



The effect of BodyPump exercises on the quality of life among middle-aged females

El efecto de los ejercicios BodyPump en la calidad de vida de las mujeres de mediana edad

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Abstract

Introduction: The quality of life for older people is influenced by numerous challenging situations and factors associated with aging and health changes. Generally, physical activity is considered a significant factor in determining one's quality of life.

Objective: This study aimed to explore the quality of life for Jordanian middle-aged females, as well as the impact of BodyPump exercises on quality of life.

Methodology: fifty-two Jordanian middle-aged females participated in this study and divided into two groups, each with 26 members: a control group (age, 54.3±2 years; height, 166±5.2cm; body mass, 64.5±3.8kg) and an experimental group (age, 53.4±2 years; height, 165±3.2cm; body mass, 63.5±2.8kg). The study's goals were accomplished by applying means, standard deviations, paired sample t-test, and an independent samples t-test to detect differences in (OPQOL-brief) means according to the bodypump programme using SPSS version 29 with a 95% confidence level ($p < 0.05$).

Results: The study findings revealed that the quality of life for Jordanian middle-aged females was close to low (2.65-2.77). On the other hand, the study findings revealed statistically significant differences between the control and experimental groups in the post-test, favoring the experimental group (2.99, 4.14) respectively.

Discussion: These findings are primarily aligned with the results of previous studies.

Conclusions: Based on the study results, BodyPump exercise can be used as an indicator among the approved strategies to improve the quality of life for middle-aged females in Jordan.

Keywords

Bodypump; middle-aged females; physical exercises; quality of life.

Resumen

Introducción: La calidad de vida de las personas mayores se ve influenciada por numerosas situaciones desafiantes y factores asociados con el envejecimiento y los cambios en la salud. Generalmente, la actividad física se considera un factor significativo en la determinación de la calidad de vida.

Objetivo: Este estudio tuvo como objetivo explorar la calidad de vida de mujeres jordanas de mediana edad, así como el impacto de los ejercicios BodyPump en la calidad de vida.

Metodología: Cincuenta y dos mujeres jordanas de mediana edad participaron en este estudio y se dividieron en dos grupos, cada uno con 26 miembros: un grupo de control (edad, 54,3 ± 2 años; altura, 166 ± 5,2 cm; masa corporal, 64,5 ± 3,8 kg) y un grupo experimental (edad, 53,4 ± 2 años; altura, 165 ± 3,2 cm; masa corporal, 63,5 ± 2,8 kg). Los objetivos del estudio se lograron aplicando medias, desviaciones típicas, prueba t de muestras pareadas y una prueba t de muestras independientes para detectar diferencias en las medias (OPQOL-brief) según el programa BodyPump utilizando SPSS versión 29 con un nivel de confianza del 95% ($p < 0,05$).

Resultados: Los hallazgos del estudio revelaron que la calidad de vida de las mujeres jordanas de mediana edad era cercana a baja (2,65-2,77). Por otro lado, los hallazgos del estudio revelaron diferencias estadísticamente significativas entre los grupos de control y experimental en la prueba posterior, a favor del grupo experimental (2,99, 4,14) respectivamente.

Discusión: Estos hallazgos se alinean principalmente con los resultados de estudios previos. **Conclusiones:** Con base en los resultados del estudio, el ejercicio BodyPump se puede utilizar como un indicador entre las estrategias aprobadas para mejorar la calidad de vida de las mujeres de mediana edad en Jordania.

Palabras clave

Bodypump; mujeres de mediana edad; actividad ejercicios; calidad de vida.

Introduction

Aging is accompanied by numerous biological changes that contribute to a decline in mental health (Ara-kelian et al., 2018). This is positively associated with increased fear of falling and decreased quality of life (Carrasco Poyatos et al., 2019). Quality of life can be considered a measure of personal happiness. However, a multidimensional view of quality of life has been established, particularly in the health field, where psychological well-being and quality of life are considered essential components of health. Enjoying high psychological health is a positive indicator of a stable and good life (An et al., 2020). The World Health Organization defines quality of life as an individual's perception of their place in life, about the culture and value system in which they live, their expectations, goals, interests, and standards (World Health Organization [WHOQOL], 2012). Quality of life encompasses multiple dimensions, including social, psychological, physical, and economic components (Puciato et al., 2017).

