

Developing an Instructional Unit in Vocational Education Curriculum, based on the International Standards of Nutrition and Sports, and Investigating its Effectiveness on Improving the Physical Self-Concept among Eighth Grade Female Students in Jordan

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Abstract

The aim of this study was to identify the effectiveness of a developed Instructional Unit Based on International Standards in Nutrition and Sports and Examine its Effectiveness on Improving the Physical Self-Concept Among Eighth Grade Female Students in Jordan. The students were selected from the eighth grade students in the first Secondary university schools –Femal- in the capital Amman during the Second semester of the academic year 2017/2018. The researchers identified the private schools that include two divisions of the eighth grade and chose one of them. One of the two divisions was randomly assigned to be an experimental group (26) and the other to be a control group (29) students. In order to achieve the objectives of the study, the measure of the self-concept of the body was composed of (24) items. An Instructional Unit was developed in the vocational education curriculum based on international standards in nutrition and sports to measure its effectiveness in improving the concept of the physical self. The developed unit consisted of (8) international standards in nutrition and sport, where (36) outcomes were derived, and were implemented in (20) Forty-five-minute lessons.

The results showed a statistically significant effect on the developed unit based on the global standards in nutrition and sport. The level of the self-concept of the students in the experimental group was higher than the students of the control group.

Keywords: Instructional Unit, vocational education, international standards, nutrition and sport, physical self, basic eighth grade

1. Introduction

Human, as far as resource is concerned is rendered the basic wealth of any society, and no economic or social development can be achieved unless preceded or accompanied by human development. Food and sports represent the most important environmental factors that have impact on human life, these two forms a symbiotic relationship, however it is food that has a profound impact on human life. Its importance is a priority, so that both the family (home) and school must provide to their members respectively.

Therefore, the education of food and sports and caring for a sound and healthy behavior of students is to be considered a fundamental goal of teaching objectives in all general courses, and in particular the teaching of vocational education subjects. This is a key milestone in the preparation of students, it also acts as a key pillar of the development of education and human development, which is a function of comprehensive development. (*Mesh'al, Al-Rahala and Batayneh, 2012*).

Al-Alwan (2015) pointed out that there was no scientific evidence for the majority of food related information in the past, but rather said information was derived from the inherited or passed on to people and what was public knowledge. However, scientists have recently reviewed this information in the light of new research and scientific method. They deduced that a fully balanced natural diet is important for health, growth and in raising an individual's mental and psychological level to its optimal stage.

It is noted in this regard that many organizations, such as the American Nutrition and Sports Association, have confirmed that optimal nutrition enhances physical activity and athletic performance of individuals and reduces

the frequency of hospitalization. These organizations have recommended the appropriate selection of food and fluids (Mesha'al, Al-Rahala and Batayneh, 2012).

Al-Ghuwairi (2017) noted that the World Health Organization (WHO) reported that the lack of movement and lack of physical and athletic activity are underlying risk factors of many chronic diseases, namely heart disease, obesity and diabetes, and have recommended daily physical activity to maintain healthy body weight.

Thus, the National Strategy for Food, Physical Activity and Sport was adopted by the World Health Assembly. The strategy focused on a set of global standards in nutrition and sports. This special criteria included a range of recommendations, including achieving an energy balance and a healthy weight, in addition to reducing the intake of energy-rich fatty foods and consuming more fruits, vegetables, legumes, non-dehydrated grains, walnuts and nuts (*WHO, 2004*).

A review of nutrition and human health research, published in 2017, which was conducted in cooperation with the National Institute of Health Research and the Medical Research Council, suggests that nutrition is a combination of integrated processes carried out by cells, tissues and organs, where the body acquires the energy and nutrients to carry out its normal functions through the intake of food and through the body's ability to convert food into nutrients via metabolism (*Medical Research Council, National Institute for Health Research, 2017*).

Unwittingly there are many who think that food and nutrition have the same meaning and function, they do not. Food means all the plant and animal products we consume. These foods contain the energy and nutrients the body needs to sustain life and to support growth and health. Conversely, Nutrition is the scientific study of food and nourishment of the body, and its effect on our health, as well as eating, digestion and metabolism (*Thompson, Manore & Vaughan, 2011*).

Elmadfa & Meyer (2009) points out that an improper diet combined with lack of athletic activity is a major determinant of high weight gain and obesity. Obesity is one of the most detrimental health concerns of our time and is classified under the category of endocrine diseases and nutrition (*Stefana, Kantaratzis, Machann, Schick, Thamer, Ritti Balletshover, Machicao, Fritsche, & Ha "ring, 2008*).

