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# A Study to Assess the Effectiveness of a Tailored Exercise Program for Improving Physical and Mental Well-being among Staff Nurses in Kuwait Hospital, Sharjah

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## ABSTRACT

Exercise improves health and well-being for nurses, but work schedules and stressors can hinder self-care, leading to physical and mental health issues and increased nursing shortages. This study aims to evaluate the effectiveness of a tailored exercise program for improving physical and mental wellbeing among staff nurses in Kuwait Hospital, Sharjah. **OBJECTIVES:** To evaluate the physical and mental well-being of staff nurses and assess the effectiveness of a tailored exercise program in enhancing their overall well-being. **METHOD:** A quasi-experimental one-group pre-test and post-test design with 124 staff nurses selected through non-probability convenient sampling. The nurses participated in a tailored exercise program involving warm-up, strengthening/aerobic, and cool-down exercises before each shift for 2 months, and data was collected using a structured interview schedule and a 40-item Well-Being Measuring tool. **Results:** The mean postinterventional level of physical and mental health wellbeing was significantly greater than that of the mean pre-interventional level of physical and mental health well-being. The paired 't' test computed between pre-interventional and post-interventional levels of physical and mental health wellbeing was statistically significant at the 0.05 level. The calculated 't' value (7.2992) exceeds the table value. Hence, the null hypothesis ($H_0$) is rejected. It indicates that a tailored exercise program is an effective measure in improving physical and mental health well-being among staff nurses. **Conclusion:** The tailored exercise program demonstrated measurable success in elevating participants' quality of life, emotional resilience, and physical health. The results showed a positive impact on physical and mental well-being. Therefore, it is crucial to focus on and implement such exercise programs among nurses, the largest workforce team in a hospital, targeting their well-being.

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***Keywords:*** *Physical well-being, Mental well-being, Tailored exercise, Work-related stressors*

## INTRODUCTION

Health professionals have some of the highest rates of physical health risks (e.g., obesity, metabolic syndrome) and musculoskeletal problems (e.g., lumbar spine, wrists, neck) due to improper equipment, uncomfortable postures, and inappropriate working methods[1,16]. Hospital environments are stressful for health professionals as they treat patients with debilitating conditions[2,25]. Musculoskeletal disorders among nurses contribute to reduced care quality, job satisfaction, quality of life, career changes, and early retirement[7,12].

In the 21st century, registered nurses play a critical role in delivering compassionate and evidence-based care across diverse and evolving healthcare settings. Nurses are expected to demonstrate leadership, emotional resilience, and critical thinking while working collaboratively in interdisciplinary teams to promote health, manage complex care needs, and adapt to the continuous changes within health and social care systems[13]. Although exercise promotes health and well-being, nurses often lack time for self-care due to work schedules and responsibilities. Work-related problems from patient handling and stressors affect nurses' physical and mental well-being[2,21]. While there are studies on mindfulness and yoga, tailored exercise interventions for nurses are rare, and evidence of their efficacy is limited[14,19].

Over a quarter of the world's adult population (1.4 billion) is insufficiently active, negatively impacting health systems, the environment, economic development, community well-being, and quality of life. The World Health Assembly aims to reduce physical inactivity by 15% by 2030, aligning with the Sustainable Development Goals[14,23,24]. Work-related musculoskeletal disorders are common among nursing professionals due to the physical demands and ergonomic challenges of hospital settings, leading to physical strain and occupational health issues. Studies shows that a significant association between Work-related musculoskeletal disorders and increased work instability, which can lead to absenteeism, ineffective work performance, and even early retirement among nurses[18].

In 2018, WHO launched the Global Action Plan on Physical Activity 2018-2030, outlining policies and actions to increase physical activity worldwide. It calls for a 'whole-of-system' response involving all sectors and stakeholders at global, regional, and local levels to create supportive environments and opportunities for physical activity. Therefore, implementing exercise regimes during work hours for nursing staff can enhance their physical activity[22]. Regular physical activity is as a vital component of maintaining overall health and preventing chronic diseases such as heart disease, diabetes, and certain cancers. Studies shows that even moderate exercise can significantly improve physical and mental well-being, helps in weight management, and improve cognitive function[15].

