

Effectiveness of an Educational Program on Physically-Disabled Fighters' Quality of Life at Rehabilitation Military Center in Al-Basra City

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Abstract

Objective(s): The aim of the study is to determine the effectiveness of the education program on physically-disabled fighters' quality of life, to determine the effectiveness of the education program on physically-disabled fighters' health status.

Methods: A quasi-experimental, one group test retest design, is carried out in order to achieve the objectives of the study by using the evaluation approach and the implementation of the education program at the Rehabilitation Military Center in Al-Basra City from of January 7th, 2019 to October 31st 2019. Non Probability "purposive" sample of (27) physically disabled fighters' is selected selected for the present study The sample is assigned according to the following criteria: **a.** Physically disabled who has not participated in any health educational program related quality of life. **b.** Physically disabled fighters are selected as having disability ratio from 60 to 80 percent. Test-retest reliability and content validity "panel of (18) experts" of the questionnaire are determined through pilot study.

Data are collected through the application of the education program, the use of the questionnaire and the structured interview as means of data collection. Data were analyzed through the use of descriptive statistical data analysis approach of frequency, percentage, mean, mean of scores, total of scores, range and standard deviation and inferential statistical data analysis approach T-test, multiple linear regressions, person correlation coefficient, Chi-Square test, and analysis of variance (ANOVA).

Results: The results of the study depict that the evaluation of physically-disabled fighters' health status and quality of life is moderate due to the effect of physical disability; the physically disabled fighters' quality of life domains have been improved due to the effect of the education program; the physically disabled fighters' health status have been improved due to the effect of the education program; physically disabled fighters' quality of life is significantly different relative to their age, residency, marital status, level of education, and chronic illness, and a non-significant difference relative to their type of injury and socioeconomic is determined.

Conclusion: The study concluded that the health education Program has produced an effect on the physically-disabled fighters' health status in the study group post its implementation. So, the study has confirmed that the program is an effective mean for the physically-disabled fighters' health status in the Rehabilitation Military Center; the Health Education Program has produced an effect on the physically-disabled fighters' quality of life in the study group post its implementation. Further, the study has confirmed that the program is an effective mean for the enhancement of the physically-disabled fighters' quality of life in the Rehabilitation Military Center.

Keyword: Educational Program, Quality of Life, Physically- Disabled Fighters'.

Introduction

The World Health Organization (WHO) defines a disability as something that impairs, limits activity, or constrains an individual's participation¹.

Physical disability is defined as "the loss of motor function of varying degrees or limitation in movements or activities resulting from deformed limbs, body paralysis, or deformity caused by damage to the structure or function of body parts"².

A physical disability is the long-term loss or impairment of part of a person's body function, resulting in a limitation of physical functioning, mobility, dexterity or stamina. Due to the functional loss the person will experience the inability to perform normal movements of the body, such as walking and mobility, sitting and standing, use of hands and arms, muscle control³.

A Physical disability, which are also referred to as orthopedic, neuromotor, or musculoskeletal impairments, are those that prevent normal physical functioning. Examples of physical disabilities include cerebral palsy, a neuromotor disorder resulting from brain injury that impairs movement control, and spinal bifida, a neuromotor impairment of the spinal cord that can limit normal movement and cognitive functioning⁴.

Quality of life is described as a wellness resulting from a combination of physical, functional, emotional and social factors. Is a broad multidimensional concept that includes subjective evaluations of both positive and negative aspects of life⁵. Physical disability can decrease quality of life and limit the community participation. A significant and negative association was found between disability and quality of life^(6,7).

The disabling nature of the chronic disease can limit the daily activities, restrict the society roles, unemployment and finally lead to drop the quality of life, the quality of life can be affected by disability⁸.

People with physical disability are more likely to have chronic diseases such as cardiovascular disease, diabetes, stroke, arthritis, asthma, high blood pressure, cholesterol, and exposure to bed ulcers. The most common health problems among the physically disabled are obesity, which limits the freedom of movement and work in the environment, and limits the ability of the disabled to work daily activities such as feeding, bathing, and thus limit the ability of the person to rely on him-self⁹.

Physically disabled people experience more restrictions in social activities than healthy people, which are associated with lower level of wellbeing^(10,11).

