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Research Paper: The Effects of Participation in Physical Activity and Exercise on Mental Health and Quality of Life of the Nurses

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Abstract

Objective: Despite numerous studies on the influence of regular engagement in physical activity and sports on mental health and quality of life across various demographics, there has been limited focus on its impact within the nursing profession. As a result, this study seeks to explore the effects of sports and physical activity participation on the mental health and quality of life of nurses.

Methods: The current study utilized a descriptive correlational design and was conducted in a cross-sectional manner. The target population consisted of all nurses employed in the hospitals of Tehran. The research sample was selected using an available sampling method, specifically among nurses who expressed their willingness to participate in the study. A total of 384 male and female nurses took part in the research and successfully completed the provided questionnaires. Standard questionnaires were used for data collection. Pearson correlation test and the structural equation modeling were used for data analysis.

Results: Results reveled that physical activity significantly affected depression (T= - 5.254), anxiety (T= - 6.471) and stress (T= - 4.527). In addition, physical activity significantly affected quality of life (T=3.627). Results of model fit are presented in Table 3 and indicated that the research model has good fit.

Conclusion: This implies that nurses could greatly enhance their well-being through increased engagement in physical activity and a decrease in sedentary habits. As a result, we strongly urge healthcare policymakers to implement measures aimed at increasing physical activity levels among nurses.

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1- Introduction

Nurses who work long daily and night shifts caring for patients with severe physical injuries are tasked with handling the care of dying patients, cardiorespiratory resuscitation, patients experiencing severe bleeding after surgery, and other high-stress situations that can lead to symptoms and physical ailments, eventually manifesting into psychological issues (Abdi et al., 2022; Afsanepurak et al., 2012; Dana & Shams, 2019; Dana et al., 2021). Nursing is a profession that exposes individuals to numerous mental health challenges, making nurses one of the most frequent groups to seek help from mental health professionals (Letvak et al., 2012; Mikkelsen et al., 2017; Newhan et al., 2014; Ohler et al., 2010). Furthermore, nurses tend to have poorer physical health compared to other sectors of society. Studies have shown that the prevalence of mental disorders among nurses is 8.38% in Taiwan, 22.8% in England, and 18.3% in Iran (Farsi et al. 2016; Ghorbani & Bund, 2014, 2017; Ghorbani et al., 2020; Khosravi et al., 2023; Moradi et al., 2020; Sadeghipor & Aghdam, 2021).

Nurses, by virtue of their profession, are consistently exposed to patients, pain, suffering, incidents, and stressors. The continuous interaction with patients and the round-the-clock responsibility for their care exposes nurses to various stressors, which in turn have detrimental effects on their physical, mental, and social well-being (American Psychological Association, 2014; Davidson, 2003; Jolivet, et al. 2010). These stress factors manifest as job stress, job burnout, and physical and mental health issues, ultimately leading to a decline in quality of life, overall health, job satisfaction, and productivity (Sadeghipor et al., 2021; Sadeghipor et al., 2021; Seyedi-Asl et al., 2021; Seyedi-Asl et al., 2016; Taghva et al., 2020).

Sustainable development relies heavily on health, which is a crucial component of prosperity and enhancing the overall quality of life. According to the World Health Organization (WHO), health encompasses physical, mental, and social well-being, rather than just the absence of illness or disability (Ramachandra et al., 2013; Ulger & Yagli, 2010; Vasconcelos et al., 2013; Sharma, 2014; Masten, 2001; Sadeghipor & Aghdam, 2021). Mental health is recognized as a key aspect of overall well-being, alongside physical and social health. Factors such as age, social and economic status, marital status, social support, parental education, and exercise can all impact mental health. In particular, exercise and physical activity are vital for enhancing the mental health, facilitating socialization, psychological growth, and spiritual intelligence (Sadeghpour & Sangchini, 2020; Taso et al. 2014).