Regular physical activity improves general health, fitness, weight management, and immune function, reducing the risk of diseases such as hypertension, heart disease, diabetes, and stroke, and lowering stress[4]. Studies have consistently shown an increased prevalence of musculoskeletal disorders (MSDs) among nursing staff, often linked to the physical demands of patient care. Research also indicates that MSDs can negatively impact nurse's well-being and can impair their ability to demonstrate effective caring behaviors, such as empathy, connectedness, and respect[11].

Physical activity gives nurses better cardiorespiratory capacity, a cognitive distraction from job demands, and emotional regulation[6,13]. Healthy nurses handle stress better and perform more effectively, while poor health behaviors can lead to physical and psychological problems, increasing nursing shortages[3,25]. The Health Belief Model, used in this study, suggests that belief in a personal threat of illness and the effectiveness of health

behaviors predicts the likelihood of adopting those behaviors[5,17].

While extensive research has focused on the negative impacts of nursing work such as burnout, depression, and physical injury there is a gap in literature addressing the importance of self-care among nurses. Evidence-based interventions have been shown to enhance nurse's well-being, job satisfaction, and work-life balance, eventually improving the quality of care they provide[21].

At Sharjah Kuwait Hospital, activities for staff well-being are implemented, but continuous support programs like exercise regimes are lacking. Monitoring the effectiveness of such programs can enhance organizational productivity and nurse retention. This study aims to evaluate the effectiveness of a tailored exercise program for improving physical and mental well-being among staff nurses in Kuwait Hospital, Sharjah.

**Objective of the Study**

- To evaluate the physical and mental well-being of staff nurses
- To assess the effectiveness of a tailored exercise program in improving the overall well-being of staff nurses.

**Hypothesis:**

- H1: There is a correlation between nurse's well-being and tailored exercise.
- Null Hypothesis H0: There is no correlation between nurse's well-being and tailored exercise.

## MATERIALS & METHODS

❖ **Research Approach:**

Quantitative Research

❖ **Study design:**

One group Pretest-posttest experimental design

❖ **Population:**

Staff Nurse in Kuwaiti Hospital Sharjah

❖ **Sample size:**

Sample size 124

Sampling and recruitment for this research project target the nursing healthcare workers at Sharjah Kuwait Hospital. All Nursing staff that fell under the inclusion criteria and consented to participate were involved in the study, among the 212 total nursing staff in SKH hospital.

❖ **Sample Size Calculation:**

The sample size was calculated using the below formula.

$$\text{Sample Size} = \frac{(\text{Z-score})^2 \times \text{StdDev} \times (1-\text{StdDev})}{(\text{confidence interval})^2}$$

A total of 124 or more samples were needed to have a confidence level of 95% included in the study.

❖ **Sampling technique:**

The participants were selected conveniently and a non-probability convenient sampling technique was used.

❖ **Sampling Criteria:**

➢ **Inclusion criteria:**

- Staff nurses who all are working in Sharjah Kuwait Hospital.

➢ **Exclusion criteria:**

- Nursing staff who are pregnant
- Nursing staff who are suffering from lower back pain.
- Nursing staff who are suffering from joint or disc problems.
- Nursing staff who are in severe pain.

❖ **Data collection tool:**

There are 2 tools used to collect data for this study.

- **Tool 1: Sociodemographic data**
  It consists of 10 items for obtaining information regarding age, gender, weight, height, BMI, Years of Nursing Experience, prevailing health issues, the status of exercise, its frequency, and uses.

- **Tool 2: 40-Item Well-Being Measure**
  The 40-Item Well-Being Measure is a comprehensive scale designed to assess various aspects of an individual's well-being across six domains[20]:

✓ **Emotional Health:** Measures satisfaction with life, happiness, mental health, depression, anxiety, and emotional control.
✓ **Purpose:** Assesses a sense of meaning, values, beliefs, purpose in life, and the perceived worth of life activities.
✓ **Social Connectedness:** Evaluates the quality of relationships, feelings of loneliness, contentment with friendships, and community connection.
✓ **Character Strengths:** Looks at moral actions, decision-making, kindness, fairness, and the ability to face difficulties.
✓ **Physical Health:** Rates overall physical health, absence of illness, ability to perform activities, and health maintenance behaviors.
✓ **Financial Security:** Examines the ability to meet expenses, worry about financial issues, savings, financial freedom, and debt management.