The education is effects on people's earnings and productivity; education helps them in achieving a variety of outcomes that matter for quality of life¹². Education is one of the most important predictors of one's health status, Employability and probability of being married, all are well known predictors of quality of life¹³.

Health education can improve quality of life, emotional function and lessen distress^(14,15). Education improves well-being because it increases access to non-alienated paid work and economic resources that increase the sense of control over life, as well as access to stable social relationships, especially marriage, that increases social support¹⁶.

Patient education significantly improves quality of life. It is concluded that patient education has a reliable positive impact on the quality of life¹⁷. Education influences positively health condition and by this quality of life. The educational process passes also knowledge, skills and psycho-emotional motivations, allowing partner interaction between a patient and a teacher. The aims of education are though making patients independent, producing motivation for therapy and counteract fear, depression and frustrations¹⁸.

Method

A quasi-experimental, one group test retest design, is carried out in order to achieve the objectives of the study by using the evaluation approach and the implementation of the educational program at the Rehabilitation Military Center in Al-Basra City from of January 7th, 2019 to October 31st 2019. The present study is conducted on physically disabled fighters at the Rehabilitation Military Center in Al-Basra City. The Military Rehabilitation Center is established on May 7th, 2018. It provides medical and rehabilitative services to physically disabled fighters' who have disability ratio from 60 to 80 percent. Non Probability "purposive" sample of (27) physically disabled fighters' has been selected for the present study. The physically disabled group is exposed to the educational program. The sample is assigned according to the following criteria:

a. Physically disabled who has not participated in any health educational program related quality of life.

b. Physically disabled fighters are selected as having disability ratio from 60 to 80 percent.

An educational program is constructed for the purpose of the study. The program is oriented toward the physically- disabled fighters’ quality of life. The program is comprised of (6) lectures. These lectures focus on physically- disabled fighters’ quality of life related issues.

The questionnaire is composed of three main parts as follows:

Part I: The Physically Disabled Socio-Demographic Characteristics: This part includes items of age, gender, residency, types of injury, marital status, level of education, chronic diseases, and socioeconomic status which are calculated through use for Socioeconomic Status Scale Low= (less than 59), Moderate= (60-80), and High= (81-100).

Part II: The Physically Disabled Fighters’ Health Status Evaluation Tool: This part is comprised of (32) item that measure physically disabled fighters’ health status about physically disabled fighters’. It is measured as High= (2.34-3) it mean poor health status, Moderate= (1.67-2.33) it mean moderate health status, and Low= (1-1.66) that means good health status.

Part III: Physically Disabled Fighters’ Quality of Life Evaluation Tool: This part is comprised of (69) item that measure physically disabled fighters’ quality of life about physically disabled fighters’. It is measured as

High= (2.34-3), Moderate= (1.67-2.33), and Low= (1-1.66).

Test-retest reliability is employed for the determination of the study instruments stability. Pearson correlation coefficient is computed on responses of (12) physically disabled fighters at the Rehabilitation Military Center in Al-Basra City, determined through a pilot study. The content validity of the program and the study tools are determined through the use of panel of (18) experts.

Data are collected through the application of the education program, the use of the study instruments and the structured interview technique as means of data collection.

The data of the present study are analysed through the use of the Statistical Package of Social Sciences (SPSS) version 20. Through descriptive statistics (frequency, percentage, mean, mean of scores, total of scores, range and standard deviation) and statistical inferential (T-test, multiple linear regressions, person correlation coefficient, Chi-Square test, and analysis of variance ANOVA).

Results were determined as highly significant at ($P \leq 0.01$) significant at ($P \leq 0.05$) and non-significant at ($P > 0.05$).

Results

Table (1): Comparative Differences among the three Periods (Pre-test, Post-test I and Post-test II) for the Physically-disabled Fighters’ Health Status

Main Domain Related to Physically- Disabled Fighters’ Health Status	ANOVA					
	Test	Sum of Squares	d.f.	Mean Square	F	Sig.
Physical Health	Between Groups	17.124	2	8.562	186.345	0.000 HS
	Within Groups	3.584	78	0.046		
Mental and Psychological Health	Between Groups	17.590	2	8.795	108.125	0.000 HS
	Within Groups	6.345	78	0.081		
Social Health	Between Groups	18.142	2	9.071	97.548	0.000 HS
	Within Groups	7.253	78	0.093		
Behavioral Health	Between Groups	7.657	2	3.829	77.769	0.000 HS
	Within Groups	3.840	78	0.049		

NS: Non Significant at $P \geq 0.05$, Sig: Significant at $P < 0.05$, HS: Highly Significant at $P < 0.05$, df: degree of freedom, F: F Observed.