Enhancing health and quality of life can be achieved through engaging in physical activity and exercise. Sports offer recreational, therapeutic, and competitive benefits that contribute to the overall physical and mental well-being (Bandura, 1997; Conner & Davidson, 2003; Hartfiel et al., 2011; Herrick & Ainworth, 2000; Chris et al., 2010). Participation in sports helps in reducing stress, anxiety, and depression,

while also boosting self-efficacy, self-confidence, and mental health (Ellis, et al. 2013). By enhancing mental health and spiritual intelligence, individuals can provide better live, increase satisfaction, boost productivity, and reduce health costs. Incorporating regular physical and sports activities into their weekly routine can further improve the physical and mental health and spiritual intelligence. The importance of regular physical activity and exercise in promoting human well-being and mental health is highlighted by the World Health Organization's slogan in 2002, “Movement, the secret of health” (Faircloth, 2017).

Despite numerous studies on the influence of regular engagement in physical activity and sports on mental health and quality of life across various demographics, there has been limited focus on its impact within the nursing profession. As a result, this study seeks to explore the effects of sports and physical activity participation on the mental well-being and overall quality of life of nurses.

2. Methods

2.1. Research Design, Population, Sampling, Sampling Method

The current study utilized a descriptive correlational design and was conducted in a cross-sectional manner. The target population consisted of all nurses employed in the hospitals of Tehran. The research sample was selected using an available sampling method, specifically among nurses who expressed their willingness to participate in the study. A total of 384 male and female nurses took part in the research and successfully completed the provided questionnaires. In order to be included in the study, participants were required to meet certain criteria, including: 1) providing written consent to participate, 2) completing all the questionnaires, and 3) being employed as a nurse in one of the hospitals in Tehran. On the other hand, participants were excluded from the study if they failed to complete the questionnaires or did not provide written consent.

2.2. Instruments

The physical activity questionnaire: This questionnaire developed by Sharkey (Letvak et al., 2012) comprises four five-choice questions focusing on duration, intensity, number of sessions, and sports activity history. Responses are scored using a five-point Likert scale, with each qualitative value corresponding to a numerical value ranging from one to five. The total physical activity score is calculated by summing up the scores of all questions, resulting in a score between 5 and 25. Individuals scoring above 15 can be classified as active, while higher scores reflect a greater level of activity in the respondent.

Depression, Anxiety, Stress Scale (DASS-21): The mental health of nurses was assessed in this study using DASS-21 (Connor & Davidson, 2003). DASS-21 consists of three self-report scales that evaluate negative emotional states related to depression, anxiety, and stress. The purpose of using this scale is to measure the intensity of the primary symptoms associated with depression, anxiety, and stress. To complete

the questionnaire, individuals are required to indicate the frequency of experiencing each symptom during the past week. This scale allows for a comparison of symptom severity across different weeks, enabling the assessment of treatment progress over time. Each subscale of DASS-21 comprises 7 questions, and the final score for each subscale is calculated by summing the scores of the corresponding questions. Each question is scored on a scale of 0 (not applicable to me at all) to 3 (extremely applicable to me). As DASS-21 is a condensed version of the original scale (which includes 42 questions), the final score for each subscale should be multiplied by two.

The quality-of-life questionnaire (Sharma, 2014): This questionnaire is based on the criteria proposed by the World Health Organization (BREF-WHOQOL). This questionnaire consists of questions that assess various aspects of quality of life, including four dimensions and two general questions about overall quality of life and health. The structure of the questionnaire is as follows: 1) Physical health domain: This domain focuses on physical health and covers areas such as daily activities, drug dependence, energy levels, fatigue, mobility, pain, sleep, rest, and work capacity; 2) Mental and psychological realm: This realm evaluates the psychological aspect of quality of life. It includes the individual's perception of their body and appearance, level of life enjoyment, sense of meaning in life, self-satisfaction, assessment of mental states like depression, despair, and sadness, as well as concentration and memory levels; 3) Social communication domain: This domain encompasses personal communication, social situations, and sexual activities; 4) Environmental domain: This domain examines the environmental factors that influence quality of life. It includes financial resources, physical security and freedom, access to healthcare and social services, the physical environment of one's home, opportunities for skill development and access to information, engagement in creative activities and leisure time, transportation, and the overall physical environment; Each question in the questionnaire has five options, and a score is assigned to each option. The scoring ranges from one to five, with the scoring reversed for negative questions.

