance of the quality of life scale which was developed by researchers when applied to a sample of inclusive students in inclusion schools in Hail city?*

The validity is one of the most important psychometric properties of the scale. The content validity was verified by presenting it in its initial form to a group of arbitrators who specialised in educational psychology, psychological counselling, Arabic language curricula, teaching methods and special education. They were asked to express their opinions and notes about the appropriateness of the items for the study's domains to which they belong, the appropriateness of the items to reveal the quality of life level the extent of their soundness from a linguistic aspect, the extent of their clarity in terms of meaning, and any comments and notes as they consider appropriate or adding and deleting items that suit the objectives of the study. The researchers adopted 80 percent of the arbitrators' consensus to delete, add or edit any of the items, therefore 3 items were reformulated linguistically, as well as replaced some vocabulary to give a more precise and clear meaning. Accordingly, the questionnaire in its final form consisted of 40 items.

To verify the construct validity of the study tool, the values of the Pearson correlation coefficients for the item with the domains to which they belong and the items with the scale as a whole were extracted by applying to an exploratory sample consisted of 20 male and female inclusive students in Hail city from outside the study sample. Table 1 shows the values of the correlation coefficients.

It is clear from the data in Table 1 that the values of the correlation coefficients of the item with the domains to which they belong ranged between 0.46-0.89, and the values of the

Table 1: Values of correlation coefficients for the item with the domains to which they belong and the items with the scale as a whole

<i>Item's number</i>	<i>Correlation coefficient with the domain</i>	<i>Correlation coefficient with the scale as a whole</i>	<i>Item's number</i>	<i>Correlation coefficient with the domain</i>	<i>Correlation coefficient with the scale as a whole</i>
1	0.56	0.49	21	0.67	0.59
2	0.71	0.66	22	0.65	0.54
3	0.77	0.73	23	0.86	0.74
4	0.68	0.61	24	0.71	0.65
5	0.67	0.59	25	0.77	0.71
6	0.56	0.48	26	0.68	0.63
7	0.46	0.45	27	0.62	0.57
8	0.47	0.43	28	0.76	0.67
9	0.67	0.61	29	0.68	0.53
10	0.56	0.45	30	0.86	0.76
11	0.89	0.81	31	0.71	0.58
12	0.74	0.63	32	0.49	0.47
13	0.82	0.75	33	0.58	0.51
14	0.57	0.46	34	0.64	0.57
15	0.84	0.77	35	0.53	0.48
16	0.85	0.72	36	0.72	0.65
17	0.72	0.68	37	0.80	0.64
18	0.63	0.55	38	0.69	0.62
19	0.67	0.54	39	0.54	0.51
20	0.61	0.57	40	0.67	0.54

correlation coefficients between the items with the scale as a whole ranged between 0.45-0.81. It is worth noting that the researchers adopted a criterion for accepting the item that its correlation coefficient with the domain to which it belongs, and with the scale as a whole, should not be less than 0.25.

To verify the reliability of the scale, the test-retest method was used, by applying it to an exploratory sample consisting of 20 male and female inclusive students in Hail city from outside the study sample, then it was reapplied after a two-week interval on the same sample. The value of the reliability coefficient was calculated, using the Pearson correlation coefficient, and the internal consistency coefficients using the

Cronbach alpha equation, for the scale as a whole, Table 2 shows these values.

It is clear from the data in Table 2 that the Cronbach's alpha value (internal consistency) for the scale domains ranged between 0.89-0.95, and the Cronbach's alpha value for the scale as a whole was 0.94. While the value of the test-retest reliability coefficient was extracted using the Pearson correlation coefficient for the scale domains, ranged between 0.84-0.92, and for the scale as a whole was 0.89. This indicates that the developed quality of life scale has appropriate validity and reliability, and that the domains and items belong and measure the quality of life level, the items have high homogeneity, and the scale has a high degree of validity and reliability.

Table 2: Values of internal consistency coefficients Cronbach's alpha and Pearson's correlation coefficient for the scale domains and the scale as a whole

<i>Domain</i>	<i>Cronbach's alpha internal consistency</i>	<i>Pearson's correlation coefficient</i>
Physical life quality	0.95	0.92
Psychological and the emotional life quality	0.93	0.89
Family and social life quality	0.90	0.87
Environmental life quality	0.92	0.88
Academic life quality	0.89	0.84
Scale as a whole	0.94	0.89

ty. This result can be explained in the light of the authors' reference to more than one scale with the aim of preparing and developing the quality of life scale, among these scales is a global scale prepared by a group of experts, in accordance with all societies. This result can also be attributed to the nature of the drafting items, which was clear to the majority of inclusive students into schools in Hail city, which led to the homogeneity of their evaluations of the items, in addition to the researchers' extensive reviewing of a large number of studies and scales that were developed to measure quality of life, which were used in drafting the items commensurate with the nature of the study sample.