Each item is rated on a scale from 0 to 10, with specific endpoints provided for each question. The measure aims to provide a holistic view of an individual's well-being by capturing both positive and negative aspects across these domains.

**Validity and Reliability**

The content validity of the tool was reviewed by subject experts, and necessary modifications were made accordingly. The reliability of the tool was established using the Karl Pearson correlation coefficient formula. The correlation coefficient formula was found to be $r_1$=0.997. Since the computed correlation coefficient of knowledge was high, the tool was found to be reliable.

**Pilot Study**

A Pilot study was conducted in Male Medical Ward, Kuwait Hospital Sharjah from 15-01-2024 to 15-03-2024. Eighteen staff nurses were included in the pilot study and they were excluded from the actual study sample; to ensure the clarity of the tools and to estimate the required time for completing the tools. Subjects were requested to complete the questionnaire (pre-test). After obtaining data from the subjects, a Tailored Exercise Program was performed. After two months, subjects were requested to complete the questionnaire (post-test). The data was analyzed using descriptive and inferential statistics. Statistical analysis of the pilot study revealed that there is a significant difference between the pre-intervention mean score and post-intervention mean score of the physical and mental well-being of the staff nurses, showing that the Tailored Exercise Program is effective in improving the physical and mental well-being of the nurses.

**Variables:**

➢ **Independent Variables:** The Exercise regimen
➢ **Dependent Variables:** Physical and Mental well being

**Data Collection Process**

The physical exercise plan was developed in collaboration with the physiotherapy department and the Research team members in Kuwait Hospital, Sharjah. The structured training program is designed for all participating nurses in the research study. The physiotherapist conducted a comprehensive training session for the research team members, using a PowerPoint presentation and demonstration methods. This was done to ensure that the team members were competent to oversee the exercise sessions in each department. Each volunteer actively participated in the exercise regimen, in coordination with their unit managers, so they led the exercise program in the unit and ensured the

consented members' participation in the study. The exercise regimen consisted of three types of physical activity: warm-up, strengthening / aerobic exercises, and cool-down exercises. The exercises are performed for 12-15 minutes at the beginning of each shift (day/night). The exercise program continued for 2 months simultaneously, so that all the staff had 15-16 sessions in a month. The exercise interventions were carried out in the nurse's station of each unit, for all consented staff to participate.

**Exercise Regime:**

| Stages of exercise | Time period |
|---|---|
| Warm-Up Exercise | 4 Minutes |
| Strengthening and Aerobic Exercise | 5 Minutes |
| Cooldown Exercise | 4 Minutes |
| Total Duration | 13 Minutes |