2.3. Data Analysis

The normality of the data was assessed using the Kolmogorov-Smirnov test. To examine the relationships between research variables, the Pearson correlation coefficient was employed. Structural equation modeling using Lisrel was used to calculate the study model. All statistical analyses were conducted at a significance level of $P<0.05$ using SPSS version 24 software.

4. Results

Demographic data showed that mean age of the participants was 33.08 years old. Among the research participants, 63% were women while 37% were men. Out of the total of 384 individuals included in the research, 122 engaged in physical activity. This data indicates that the majority of the nurses

examined, specifically 68% of them, did not engage in physical activity throughout the week. In addition, the initial findings of this study indicated that nurses exhibit moderate to low levels of physical activity, moderate to high levels of depression, moderate to high levels of anxiety, moderate to high levels of stress, and medium level of quality of life.

To assess the normality of the data, the Kolmogorov-Smirnov test was utilized. Accordingly, it was found that distribution of the research variables' scores is normal (all P > 0.05).

Table 1

Correlation matrix between variables

	Mean±SD	1	2	3	4	5
1. Physical activity	10.24±4.34	1				
2. Depression	14.15±5.94	r=-0.528 P<0.001	1			
3. Anxiety	13.64±3.94	r=-0.637 P<0.001	r=0.634 P<0.001	1		
4. Stress	15.47±4.09	r=-0.410 P<0.001	r=0.528 P<0.001	r=0.413 P<0.001	1	
5. Quality of life	3.15±0.67	r=0.357 P<0.001	r=-0.854 P<0.001	r=-0.369 P<0.001	r=-0.257 P<0.001	1

The correlation test results presented in Table 1 demonstrate the relationship between physical activity and variables such as depression, anxiety, stress, and quality of life. The results reveal a correlation coefficient between physical activity and depression, suggesting that depression decreases as physical activity levels increase. Furthermore, the correlation coefficient for physical activity level and anxiety was inverse and significant, suggesting that as physical activity increases, anxiety decreases. Also, the correlation between physical activity level and stress was an inverse and significant association, indicating that as physical activity increases, stress levels tend to decrease. Also, there was a significant relationship between physical activity and quality of life. The current study suggests that engaging in exercise and physical activity can enhance one's quality of life. Table 2 and Figure 1 show the results of structural equation modelling.

Table 2

Results of structural equation modelling

	Path	β	T-value
1	Physical activity => depression	0.526	- 5.254
2	Physical activity => anxiety	0.632	- 6.471
3	Physical activity => stress	0.410	- 4.527
4	Physical activity => quality of life	0.328	3.627