Obesity is also defined by the World Health Organization as: excessive and overwhelming accumulation of fat, which may lead to a plethora of health issues. The body mass index (BMI) is the classification method used to measure whether one is overweight and or obese (World Health Organization, 2018). This was confirmed by the results of the study of Obeidat (2015), which aimed at identifying the relationship between the concept of the physical self, as indicated by the BMI and muscle strength in the students of the Faculty of Physical Education at Yarmouk University. The results showed that the students of the Faculty of Physical Education had a positive perception of their physical self and their health represented by the body mass index (BMI). Obesity is a significant factor in numerous medical issues, including an increased risk of certain cancers such as colon, prostate, and breast cancer (Pelone, Specchia, Veneziano, Capizzi, Bucci, Mancuso, Ricciardi and de Belvis, 2012).

Broad (2008) and Sakamaki (2005) confirm that the problem of malnutrition and the spread of diseases is not only caused by the lack or decrease of financial resources, but also to the lack of food awareness, nutritional information and sports practices of individuals and groups, as stated in Ali Saleh, Rasaie and Halalat (2017). Al-Qarni pointed out that the curriculum is one of the important pillars in the comprehensive education of students and, therefore, an important aspect is health education, as health education represents a large and important part of education in general needs to be included.

If we were to consider knowledge as a basis in building curriculums, we would find that they should be characterized by development and innovation in the areas of expansion of science and information. The curriculum should include learning experiences that are design specifically to help students to obtain functional health information, to identify personal values that support healthy behaviors, and to identify global standards related to nutrition, sports, and healthy lifestyle (Brich & Videto, 2015).

The physical self is one of the dimensions of the self in which the individual presents his view of his body, which is the individual's perception of himself and is a source of influence on and from the surrounding environment. Self-esteem is closely related to the positive self-concept of body image. This is in line with the findings of the Hamilton study (2008), which aim was to identify the correlation of university students' perceptions of their physical image and depression, this showed the existence of a high perceptions of self that university students have about their own physical image, as well as the existence of a negative correlation between low body image and the degree of depression; the lower the student's body self-image, the greater the level of depression.

Individuals who have a positive perception of their bodies and selves have a strong sense of self, which makes them more confident in dealing with others and in forming their own opinions, which in turn affects their success greatly. In contrast, a negative self-perception negatively affects individuals' personalities and aspirations and, thus, negatively affects their overall performance in life (Ali, 2010).

The results of several studies, including Brennan, Lalond& Bain (2010), which aimed at examining the differences perception men have about their body's image and the perception women have. Men's perceptions were ranked higher than their own objective physicality, whereas women moderately ranked themselves in comparison to their objective physical selves.

Hence, the importance of forming a positive self-image of the body is great, as individuals who view their bodies in a positive way also tend to have a higher self-esteem. They view themselves as more social and comfortable with others and as more intelligent and able to take on responsibilities, unlike those who have a negative body image (H.H. Obeida, 2015). The concept of the physical self includes the individuals' vision and perception of his physical appearance, which includes abilities and physical properties, which have social considerations, such as public appearance, facial image, and how satisfied and pleased he is with his physical qualities and abilities (Yusuf, 2013).

Based on an understanding of the above mentioned information, Fox (1990) in England prepared the measure of physical self-perception, and it contains (25) phrases that measure six dimensions: the general concept of self, the perceived physical value of self, the physical self-concept, self-concept of self-efficacy, self-concept of physical appearance, and self-concept of self-strength. This measure is one of the first in its field and is the most famous, as it has been used in many studies, including the study of Abdul Qadir (2014). This study showed a positive relationship between physical self-concept and the dimensions of psychological characteristics towards sports with high levels of physical activity.

The study of the development of an instructional unit of research on the curriculum of professional education based on the international standards in nutrition and sports and its effectiveness in improving the self-concept of eighth grade students in Jordan is a relatively recent endeavor, within the limits of the two researchers' knowledge. The review of theoretical literature and previous studies in this field shows that there has been much research conducted on the topic of physical self-concept. The methodology used in these studies and some of the objectives and results are as follows: With regard to the methodology used, this study agrees with the study of Alwan (2015) and the study of Nejm and Fataah (2011), which followed the semi-empirical approach and measured body image of physical self, as did the study of Abdul Qadir (2016) and the study of H.H. Obeida (2015).

The review of the theoretical literature and previous studies in this field indicates that a number of studies have been interested in research in this concept of the physical self. These studies examined a number of variables and their impact on the concept of the physical self in different study samples. (2016), Hamilton (2008), Vonderen&Kinnally (2012), and the students of the Faculty of Physical Education (2015) (Zsakail et al., 2017) and the study of Santana, Silva and Raich (2013), or a sample of men and women such as the study of (Brennan, Lalond& Bain, 2010). And other studies.

Khattab (2014) conducted a study aimed at identifying the relationship between body image and select psychological and social variables in a sample of obese women in the Gaza Strip. The study used the descriptive method and used a questionnaire of (34) items to measure body image and was distributed to a sample of (162) obese women. The results showed that the perceptions of these obese women in the Gaza Strip of their body image were negative and that there is a relationship between body image and the psychological and social characteristics of obese women in the Gaza Strip.