**Conceptual Framework**

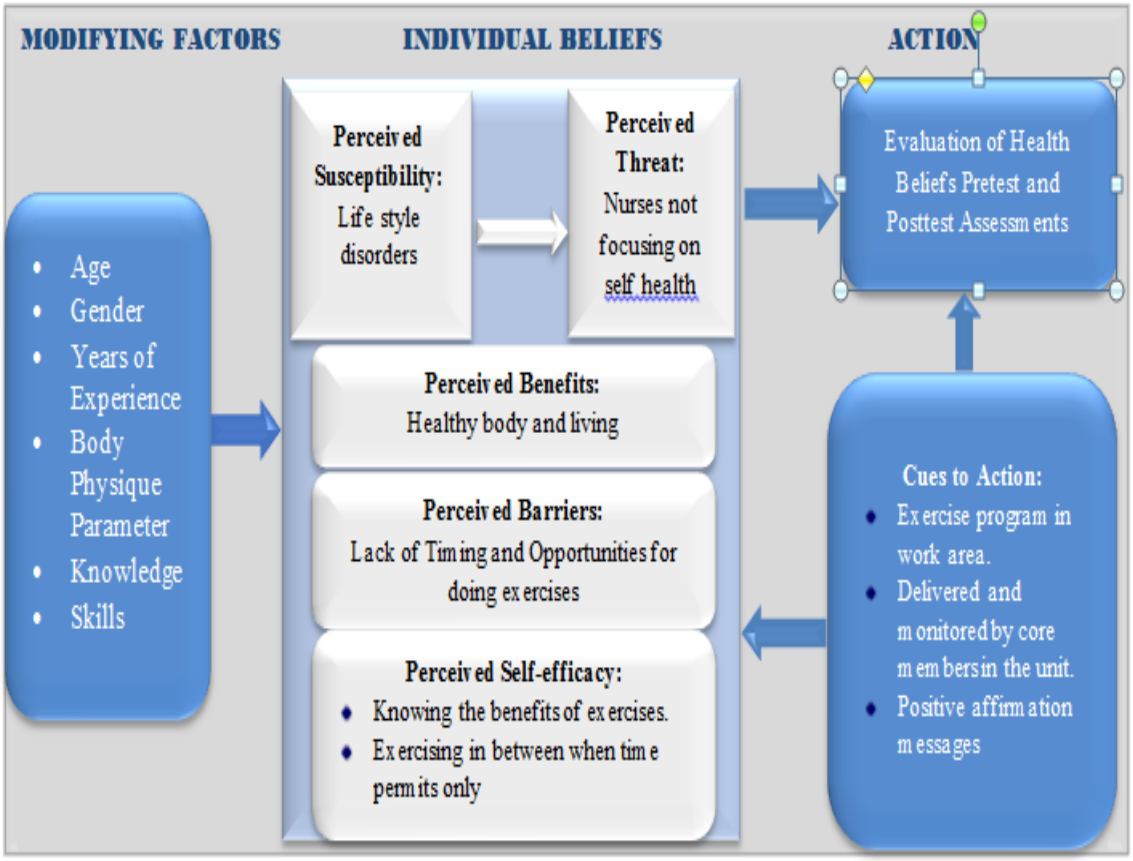



**Figure: Becker's - The Health Belief Model (1974)**

## STATISTICAL ANALYSIS

The data was analyzed and interpreted in terms of the objectives and hypothesis of the study using descriptive and inferential statistics. Statistical analysis was performed using the Statistical Package SPSS (version 20), and Microsoft Office Excel was used for data handling and graphical presentation. Data was collected, coded, and organized into tables, and then analyzed using numbers and percentages. Pearson's R was used to verify the correlation. The significance level was considered at $P \leq 0.05$.

## RESULTS

The data obtained was analyzed and presented under the following headings.

**Section I:** Distribution of sample characteristics.

**Section II:** Evaluation of the effectiveness of a Tailored Exercise Program for improving physical and mental well-being among staff nurses.

This section dealt with the characteristics of the samples in terms of frequency and percentage. Table 1 describes that a total of 124 nurses consented and participated in the study. Nearly half of the participants (48.38%) were between the age group of 35 to 44 years. The majority of the participants were females, accounting for 80.65%. Approximately 1% of the participants were obese based on their BMI, 68.55% were overweight, and 28.22% were considered to have normal weight. In contrast, 2.42% were found to be underweight. Most of the participating nurses (37.1%) had 10-15 years of working experience. Less than a quarter of the nurses (20.16%) who participated in the study had minor health issues. More than half of the participants (62.1%) exercised regularly, and looking in detail at their exercise involvement, 44.68% exercised 1-2 days a week, and 42.55% exercised 3-4 days a week. Similarly, 92.74% of the respondents marked this exercise regimen as beneficial for them.

**Table 1: Sociodemographic and physical characteristics of the samples (N=124):**

| Variables | Number (Frequency) | Percentage (%) |
|---|---|---|
| **Age** | | |
| 25-34 yrs. | 29 | 23.39 |
| 35-44 yrs. | 60 | 48.38 |
| 45- 55 yrs. | 35 | 28.23 |
| **Gender** | | |
| Male | 24 | 19.35 |
| Female | 100 | 80.65 |
| **Weight in Kgs** | | |
| 50 and below | 6 | 4.84 |
| 51-75 | 75 | 60.48 |
| 76-100 | 39 | 31.46 |
| 100 and above | 4 | 3.22 |
| **Height in cm** | | |
| 150 and below | 9 | 7.26 |
| 151-160 | 67 | 54.03 |
| 161-170 | 30 | 24.19 |
| 171 and above | 18 | 14.52 |
| **BMI** | | |
| ≤ 18.4 Underweight | 3 | 2.42 |
| 18.5 - 24.9 Normal | 35 | 28.22 |
| 25.0 - 39.9 Overweight | 85 | 68.55 |
| ≥ 40.0 Obese | 1 | 0.81 |
| **Years of Nursing Experience** | | |
| 0-5 yrs. | 15 | 12.1 |
| 6-10 yrs. | 19 | 15.35 |
| 11-15 yrs. | 46 | 37.1 |
| 16-20 yrs. | 17 | 13.71 |
| 21-25 yrs. | 27 | 21.74 |
| **Do you exercise Regularly?** | | |
| Yes | 47 | 37.9 |
| No | 77 | 62.1 |
| **How frequently do you exercise?** | | |
| Daily | 6 | 12.77 |
| 3-4 days in a week | 20 | 42.55 |
| 1-2 days in a week | 21 | 44.68 |
| **Are any health Issues Prevailing?** | | |
| Yes | 25 | 20.16 |
| No | 99 | 79.84 |

