

Health Behaviour and its Relationship with the Physical Fitness Level of the Students of Ajloun College at Balqa Applied University

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This study aims to identify health behaviour and its relation to the level of physical fitness among the students of Ajloun College at Balqa Applied University. The study sample, which was selected randomly, comprised 250 male and female students from Ajloun College at Balqa Applied University. The researcher used the descriptive approach, and a questionnaire was used as the main data-collection tool. The results also indicated that the level of health behaviour among Ajloun College students was 'moderate' and there are statistically significant differences in health behaviour levels among Ajloun College students according to gender variable. The differences were in favour of females in both personal health and body shape dimensions, and in favour of males after exercise. There were no differences regarding nutrition and the level of health behaviour as a whole. The results showed a positive correlation between healthy behaviour and fitness level. In the light of the results of the study, the researcher recommended increasing the number of courses dealing with health and health behaviour, and to increase the attention given to health awareness and behaviour through various forms of media.

Key words: *Healthy behaviour, Fitness, Nutrition, Personal health, Exercise.*

Introduction

Health has become closely related to physical fitness, and its enduring and systematic performance of physical exercises, which help to reduce the risk of heart and respiratory diseases as well as to overcome mental disorders and daily stress. It should be noted that physical education and genetic factors play a significant role in improving fitness levels. On the other hand, external obstacles exist that negatively affect the health of the body, such as a lack of time and a lack of health awareness.

It is worth mentioning that health awareness stimulates the awareness of individuals in a way that changes their behaviour and health habits, aiming to reduce the spread of diseases within communities and instilling healthy habits that reinforce and improve health, such as exercise and proper nutrition. Health awareness raises individuals' levels in a way that increases production and decreases expenditure on health treatment (Abdul Haq et al., 2012).

Health awareness can be achieved through access to the various sources responsible for providing health information that contribute to changing knowledge and bad health habits. These sources varied among constant reading of health books and magazines, following up closely what is presented in the media in the field of health awareness, regulating what is presented in educational institutions in the field of health knowledge, and information exchanged with friends and family members. These sources are in addition to what cultural activities, health centres and civil society organisations are seeking and reading (Abdel-Hussein, Arak & Mohammed, 2012).

Health advancement is based on the development of an intervention mechanism that encourages individuals to substitute their unhealthy behaviours with healthy ones. For society, health promoting means a general focus on good health, providing information that helps individuals to form healthy behaviours and avoid unhealthy ones. The media can also contribute to raising health awareness among individuals through presenting educational programs on the dangers of some unhealthy behaviours, such as smoking and some bad eating habits (Smadi, 2013).

Health behaviour is defined as conscious awareness and organised experiences that reflect positively on the physical and psychological health of the individual and the preservation of the environment from pollutants. Several studies have confirmed that socialisation, social norms and behavioural norms determine the nature of health behaviours and how they vary with social environment (Abu Laila & Al-Amoush, 2009).

Smadi's (2011) study indicates that health behaviour also refers to a set of behaviours practised by an individual to maintain an appropriate level of health based on the theory of

choice and theories of systems, which consider the general health of an individual as a result of the integration of all aspects – physical, mental emotional and motor – considering that the health of the student is attained through the functioning of all organs of the body.

Physical fitness and high levels of health depend on the level of awareness and health behaviour that qualifies individuals to access information and health services to fulfil their need for knowledge, direct their behaviour in the right way and provide them and their families with protection from various illnesses and accidents, as well as improving the economic aspect of communities and countries (World Health Organization, 2016).

It is noteworthy that the importance of health awareness of fitness lies in the provision of knowledge and information about aspects of fitness, strengthen and improving it in a way that maximises avoidance of health problems and diseases as well as promoting physical health and ensuring its preservation. Moreover, making positive changes to dietary and physical behaviours is important for the attainment of good health (Makki, 2017).

Zainknah (2009) mentions that health awareness significantly affects health, which is based on all the components of physical fitness, through health information and knowledge that help in the development of personality, and correct behaviours – especially those related to health. She also states that health awareness is affected by a group factor and variables including gender, so the majority of the existing research confirms that health awareness is less when it is related to females compared with males.