This table revealed that a statistically high significant difference between the three period (pre-test, post-test I and post- test II) related to domain of physically- disabled fighters’ health status, when analyzed by ANOVA.

Table (2): Comparative Differences among the Three Period (Pre-test, Post-test I and Post-test II) for the Physically Disabled Fighters’ Quality of Life

Main Domain Related to Physically- Disabled Fighters’ Health Status	ANOVA					
	Test	Sum of Squares	d.f.	Mean Square	F	Sig.
Physical Health	Between Groups	5.833	2	2.917	79.751	0.000 HS
	Within Groups	2.853	78	0.037		
Psychological Health	Between Groups	7.323	2	3.662	46.079	0.000 HS
	Within Groups	6.198	78	0.079		
Social Relationship	Between Groups	1.817	2	0.909	17.236	0.000 HS
	Within Groups	4.112	78	0.053		
Level of Independence	Between Groups	6.486	2	3.243	78.960	0.000 HS
	Within Groups	3.204	78	0.041		
Environment	Between Groups	4.398	2	2.199	60.112	0.000 HS
	Within Groups	2.853	78	0.037		
Spiritual Health	Between Groups	4.233	2	2.117	27.937	0.000 HS
	Within Groups	5.909	78	0.076		

NS: Non Significant at $P \geq 0.05$, Sig: Significant at $P < 0.05$, HS: Highly Significant at $P < 0.05$, df: degree of freedom, F: F Observed.

This table presented that a statistically high significant difference among the three period (pre-test, post-test I and post-test II) related to quality of life domains, when analyzed by ANOVA.

Table (3): Comparative Differences Between the Physically Disabled Fighters’

Quality of Life Relative to their (Ages, Residency, Types of injury, Marital Status, Level of Education, Chronic Disease, and Socio-economic Status)

Quality of Life Variables	Pre- test Quality of Life				Post- test I Quality of Life				Post - test II Quality of Life			
	Chi-Square	d.f	p-value	Sig.	Chi-Square	d.f	p-value	Sig.	Chi-Square	d.f	p-value	Sig.
Age (Years)	75.641	10	0.000	HS	27.428	10	0.002	S	9.579	10	0.478	NS
Residency	11.517	2	0.003	S	1.257	2	0.534	NS	5.903	2	0.052	NS
Types of injury	9.737	6	0.136	NS	9.588	6	0.143	NS	10.502	6	0.105	NS
Marital Status	0.868	2	0.648	NS	8.701	2	0.013	S	3.165	2	0.205	NS
Level of Education	97.159	8	0.000	HS	3.228	8	0.919	NS	5.506	8	0.702	NS
Chronic Disease	12.010	2	0.002	S	0.188	2	0.910	NS	2.970	2	0.226	NS
Socio-economic Status	1.683	4	0.794	NS	2.762	2	0.251	NS	1.985	2	0.371	NS

d.f = degree of freedom, P = probability value, Sig.= Significant, HS= high significant S= Significant at (P< 0.05), NS= Non-Significant at (P > 0.05).

This table revealed that there was high a significant relationship between physically disabled fighters’ quality of life and their age in pre-test for study group at (P < 0.05), while in post-test I shows that there was significant relationship between physically disabled fighters’ quality of life and their age at (P < 0.05), and there was a non-significant relationship between physically disabled fighters’ quality of life and their age in post - test II at (P ≥ 0.05). This table shows that there was a significant relationship between physically disabled fighters’ quality of life and their residence in pre-test for study group at (P < 0.05), while in post-test I and post - test II shows that there was non-significant relationship between physically disabled fighters’ quality of life and their Residence at (P ≥ 0.05). This table shows that there is no significant difference among three periods (pre-test, post-test I and post-test II) related to physically disabled