| **Was the exercise beneficial for you?** | | |
|---|---|---|
| Yes | 115 | 92.74 |
| No | 9 | 7.26 |

Table 2 illustrates the impact of the tailored exercise program on the effectiveness of physical and mental well-being by comparing the pre-test and post-test mean scores. A positive impact is observed between the pre-test and post-test results in physical health, mental health, and social connectedness.

In terms of emotional health, a significant change was noted in the depression levels, which improved by 2.935 in the mean score. Participants reported feeling happier during the past seven days in the post-test, with an increase of 2.405 in the mean score. The response to the purpose of life remained consistent between the pre-test and post-test mean scores. The exercise program did not bring any changes to financial security, as evidenced by the similar pre-test and post-test mean scores.

**Table 2: Effectiveness of the tailored exercise program on the well-being aspects of the Nurse's pre and post-exercise Implementations.**

| **Items** | **Range** | **Pre-test Mean (SD)** | **Post-test Mean (SD)** |
|---|---|---|---|
| **EMOTIONAL HEALTH** | | | |
| Overall, how satisfied are you with life as a whole these days? | 0-10 | 6.298 [1.475] | 8.209 [1.163] |
| On average, how happy have you felt during the last 7 days? | 0-10 | 6.056 [1.433] | 8.451 [1.030] |
| I expect more good things in my life than bad. | 0-10 | 9.451 [6.367] | 7.911 [1.431] |
| How would you rate your overall mental health? | 0-10 | 6.459 [1.773] | 8.266 [1.237] |
| Are you depressed? | 0-10 | 5.153 [1.288] | 8.088 [1.097] |
| Do you have anxiety that keeps you from doing the things in life that you need to do? | 0-10 | 6.209 [1.692] | 8.193 [1.501] |
| In stressful situations, I manage my emotions so that I am still in control of myself. | 0-10 | 6.306 [1.368] | 8.201 [1.154] |
| Total score | 0-70 | 45.935 [15.399] | 57.322 [8.616] |
| **PURPOSE** | | | |
| I know what gives meaning to my life. | 0-10 | 8.185 [1.410] | 8.193 [1.418] |
| I have values and beliefs that help me understand who I am. | 0-10 | 8.645 [1.289] | 8.669 [1.286] |
| My life has a clear sense of purpose. | 0-10 | 8.137 [1.515] | 8.169 [1.512] |
| I understand my purpose in life. | 0-10 | 8.314 [1.439] | 8.330 [1.435] |
| Overall, to what extent do you feel the things you do in your life are worthwhile? | 0-10 | 7.806 [1.675] | 7.830 [1.680] |
| I am pursuing what is most important to me in my life. | 0-10 | 7.951 [1.413] | 7.975 [1.405] |
| Total score | | 49.040 [8.743] | 49.169 [8.738] |
| **SOCIAL CONNECTEDNESS** | | | |
| My relationships are as satisfying as I would want them to be. | 0-10 | 7.983 [1.954] | 8.024 [1.500] |
| There are people who really understand me. | 0-10 | 7.741 [1.995] | 7.854 [1.596] |
| How often do you feel lonely? | 0-10 | 4.322 [3.137] | 4.338 [2.940] |
| I am content with my friendships and relationships. | 0-10 | 7.435 [1.955] | 7.629 [1.595] |
| I have enough people I feel comfortable asking for help at any time | 0-10 | 7.258 [2.291] | 7.362 [1.773] |
| I feel connected to the broader community around me. | 0-10 | 7.225 [1.873] | 7.379 [1.684] |
| People in my broader community trust and respect one another. | 0-10 | 7.241 [1.905] | 7.556 [1.609] |
| Total score | | 49.209 [15.114] | 50.145 [12.699] |
| **CHARACTER STRENGTHS** | | | |
| I always act to promote good in all circumstances, even in difficult and challenging situations. | 0-10 | 7.661 [1.642] | 7.846 [1.541] |