Health awareness plays an important role in the prevention of physical, mental, psychological and social diseases. Performing physical activities as recommended protects the individual from these diseases, and health awareness is an indicator of the education and application of knowledge and information that have been acquired educationally (Abdul Haq et al., 2012).

Accordingly, the researcher concluded that health behaviour and fitness of different levels meet at one point that maintains the health of the individual, protecting them from any disease or health problem; thus health awareness is a prerequisite for fitness.

The Study Problem

Fitness is an essential state of health and wellbeing, especially the ability to perform aspects of sports, activities and a daily routine. Usually, attention to fitness is performed through proper nutrition and exercise because physical activity reduces the risk of injury and improves physical fitness.

Awareness of health behaviour is one of the main priorities and objectives of health institutions and is also among the issues that are of greatest importance to individuals and their communities because of their significant role in reducing diseases and the indicators of low public health as well as decreasing levels of physical inactivity. The relationship between physical activity and health is evident in different studies, although the strong relationship between them is well known.

The researcher noticed through her work that the level of health behaviour among students was disparate through their different behaviours, and that there was a disparity in their level of physical fitness.

Objectives of the study

This study aimed to identify:

- 1 the level of health behaviours among the students of Ajloun College at Balqa University
- 2 differences in the level of health behaviours among the students of Ajloun College at Balqa University according to gender
- 3 physical fitness levels among Ajloun College students at Balqa University according to their estimates
- 4 differences in the level of physical fitness among the students of Ajloun College in Balqa University according to gender
- 5 the relationship between health behaviours and fitness levels among Ajloun College students at Balqa University.

Study Questions

The following questions were posed:

- 1 What is the level of health behaviour among Ajloun College students at Balqa University?
- 2 What is the level of physical fitness among Ajloun College students at Balqa University?
- 3 Are there any statistically significant differences in the level of health behaviours among the students of Ajloun College at Balqa University due to gender?
- 4 Are there any statistically significant differences in the level of physical fitness among the students of Ajloun College at Balqa University due to gender?
- 5 Is there a relationship between the level of health behaviours and the level of physical fitness among the students of Ajloun College at Balqa University?

The Limits of the Study

The research included the following limits:

- *Time limits*: the second semester of the academic year 2018/19.
- *Spatial limits*: Ajloun College.
- *Human limits*: students of Ajloun College.

Previous Studies

Kabbajah and colleagues' (2018) study aimed to identify the health behaviours of the scientific faculty at Al-Quds University. The sample of the study consisted of 360 students who were randomly selected. The researcher used the Smadi (2011) Health Behaviour Scale. The results indicated that the level of health behaviour was moderate and that there were statistically significant differences in the level of health behaviours attributed to the gender variable in favour of males, and no statistically significant differences attributed to the variable academic level and the cumulative scores.

Nazeer's (2016) study aimed to recognise the effect of fitness awareness on exercise and fitness. The researcher used the descriptive analytical method on a sample of 24 males from among park visitors. A total of 24 sessions were conducted, and the fitness of the sample was measured before and after the program. The study showed that the effect of awareness on the importance of fitness was positive for physical fitness.

Nader and Alwan (2015) aimed to identify health behaviour and its relationship to self-efficacy among students of the Faculty of Sports Science at the University of Muthah. The study sample consisted of 219 male and female students who were randomly selected. The results showed that the level of healthy behaviour among students was moderate, and there were statistically significant differences attributed to the gender variable and in favour of males, and a direct relationship between healthy behaviour and self-efficacy.

Al-Harthy (2014) aimed to identify the level of health behaviour among college students, and its impact on the college, the level of the student, the economic level of the family and the level of education of parents. The study sample comprised 1200 undergraduate students from the University of Umm Al-Qura. The scale of health behaviour use was implemented. The results showed that the level of health behaviour among the sample was within the average. The results also indicated that there were no statistically significant differences in the level of health behaviour attributed to the college where the student was studying, and no significant differences due to the variable level of study. There were significant differences based on the monthly income of families in favour of families with an income of more than 5,000 riyals per month.