Quality of life can be described as an individual's subjective perception and evaluation of their living conditions. It is based on internal criteria (values, expectations, and aspirations) and numerous indicators, including independence, self-sufficiency, decision-making, absence of pain and suffering, preservation of sensory abilities, maintenance of a social support system, adequate financial status, and a sense of usefulness to others. The quality of life of older people is influenced by numerous challenging situations, factors associated with aging, and health changes (Gurkova, 2011).

In the same context, the quality of life varies from place to place, depending on the social connections and support individuals receive (Amorim et al., 2017). Factors associated with lower quality of life include advanced age, gender (females are more likely to be affected), living alone, and economic instability. There is an inverse relationship between higher levels of depression and quality of life (Adhikari et al., 2022). Older people often experience a lower quality of life (Seangpraw et al., 2019). A study also indicated that higher incomes can predict a 2.73-fold higher quality of life compared to those with lower or low incomes (Hongthong et al., 2015). Quality of life has become a crucial measure and a significant indicator of both mental and physical health (Awick et al., 2017).

On the other hand, regular physical exercise improves mood, increases norepinephrine levels, lowers cortisol levels, and reduces feelings of stress in individuals (Esmaeili et al., 2018). Furthermore, regular physical exercise helps to control cortisol levels and reduces stress and anxiety, as well as the risk of depression (Bao & Swaab, 2010). Physical activity is also associated with improved psychological aspects such as self-esteem, social interaction, and reduced symptoms of depression (Tesarz et al., 2012). Generally, physical exercises are considered a significant and important factor in determining quality of life, and a positive correlation exists between physical activity and quality of life (Phillips et al., 2012). Regular physical exercise enhances mental health, reduces functional decline, and promotes independence (Praveen & Anitha, 2017). Furthermore, regular resistance training helps maintain muscle strength and improve body mass (Swift et al., 2014). Shiroma et al. (2017) suggest that women who regularly engage in resistance training significantly reduce their risk of type 2 diabetes and cardiovascular disease compared to those who engage in endurance training alone.

Therefore, the proliferation of low-cost gyms and fitness centers, combined with increased awareness of the benefits of regular physical activity and exercise, has contributed to improving individuals' quality of life and health (Lazaro, 2019). Consequently, the activities and exercise programs offered in these centers and gyms have become more diverse compared to the past (Gallegos et al., 2011). Bodepump is one of these new trends, offering group activities led by a trainer and supported by music, a choice made by more than 30% of fitness center members (Garcia & Liopis, 2010). Similarly, group training ranked third among the top 20 global physical activity trends for 2020 (Thompson, 2019). Women are participating more in group physical activities (Garcia & Liopis, 2010). In the same context, the Bodepump training program has become one of the most popular programs in recent years. The training unit lasts (55-60) minutes and includes nine musical pieces, each of which lasts (5-7) minutes and targets muscle groups throughout the body (Amoros et al., 2018). Bodepump is considered a type of resistance training that uses sets of low free weights with high repetition volume (Oliveira et al., 2009).

The Bodepump program is a pre-designed group resistance program with over five million participants weekly. The training module includes exercises for all body parts with a high number of repetitions (approximately 800) total and at low to moderate intensity. These exercises improve muscle strength and reduce fat mass (Les Mills International Web site [LMS], 2013). Greco et al. (2011) indicate positive



effects of Bodypump exercises on muscle strength in sedentary young people. Nicholson et al. (2015) also found positive changes in maximal muscle strength. A study indicated that bodypump exercises have a positive impact on psychological health, improving social interactions and reducing negative emotions such as anxiety and depression (Heiestad et al., 2016). A study revealed that the psychological and social responses of females practicing bodypump exercises during the COVID-19 pandemic had a positive impact on life satisfaction and communication with family and others, and also contributed to a decrease in stress levels (Zureigat et al., 2021a). Another study showed that bodypump exercises contributed to improving positive emotions and life satisfaction in females during the COVID-19 pandemic (Zureigat et al., 2021b). A positive association exists between quality of life and regular physical activity (Gillison et al., 2009).