| | | | |
|---|---|---|---|
| I always know the right thing to do. | 0-10 | 7.669 [1.656] | 7.919 [1.394] |
| I always treat everyone with kindness, fairness, and respect. | 0-10 | 8.177 [1.771] | 8.282 [1.522] |
| I am always able to give up some happiness now for greater happiness later. | 0-10 | 7.685 [1.594] | 7.556 [1.862] |
| I am willing to face difficulties in order to do what is right. | 0-10 | 7.556 [1.772] | 7.717 [1.600] |
| I give up personal pleasures whenever it is possible to do some good instead. | 0-10 | 7.629[1.689] | 7.709 [1.690] |
| I get to use my strengths to help others. | 0-10 | 7.935[1.661] | 8.072 [1.460] |
| Total score | | 54.314 [11.788] | 55.104 [11.072] |
| **PHYSICAL HEALTH** | | | |
| In general, how would you rate your physical health? | 0-10 | 7.403 [1.766] | 8.088 [1.097] |
| I have no major illnesses or injuries. | 0-10 | 7.354 [2.393] | 8.201 [1.503] |
| I do not routinely get sick. | 0-10 | 7.096 [2.089] | 8.201 [1.175] |
| My health does not prevent me from doing what I would like. | 0-10 | 7.217 [1.814] | 8.427 [1.052] |
| My pain makes it hard for me to do my usual activities. | 0-10 | 4.951 [2.862] | 7.919 [1.423] |
| Based on my past health, I expect to be healthy long into the future. | 0-10 | 7.282 [1.910] | 8.241 [1.251] |
| I regularly do things to maintain and improve my health, in diet, exercise, and health care. | 0-10 | 6.540 [1.918] | 7.887 [1.307] |
| Total score | | 47.846 [14.755] | 56.967 [8.811] |
| **FINANCIAL SECURITY** | | | |
| I am able to meet my normal monthly living expenses without any difficulty. | 0-10 | 6.354 [2.409] | 6.346 [2.399] |
| How often do you worry about food, housing, or health expenses? | 0-10 | 5.491 [2.346] | 5.508 [2.282] |
| I have sufficient savings that I could cover six months of expenses. | 0-10 | 4.225 [2.926] | 4.233 [2.885] |
| My financial circumstances give me the freedom to pursue my goals. | 0-10 | 4.862 [2.774] | 4.870 [2.752] |
| Given my age, I have done adequate financial planning for the future. | 0-10 | 5.008 [2.724] | 5.056 [2.690] |
| The amount of debt I have often overwhelms me. | 0-10 | 4.862 [2.396] | 4.879 [2.370] |
| Total score | 0-60 | 30.806 [15.578] | 30.895 [15.381] |

