

البحث الثاني عشر :

'Live well, walk 30'—The role of physical activity in health promotion in a sample of Shaqra University students

”مش بصحة، امش ٣٠“، دور النشاط البدني في تعزيز الصحة لدى عينة من طالبات جامعة شقراء

إعداد :

د. هيتاف العمار

أستاذ مساعد الصحة النفسية
جامعة شقراء بالمملكة العربية السعودية

Dr.Hetaf A Alammar

Assistant professor of Health Psychology at Shaqra University

”عش بصحة، امش ٣٠“: دور النشاط البدني في تعزيز الصحة لدى عينة من طالبات جامعة شقراء

د. هيتاف العمار

أستاذ مساعد الصحة النفسية

جامعة شقراء بالمملكة العربية السعودية

• المستخلص :

تهدف هذه الدراسة إلى تشجيع طالبات الجامعة (قسم علم النفس) على المشي ٣٠ دقيقة في اليوم أو ١٥٠ دقيقة في الأسبوع بعد مشاهدة الفيديوهات المنشورة بواسطة وزارة الصحة السعودية (عش بصحة، امش ثلاثين). في فبراير ٢٠٢٠، تم توزيع ورقة المعلومات الخاصة بالبحث وورقة الموافقة على المشاركة في البحث على طالبات علم النفس في السنة الثالثة في جامعة شقراء. بعدما وافقت (٣٨) من الطالبات على المشاركة تم استكمال المقاييس القبلية. استخدمت الدراسة الحالية المنهج التجريبي، تصميم المجموعة الواحدة (القياس القبلي والقياس البعدي). أشارت نتائج الدراسة إلى عدم وجود فروق دالة إحصائية بين القياسين القبلي والبعدي في المتغيرات التالية: (اضطرابات النوم، والسلوك الصحي، والاكتئاب، والقلق، والضغط). لكن يوجد انخفاض في المتوسط بعد إجراء القياس البعدي في المتغيرات التالية: (اضطرابات النوم، والقلق، والضغط). أيضاً هناك نتائج إيجابية في مقياس السلوك الصحي حيث ارتفع المتوسط في القياس البعدي. في المقابل، تم الإشارة إلى نتائج سلبية في متوسط القياس البعدي للاكتئاب، حيث ارتفع مقارنة بالقياس القبلي. خلصت هذه الدراسة إلى أن استخدام تطبيق صحي، ومشاهدة الفيديوهات التي تم إعدادها بواسطة وزارة الصحة (عش بصحة، امش ثلاثين) وممارسة النشاط البدني لطالبات السنة الثالثة في قسم علم النفس في جامعة شقراء لم يظهر فروق دالة إحصائية في المتغيرات التالية: (اضطرابات النوم، والسلوك الصحي، والاكتئاب، والقلق، والضغط). توصي الدراسة بإجراء تجربة عشوائية ذات تصميم متحكم به باستخدام تصميم المجموعتين للوصول إلى نتائج موثوق بها.

كلمات مفتاحية : عش بصحة – امش ٣٠ – النشاط البدني – تعزيز الصحة – طالبات جامعة شقراء

‘Live well, walk 30’—The role of physical activity in health promotion in a sample of Shaqra University students

Dr.Hetaf A Alammar

Assistant professor of Health Psychology at Shaqra University

halammar@su.edu.sa

Abstract

The aim of this study was to encourage female university students (from the psychology department) to walk 30 minutes a day or 150 minutes per week after seeing videos published by the Ministry of Health in Saudi Arabia (‘Live well, walk 30’). In February 2020, information sheets and consent forms were

distributed among third-year psychology students at Shaqra University. When they agreed to take part, the baseline assessments were completed. This study had an experimental one-group design with pre- and post-intervention assessments. The results show that there were no significant differences between 'before' and 'after' assessments in the following variables: sleep disorders, healthy behaviour, depression, anxiety, and stress. However, there was a decrease in the mean in post-intervention assessments in the following variables: sleep disorders, anxiety, and stress. In addition, a positive result was reported in the healthy behaviour assessment, as the mean improved in the post-intervention assessment. In contrast, a negative result was reported on the depression scale, as the post-intervention mean was higher than the baseline mean. This study concludes that using an application called My Health, watching videos distributed by the Ministry of Health ('Live well, walk 30'), and engaging in physical activity did not show significant results for third-year psychology students in the following variables: sleep disorders, healthy behaviours, depression, anxiety, and stress. Future and large randomised controlled trials (RCT) with two groups are recommended to establish reliable results.