A study was conducted by Abdelkader (2016) to identify the level of future anxiety and body image of students of the Institute of Physical Education and Sports at the University of Hassiba Ben Bouali in Algeria, as well as the correlation between future anxiety and body image. The researchers used the scale of future anxiety of Al-Seb'awy (2007), which includes five characteristics and (48) items. The researchers also used the scale of body image prepared in Arabic by Allawi, which contains (15) characteristics. The sample of the study consisted of (70) students from the institute. The study found that the students of the institute had a high level of future anxiety. They also had an average body image, and there is a positive correlation between future anxiety and body image.

Vonderen&Kinnally (2012) conducted a study aimed at identifying the impact of the media on the sample of university students in regards to their body image in relation to other variables. The study used the descriptive methodology. The sample consisted of (285) female students from the University of Florida in the United States.

The study used a questionnaire consisting of (39) items to measure the students' perceptions of their body image, the impact of the media and other social factors associated with body image, including friends, romantic partners, and parents. The results showed that there was a high impact of the media in the students' perceptions of body image.

Santana, Silva & Raich (2013) conducted a study aimed at identifying the factors affecting the degree of satisfaction of adolescents with their body image in public schools in Brazil. A questionnaire was prepared consisting of (26) sections distributed to the sample of the study: (1494) students. The results showed that the degree of satisfaction of adolescents with their own physique was low and represented the students' dissatisfaction with their own physique, specifically in weight, height, and eating habits.

Zsakail, et al. (2017) aimed to compare select factors of body image of adolescents (early teens) belonging to a randomly selected sample with a difference in the concept of physical self. The results showed that negative self-concept was related to obesity in both sexes.

Adolescence is the stage in which girls devote particular attention to their bodies because of the rapid changes and the pattern of growth and maturity that occurs at this stage. The physiological changes that occur in the body structure lead to a state of psychological instability and a decline in the level of self-concept among these adolescents (Zsakail et al., 2017).

This was agreed upon by the study of Al - Abbadesah (2013) in his study, which included (377) adolescent girls, and used the scale (satisfaction with the image of the body, the media programs), and the scale of Beck Depression, where the results showed a statistically significant correlation between age at maturity and satisfaction with The body image, and the existence of a correlative and predictive relationship between satisfaction with the image of the body and the (observed media programs, depression, weight) and a positive correlation and predictive relationship between satisfaction with body image and height.

The researchers noticed that many of the misconduct behaviors among the students of the basic stage were spread among many students. Many of them ate chips, biscuits, chocolate, Pepsi and candy. The researchers also noticed the prevalence of obesity among some students at this stage and dissatisfaction with their physical image.

1.1 The Issue of the Study

Before the 20th century, obesity was a rare disease, but in the 20th and 21st century it was classified by (WHO, 2015) as a global pandemic, which The United States ranked first in the world for the prevalence of obesity among its citizens by 74.6%. In the Arab world, the percentage of males with obesity was 64.5% and females 76%. Kuwait ranked first in the Arab world in the prevalence of obesity. 47.9% of women were obese compared to 34% 6% of males, and Jordan ranked sixth in the Arab world with prevalence of obesity among males (20%) and females (38%) (Alzaman & Ali, 2016).

The prevalence of obesity among females in Jordan is higher than that of males. This study is in response to the results and recommendations of many studies as (Zsakail, et al, 2017) and others, which this study confirmed that it is important to avoid obesity and increase mass because these nutritional disorders are always accompanied by severe health and physical problems in both the stages of adulthood and puberty. It also pointed out that the concept of the physical self in adults has its roots from the stage of adulthood, Significant and inconsistent things in the age of majority affect the concept of the physical self in adults, both in terms of their sense of themselves or in terms of their emotional development, cognitive and social.

World Health Organization emphasized the importance of schools' role in promoting healthy diets and physical and athletic activity to combat childhood obesity and other chronic diseases, because children and adolescents spend a long time in childhood and adolescence in the school environment, the environment is the most appropriate place to acquire knowledge and skills about healthy options and increase levels of physical activity. As an example, the teacher can significantly influence student lifestyles (World Health Organization emphasized, 2004).

This is where the role of the vocational education subject begins, as stated in the general framework document and the general and special outcomes of the vocational education subject for the basic education stage in Jordan (Ministry of Education, Jordan, 2013), which The nutrition education and its relation to sport and awareness of health education is one of the most important concerns of teaching this subject in adolescence - the stage of building the body properly - the stage of mental maturity to realize the importance of this stage - especially the preventive side of diseases of malnutrition and future diseases such as osteoporosis and obesity and increase The level of fat, delayed sexual puberty, anemia, rapid pyramid and the appearance of other types of diseases. . This is the aim of this study to developing a unit of study in vocational education based on international standards in

sports nutrition and investigating its effectiveness in improving the physical self-concept of the female students in the eighth grade in Jordan. The following is the main question: Are there statistically significant differences at the level ($\alpha = 0.05$) in the level of the physical self-concept of the members of the experimental and control group due to the teaching method (the developed instructional unit based on the global standards in nutrition and sports, the assessed unit)?