**Figure 1: Analysis of Data Based on 40-Item Well-Being Measurement Tool**

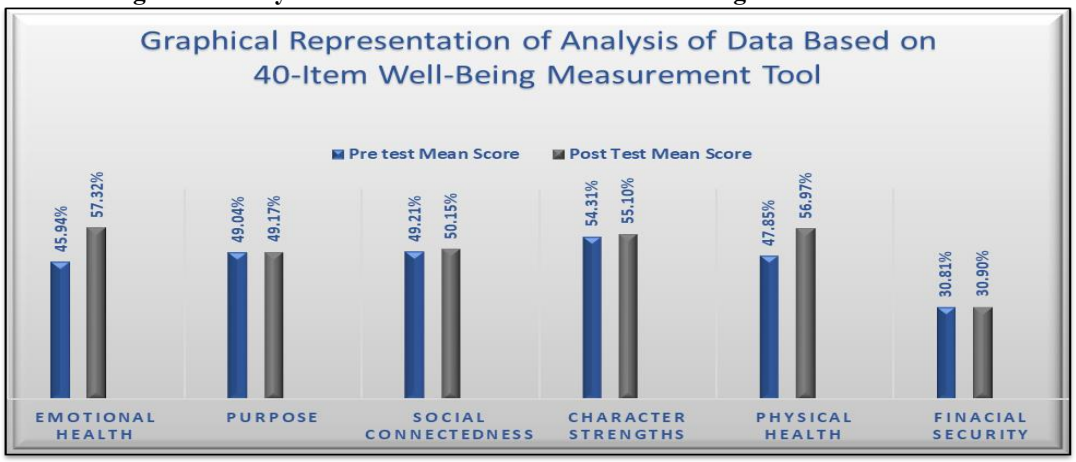
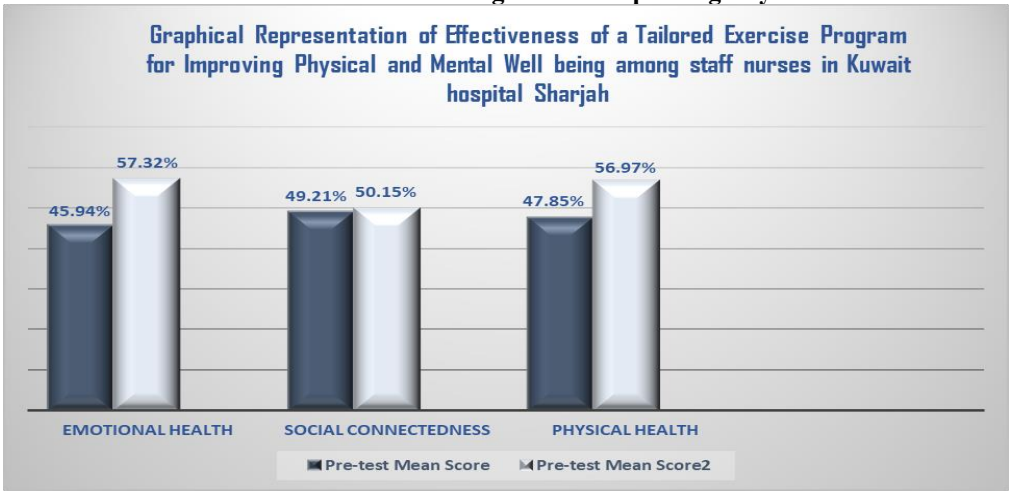



Figure 1 illustrates the positive impact of the intervention on the physical and emotional health of the nurses. The results show a significant improvement in these areas, with physical health increasing by 9.12% and emotional health increasing by 11.38% from the pre-test to the post-test. In contrast, the scores for financial security

and social connectedness remained largely unchanged, suggesting that these aspects were not directly influenced by the exercises or activities included in the study. The minimal changes in these areas imply that the focus of the intervention may not have targeted financial and social aspects, and they likely did not benefit from the same level of impact as physical and emotional health.

**Figure 2: Effectiveness of a Tailored Exercise Program for Improving Physical and Mental Wellbeing**




The figure above illustrates the well-being measures observed between the pre-test and post-test. A significant improvement of nearly 12% in emotional well-being was observed among participants. The two-month exercise program resulted in a 9% increase in physical health among the staff. Additionally, a modest improvement of almost 1% in social connectedness was also noted.

The above figure picturizes well-being measures identified between the pre and post-test, a significant improvement in the emotional well-being of the participants is noted which has improved by almost 12%. The 2-month exercise program has brought up a 9% increase in the physical health of the staff. Almost a 1% improvement in social connectedness is also noted.

Effectiveness of a tailored exercise program for improving physical and mental well-being among staff nurses

This section dealt with the mean, standard deviation, and test of significance by using a paired 't-test. To test the statistical difference between the mean pre-interventional and post-interventional level physical and mental well-being, the following null hypothesis ($H_{01}$) is stated.

$H_0$: There is no significant difference between pre-interventional and post-interventional levels of physical and mental well-being among nurses.