The results of the current study agreed with the results of the studies of Mohamed (2011), which demonstrated that the scale possesses good normative properties and that the correlation and discrimination indices were satisfactory and statistically significant. It also agreed with Yahya's (2016) study, which confirmed that the quality of life scale has a high level of effectiveness and that its validity and reliability indices were acceptable and satisfactory. Furthermore, it also agreed with studies by Hamza and Hussein (2018), Ahmad et al. (2023), Al-Attar et al. (2024) and Abbas and Henni (2025), which indicated that the scale is characterized by high validity and reliability coefficients. Additionally, this study agreed with Al-Yami's (2021) study, which indicated that the scale possesses good internal and construct validity, as well as high consistency and high discriminatory power. Moreover, all reliability indices, using Cronbach's alpha coefficients and the split-half method, were high. Al-Khamisi's study (2022) demonstrated that the scale possesses high validity and reliability coefficients, including high dis-

criminant validity, internal consistency validity, Cronbach's alpha, and test-retest reliability.

The current study's findings agreed with Nasser and Adawi's study (2026), which also showed the scale to have good validity and reliability. They are further supported by Al-Ghaili and Othman's study (2026), which indicated that the Yemeni version of the WHO Quality of Life Questionnaire (WHOQOL-100) exhibits strong psychometric properties, including content and construct validity, as well as high reliability.

Research Question 2: What is the level of quality of life among inclusive students in inclusion schools in Hail city?

To answer this question, the arithmetic means and standard deviations of the responses of the sample members on the domains of the quality of life scale and the scale as a whole in Table 3 shows this.

It is clear from the data in Table 3 that the arithmetic means the responses of the sample members on the quality of life domains ranged between 3.39-3.71 with a moderate quality of life level for all domains except for the family and social life quality domain, which came in the first rank with an arithmetic mean of 3.71, in the second rank came the academic life domain, with an arithmetic mean of 3.65, then in the third rank came the environmental life quality domain, with an arithmetic mean of 3.50, in fourth rank came the psychological and emotional life quality domain, with an arithmetic mean of 3.42, and in the last place came the physical life quality domain, with an arithmetic mean of 3.39, while the arithmetic mean of the quality of life level as a whole was 3.53, with a moderate level.

This result can be attributed to the stressors that the students may feel as a result of their

Table 3: Arithmetic means and standard deviations of the responses of the sample members on the domains of the quality of life scale and the scale as a whole, arranged in descending order

Rank	S.No.	Domain	Arithmetic mean	Standard deviation	Level
1	3	Family and social life quality	3.71	0.67	High
2	5	Academic life quality	3.65	0.73	Moderate
3	4	Environmental life quality	3.50	0.84	Moderate
4	2	Psychological and the emotional life quality	3.42	0.69	Moderate
5	1	Physical life quality	3.39	0.61	Moderate
		Scale as a whole	3.53	0.72	Moderate

inability sometimes to solve the problems and difficulties they may face themselves, but turn to their families or teacher for helping them to find appropriate solutions, and their feeling of inability sometimes to do the homework and assignments that must be done, compared to other students. This result can also be explained in the light of the challenges, obstacles and psychological effects that are experienced by inclusive students, which still present and vary depending on the forms of support provided to them by their families and communities.

Langer et al. (2019) indicated that the quality of life is clearly and significantly linked to the social, psychological and financial support, which is received by people with disabilities, through participating in daily life activities and acquiring special skills to reduce the impact of disability on their psychological, social and academic adaptation. Friedman and Rizzolo (2018) also confirmed that providing permanent care for people with disabilities, forming friendships and relationships with others, and providing support by the family are all factors that positively affect their quality of life level.

Researchers believe that students' enrollment in inclusion schools may help them integrate with ordinary students, but they may face some difficulties in adapting to them, especially at the beginning, this may make them feel anxious, lose focus and attention, and have a low energy level, which leads to fear of integrating with other students and adapting to the school environment.

It can be attributed that the domain of family and social life quality came in the first rank to the nature of the living conditions of the inclusive students, and the support provided by family and friends, in addition to the parents' attempt to create an encouraging and cooperative climate for the students that would enhance their quality of life, and provide the sufficient and appropriate requirements and needs that contribute to raising the level of their physical and psychological abilities.

It can be attributed that the domain of the physical quality of life came in the last rank, to the type of students' disabilities, which may affect them physically and psychologically in carrying out their academic tasks, participating in various activities, in addition to integrating with other students, and expressing their opinions in

classes, as a result of feeling fear and lack of confidence, which is a result of feeling that there are physical differences between them and others.

Higgs (2007) believed that the quality of life is related to the individual's ability to face daily difficulties and problems, and try to find appropriate solutions, and the ability to live with them as a normal individual who is almost free of problems and psychological illnesses.