fighters’ quality of life and their type of injury at (P ≥ 0.05). This table shows that there was a non-significant relationship between physically disabled fighters’ quality of life and their marital status in pre-test for study group at (P ≥ 0.05), while in post-test I shows that there was a significant relationship between physically disabled fighters’ quality of life and their marital Status at (P < 0.05), and there was non-significant relationship between physically disabled fighters’ quality of life and their marital Status in post - test II at (P ≥ 0.05). This table shows that there was a high significant relationship between physically disabled fighters’ quality of life and their level of education in pre-test for study group at (P < 0.05), and this table shows that non-significant different between physically disabled fighters’ quality of life and their level of education in post-test I and post-test II at (P ≥ 0.05). This table shows that there was a significant

relationship between physically disabled fighters' quality of life and their chronic disease in pre-tests for study group at ($P < 0.05$), and this table shows that non-significant different between quality of life and chronic disease in post-test I and post-test II at ($P \geq 0.05$). This table shows that there are no significant among three periods (pre-test, post-test I and post-test II) related to physically disabled fighters' quality of life and their socio-economic status at ($P \geq 0.05$).

Discussion

Part I: Discussion of the Effectiveness of the Education Program on

Physically-Disabled Fighters' Health Status

Analysis of such physically- disabled fighters' health status between the three period (pre-test, post-test I and post- test II) related to physically disabled fighters' health status, in the present study, have moderate health status before the educational program implementation, and improved health status after educational program implementation (Table 1). This finding provides empirical evidence that these physically- disabled fighters' is perfect candidates to the education program because they experience health related problems and improved physically- disabled fighters' health status after implementation of educational program. Throughout the course of data analysis, the study depicts that physically- disabled fighters' health status has been improved particularly for those in the study group. So, we can confirm that physically- disabled fighters' in the study have benefited out of the education program implementation and the quality of life program can be considered an effective tool to improve physically-disabled fighters' health status in the rehabilitation military center.

This finding is in an agreement with some studies that find a positive relationship between education and well-being, while others find that middle level education is related to the highest level of well-being¹⁹.

Part II: Discussion of the Effectiveness of the Education Program on Physically-Disabled Fighters' Quality of Life

Analysis of such physically- disabled fighters' quality of life between the three period (pre-test, post-test I and post- test II) related to physically-disabled fighters' quality of life, in the present study,

have moderate quality of life before the educational program implementation, and improved quality of life after educational program implementation (Table 2). This finding provides empirical evidence that these physically- disabled fighters' is perfect candidates to the education program and improved physically-disabled fighters' quality of life after implementation of educational program. Throughout the course of data analysis, the study depicts that physically- disabled fighters' quality of life has been improved particularly for those in the study group. So, we can confirm that physically- disabled fighters' in the study group have benefited out of the program implementation and the quality of life program can be considered an effective tool to improve physically- disabled fighters' quality of life in the rehabilitation military center.

This finding is in an agreement with study conduct by Javed and others conduct a study to examine the effect of education on quality of life and well-being. The study depicts that an education influences people's perception of their quality of life domains and well-being²⁰.

Part III: Discussion of the Differences between Physically-Disabled Fighters' Quality of Life and their Socio-demographic Characteristics

Analysis of such differences reveals that physically-disabled fighters' quality of life. is significant different relative to their age, residency, marital status, level of education, and chronic illness, except that of type of injury, and socioeconomic status which depicts not significant different relative physically- disabled fighters' quality of life (Tables 3).

This finding is in an agreement with that of a study which indicate that there is significant relationship between quality of life for adult patients with limbs loss and their age²¹. Another supportive evidence is provided in a study which finds that that there is a significant relationship between age, marital status, level of education, and quality of life of spinal cord injured persons (Ali and Tawfiq, 2013)²². This finding is in an agreement with that of a study indicate there is a statistically significant difference between quality of life and their: age, marital status, and educational level²³.

Conclusion

1. Evaluation of physically-disabled fighters' health status and quality of life is moderate due to the effect of physical disability.

2. The physically disabled fighters' quality of life domains have been enhanced due to the effect of the education program.

3. The physically disabled fighters' health status has been improved due to the effect of the education program.

4. Physically disabled fighters' quality of life and socio-demographic characteristics. Physically-disabled fighters' quality of life is significant different relative to their age, residency, marital status, level of education, and chronic illness, and a non-significant difference relative to their type of injury and socioeconomic is determined.

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Conflict of Interest: None to declare.

Ethical Clearance: All experimental protocols were approved under the Ministry of Defense, Iraq and all experiments were carried out in accordance with approved guidelines.

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