The study's importance stems from the fact that increasing aging is associated with numerous psychological, physical, and health effects. Furthermore, quality of life among older females is of great importance and is linked to mental and psychological health, such as depression. Given the increasing number of older people, it is essential to examine the physical, health, and psychological challenges they encounter. In this context, Morales-de-la-Rosa (2025) indicated that the adopting healthy habits from childhood and during university studies contributes to improving quality of life. It has been observed that students tend to adopt unhealthy lifestyles at the beginning of their university years, which increases their risk of obesity and cardiovascular diseases. Furthermore, poor nutrition and lack of physical activity are major factors affecting overall health, highlighting the importance of promoting physical activity.

Therefore, the results of this study may serve as a starting point for further research exploring the impact of regular physical activity on the quality of life among older people. There is also an urgent need to shed light on the psychological and social issues faced by older people in Jordan, and consequently, to explore strategies that can contribute to improving their quality of life as they face aging. By reviewing previous studies related to the topic of the current study, the researchers found that most of them focused on the impact of bodypump exercises on physiological aspects, including obesity, bone density, and triglyceride levels. However, to the researchers' knowledge, studies exploring the impact of BodyPump exercises on psychological aspects are scarce. Therefore, the researchers sought to explore the quality of life among Jordanian middle-age females, as well as the impact of BodyPump exercises on quality of life among middle-age females. This study results of were presented to those responsible for planning to enhance the quality of life for middle-age and the elderly people to achieve sustainable development for them. Therefore, the main hypothesis of the current study is that performing body pump exercises has a positive impact on the quality of life of middle-aged female.

Method

Participants

To achieve the study objectives, we have been using the quasi-experimental approach and Bodypump programme on (52) untrained healthy women in middle-age and divided into two groups randomly, each with 26 members: a control group (age, 54.3 ± 2 years; height, 166 ± 5.2 cm; body mass, 64.5 ± 3.8 kg) and an experimental group (age, 53.4 ± 2 years; height, 165 ± 3.2 cm; body mass, 63.5 ± 2.8 kg). The participants were selected purposively from anew registrants for the fitness center, and they are not practicing body pumps or regular sports activities, and any injuries or diseases that would hinder the practice of resistance training, such as tears, lower back pain, osteoporosis, high blood pressure, cardiovascular disease, irregular heartbeat, or diabetes. This was achieved through a medical examination conducted by the medical department at the fitness center after registration. The absence of menstruation during the trial period was taken into account. It should be noted that all participants successfully completed the program.

Procedure

Older People's Quality of Life questionnaire (OPQOL-brief)

The (OPQOL-brief) questionnaire has 13 items, with a preliminary single item. Each of the 13 items is scored as follows: strongly agree, 5; agree, 4; neither, 3; disagree, 2; and strongly disagree, 1. A preliminary single item is scored very good, 5; good, 4; alright, 3; bad, 2; and very bad, 1 (Bowling et al., 2013). The following classification was used to assess the means of the study sample's responses: Low level:

Less than 2.33; Intermediate level: 2.33 - Less than 3.67, and High level: 3.67 – 5. Following the construction of the study instrument, its paragraphs were translated into Arabic by three specialists in psychology and the English language, who then reviewed them to ensure their linguistic and scientific integrity. The study sample was also required to complete the tool under the supervision of a Psychologist. This was done to explain the study objectives and answer any inquiries to ensure complete clarity of the study tool paragraphs. The study tool items were included in an electronic questionnaire via Google Forms to facilitate the study sample's response, after verifying the scientific coefficients of the study tools (validity and reliability). The study tool link was sent via WhatsApp to both groups (control and experimental) before the experiment began to assess the quality of life level. After the experiment, the study tool was sent again to identify the effect of practicing BodyPump exercises on the experimental group.