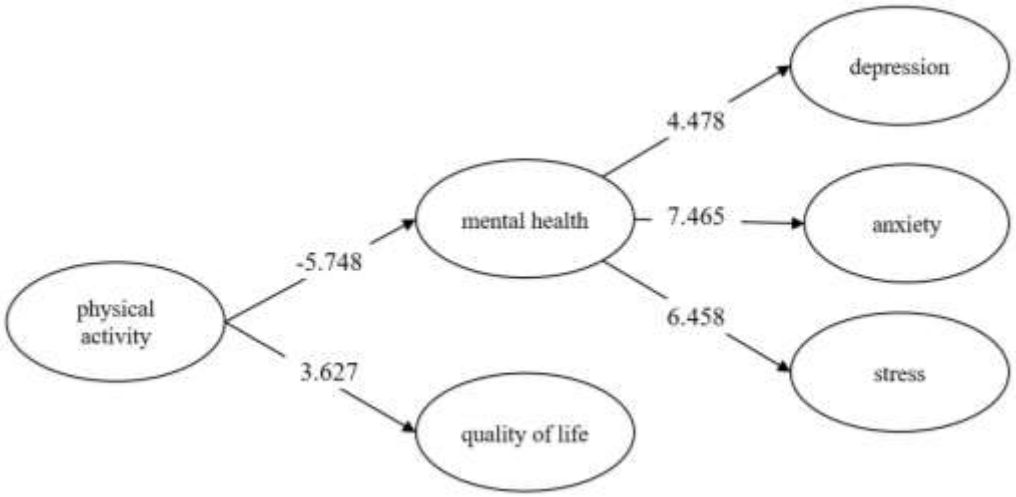

Figure 1

Structural equation modelling in the form of T-values

Results reveled that physical activity significantly affected depression (T= -5.254), anxiety (T= - 6.471) and stress (T= -4.527). In addition, physical activity significantly affected quality of life (T=3.627). Results of model fit are presented in Table 3 and indicated that the research model has good fit.

Table 3

Results of model fit

Index	Optimal Range	Obtained Value	Conclusion
RMSEA	< 0.08	0.06	Good fit
X^2 / df	< 3	2.84	Good fit
RMR	Closer to 0	0.02	Good fit
NFI	> 0.9	0.96	Good fit
CFI	> 0.9	0.95	Good fit

4. Discussion

The aim of this study was to explore the correlation between physical activities and mental health and quality of life among nurses. First, it was found that physical activity level of the nurses is low. Also, their mental health in lower than the average. Finally, the quality of life of nurses in about the medium level. These findings are clearly showing that nurses are not in a good physical and mental condition and need special attention for improving their lifestyle and quality of life. Health assessment is one of the key dimensions in evaluating various societies, revealing that the societal significance is intertwined with the research variables. Mental health is crucial for maintaining the vitality and effectiveness of any system, including health system, and is

deemed a fundamental requirement for the well-being of the nurses (Khosravi et al. 2023; Moradi et al., 2020; Sadeghipor & Aghdam, 2021; Sadeghipor et al., 2021). Enhancing the drive to engage in sports activities leads to the generation of vitality and the proper alignment of their conduct, interests, and necessities with valuable and defined objectives. Hence, it is evident that meticulous and comprehensive planning is indispensable for ensuring mental health, and the more profound and precise this planning is, the more enduring the advancement and reinforcement of the motivation for sports participation will become (Sadeghipor et al., 2021; Seyedi-Asl et al., 2021; Seyedi-Asl et al., 2016; Taghva et al., 2020).

In elucidating the aforementioned findings, it is worth noting that engaging in exercise and physical activity regimens can serve as an effective method for enhancing the cognitive, social, and emotional aspects of individuals. Physical exercise plays a crucial role in mental well-being. Enhancing physical fitness can potentially lead to psychological well-being, and it is widely acknowledged that engaging in physical activities can yield positive impacts on individuals' anxiety and mood (Bandura, 1997; Conner & Davidson, 2003; Hartfiel, et al. 2011; Herrick & Ainworth, 2000). While the precise mechanisms behind the mental health benefits of exercise remain unclear, the significance of physical activity in promoting and fortifying mental health is evident. Physical activity boosts the body's metabolic rate, enhances blood circulation, burns excess calories, and elevates mood through the release of endorphins. Numerous studies have demonstrated that exercise can alleviate symptoms of depression, which aligns with the findings of the current research. A study concluded that engaging in aerobic exercise 1 to 4 times per week at low to moderate intensity for 14 to 44 minutes can effectively treat depression. This exercise regimen can be complemented with pharmacotherapy, psychotherapy, behavioral interventions, and electroconvulsive therapy (Dana et al., 2021; Ghorbani & Bund, 2014).

Furthermore, numerous studies have documented the positive effects of exercise in treating depression (Masten, 2001; Sadeghipor & Aghdam, 2021). It has been concluded that exercise has a moderate impact on depression and should be incorporated into long-term treatment plans. However, the specific details regarding the number, duration, and intensity of the sports activities in these studies remain unknown. Exercise has the potential to influence various physiological factors, such as the increased secretion of beta-endorphins and monoamines, as well as the reduction of cortisol secretion (Davidson, 2003; Jolivet et al., 2010). Additionally, it serves as an uplifting activity, promotes social communication, facilitates skill acquisition, provides a distraction from daily routines, and fosters self-confidence. These factors collectively contribute to its role in alleviating the effects of depression. These findings align with previous research that has demonstrated the effectiveness of physical activity in improving mental health. Some studies have attributed the positive impact of physical activity and exercise on mental well-being to physiological adjustments. By

enhancing general health through skill development, self-assurance, social support, improved physical performance, balance, strength, flexibility, and increased serotonin secretion, sports activities contribute to overall mental well-being (Ramachandra et al., 2013; Ulger & Yagli, 2010; Vasconcelos et al., 2013; Sharma, 2014).