Introduction

The Ministry of Health (MoH) in Saudi Arabia has launched a campaign that focuses on walking for health. It uses an application called My Health, videos, and hashtags on Twitter to promote physical activity for health ('Live well, walk 30'). Physical activity has many benefits for physical and mental health. According to Fletcher et al. (2018), physical activity has a positive impact on promoting physical health and preventing chronic disease, e.g. cardiovascular disease, obesity, diabetes, and high blood pressure. Additionally, physical activity has a positive impact on the mental health and quality of life of university students, whether they are athletes or general university students (Kotarska et al., 2021; Snedden et al., 2019).

For optimal health, the Saudi Public Health Authority has recommended at least 150 minutes of physical activity per week for adults aged 18–64 (Alfawaz et al., 2021). Meanwhile, university students in Saudi Arabia have shown a

significant reduction in total physical activity time after starting university due to time availability and academic commitments (Alkhateeb et al., 2019).

University students are an important part of society. Encouraging them to exercise can lead to spreading walking culture among them and their families, which results in improving physical and mental health and preventing chronic illnesses. Thus, the aim of this study was to encourage female university students from the psychology department to walk 30 minutes a day, or 150 minutes per week, after seeing videos published by the Ministry of Health in Saudi Arabia ('Live well, walk 30').

Methods

Ethical approval was obtained for this study from Shaqra University (code number ERC_SU_2020012, date 23/2/2020). In February 2020, the information sheet and consent form were distributed among third-year psychology students at Shaqra University. When they agreed to take part, the baseline assessments were completed. The study had an experimental, one-group design (with pre- and post-intervention assessments). Pre- and post-intervention assessments and the intervention were completed before the COVID-19 health measures began.

Intervention

The intervention consisted of two sessions in which participants took notes on lectures on the importance of physical activity from videos provided by the Ministry of Health on YouTube. The videos focus on physical activity, its importance for health, how it prevents visiting hospitals and chronic diseases, and how the prophet Muhammad (peace be upon him) walked.

Assessments

Healthy behaviour

This scale consists of ٤٢ items divided into four subscales: the psychosocial dimension, public healthcare dimension, body care dimension, and dealing with medications and drugs dimension. A higher score was considered to indicate healthier behaviours.

DASS

The Depression, Anxiety, and Stress Scale consists of 42 items divided into three major subscales (depression, anxiety, and stress). Each subscale consists of 14 items. Higher scores are considered to indicate symptoms of depression, anxiety, and stress.

Sleep Disorder Scale

An Arabic scale that focuses on sleep disorders was also used. It consists of ٣٦ items divided into six subscales (insomnia, circadian rhythm disorders, restless legs syndrome/periodic limb movement disorder, obstructive sleep apnea, and parasomnias). Higher scores were considered to indicate symptoms of sleep disorders.

Step calculation

Average weekly steps were calculated four times through the My Health application created by the Ministry of Health (pre-intervention, second week, third week and post-intervention).

Results

Participants' characteristics

38 participants agreed to take part. All were third-year female students studying psychology at Shaqra University in the 2020 academic year.

Weekly average of the steps

Students reported average weekly step readings four times: at the baseline, second week, third week, and post-intervention, which was the fourth week (see Figure 1: number of steps reported by the students per week).