Bodypump programme

The bodypump program is based on the concept of performing a large number of repetitions to stimulate and recruit motor neurons, similar to resistance training with heavy weights. The training session begins with a 10-minute warm-up, which includes straight-legged weightlifting, shoulder presses, and squats, and concludes with a cool-down. Then, the focus shifts to large muscle groups (such as the legs and trunk), followed by small muscle groups (like the arms and shoulders), and finally, cool-down and stretching exercises. The exercise intensity should range between 40-60% of the maximum heart rate, which is determined using the following equation: $HR_{max} = 207 - (0.7 \times \text{Age})$, and between 40-60% of the maximum heart rate. It should be noted that the researchers verified that the participants achieved the required heart rate using smartwatches. The bodypump exercises also consist of exercises group divided into nine tracks; each track includes a group of different exercises in terms of weight, range of motion, speed of movement, volume and intensity of the exercise, which are performed for 70-100 repetitions in each track; thus, the total repetitions in the training unit reach 800 repetitions, which last from 30-60 minutes, as illustrated in Table 1.

Table 1. The Bodypump Exercise group (release no.83)

Music no	Exercise	Volume (reps)
1 Warming-up	deadlift, rowing, shoulder press, squat, lunges, and biceps curl	10 m
2 Leg Squat	Squat	80-95
3 Chest Bench press	Chest Bench Press	70-75
4 Back Rowing	Rowing, stiff-legged deadlift, clean & press, and power press	70-75
5 Triceps	French press, triceps press, pullover, and overhead triceps press	70-78
6 Biceps	Biceps curl	60-68
7 Squat Jump	Squat, lunges, and squat jump	24-78 jumps
8 Shoulders	Push-up, lateral raise, rowing, and shoulder press	36-76 push-up
9 Abdominals	Sit-ups, sit-ups to the side, and side-plank	51+30 seconds

Note: El-Kailani et al. (2025).

The experiment was conducted from March 10 to May 10, 2025. The experimental group performed BodyPump exercises for eight weeks, consisting of three training sessions per week and this refers to the period of time required for physical and psychological adaptations to occur. While the control group did not engage in any exercise. All safety instructions were explained to the experimental group, including wearing comfortable sportswear for movement and sweating, wearing comfortable sports shoes, and drinking water and other fluids as needed. Bodypump exercises were performed while listening to music, which specified the time for each muscle group. Each music clip (4-6 per clip) contained specific exercises for each muscle group, with a short rest period (approximately one minute), primarily used to change weights and prepare for the following exercises. The number of repetitions was gradually increased. Participants were instructed not to engage in any exercise programs, alter their eating habits, or modify their daily activities during the experiment. It is worth noting that the BodyPump program was developed by a specialist certified in this type of exercise.

Reliability and Validity

In the current study, the Cronbach's alpha coefficient of the measurement tool (0.89) is close to 1. It can be said that this result is quite reliable according to Karagöz (2017). In general, the (OPQOL-brief) questionnaire was shown to be highly reliable. Cronbach's alpha measure of internal consistency exceeded the 0.70 threshold, with a value of 0.856, for the 13 items ($n = 583$ cases included in the analysis). This



was very similar to the Cronbach's alpha achieved for the full OPQOL-35 of 0.876 (in analyses of the ONS Omnibus survey data). To ensure the apparent validity of the study tool, which indicates that the tool adequately measures the variables it was designed to measure, the study tool was presented to five experienced and competent arbitrators in the fields of Psychology and Sports Training at Jordanian universities. This was done to verify the linguistic integrity and clarity of the items, their suitability for measuring the purpose for which they were designed, and the extent to which the items fit within their respective domain.

Ethical Considerations

All participants underwent a medical examination prior to joining the fitness center and performed the body-pump exercises without injury or physical discomfort. All participants were informed of the current study procedures and signed a consent form.