The utilization of a questionnaire in this study for data collection may have been influenced by the nurses' busy schedules and lack of patience, potentially impacting the responses. Additionally, limitations were encountered in terms of accessing the society and the target sample. Furthermore, the unavailability of accurate statistics on nurses and the difficulty in obtaining desired samples suggest the use of random sampling method and other data collection tools like observation and interviews to enhance the generalizability of the findings. Lastly, researchers are advised to compare various sports in order to assess their impact on improving the quality of life, overall health, and depression levels among nurses.

5. Conclusion

The study's results indicated a significantly low level of physical activity among nurses, underscoring the pressing requirement for interventions and policies focused on improving health-related physical activity within this demographic. Furthermore, a connection was noted between physical activity, improved mental health, and quality of life. This implies that nurses could greatly enhance their well-being through increased engagement in physical activity and a decrease in sedentary habits. As a result, we strongly urge healthcare policymakers to implement measures aimed at increasing physical activity levels among nurses.

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Conflicts of Interest

No conflict of interest has been reported.

References

Abdi, K., Hosseini, F. B., Chaharbaghi, Z., & Ghorbani, S. (2022). Impact of social support on wellbeing and health-related quality of life among elderly women: Mediating role of physical activity. *Women's Health Bulletin*, *9*(2), 104-109. https://doi.org/10.30476/whb.2022.94981.1174

Afsanepurak, S. A., Bahram, A., Dana, A., Abdi. J. (2012). The effect of self-talk and mental imagery on self-efficacy in throwing darts in adolescents. *International Research Journal of Applied & Basic Sciences*, *3*(3), 594-600. https://ssrn.com/abstract=3947464

American Psychological Association. (2014). *The Road to Resilience*. Washington, Dc: American Psychological Association.

Bandura, A. (1997). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*, 191–215. https://doi.org/10.1037//0033-295x.84.2.191

Chris, C., et al. (2010). Effects of yoga versus walking on mood, anxiety, and brain levels: A randomized controlled MRS study. *The Journal of Alternative and Complementary Medicine*, *16*(11), 1145-1152. https://doi.org/10.1089/acm.2010.0007

Conner, K. M., & Davidson, J. R. T. (2003). Development of a new Resilience scale: The Conner – Davidson Resilience Scale (CD-RISC). *Depression & Anxiety*, *18*, 76-82. https://doi.org/10.1002/da.10113

Dana, A., & Shams, A. (2019). The efficacy of brain cognitive rehabilitation interventions on executive functions in children with attention deficit hyperactivity disorder. *Neuropsychology*, *5*(18), 131-140. https://doi.org/10.30473/clpsy.2020.46249.1440

Dana, A., Ranjbari, S., Salehian, M. H., & Shayan Matin, P. (2021). Effects of Cognitive-Behavioral Therapy on Mental Health of High-School Students during COVID-19 Pandemic. *International Journal of School Health*, *8*(4), 201-208. https://doi.org/10.30476/intjsh.2021.92100.1165

Davidson, C. (2003). Development of a new resilience scale: The Connor Davidson resilience scale (CD-RISC). *Journal of Depression and anxiety*, *18*, 76-82. https://doi.org/10.1002/da.10113

Ellis, N., Randall, J., & Punnett, G. (2013). The effects of a single bout of exercise on mood and self-esteem in clinically diagnosed mental health patients. *Open Journal of Medical Psychology*, *2*(3), 81-85. http://dx.doi.org/10.4236/ojmp.2013.23013

Faircloth, A. L. (2017). Resilience as a mediator of the relationship between negative life events and psychological well-being. *Electronic Theses & Dissertations*, 1373.