1.2 The Hypothesis of the Study

The study seeks to verify the validity of the following hypothesis: There are no statistically significant differences at the level ($\alpha = 0.05$) in the level of physical self-concept in the experimental and control group members attributed to the method of teaching (developed unit based on global standards in nutrition and sports, the assessed unit).

1.3 Objective of the study

This study aims to develop a unit of study in the curriculum of vocational education based on international standards in nutrition and sports and to investigate its effectiveness in improving the physical self-concept of eighth grade female students in Jordan.

1.4 The Importance of the Study

The importance of the study is summarized as follows:

1. Addressing the latest trends in the pedagogical process, which are the global standards in nutrition and sports.
2. Helping the officials and educators in the Ministry of Education in the Hashemite Kingdom of Jordan in planning and developing educational plans in accordance with international standards.
3. The results may contribute to improving the level of physical self-concept of eighth grade female students.
4. This study should be the nucleus of other studies in the future as there is a trend that the global standards in nutrition and sports will be gradually distributed in educational institutions and at various age levels.

1.5 Operational Definitions

Specific terms in the study will be defined as follows:

International Standards: These are the criteria for determining what students should learn and know of health concepts in the professional education textbooks set forth in the eighth grade in Jordan (*Ali Saleh, Al-Rasa'i and Al-halalat, 2017*).

Global standards in nutrition and sports are defined operationally: as eight global standards for health curriculum content, developed by the researchers, drawing on global standards for the content of health curricula in California from kindergarten to twelfth grade (California Department of Education, 2009). Most of the states of America participate in and achieve the recommendations of the World Health Organization in nutrition and sports, and these standards are: (basic concepts, impact analysis, access to valid and sound information, interpersonal communication, decision-making, goal setting, health-promoting behaviors, health promotion, and a set of knowledge, attitudes, values, and skills of a global nature). These should be given to female students to form the interwoven fabric of information, behaviors, and positive attitudes associated with food and nutrition and the exercise of healthy sports that cause girls to think about the eating and selecting of foodstuffs that are nutritionally appropriate to the needs of the body to protect itself from diseases related to malnutrition, changing habits in nutrition and sports, correct habits and habits of food, and sports innovation.

The concept of the physical self: is the sum of the individual's perceptions of him or herself and their self-evaluation. It consists of cognitive and emotional experiences, centered around the individual for being the source of experience, behavior, and functions. One of the dimensions of self in which the individual presents his view of his body is the individual's perception of himself (H.H. Obeida, 2015). It influences and is influenced by the surrounding environment and is recognized by the researchers by the students' use of a self-measure of the body prepared by the researchers for this purpose.

1.6 Limitations and Framework of the Study

The study was limited to the following limits and determinants:

- Spatial limits: Restricted to the eighth grade female students in the schools of the first secondary university in the capital, Amman.
- Time Limits: The study was applied to the eighth grade female students in the second semester of the academic year 2017/2018.

- Human limits: The study was applied to the experimental and control groups represented by the eighth grade students in the schools of the first secondary university girls in the capital, Amman.
- The Objective Determinants: The results of this study are also determined in part by the nature of the study procedures in terms of the design of the study tools and the extent of its validity and stability.

2. Method and Procedures

This section deals with the study's methodology, a description of the study's population and the sample of the study, the way they were selected, the method of preparation of the study's scale, the module developed in the vocational education curriculum based on the international standards in nutrition and sports prepared by the researchers, statistical data used in data processing, in addition to the design of the study and its variables.

2.1 Study Approach

To determine the effectiveness of the module developed in the vocational education curriculum based on the global standards in nutrition and sports in improving physical self-concept. The study used the semi-experimental method to examine the effectiveness of the independent variable (the developed unit) in the dependent variable (physical self-concept). The design used was the design of the experimental group and the control by pre and post measurement.

2.2 The population of the Study

The study's population is composed of all eighth grade female students in private schools affiliated with the Directorate of Education of Oman II, which is according to (1850) statistics students from (48) private schools, with two divisions of the eighth grade in each school. Each division includes approximately (27) students.

2.3 The Study Sample

The first secondary school of girls was chosen purposely because of its proximity to the place of residence of the researchers so that it was easy for them to follow up the application of the study. The two administrative and teaching bodies in the school cooperated on the study. Two divisions of the eighth grade were chosen randomly, with (26) students and the other representative group of (29) female students.