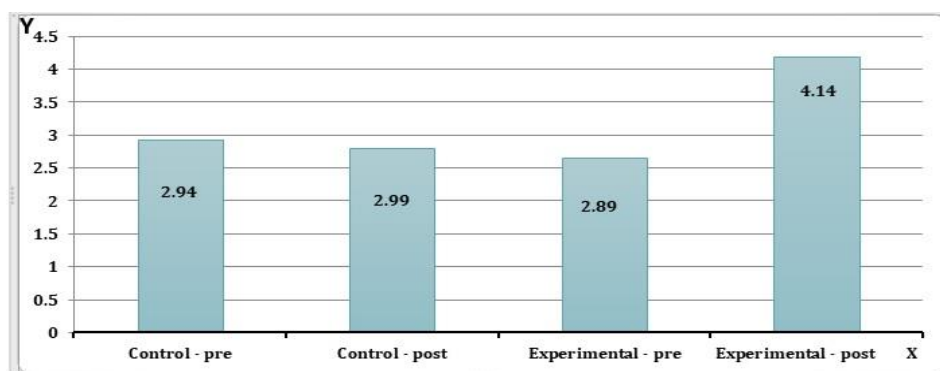
Data Analysis

For illustrative purposes, we used means, skewness, Cronbach's alpha coefficient, and standard deviations as descriptive statistics for the study variables. In addition, we used paired sample t-test and an independent samples t-test to detect differences in (OPQOL-brief) means according to the bodypump programme variable, using SPSS version 29 with a 95% confidence level ($p < 0.05$). The Kolmogorov-Smirnov test was employed to verify data normality, with a statistical significance value of 0.972, which was more significant than 0.05.

Results

The primary objective of this study was to explore the quality of life among **Jordanian middle-age females**, as well as the impact of BodyPump exercises on quality of life. In general, Figure 1 illustrates the differences in the mean values of the (OPQOL-brief) according to the bodypump Exercise Variable. It should be noted that the X-axis represents the study design (pre and post measurements for both groups), while the Y-axis represents the quality of life scores in the pre and post measurements for both **groups**. Table 2 presents the OPQOL-brief level among **Jordanian middle-age females** and the differences between the two groups in pre- and post-measurement of the OPQOL-brief test. Table 3 presents the results of a paired sample t-test for the OPQOL-brief test among the control and experimental groups in the pre- and post-measurements. Table 4 presents the results of the paired sample t-test for the OPQOL-brief test among the control and experimental groups in pre-measurement. Finally, Table 5 presents the differences in the OPQOL-brief test between the control and experimental groups in the post-measurement according to the body pump exercise variable.

Figure 1. Illustration of the values of the (OPQOL-brief) according to the bodypump Exercise Variable



*Low level: Less than 2.33; Intermediate level: 2.33 - Less than 3.67, and High level: 3.67 – 5

Table 2. Means and Std. Deviation for both groups in pre- and post-measurement of the OPQOL-brief test (n=52)

Variable	Groups Measurement	Mean*	Std. Deviation
The (OPQOL-brief) test	Control (n=26)	Pre-measurement	2.94
		Post-measurement	2.99
	Experimental (n=26)	Pre-measurement	2.89
		Post-measurement	4.14
	Total(n=104)		3.23

*Low level: Less than 2.33; Intermediate level: 2.33 - Less than 3.67, and High level: 3.67 – 5

Note: El-Kailani et al. (2025).

Table 3. Results of paired sample T-test for OPQOL-brief test among the control and experimental groups in pre- and post-measurement (n=52)

Variable	Groups	Pre-measured/ Mean±SD	Post-measured/ Mean±SD	Sig.
The (OPQOL-brief) test	Control (n=26)	2.94± 0.53	2.99± 0.51	0.71
	Experimental (n=26)	2.89±0.55	4.14± 0.62	0.00*

* Diferencias significativas, $p < .05$.

** Experimental group, the cohen $d > 0.80$, this indicated the large impact of body pump exercises on the quality of life among middle-aged female in post-measured.

Note: El-Kailani et al. (2025).

Table 4. Results of paired sample T-test for OPQOL-brief test among the control and experimental groups in pre-measurement (n=52)

Variable	Groups	Pre-measured/ Mean±SD	Sig.
The (OPQOL-brief) test	Control (n=26)	2.94± 0.53	0.63
	Experimental (n=26)	2.89±0.55	

Note: El-Kailani et al. (2025).