Al Ghawi's (2014) study of awareness of healthy food and fitness in Bahrain aimed to measure health awareness and behaviours, especially those related to food and physical activity. The researcher adopted a descriptive analytical method. The sample of the study consisted of 501 adults. A questionnaire was used to measure health awareness. The researcher concluded that the various members of the sample practised physical activity in several forms and recommended the use of research data and results to evaluate the current preventive programs and assist planning for future programs.

A study conducted by Smadi (2013) aimed to identify the level of health behaviour of Yarmouk University students and the extent of the difference according to gender, college, economic income, academic level of students, family and father's education level. The sample consisted of 955 male and female students from Yarmouk University who were randomly selected from all disciplines. The results showed that the health behaviour of Yarmouk University students was moderate and there were statistically significant differences attributed to gender and in favour of females. There were also statistical differences based on the father's level of education, in favour of students whose parents' education was a Diploma or Bachelor degree.

Ashraah (2013) aimed to determine the level of health awareness among university students in Jordan. The researcher used the descriptive analytical method on a sample of 860 students from different faculties at The Hashemite University, using the Health Awareness Scale, which includes the domains nutrition, personal health, exercise and body. The results showed that there were statistically significant differences in the degree of health awareness attributed to the gender variable and in favour of females.

Abdul Hussein and colleagues (2012) aimed to build a measure of health awareness and identify the level of health awareness among students from the Faculty of Physical Education at the University of Muthanna. The study sample consisted of 161 students. The results indicated that the level of awareness among students was high, and there were no statistically significant differences in the level of health awareness attributed to gender and school year.

Abdul Haq and colleagues (2012) examined the level of health awareness among students of An-Najah National University and Al-Quds University. The researchers used the descriptive analytical approach on a sample of 800 students who completed a questionnaire. The results of the study showed that the level of health awareness varied according to the university variable in favour of Al-Quds University and for the gender variable in favour of females. In the light of these results, the researcher recommended the need to hold workshops on the development of health awareness.

Meshal and colleagues (2012) aimed to identify the extent to which the students of the Faculty of Physical Education at the University of Jordan had knowledge about the nutritional culture and their level of aerobic fitness as well as to examine the correlation between their knowledge about nutritional culture and level of aerobic fitness. The study sample consisted of 251 students, and the researcher used the descriptive method in the form of a questionnaire as a three-part data-collection tool. Part 1, the General Nutrition Questionnaire (GNVQ) included four themes (dietary advice, food groups, food selection, and finally health problems or diseases), while the second part was the test trend towards food (EAT-26). Part 3 included baseline data to predict the maximum consumption of oxygen (VO_2max). The results showed that there was a general lack of nutrition knowledge (GNKQ) among students of the Faculty of Physical Education at the University of Jordan despite a good level of aerobic fitness. The researchers recommended the need to pay attention to the subject of nutrition culture and work to include it in university curricula.

Qaddoumi (2005) conducted a study to identify the level of health awareness and sources of access to health information among Arab volleyball club players, and to identify differences in the level of health awareness according to the variables in the experience of play and educational qualification. The study sample consisted of 90 players from the 22nd Arab Clubs Championship in Jordan. The researcher used the Health Awareness Scale and sources of access to health information as the main means of collecting information. The results indicated that the level of health awareness among the samples was high.

Comment on Previous Studies

The researcher relied on the previous studies in selecting the title of the current research and in identifying the variables and topics that were the focus of the research: health behaviour and fitness among students of Ajloun College at Balqa University.

Previous studies have dealt with a range of information and knowledge related to health behaviour (Harthy, 2014; Kabbajah, 2018; Nader, 2015; Smadi, 2013), health awareness (Ashraah, 2013; Abdul Haq et al., 2012; Kaddoumi, 2005) and fitness. Physical studies such as those of Ghawi (2014), Nazeer (2016) and Meshal et al. (2012) have varying degrees of content and form, but all have formed an important source of information and ideas for the researcher to formulate the research and produce it according to scientific standards and requirements.

The researcher did not find studies dealing with the relationship between health behaviour and fitness level, and hence this study is important as it measures health behaviour and fitness level, and studies the relationship between them.