2.4 Study Tool

For the purposes of this study, the researchers used two tools:

First: The Measure of Physical Self-Concept:

Its aim was to measure physical self-concept from the viewpoint of female eighth grade students. The study took several steps in preparation of the scale. A series of foreign studies on body image were examined, such as Hamilton (2008), Vonderer&Kinnally (2012), Abadisa (2013), Khatatb (2014), H.H. Obeida (2015), Abdelkader (2016), Santana, Silva &Raich, (2013), and others. In light of this, the measure is in the final form of (24) items and the researchers chose to make the answer to the paragraphs on a scale of one (1) to five (5), the degrees in which the students assesses levels of physical self-concept on each paragraph, are as follows: (5) means that the student is strongly in agreement with the level of her physical self-concept, (4) means that the student agrees to the level of her physical self-concept, (3) means that the student is neutral to the level of her physical self-concept, (2) means that the student does not agree with her level of physical self-concept, and (1) means that the students disagrees strongly with her level of physical self-concept. The minimum degree that the student can obtain on the scale is (24) degrees and the maximum (120) degrees. The current level of performance on the physical self-concept scale of these eighth grade students has been divided into three levels (high, medium, and low) by dividing the number range from 5-1 in three categories for each to reach the level of 1.33. So, the levels are as follows: From the low physical self-concept (1-2.33), the average level of the physical self-concept (2.34-3.67), and the high level of physical self-concept (3.68-5).

2.4.1 The Validity of the Scale of Physical Self-Concept:

The validity of the scale was verified in a way that is true: the validity of the physical self-concept was verified by presenting the scale to (11) specialized arbitrators in the field of educational psychology, measurement, evaluation, curriculum, and teaching in the Jordanian universities, as well as some specialists working in the field. In light of the arbitrators' observations, the authors rephrased some of the statements and excluded some ambiguities. The arbitrators expressed their suggestions regarding the nature, language, and appropriateness of the items. Accordingly, the number of items has been reduced to (24) instead of (30) items.

2.4.2 Stability of the Scale of the Physical Self-Concept

Both researchers measured the stability of the scale of physical self-concept in two ways:

- **Method of testing and retesting** by applying it to a sample of (20) students outside of the study with a time difference of two weeks, and then the coefficient of stability was calculated using correlation coefficient Pearson. The stability coefficient of the scale as a whole (0.99) was appropriate for the study.

- **Kronbach Alfa method:** Internal consistency was calculated (whether the items are related to the test as a whole) was calculated through a random sample of (20) students from the study population and sample, in Kronbach Alfa method. (0.76) indicates that the stability is good for the scales of the measure of physical self-concept, and thus the scale and its items are pertinent.

2.4.3 The Module Developed in the Curriculum of Professional Education Based on the Global Standards in Nutrition and Sports

The two researchers prepared and developed the instructional unit in the following steps:

In order to achieve the objectives of the study, based on the pedagogical instructions, the instructional unit of nutrition and sports was developed in order to provide: special products according to the international standards in nutrition and sports, which are proposed to be included in vocational education textbooks for the eighth grade in Jordan and to investigate their effectiveness in improving the physical self-concept of the female students. These included the cognitive, functional, and sentimental aspects. The unit was also constructed in the form of 20 classes in the survey method to achieve the special products according to the international standards in nutrition and sports that are suitable to eighth grade female students at that stage of life, using the theoretical framework and its implications from: scientific sources, previous studies, and the outlines of the curriculum of health and vocational studies for the eighth grade and the guidance of a number of specialists in the curriculum, in the field of nutrition and health and global standards, including: standards for health education content for American school students in the states of (New Jersey, Texas, and California). In its initial form, the list consisted of 8 main criteria in nutrition and sports activity: (basic concepts, impact analysis, access to valid and applicable information, interpersonal communication, decision making, goal setting, health promotion behavior, and health promotion). In addition, (36) special outcomes were produced and distributed to the unit's subjects, which were divided into four topics and the teaching quota of (20) teaching units. The content was organized in the form of bulletins at the end of each section, in line with international standards of nutrition and sports, in which the teaching methods of the unit were developed in a survey method so that the products met international standards. A daily plan was developed to implement each stake within the unit. Table (1) shows the title of the topic, the order of the topic, and the number of shares.

Table (1). Subject Title, Subject Order and Number of Quotations for the Developed Study Unit (Nutrition and Sports)

Subject Title	Order Subject	Number of Classes
Food and Nutrition	1	6
My body is a mirror of my health	2	4
Sports activities	3	6
The energy that the body needs	4	4

2.4.4 Overall Goal of the Instructional Unit

The instructional unit was based on international standards in nutrition and sports and aimed at measuring its effectiveness in improving the physical self-concept of eighth grade female students in the Hashemite Kingdom of Jordan.

2.4.5 General Outcome of the Developed Instructional Unit

Table (2) shows the global standards for learning the concepts of nutrition and sports and the general outcome of the instructional unit developed in light of the international standards in nutrition and sports.