Farsi, A., Bahmanbegloo, Z. H., Abdoli, B., & Ghorbani, S. (2016). The effect of observational practice by a point-light model on learning a novel motor skill. *Perceptual & Motor Skills*, *123*(2), 477– 488. https://doi.org/10.1177/003151251666%202896

Ghorbani, S., & Bund, A. (2017). Throwing skills: Analysis of movement phases in early motor learning. *Perceptual & Motor Skills*, *124*(2): 502-513. https://doi.org/10.1177/0031512517689972

Ghorbani, S., & Bund, A. (2014). Acquisition a baseball-pitch through observation: What information is extracted? *American Journal of Sports Science & Medicine*, *2*(6A), 18-21. https://pubs.sciepub.com/ajssm/2/6A/5/index.html

Ghorbani, S., Ghanati, P., Dana, A., & Salehian, M. H. (2020). The effects of autonomy support on observational motor learning. *Iranian Journal of Learning and Memory*, *3*(11), 77-87. https://doi.org/10.22034/iepa.2021.242953.1195

Hartfiel, N., Havenhand, J., Khalsa, S., Clarke, G., & Krayer, A. (2011). The effectiveness of Yoga for the improvement of well-being and resilience to stress in the workplace. *Scandinavian Journal of Work, Environment & Health*, *37*(1), 70-76. https://doi.org/10.5271/sjweh.2916

Herrick, C., & Ainsworth, A. (2000). Invest in yourself: Yoga as a self-care strategy. *Nurs-Forum*, *35*(2), 32-36. http://dx.doi.org/10.1111/j.1744-6198.2000.tb00996.x

Jolivet, A., Caroly, S., Ehlinger, V., Kelly Irving, M., Delpierre, C., & Balducci, F. (2010). Linking hospital workers' organisational work environment to depressive symptoms: A mediating effect of effort–reward imbalance? The Orsosa study. *Social Science & Medicine*, *71*(3), 534-540.

https://doi.org/10.1016/j.socscimed.2010.04.003

Khosravi, M., et al. (2023). Parenting styles, maladaptive coping styles, and disturbed eating attitudes and behaviors: a multiple mediation analysis in patients with feeding and eating disorders. *PeerJ*, *11*, e14880. https://doi.org/10.7717/peerj.14880

Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., & Wei, N. (2020). Factors associated with mental health outcomes among health care workers exposed to Coronavirus disease 2019. *Jama Network Open*, *3*(3), E203976-E. https://doi.org/10.3390%2Fijerph19095346

Letvak, S., Ruhm, C., & Mccoy, T. (2012). Depression in hospital-employed nurses. *Clinical Nurse Specialist*, *26*(3), 177-182. https://doi.org/10.1097/nur.0b013e3182503ef0

Masten, A. (2001). Ordinary Magic: Resilience Processes in Development. *American Psychologist*, *56*(3), 227-38. https://doi.org/10.1037//0003-066x.56.3.227

Mikkelsen, K., Stojanovska, L., Polenakovic, M., Bosevski, M., & Apostolopoulos, V. (2017). Exercise and mental health. *National Library of Medicine*, *106*, 48-56. https://doi.org/10.1016/j.maturitas.2017.09.003

Moradi, J., Bahrami, A., & Dana, A. (2020). Motivation for participation in sports based on athletes in team and individual sports. *Physical Culture and Sport, Studies & Research*, *85*(1), 14–21. http://dx.doi.org/10.2478/pcssr-2020-0002

Newhan, J. J., Clin, A. W., Hurley, J., Aplin, J. D., & Westwood, M. (2014), Effects of antenatal yoga on maternal anxiety and depression: A randomized controlled trial. *The Official Journal of ADAA*, *31*, 631-640. https://doi.org/10.1002/da.22268

Ohler, M., Forbes, D., & Kerr, M. (2010). Depression in nurses. *Canadian Journal of Nursing Research*, *42*(3), 66-82. https://pubmed.ncbi.nlm.nih.gov/21086777/