Study Methodology

The descriptive approach was used because it is appropriate for achieving the objectives of the study.

Study Variables

The independent variable is the levels of health behaviour in the current study. The dependent variable is the level of fitness in the current study.

Study Population and Sample

The study population consisted of the students of Ajloun College at Balqa Applied University.

The total sample of the study was 250 male and female students, who were selected randomly. The number of the male students was 116 (46.4%) and the number of female students was 134 (53.6%).

Table 1: Distribution of the research sample according to gender

Gender	No.	%
Male	116	46.4
Female	134	53.6
Total	250	100.0

Data-collection Tool

The researcher designed a questionnaire that included two parts. The first part consisted of 28 paragraphs and measured the level of health behaviour. It included four domains: nutrition, personal health, doing sport, body shape. The second part comprised eight paragraphs that measure the level of fitness and provide an indicator of the level of physical fitness as the study adopted the descriptive approach. They were graded according to Likert's five-point scale: 1 rarely given; 2 sometimes; 3 to some extent; 4 'a lot'; and 5 always. The grades on the negative paragraphs were reversed so that they were: rarely (5), sometimes (4), to some extent (3), a lot (2) always (1).

Table 2: Statistical standard for the interpretation of the mean of the estimates of the sample members on each paragraph of the tool.

Mean	Rank
1.00 less than 1.80	Very low
1.80 less than 2.60	Low
2.60 less than 3.40	Moderate
3.40 less than 4.20	High
4.20 less than 500	Very high

The Validity of the Study Tool

The validity of the tool ensures that the content of the paragraphs is comprehensive and provides precise description so that everyone can understand and use it clearly. This was done by achieving face validity and sincerity of construction.

The face validity of the tool was performed by presenting the questionnaire to a few arbitrators from faculty members from different universities. They reviewed the content of paragraphs (suitability, comprehensiveness and coverage of the subject matter), based on their observations. The study tool was modified in its final form.

Calculating Pearson's Correlation Coefficient Between Each Dimension of the Study

Table 3 shows a statistically significant correlation between the two dimensions of health behaviour and between the dimensions and health behaviour as a whole.

Table 3: Pearson correlation coefficients between each study dimension

		Nutrition	Personal health	Doing sport	Body shape
Nutrition	correlation	1			
	P value				
	No.	250			
Personal health	correlation	.077	1		
	P value	.228			
	No.	250	250		
Doing sport	correlation	.438**	.073	1	
	P value	.000	.248		
	No.	250	250	250	
Body	correlation	.301**	.553**	.206**	1

		Nutrition	Personal health	Doing sport	Body shape
shape	P value	.000	.000	.001	
	No.	250	250	250	250
Total health awareness	correlation	.677**	.587**	.667**	.760**
	P value	.000	.000	.000	.000
	No.	250	250	250	250

** Statistically significant at statistical significance level ($\alpha = 0.01$)

*Statistically significant at the level of statistical significance ($\alpha = 0.05$)

Reliability of the Tool

The consistency of the study tool means the reliability of the results and the extent of consistency of the results of the questionnaire if it is applied more than once and in similar conditions. The Cronbach's alpha internal consistency test was used to measure the consistency of respondents' responses to all paragraphs in the scale. Cronbach's alpha can also be described as the internal stability factor between the answers. The increase in its value indicates the degree of high reliability, which ranges between 0 and 1, and its value is acceptable at 60 per cent and above. The results were as shown in Table 4.

Table 4: Internal consistency coefficients (Cronbach's alpha) for each dimension of the study tool and for the tool as a whole (health behaviour dimensions)

Dimension	No. Paragraph	consistency coefficients
Nutrition	7	0.821
Personal health	7	0.908
Doing sport	7	0.904
Body shape	7	0.852
Total health awareness	28	0.933

Corrected item-total correlations were calculated for the correlation of each paragraph of the fitness tool as a whole, as well as the corrected item-total correlation. There are two main conditions for these correlations: that the correlation correction factor is not less than (0.30), and the existence of statistical significance of those correlation. Table 5 shows the values of these correlations.