The results of the current study agreed with the results of the studies of Paskarini et al. (2019), and Al-Abedallat (2022), whose results indicated that the level of quality of life among workers with disabilities was moderate, and also agreed with the results of the study of Algholeh (2019), which showed that students at King Abdulaziz University had a moderate quality of life.

The result of the current study differed from the result of the study by Al-Ghaili and Othman (2026), which indicated that the level of quality of life was above average among students, with the highest levels in the areas of independence and religious beliefs, while the lowest levels were in the areas of public relations and the environment.

Research Question 3: Are there statistically significant differences at the level of significance ($\alpha=0.05$) in the level of quality of life among inclusive students in inclusion schools in Hail city according to the gender variable?

To answer this question, the arithmetic means and standard deviations of the responses of the study sample members on the scale as a whole were extracted, according to the gender variable, as shown in Table 4.

Table 4: Arithmetic means and standard deviations of students' responses on the scale as a whole according to the gender variable

Variable		Arithmetic means	Standard deviations
Gender	Male	3.43	0.81
	Female	3.27	0.76

It is clear from the data in Table 4 that there are apparent differences between the arithmetic means of students' responses on the scale as a whole, according to the gender variable. To determine the statistical significance of these dif-

ferences, one-way ANOVA was applied to the scale as a whole, according to the gender variable, as shown in Table 5.

The data in Table 5 show that there is no statistically significant difference at the significance level ($\alpha=0.05$) in the level of quality of life among inclusive students, according to the gender variable, as the value of (F) reached 34.9, with the statistical significance at 0.12.

This result can be attributed to the similarity of the school environment in all schools in Hail city, whether for males or females, and the availability of the same requirements and needs that inclusive students need regardless of their gender, whereas the Ministry of Education seeks to provide equally all tools, equipment and activities which related to this category in all schools to benefit from these activities, and everyone can integrate with other students in a positive way, and with ease. The researchers believed that the Kingdom of Saudi Arabia has paid attention to the quality of life by launching the Quality of Life Program in 2018, as one of the most prominent vision programs directly related to the goals of sustainable development (Kingdom's Vision 2030 2018), this has led to providing schools with the same capabilities that raise the level of the quality of life among students regardless of their gender.

This result can also be interpreted in the light of the interest of all male and female teachers schools in involving students with disabilities with ordinary students in classrooms. This is a result of the Kingdom's Vision 2030 on the importance of raising the quality of life for inclusive students and trying to equate them with ordinary students in rights and duties, involving them in all different school activities, and raising their level of self-confidence, so that they become active members of society, like ordinary students.

The results of the current study agreed with the results of the studies of Al-Yami (2021) and

Al-Khamisi (2022), which showed no differences in the level of quality of life among students according to the gender variable.

The results of the current study differed from the results of the study of Algholeh (2019), which indicated that there were differences in the quality of life level according to the gender variable, in favour of males. It also differed from the results of the study of Al-Abedallat (2022), which showed that there were differences in the quality of life level among workers according to the gender variable, in favour of females.

CONCLUSION

This study is related to the development of a scale for quality of life, as per prescribed guidelines by the World Health Organisation (WHO), and verifying its psychometric properties among inclusive students. For that, the authors collected data from 69 special students in the inclusive mode of schools of Hail city, Kingdom of Saudi Arabia and analysed the data for developing a scale of "life quality". The study results showed that the Cronbach's alpha value was 0.94, and the reliability coefficient was 0.89 for the scale as whole, which are considered high values, and this indicates that the scale has high validity and reliability coefficients.

RECOMMENDATIONS

In the light of the study's results, researchers recommend designing training programs to improve the quality of life level among inclusive students in Hail city schools, holding training and awareness workshops for teachers on the importance of the quality of life of inclusive students, and how to improve their level, establishing clubs for inclusive students and providing them with qualified staff to deal with them and seek to involve them in various activities, and conducting more studies on the quality of life of

Table 5: The results of one-way ANOVA on the scale as a whole according to the gender variable

Source of variance	Sum of squares	Degree of freedom	Mean sum of squares	F	statistical significance
Gender	0.04	1	0.04	34.9	0.12
Error	35.01	68	0.37		
Total	231.17	69			

inclusive students in the light of other variables, such as severity of disability and age.