Table 5. Results of an independent sample T-test for the OPQOL-brief test among the control and experimental groups in post-measurement according to the bodypump exercise variable (n=52)

Variable	Groups	Post-measured/ Mean±SD	t	Sig.
OPQOL-brief test	Control (n=26)	2.99± 0.51	6.99	0.00*
	Experimental (n=26)	4.14± 0.62		

* Diferencias significativas, $p < .05$.

** Eta Squared= 0.494, this indicated the large impact of body pump exercises on the quality of life among middle-aged female.

Note: El-Kailani et al. (2025).

Discussion

The researchers sought to explore the quality of life level among Jordanian middle-age females, as well as the impact of BodyPump exercises on quality of life among middle-age females. Overall, the study results revealed that the pre-test quality of life scores of older adults in both groups (experimental and control) were close to low (2.77 and 2.65, respectively). This finding is consistent with studies that have shown advancing age to be a significant predictor of lower quality of life (Adhikar et al., 2022). Furthermore, the current results are consistent with the study by Seangpraw et al. (2019), which indicated that older adults have a low quality of life. The problem here is that there is an inverse relationship between quality of life and higher levels of depression; in other words, the lower the quality of life, the higher the level of depression (Adhikar et al., 2022). On the other hand, a positive correlation exists between quality of life and regular physical activity (Gillison et al., 2009; McAuley et al., 2006).

By reviewing the data contained in Table 5, which shows the presence of statistically significant differences between the control and experimental groups in the post-test, in favor of the experimental group. The researchers believe that the improvement in the quality of life of the experimental group is due to the nature of the Body Pump program, which includes a set of exercises performed collectively, helping to strengthen social ties and provide social support to the participants. In this context, Amorim et al. (2017) indicate that quality of life depends on many indicators, including social ties and social support received from individuals. Group training is also ranked third among the top 20 global physical activity trends for 2020 (Thompson, 2019). Quality of life encompasses multiple dimensions, including social, physical, and psychological aspects (Puciato et al., 2017). Regular physical activity enhances mental health, reduces functional decline, and improves independence (Praveen & Anitha, 2017). This stems from the benefits of resistance training, which helps maintain muscle strength and improve body mass (Donnelly et al., 2009). Amoros et al. (2018) indicate that the Body Pump program has been one of the most popular programs in recent years.



Researchers have confirmed the positive results of body pump exercises, which are consistent with the nature of resistance training in general, contributing to improved blood flow and metabolic processes throughout the body. This type of exercise has a positive impact on both the physical and mental health of those who practice it, and it also helps mitigate the adverse effects of aging. Studies indicate that regular physical activity improves mood, increases levels of norepinephrine, reduces cortisol levels, and contributes to lower levels of anxiety and stress (Esmaeili et al., 2018).

Body pump exercises, in particular, have a positive impact on mental health, improving social interactions and reducing negative emotions such as anxiety and depression (Heiestad et al., 2016). In this regard, the results of a study by Zureigat et al. (2021a) indicate that body pump exercises have a positive impact on life satisfaction and communication with family and others. Body pump also contributes to improving emotional well-being and life satisfaction for females (Zureigat et al., 2021b). Tesarz et al. (2012) indicate that physical activity contributes to improving self-esteem, social interaction, and reducing symptoms of depression.

Conclusions

The results of the current study revealed that practicing body-pump exercises has a positive effect on the quality of life of older women in Jordan. These exercises contributed to improving the quality of life among the experimental groups, as measured post-intervention (4.14). Therefore, this type of exercise can be used as an indicator among the approved indicators in strategies that aim to improve the quality of life for older people in Jordan. The researchers recommend conducting further studies in this field that address other psychological variables, such as anxiety and depression, as well as physical variables, including muscular strength and cardiorespiratory endurance. Studies could also be conducted to examine the impact of these exercises on the quality of daily activities for older people, as well as studies of other samples, such as males.

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