Table 5: Corrected correlation coefficients for each correlation of physical fitness as a whole.

No.	Corrected correlation coefficients
1	.619
2	.782
3	.474
4	.447
5	.782
6	.782
7	.578
8	.451

* All these parameters are statistically significant.

Reliability Test of the Study Fitness Tool

The consistency of the study tool means the reliability of the results and the extent of consistency of the results of the questionnaire if it is applied more than once and under similar conditions. The Cronbach's alpha internal consistency test was used to measure the consistency of respondents' responses to all paragraphs in the scale. It can also be described as the internal stability factor between the answers. The increase in its value indicates the degree of high reliability, which ranges between 0 and 1. Its value is acceptable at 60% and above. The internal coherence coefficient (Cronbach's alpha) of the fitness tool was 0.884, which is higher than 0.60, indicating an internal consistency between the paragraphs of fitness.

Statistical Analysis

To answer the research questions, SPSS was used to process the data after tabulating and entering the computer through:

- frequencies and percentages
- arithmetic averages and standard deviations.
- multiple Linear Regression test
- independent-samples T test.
- Pearson correlation
- ANOVA contrast analysis
- Cronbach's alpha.

Results

This section includes a presentation of the results of the study aimed at identifying the level of health behaviour among the students of Ajloun College at Balqa University and its relationship with their fitness level.

Results of the First Question

What is the level of health behaviour among the students of Ajloun College at Balqa University?

To answer this question, Mean and standard deviations were calculated for the estimates of the study sample members on each dimension of health behaviour (nutrition, personal health, doing sport, body shape), as shown in Table 6.

Table 6: Mean and standard deviations of the study sample estimates for each dimension (nutrition) in descending order according to the arithmetic averages

No.	Paragraph	Mean*	SD	%	Level	Rank
6	I drink tea and coffee a lot because it helps me to concentrate.	3.84	.508	76.7	High	1
1	I don't care about breakfast	3.81	.510	76.2	High	2
3	I drink soft drinks with basic meals.	3.70	.654	74.0	High	3
4	I always try to have my weight appropriate.	3.61	.727	72.2	Moderate	4
3	I avoid eating fried food and I prefer cooked foods.	3.53	.751	70.6	Moderate	5
5	I eat fresh fruits and vegetables on a daily basis.	2.76	.542	55.3	Moderate	6
7	I take care to get a varied and balanced daily diet.	2.18	.805	43.7	Low	7
Nutrition		3.35	.441	66.9	Moderate	

Minimum score (1) and maximum score of(5)

Table 7 shows that the personal health dimension came in at a low level. The paragraph 'I keep my teeth clean after meals' was ranked first with a mean of 3.34 and a moderate level, while the paragraph 'I make sure to have periodical medical check-ups' was ranked last with a mean of 1.38 and a very low rank.

This is due to the fact that the student may be educated to be healthy and constantly informed through the means of health education about the importance of periodic examination, but does not apply this knowledge because of a lack of awareness of the importance of this behaviour and its role in maintaining health.

Table 7: Mean and standard deviations of the estimates of the study sample members on each paragraph (personal health) in descending order by arithmetic means

Dimension	*Mean	SD	%	Level	Rank
I keep my teeth clean after meals	3.34	.689	66.8	Moderate	1
I prefer watching TV at close range	3.30	.724	66.0	Moderate	2
I avoid taking medications without prescription	2.71	.463	54.2	Moderate	3
I try to take enough time to sleep and relax.	2.66	.622	53.1	Moderate	4
I avoid staying up for a long time	2.27	.720	45.4	Moderate	5
I visit a doctor immediately if you feel sick	2.17	.725	43.4	Very low	6
I make sure to have periodical medical check-ups	1.38	.486	27.6	Very low	7
Personal health	2.53	.459	50.6	متدنية	

*Minimum score (1) and maximum score of(5)

Table 8 shows that the doing sport dimension came in at a high level, with the paragraph 'I participate in sports activities to feel happy and satisfied' in first place with a mean of 3.93 and a high level, while the paragraph 'I prefer doing sport under the supervision of specialists' was ranked last, with a mean of 3.55 and a high level.