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REFERENCES

- Abbas M, Henni E 2025. The factor analysis and psychometric properties of the quality of school life scale for first-year secondary school pupils. *Cultural Dialogue Journal*, 14(2): 399-428.
- Abed Alkhalig A 2008. The Arabic version of the World Health Organization Quality of Life Scale: Preliminary results. *Journal of Psychological Studies, Kuwait University*, 18(2): 247-257.
- Ahmed M, Abu Al-Saud S, Al-Sharqawi F, Ibrahim F 2023. Psychometric properties of the quality of life scale for secondary school students. *Matrouh University Journal of Educational and Psychological Sciences*, 3(5): 133-157.
- Al-Abedallat B 2022. Quality of life among workers with disabilities in Jordan and its relationship to some variables. *Jordanian Journal of Educational Sciences*, 18(1): 75-86.
- Al-Attar Hanan, Muhammad Badiwi, Kamel Karam 2024. Psychometric properties of the psychological quality of life scale for children with physical disabilities. *Educational and Social Studies*, 30(5): 243-276.
- Al-Ghaili M, Othaman N 2026. Psychometric properties of the Quality-of-Life Scale (WHOQOL-100) for university students in the capital city of Sana'a. *Sana'a University Journal of Human Sciences*, 5(1): 670- 699.
- Algholeh S 2019. The level of quality of life among students with disabilities at King Abdul - Aziz University and the University of Jordan in the light of some variables. *Journal Of Al-Quds Open University For Educational & Psychological Research & Studies*, 10(28): 72-78.
- Al-Khamisi A 2022. Validating the World Health Organization Brief Quality of Life (WHOQOL-BREF) on a sample of students from Sana'a University in the Republic of Yemen. *Research Journal*, 9(3): 283-312.
- Al-Yami M 2021. Validating the World Health Organization's abbreviated quality of life scale on a sample of students at Najran University in the Kingdom of Saudi Arabia. *Journal of the Islamic University for Educational and Psychological Studies*, 2(29): 201-215.
- Friedman C, Rizzolo M 2018. Friendship, quality of life, and people with intellectual and developmental disabilities. *J Dev Phys Disabil*, 39-54.
- Hamza F, Hussein B 2018. Validating the World Health Organization Brief Quality of Life (WHOQOL-BREF) on samples from the Algerian environment. *Journal of Social Sciences, University of Laghouat, Algeria*, 7(31): 139-157.
- Higgs N 2007. Measuring and understanding the well-being of south Africans: Everyday quality of life in south Africa. *social Indicators Research*, 812(2): 331-356.
- Hrtani A 2014. *Quality Of Life Of Mothers And Their Relationship To Behavioral Problems In Children*. Master Thesis, Unpublished. Algeria: Faculty of Social Sciences, University of Oran.
- Jenkinson C 2020. Quality Of Life. *Encyclopaedia Britannica*. From <<https://www.britannica.com/topic/quality-of-life>> (Retrieved on 10 June 2024).
- Kidd S 2008. Effect of a vocationally-focused brief cognitive behavioural intervention on employment related outcomes for individuals with mood and anxiety disorders. *Cogn Behav Ther*, 37(4): 247-51.
- Langer K, O'Shea D, De Wit L, DeFeis B, et al. 2019. Self-efficacy mediates the association between physical function and perceived quality of life in individuals with mild cognitive impairment. *Journal of Alzheimer's Disease*, 68(4): 1511-1519.
- Livneh H 2016. Quality of life and coping with chronic illness and disability: A temporal perspective. *Rehabilitation Counseling Bulletin*, 59(2): 67-83.
- Mohamed A 2011. The standard properties of the Quality of Life Percentile scale (WHOQOL-100) which was issued by WHO on samples from the Libyan community. *Al-Basira Center for Research, Consulting and Educational Services*, 4: 89- 131.
- Nasser R, Adawi H 2026. Standardizing the psychological quality of life scale on a sample of secondary school students in the Galilee Region. *Humanities & Natural Sciences Journal*, 7(5): 1-18.
- Paskarini I, Martiana T, Suwandi T 2019. The independence and the quality of life of workers with disabilities caused by an occupational accident in Gresik and Sidoarjo, Indonesia. *Indian Journal of Public Health Research & Development*, 10(12): 1734-1739.
- Saudi Vision 2030 2018. Quality of Life Program. From<<https://www.vision2030.gov.sa/ar/v2030/vrps/qol>> (Retrieved on 23 June 2024).
- Smart K, Blake C, Staines A, Doody C 2012. Self-reported pain severity, quality of life, disability, anxiety and depression in patients classified with 'nociceptive', 'peripheral neuropathic' and 'central sensitisation' pain: The discriminant validity of mechanisms-based classifications of low back ($\pm$ leg) pain. *Manual Therapy*, 17(2): 119-125.
- World Health Organization (WHO) 2004. *The World Health Organization Quality of Life (WHOQOL)-BREF* (No. WHO/HIS/HSI Rev. 2012.02). World Health Organization.
- World Health Organization 2019. *The World Health Report 2019: Health Systems: Improving Performance*. World Health Organization.
- Yahya A 2016. *Validating The Quality Of Life Scale Of Mahmoud Mansi And Ali Kazim On University Students*. Master's Thesis, Unpublished. Ouargla, Algeria: University of Qasdi Marabah.

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