Table (2). Scientific standards for learning the concepts of nutrition and sports and the general outcomes of the instructional developed unit

No.	Global standards
1	The basic concepts.
2	Impact analysis.
3	Access to valid and applicable information.
4	Interpersonal communication.
5	Decision making.
6	Setting goals.
7	Exercise of health-promoting behaviors.
8	Health promotion.
No.	General outcome of the developed instructional unit.
1	Describes what is meant by: (nutrients, food, nutrition, balanced food, body image, athletic activity, fitness).
2	Distinguishes between healthy diets and diet-related diets.
3	Describes the benefits of eating a variety of foods containing iron, calcium and fiber and its impact on building a better body image.
4	Determines the effect of nutrition and athletic activity in maintaining fitness, blood pressure, weight, sugar and fat in the body.
5	Analyzes the value of calories and nutrition for food and beverages.
6	Explains how to use BMI as a tool to measure public health.
7	Analysis of the harmful effects of engaging in non-scientific diet practices to lose or gain weight.
8	Defines food preparation methods that are consistent with the guidelines for a nutritionally balanced diet.
9	Analyzes the influence of family, peers, culture, media, technology and other factors on: (Physical image, sports activity, healthy nutritional behavior).
10	Develop a personal plan to improve nutrition and integrate sports activity into your daily routine.
11	Use effective communication skills to access reliable information to avoid overuse of foods and beverages, promote healthy nutrition and better body image.
12	Use effective communication skills to obtain trustworthy information to enhance athletic activity.
13	Characterize individual methods to be physically active throughout life.
14	Encourages the trend towards health and sports activity in school.

2.4.6 Strategies Used to Implement the Developed Instructional Unit

1. **The survey:** An educational method is represented in the (pre-calendar) which is reviewing the previous experiences of the students, then the process of education passes through the following stages:

First: the planning stage: the division of students into groups and determining the work of each group for each activity. This stage consists of two main steps:

A - Identify the problem: The female students will complete this step with the help of the teacher, who displays via (cards, pictures, flyers, videos, or short stories). And then ask questions to the female students to facilitate in identifying and accessing the problem.

B – Laying down hypotheses and proposed solutions: by the female students to benefit from the means of support for education provided by the teacher to help students to reach the answers and the initial solutions to the problem.

Second: the stage of collecting data, information, evidence and proofs.

1 - The questions are asked by the teacher after providing one of the most supportive educational aids from the previous step to facilitate the arrival of female students in each group to data and information that helps them reach answers and correct solutions to the problem identified previously.

2. The teacher asks each group to collect evidence and proofs that support its views and organize them, and then the teacher will discuss with the groups logically, while avoiding intolerance of any particular opinion.

Third: The stage of presentation, interpretation and analysis of data and information: (examination of hypotheses, solutions and proposals):

1. The teacher asks each group to present its findings to the other groups through the use of group business sheets.

2 - The teacher asks each group to compare the evidence and proofs of the correct solutions to the problem identified at the beginning of the activity with the hypotheses, guesses or proposed solutions before research, exploration, analysis and interpretation.

Fourth: the stage of conclusion and making recommendations and suggestions: (in which the final decision is reached):

1 - The teacher asks the students in each group to provide the relations between the evidence (bulletins, pictures, videos, short stories), and hypotheses developed by each of the four groups at the beginning of the activity, and then implementing the decision.

2 - The teacher asks the students in each group to look at the bulletin (content), whether it supports the hypothesis put forward by each group or not.

3. The teacher from the four groups will require agreement on a particular opinion and finalization of the report.

Fifth: the stage of applying the decision in new positions-- homework

1 - The teacher gives each group homework of making posters or murals on the subject and displaying them on the walls of the school.

2 - The teacher asks the students to prepare paragraphs for morning radio on topics of nutrition and sports.

3. Practical application of a balanced breakfast in the school lab.

4 - Calculation applications for calculation of calories.

5 - The practical application of sports activities in the school yard.

Target group of the upgraded instructional unit:

The selected sample of the eighth grade female students in the schools of the first secondary university in the capital, Amman.

The Female Teacher:

The teacher of vocational education in the school has the primary responsibility of the implementation of the upgraded instructional unit and evaluating it, and being available for the assistance of researchers when necessary.

Duration:

It is dedicated to the implementation of the nutrition and sports unit (20) lessons, (two sequential lessons each class is forty-five minutes, distributed as follows: Six food and nutrition classes were allocated, and four classes of physical subjects were assigned to the class called, "My Body is a Mirror for My Health." While on the subject of sports activity, it was allocated (6) classes, and finally (4) class quotas were allocated for the subject of energy needs of the body. The time required to implement all the modules of the upgraded unit is approximately three months, two classes per week on Thursday. The unit began on 8/2/2018 and ended on 3/5/2018.

Application requirements for the upgraded instructional unit:

Cards & Photos - Bulletins - White Papers - Interactive Board.