Table 8: The mean and standard deviations of the estimates of the study sample members for each paragraph (doing sport) in descending order by arithmetic means

Dimension	Mean*	SD	%	Level	Rank
I participate in sports to feel happy and satisfied.	3.93	.823	78.6	High	1
I keep walking to stimulate blood circulation.	3.85	.455	77.0	High	2
I like participating in sports and leisure activities.	3.84	.990	76.7	High	3
Do sport in(clubs and sports clubs).	3.82	.815	76.3	High	4
I avoid continuing to exercise when feeling tired.	3.74	.873	74.9	High	5
I do not have enough to do sport.	3.71	.612	74.2	High	6

I prefer doing sport under the supervision of specialists.	3.55	.739	71.0	High	7
Doing sport	3.78	.507	75%	High	

*Minimum score (1) and maximum score of(5)

This may be due to increased awareness among the community members of the importance of participating in sport and its role in the prevention of diseases, which they learned from educational programs and various media.

Table 9 shows that the body shape dimension came in at a low level. The paragraph 'I exaggerate my ability to raise things' ranked first with a mean of 3.50 and a high level, while the paragraph 'I make sure to stand and walk properly' ranked last with a mean of 1.54 and a very low level.

Table 9: The mean and standard deviations of the study sample estimates for each paragraph dimension (Body shape) in descending order by arithmetic averages

No.	Dimension	Mean*	SD	%	Level	Rank
1	I avoid exhaustion and physical stress.	3.50	.629	70.0	High	1
2	I prefer wearing comfortable shoes constantly.	2.94	.933	58.7	Moderate	2
4	I exaggerate my ability to raise things.	2.70	.501	54.0	Moderate	3
5	I avoid staying static for a long time without movement.	2.68	.509	53.6	Moderate	4
3	I make sure to sleep on a healthy mattress.	2.51	.603	50.2	Moderate	5
7	I make sure to take the right positions when studying and sitting.	1.93	.808	38.6	Low	6
6	I make sure to stand and walk properly.	1.54	.499	30.9	Very low	7
Body shape		2.54	.455	50.8	Low	

*Minimum score (1) and maximum score of(5)

This is due to the lack of students' awareness of the importance of the body, and keeping it fit. The absence of a curriculum or an independent curriculum to teach healthy behaviours and habits, and the failure of the family and school in not educating and encouraging students to take the right position also plays a part.

Table 10 shows that the level of health behaviour among university students was moderate, with a mean of 3.31 and a standard deviation of 3.31 within the statistical standard used in this study (from 2.60 to less than 3.40). Estimates of the study sample on the dimensions of health behaviour ranged from 2.53 to 3.78, as noted in Table 6; one dimension came with a high level – that is, doing sport, followed by the nutrition dimension with a moderate average and two dimensions that came with a low average: body shape and personal health. This result is consistent with Ashraah’s (2013) study in the order of dimensions of the study (doing sport, nutrition, body, personal health).

Table 10: The mean and standard deviations of the study sample estimates on each dimension of health behaviour arranged in descending order according to the arithmetic averages

Dimension	mean*	SD	%	level	Rank
Doing sport	3.78	.507	75.5	High	1
nutrition	3.35	.441	66.9	Moderate	2
Body shape	2.54	.455	50.8	Low	3
Personal health	2.53	.459	50.6	Low	4
Health awareness – total	3.05	.313	61.1	Moderate	

*Minimum score (1) and maximum score of(5)

It is also consistent with the studies of Kabbajah (2018), Nader and colleagues (2015), Harthy (2014), Smadi (2013) and Abdul-Haq and colleagues (2012), where the level of health behaviour was moderate. It differs from Ashraah’s (2013) study, where the level of behaviour and health awareness was (low) and also differs from Abdul Hussein’s (2012) and Qaddumi’s (2005) studies, where the level was high.

The researcher attributes this to the reason why the student has a healthy awareness and understanding of health information without applying them in practice, as well as the lack of courses about health culture and health education.

Results of the Second Question

What is the level of physical fitness among Ajloun College students at Balqa Applied University?