Ramachandra, P. U., Varambally, S., Philip, M., & Gangadhar, B. N. (2013), Effect of yoga therapy on anxiety and depressive symptoms and quality-of-life among caregivers of in-patients with neurological disorders at a tertiary care center in India: A randomized controlled trial. *Indian Journal of Psychiatry*, *55*(3), 385-389. https://doi.org/10.4103/0019-5545.116304

Sadeghipor, N., & Aghdam, B. H. (2021). Investigating the effect of appropriate personal protective equipment on the stress level of care workers in the Covid19 epidemic. Iran. *Health Science Journal*. *3*, 7. https://doi.org/10.1027/MARCR.2021.0154

Sadeghipor, N., & Aghdam, B. H. (2021). The effect of pesticides on child gender and the level of sexual activities in people exposed – Iran. *MAR Gynecology*, *1*(4). doi:10.1027/MARGY.2021.0106.

Sadeghipor, N., Aghdam, B. H., & Kabiri, S. (2021). Evaluation of burnout and job stress in care worker and comparison between front-line and second line in care worker during coronavirus epidemic. *Health Science Journal*, *3*, 8. doi: 10.1027/MARCR.2021.0155.

Sadeghipor, N., Kabiri, S., & Aghdam, B. H. (2021). Investigating the pesticides impact on mental health of exposed workers – Iran. *MAR Case Reports*, *2*(6). doi: 10.1027/MARCR.2021.0164.

Sadeghpour, E., & Sangchini, E. K. (2020). Assessment and comparative study of job stress in Jam hospital jobs, Tehran city. *Health Science Journal*, *2*, 4. doi: 10.36648/1791-809X.S2.004.

Seyedi Asl, S. T., Rahnejat, A. M., Elikaee, M. M., Khademi, M., Shahed-HaghGhadam, H., & Taghva, A. (2021). The role of resilience, positive/negative emotions, and character

strengths in predicting burnout of military personnel. *EBNESINA*, *22*(4), 4-13. https://ebnesina.ajaums.ac.ir/browse.php?a_code=A-10-689-1&sid=1&slc_lang=en

Seyedi-Asl, S. T., Sadeghi, K., Bakhtiari, M., Ahmadi, S. M., Nazari-Anamagh, A., & Khayatan, T. (2016). Effect of group positive psychotherapy on improvement of life satisfaction and the quality of life in infertile woman. *International Journal of Fertility & Sterility*, *10*(1), 105–112. Doi: 10. 22074/ijfs.2016.4775. https://doi.org/10.22074/ijfs.2016.4775

Sharma, M. (2014). Yoga as an alternative and complementary approach for stress management: a systematic review. *Evidence-Based Complementary & Alternative Medicine*, *19*(1), 59-67. https://doi.org/10.1177/2156587213503344

Taghva, A., Seyedi Asl, S. T., Rahnejat, A. M., & Elikaee, M. M. (2020). Resilience, emotions, and character strengths as predictors of job stress in military personnel. *Iranian Journal of Psychiatry & Behavioral Sciences*, *14*(2), e86477. http://dx.doi.org/10.5812/ijpbs.86477

Taso, C. J., Lin, H. S., Lin, W. L., Chen, S. M., Huang, W. T., & Chen, S. W. (2014). The effect of yoga exercise on improving depression, anxiety, and fatigue in woman with breast cancer: a randomized controlled trial. *The Journal of Nursing Research*, *22*(3), 155-164. https://doi.org/10.1097/jnr.0000000000000044

Ulger, O., & Yagli, N. V. (2010). Effects of yoga on the quality of life in cancer patients. *Complementary Therapies in Clinical Practice*, *16*(2), 60-63. https://doi.org/10.1016/j.ctcp.2009.10.007

Vasconcelos, A., França, I; Coura, A., Enders, B., Cartaxo, H., & Sousa, F. (2013). Self-care in neurogenic intestine in subjects with spinal cord injury: An integrative review. *Online Brazilian Journal of Nursing*, *12*(4), 998-1010. https://doi.org/10.5935/1676-4285.20133692