Evaluation of the upgraded instructional unit:

Adopted in evaluating the effectiveness of the upgraded instructional unit on a number of tools including:

- Applying the scale of the concept of the physical self at the beginning of the application and its application after the end of the unit.
- Observing the behavior of the female students and their impressions during the interaction in educational

situations.

- Feedback from the female students.

Authenticated upgraded instructional unit

The validity of the developed instructional unit was verified by presenting it to (11) specialized arbitrators in the curricula and teachers in Jordanian universities as well as some specialists working in the field. In light of the arbitrators' observations on the developed module, the researchers rephrased some of the terms in language, excluded some ambiguities, reworded some of the thematic outcomes, and increased the duration of some activities to ensure that the outcomes were achieved to the fullest.

2.5 Study Procedures

The following procedures were followed in implementing the study.

- 1- Reviewing the educational instructions and determining the title of the study.
- 2- Defining the title of the study and the subjects of the study who are the eighth grade female students in the schools of the first secondary university on the subject of vocational education in the second semester of the academic year 2017/2018, where the school was deliberately chosen because of its proximity to the researchers' place of residence and to demonstrate the cooperation of the administrative and teaching bodies in the school.
- 3 - Building the measure of the physical self-concept using the instructions of the theoretical and previous studies.
4. Building a list of global standards and special products in nutrition and sports activity using theoretical instructions.
5. Developing an instructional unit of study in the curriculum of vocational education based on the international standards in nutrition and sports.
6. The two groups (A and B) were chosen randomly to be in the experimental and control groups so that the experimental group included (26) female students represented in Division (B), while the control group included (29) female students and was represented in Division (A).
7. The application of the measure of the physical self-concept to a sample from outside of the sample of the study consists of (20) students of the eighth grade, in which the stability of the measure was calculated by testing and retesting the measure of the sample of the study with a time interval of two weeks and calculating the Pearson correlation coefficient and Cronbach Alpha .
- 8 - Applying the scale of the concept of physical self-concept to the eighth grade female students in the basic experimental and control groups at the beginning of the application of the program on 8/2/2018.
- 9 – Applying the developed unit to the eighth grade students in the experimental group and not applying it to the control group, in which the period of application continued from 8/2/2018 until 3/5/2018.
- 10 - Applying the scale of physical self-concept on the eighth grade female students in the basic control and experimental groups after the completion of the application of the developed unit on 6/5/2018.
11. Entering data into the computer, performing the appropriate statistical analyses, and extracting the results and finding recommendations.

2.6 Study Variables

The study included the following variables:

First: Independent Variable: The unit has two levels:

- The instructional unit developed in the curriculum of professional education based on the global standards in nutrition and sports.
- The unit of study in the vocational education curriculum.

Second: Dependent Variable: The concept of the physical self.

Third: Adjuster Variable: Eighth grade female students in private schools.

2.7 Study Design

The study was designed in the experimental, control and pre-trial and experimental groups.

O2	X	O1	Experimental Group
O2	-----	O1	Control Group

O1: Previous test

X:Experimental treatment by applying the developed instructional unit.

O2:Posttest.

2.8 Statistical Processing

After collecting the questionnaires, the statistics were emptied and statistical data processors were carried out using the SPSS program to answer the study question as follows: To answer the question of the study, the arithmetic mean and the standard deviations were used. The mathematical averages of the students in the previous application of the measure of physical self-concept and the measure of the aptitude towards physical activity according to the independent variable of the developed unit. In order to determine the effect of the variable size on physical self-concept, Eta Square was used in light of the level of statistical significance.

3. Results of the Study and Its Discussion

This section includes an overview of the results of the study, and the results are presented below according to their hypotheses.

The results related to the first hypothesis: which states: “There are no statistically significant differences at the level ($\alpha = 0.05$) of physical self-concept in the members of the experimental and control groups due to the teaching method (the unit based on the global standards in nutrition and sports). To ascertain the validity of this hypothesis, the arithmetical averages and standard deviations of the pre- and post- primary measurement of the eighth grade female students in the first university schools on the physical self-concept scale of the experimental and control groups were calculated and displayed in Table (3).

Table 3. The arithmetical averages and standard deviations of the responses of the eighth grade students on the scale of the physical self-concept of the experimental and control groups.

The group	Number	Pre-measure		Post-measure		Post-measure mathematical medium-average	Standard error
		Arithmetic average	Standard deviation	Arithmetic average	Standard deviation		
Experimental	26	3.5080	.33686	4.4487	.26334	4.484	0.072
Control	29	3.7960	.50792	3.7888	.43968	3.757	0.068

Table 3 shows that there are apparent differences between the experimental and control groups in the arithmetical averages and the standard deviations on the scale of physical self-concept in the pre- and post- measurements. The experimental mean of the experimental group on the scale of the physical self-concept was (4.4487), while the arithmetic average of the control group on the same scale was (3.7888). To verify that these differences in the arithmetic mean between the experimental group and the control group have statistical significance at the $\alpha = 0.05$ level, the ANCOVA analysis was conducted. Table (4) shows this.