To answer this question, the mean and standard deviations of the students’ grades were calculated on each paragraph of fitness, as shown in Table 11.

Table 11 indicates that the fitness came in at the moderate level, with a mean of 3.38 within the standard deviation (2.60 to 3.40) and the averages ranged between 3.12 and 3.56. The

paragraph ‘I suffer from laziness and lethargy constantly’ was in first place with a mean of 3.56 and a high level, while the paragraph ‘Feeling anxiety and depression from time to time’ was in last place with a mean of 3.12 and a moderate level.

Table 11: The mean and standard deviations of the study sample estimate for each dimension paragraph (physical fitness) in descending order according to the arithmetic averages).

Dimension	Mean*	SD	%	Level	Rank
I suffer from laziness and lethargy constantly.	3.56	.514	71.1	High	1
I feel tired when walking continuously for more than 15 minutes.	3.46	.588	69.2	High	2
When doing moderate-intensity effort, I quickly feel an increase in breathing.	3.44	.586	68.	High	3
Feeling overweight and fat accumulation in areas of the body.	3.42	.590	68.3 %	High	4
When I exercise, I feel pain in all my muscles.	3.40	.499	68.0	High	5
I feel tired quickly when you climb the stairs.	3.38	.555	67.5	Moderate	6
I feel energetic when doing my daily work.	3.29	.645	65.8	Moderate	7
I feel anxious and depressed from time to time.	3.12	.326	62.4	Moderate	8
Fitness	3.38	.299	67.6	Moderate	

*Minimum score (1) and maximum score of(5)

This is due to students’ insufficient awareness of the importance of physical fitness and its relation to health, and that exercise improves fitness, but alone it is not enough to improve fitness – it is necessary to behave in a healthy manner in daily life to improve fitness.

Results of the Third Question

Are there any statistical differences in the level of health behaviour among the students of Ajloun College at Balqa University according to gender?

Table 12 shows that there are differences at the statistical significance level ($\alpha \leq 0.05$) between the means of the study sample estimates on the personal health dimension due to the gender variable.

Table 12: The mean, standard deviations and T-test for the dimensions (health behaviour) as a whole and each of its dimensions (nutrition, personal health, exercise, strength) by gender

Dimensions	Gender	No.	Mean	SD	T value	DF	p value
Nutrition	Male	116	3.37	.386	.836	248	.404
	Female	134	3.33	.484			
Personal health	Male	116	2.39	.503	-4.621	248	.000*
	Female	134	2.65	.380			
Doing sport	Male	116	3.89	.575	3.314	248	.001*
	Female	134	3.68	.419			
Body shape	Male	116	2.45	.476	-3.048	248	.003*
	Female	134	2.62	.422			
Health awareness	Male	116	3.04	.319	-.644	248	.520
	Female	134	3.07	.309			

* Statistically significant at the level of statistical significance ($\alpha \leq 0.05$).

The table also shows that there are differences at the level of statistical significance ($\alpha \leq 0.05$) between the means of the study sample estimates on the dimension (doing sport) attributed to the gender variable, with the differences in favour of males.

Table 12 indicates that there are statistically significant differences at the level of statistical significance ($\alpha \leq 0.05$) between the means of the estimates of the study sample members at a distance (body shape) attributable to the gender variable. It also shows that there are no statistically significant differences at the level of statistical significance ($\alpha \leq 0.05$) between the means of the estimates of the study sample members at a distance (nutrition and health behaviour as a whole) due to gender. This is due to the similarity of the methods of education, upbringing and healthy habits between males and females, which reduces the existence of differences in health behaviour as a whole.

This results of this study differ from those of Smadi (2013), Ashraah (2013) and Abdul Haq and colleagues (2012), which showed differences in the level of behaviour and health awareness in favour of females, while Kabbaja (2018), and Nader and Alwan (2015) showed differences in favour of males.

Results of the Fourth Question

Are there statistically significant differences in the level of physical fitness among the students of Ajloun College at Balqa University according to gender?