**Table 3: Mean standard deviation and 't' value according to pre-interventional and post-interventional levels of physical and mental well-being among nurses**

| | Pre-interventional mean scores | Post-interventional mean scores | Paired 't' test value |
|---|---|---|---|
| Mean | 6.92883 | 7.49012 | 7.2992 |
| SD | 0.75604 | 0.78404 | |
| SEM | 0.06789 | 0.07041 | |
| N | 124 | 124 | |

***Level of significance at 0.05**

The pre-interventional mean score of physical and mental health wellbeing was 6.92883 with a standard deviation of 0.75604 and the overall post-interventional

mean score of physical and mental health wellbeing was 7.49012 with a standard deviation of 0.78404. The mean post-interventional level of physical and mental health wellbeing was significantly greater than that of the mean pre-interventional level of physical and mental health wellbeing. The paired 't' test computed between pre-interventional and post-interventional levels of physical and mental health well-being was statistically significant at 0.05 level. The calculated 't' value (7.2992) is greater than the table value (3.134537). Hence the null hypothesis ($H_0$) is rejected. It indicates that a tailored exercise program is an effective measure of improving physical and mental health well-being among staff nurses.

## DISCUSSION

The results confirm that the interventions had a positive and meaningful impact on various dimensions of well-being. The tailored exercise program for the nursing staff showed significant gains in emotional and physical health, with moderate progress in social connectedness, suggesting that the program effectively contributed to the overall well-being and resilience of the healthcare workforce.

A study conducted to identify the Effectiveness of workplace exercise supervised by a physical therapist among nurses conducting shift work, it was found that Aerobic fitness increased in the supervised group whereas it decreased in the voluntary group among the young nurses of Japan[8]. Another study conducted to assess the effect of aerobic exercises on the level of occupational stress found that the aerobic exercise program was associated with decreased work stress of nurses in the experimental group compared to the control group in an eighth weeks study, but this difference did not persist when the experimental group did not continue with the program[10]. Both studies correlate to our study where a change is brought in the physical and mental well-being of nurses during the activity implementation phase. A systematic review was conducted to investigate the effects of exercise and physical activity interventions, delivered both in the workplace and outside of work, on mental well-being, stress, burnout, depression, anxiety, and sleep in healthcare professionals and the results revealed that there was consistent evidence of a reduction in psychological stress and improvement of sleep quality following exercise compared to non-active controls[9]. The results of this research study are in the same line with our study. Our study has certain limitations including the short period of doing exercise which cannot have much impact on the results. Another limitation is, as this is self-reported data, participants may overestimate themselves on physical activity (exercise regime) and the aspects of health-causing social desirability bias that may affect the result. Finally, the findings of this study could be generalized only to the same population who fulfilled the criteria in the study.

## CONCLUSION

The tailored exercise program demonstrated measurable success in elevating participants' quality of life, emotional resilience, and physical health. These outcomes support the continued implementation and development of similar interventions, aligning with the hospital's mission to foster a supportive environment that enhances both patient care and well-being.

This study presents the first evaluation of the exercise implications among nurses in a hospital in the UAE. The nurses demonstrated a positive reflection on their physical and well-being attributes after the tailored exercise regime, compared to their pre-survey data. Therefore, it is crucial to focus on and implement such exercise programs among nurses, the largest workforce team in a hospital, targeting their well-being. This, in turn, reflects positively on the staff's well-being and the hospital by providing energetic care to the patients.

A similar study can be undertaken with a larger sample in different settings to

generalize the findings. Additionally, collaborating with the physical therapy unit in the facility to arrange space and equipment for conducting the exercise regime can foster more participation among nurses. Furthermore, these findings demonstrate the need to educate nurses while they are in nursing school to promote self-care techniques through regular exercise and body mechanics maintenance before developing negative health issues. Moreover, providing working environments that encourage physically active and healthy lifestyles and reducing conditions that interfere with health-related sporting activities during leisure time, such as equitable distribution of nursing work schedules, is essential.

### *Declaration by Authors*

All authors contributed to the development of the manuscript. All authors read and approved the final manuscript.

**Ethical Approval:** The study proceeded after getting ethical approval from the Ethical Review Board of the Ministry of Health and Prevention, Dubai (MOHAP/DXB-REC/ S.O.N /No.120 / 2023).

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**Informed Consent form:** There is a participant information sheet detailed with the required elements from the participants, which needs to be read and acknowledged and then proceed with signing the consent form for the study. The participants were also given the option to withdraw from the study without giving any justification. Confidentiality and anonymity were assured in the research.

**Availability of Data and Materials:** The data that support the findings of this study are available from the corresponding author upon reasonable request.

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**Conflict of Interest:** The authors declare no conflict of interest.

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