Table 4. Analysis of the common variation to indicate the differences in the concept of the physical self in the pre and post measurement between the control and experimental groups

Source	Total squares	Degrees of freedom	Average squares	F	Significance	ETA box
The group	6.948	1	6.498	51.07	.000	.496
Pre-measurement	0.535	1	0.535	4.208	0.045	.075
The error	6.612	52	0.127			
Total summation	13.117	54				

The results in Table (4) indicates that there are statistically significant differences between the experimental and control groups in the scores on the physical self-concept scale. The value of (P) (51.107) statistical significance of (.000), which is a statistical value at the level of significance ($\alpha = 0.05$), meaning that the developed unit has an impact on raising the level of physical self-concept of the students. In order to determine the differences in the results of the eighth grade female students on the scale of physical self-concept, the modified standard and standard errors for the performance of the eighth grade students were obtained on the scale of physical self-concept, and the results are displayed in Table (5).

Table (5). Modified arithmetical averages and standard errors of the responses of the eighth grade female students on the scale of the concept of the physical self

The group	Modified post-arithmetic mean	Standard error
Experimental	4.484	.072
Control	3.757	.068

It is clear from Table (5) that the differences were in favor of the experimental group. The experimental average of the experimental group reached (4.484), and the modified mean of the control group was (3.757). Thus, the hypothesis of the study was rejected. The ETA Square was used in light of the level of statistical significance. The results in Table (4) show that the effect size was good (0.496). This confirms the effectiveness of the upgraded instructional unit in improving the physical self-concept of the experimental group. This may be due to the enhanced results of the physical self-concept of the instructional unit, which are based on the international standards in nutrition and sport, in which the students were trained by the teacher, which improved their physical self-concept and helped them to improve their scholastic performance and to engage with other students in the competition for the sake of winning and excellence not only on the theoretical side but also on the psychological side and self-esteem aspect and to improve the physical self-concept. In the view of the researchers, training in the achievement of previous products and activities contained in the upgraded instructional unit and based on global standards in nutrition and sports were useful in improving the level of physical self-concept of the students' physical selves. It is clear that positive physical self-concept can be learned and acquired by students if they have the products, health, scientific content, and the good methods of educations that keep abreast of developments and are based on international standards. The effectiveness of the developed instructional unit based on the global standards in nutrition and sports in improving physical self-concept in this study is illustrated by the improvement in motivation and the academic level of the students in the experimental group. This was established through the observations of the teacher and researchers who indicated the improvement of academic performance and interaction resulting from the development and improvement of their physical self-concept.

Empowerment of the experimental group to develop the physical self-concept has been enhanced by their application of various activities, which were developed in this unit by the researchers to achieve global standards. This unit was also built in the method of distributing the survey, which keeps abreast of developments in teaching methods, and which enable the members of the experimental group to master the skills of the developed unit using a variety of educational activities. The researchers also believe that the reason for the effectiveness of the developed unit may be due to the creation of a comfortable classroom atmosphere in which students feel free to express their ideas without fear, which allowed them to interact positively with one another. The results may also be attributed to the improvement of physical self-concept in the experimental group or to the diversity of the subjects of the developed unit to improve many aspects; of the aspects, the most mentionable were the emotional, psychological, and social aspects of the students and connecting them to a positive body concept. As confirmed by the study of Khattab (2014), which was showed the most prominent result of a relationship between body image and the psychological and social aspects of obese women. Hamilton (2008) also showed significant result, where a correlation between body image and level of depression was discovered, in which the lower the body image of the student, the higher the degree of depression he or she had. Qadir (2016) had results which confirmed the existence of a relationship between worrying about the future and body image. The researchers believe that the diversity in the subjects of the unit of study, the appropriateness of unity within the developments and growth in society, and its conformity with global standards in its outcomes, subjects, activities, and teaching methods—all this led to the improvement of physical self-concept.

4. Recommendations and Proposals

The results of the present study demonstrated the effectiveness of the developed unit based on the global standards in nutrition and sports in improving the physical self-concept of the members of the experimental group. Therefore, the study recommends the following:

1. Using this module and applying it by teachers of vocational education in the basic stage in general and the eighth grade specifically, and circulating it throughout the public schools.
2. The interest in strengthening the concept of physical self-concept in students of the basic stage by working on the development of units other than vocational education to increase their self-awareness.
3. Attention to strengthening the factors that affect the appreciation of the concept of physical self-concept in a positive way for the students of the eighth grade and the abandonment of the experience of failure by working to achieve high educational merits and the acquisition of expertise and culture and awareness.
4. Work on the development of modules to improve the emotional aspects of students not included in the current study, as many field studies, including the current study, showed a positive effect of use of these developed units on students in different stages of schooling.

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