Table 13 shows significant differences at the level of statistical significance ($\alpha \leq 0.05$) between the means of the study sample estimates on physical fitness as a whole due to the gender variable, where the statistical significance values were lower than the statistical significance level ($\alpha \leq 0.05$).

Table 13: The mean and standard deviations and the T-test for the overall fitness scale by gender

Dimension	Gender	No.	Mean	SD	T-value	DF	P value
Fitness	Male	116	3.45	.306	3.664	248	.000*
	Female	134	3.32	.280			

*Statistically significant at the level of statistical significance ($\alpha \leq 0.05$).

There are statistically significant differences between the averages of the study sample estimates on physical fitness as a whole, with the differences in favour of males. This is because males do more sport than females, whether this is participating in sports activities at the university or active involvement in sporting clubs. This may be due to the social customs prevailing in society, which sometimes hinder females from participating in sports.

Results of the Fifth Question

Is there a relationship between the level of health behaviour and the level of fitness among the students of Ajloun College at Balqa University?

To answer this question, Pearson correlation coefficients between overall health behaviour with overall fitness score were extracted. Table 14 shows a positive correlation at the statistically significant level (0.05 and 0.01) between health behaviour as a whole and fitness as a whole (0.330). The positive correlation indicates that increasing the level of healthy behaviour leads to an increase in the level of physical fitness.

Table 14: Person correlation coefficients between health behaviour and fitness

Dimension		Fitness
Health behaviour as a whole	Person correlation coefficients	.330**
	P -value	.000
	No.	250

** Statistically significant at the level of statistical significance ($\alpha = 0.01$).

*Statistically significant at the level of statistical significance ($\alpha = 0.05$).

To calculate the effect of health behaviour and its sub-dimensions regarding the level of physical fitness among Ajloun College students, ANOVA was calculated. After the introduction of independent variables (nutrition, personal health, exercise, textures), the analysis of the variance was calculated for the independent variables entered in the equation. The results are shown in Table 15.

Table 15: ANOVA results to verify the strength and significance of the linear regression analysis model

Source of variance		SS	DF	MS	F value	P value
4	Regression	5.746	4	1.437	21.262	.000* ^d
	Residuals	16.554	245	.068		
	Total	22.300	249			

*Statistically significant at the level of statistical significance ($\alpha = 0.05$).

Table 15 shows all statistical significance values for all independent variables (0.000), which are less than the level of statistical significance. This indicates that there is an explanatory and moral force to use the multiple linear regression analysis model between independent variables (nutrition, personal health, doing sport, body shape) and dependent variable (fitness as a whole).

The multiple linear regression models are therefore appropriate to measure the causal relationship between the independent variables (nutrition, personal health, doing sport, body shape) and the dependent variable (fitness as a whole). Table 16 shows a summary of the Model Summary analysis of multiple linear regressions.

Table 16: Summary of model (b) – the multiple linear regression model

	R	R ²	Adjusted R ²	Std. error of the estimate	R ² change
4	.508 ^d	.258	.246	.25994	.059

d. Predictors: Constant – nutrition, personal health, doing sport, body shape.

e. Dependent Variable: Fitness.

As shown in Table 16, the value of the correlation coefficient is 0.508, the value of the coefficient of determination (2R) is 0.258 and the value of the modified coefficient of adjustment (Adjusted R²) is 0.246, indicating that the independent variables (nutrition, personal health, doing sport, body shape) were able to interpret 25.8 per cent of the changes in the dependent variable (fitness as a whole).



Conclusions

- The level of health behaviour among the students of Ajloun College was moderate.
- There are statistically significant differences in health behaviour levels among Ajloun College students according to gender. The differences in favour of females were in the dimensions of personal health and body shape, and those in favour of males were related to exercise.
- There are no statistically significant differences on the nutrition dimension and the level of health behaviour as a whole.
- The level of physical fitness of Ajloun College students was moderate and there were statistically significant differences in favour of males.
- There is a positive correlation between health behaviour and fitness level.

Recommendations

- Increasing the number of courses dealing with health and health behaviour.
- Holding courses and seminars on health and fitness in universities in cooperation with the Ministry of Health and health education centres.
- Increasing interest in health awareness and behaviour through various media.

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