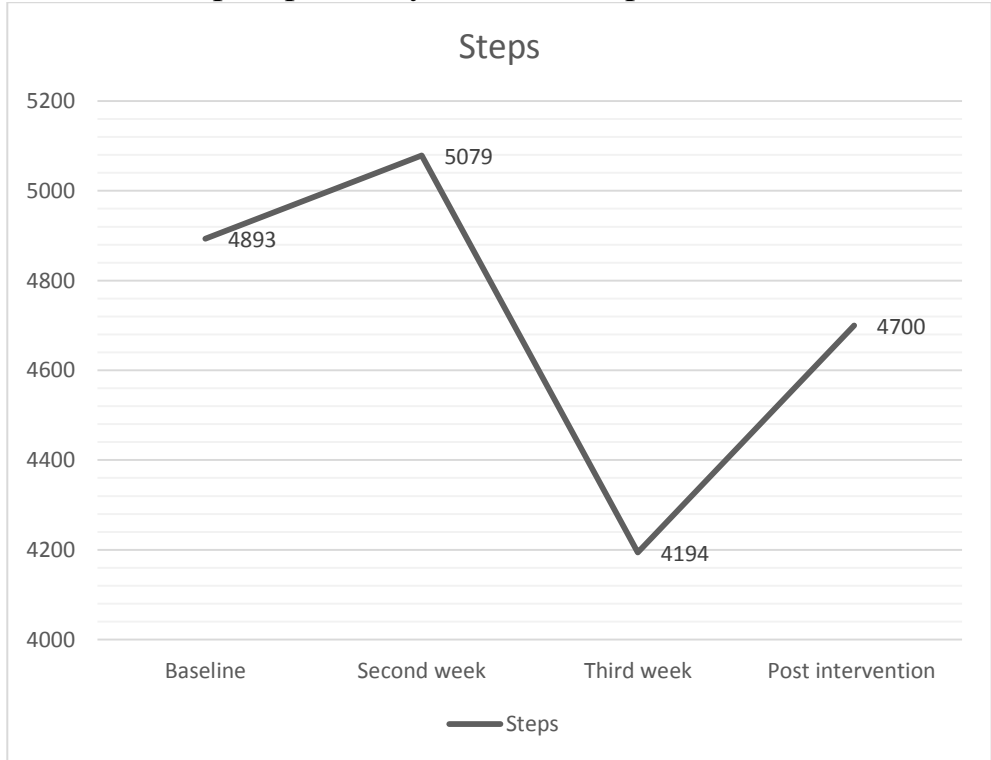


Figure 1: Number of steps reported per week

At the baseline, an average of 4,893 steps were reported. In the second week, an increase was observed, as a total of 5,079 steps were reported. A decrease in total steps in the third week was reported, at 4,194 steps. Total steps increased again in the fourth week (post-intervention), as the average was 4,700 steps.

Mean, standard deviation, T-test, and level of significance for all variables

Table 1: Number, mean, standard deviation, T-test and level of significance of all variables

Variable	Time of assessment	N	Mean	Std Deviation	T	Sig
Sleep disorders scale	Before	٣٨	٦١	١٢	.٥٧	.٥٧
	After	٣٨	٦٠	١٢		
Healthy Behaviour	Before	٣٨	١٤٧	٣٢	-.٨٤	.٤١
	After	٣٨	١٥٣	٢٦		
Depression	Before	٣٨	٦	٥	-.٢٦	.٧٩
	After	٣٨	٧	٦		
Anxiety	Before	٣٨	6	5	.80	٣.4
	After	٣٨	5	5		
Stress	Before	38	9	6	1.67	.10
	After	38	7	5		

Table 1 shows that there were no significant differences between before and after assessments in the following variables: sleep disorders, healthy behaviour, depression, anxiety, and stress. Another important finding was that there was a decrease in the mean in post-intervention assessments in the following variables: sleep disorders, anxiety, and stress. A positive result was also reported in the healthy behaviour assessment, as the mean improved post-intervention. In contrast, a negative result was reported on the depression scale, as the post-intervention mean was higher than the baseline.

Discussion

The aim of this study was to encourage psychology students to walk 30 minutes a day or 150 minutes per week after seeing videos published by the Ministry of Health in Saudi Arabia on YouTube. The results showed that these female university students walked an average of 4,717 steps, which is in line with Wilde et al. (2001), who claimed that

females walk between 2,000 and 7,000 steps per day. On the other hand, the average number of steps reported in this study is less than the recommended number of 10,000 steps per day (Wattanapisit & Thanamee, 2017). The results also show that there was an increase in total steps reported in the second and fourth weeks, at 5,079 steps in the second week and 4,700 steps in the fourth week. However, a decrease in the total number of steps was reported in the third week (4,194 steps). A possible explanation might be related to a dust storm that occurred in the third week, which might have affected the students' exercise. Ghalib et al. (2021) determined that sandstorms may lead to shortness of breath while exercising, which may affect physical activity.

The results also showed that there were no significant differences between the baseline and post-intervention assessments in all variables (sleep disorders, healthy behaviours, depression, anxiety, and stress). This outcome is contrary to that of McDonough et al. (2022), who found statistically significant interaction effects for free-living moderate-to-vigorous physical activity, sleep efficiency, and muscle-strengthening physical activity frequency, with all outcomes among the intervention group. Additionally, Fukui et al. (2021) investigated physical activity promotion as a result of 'stay-at-home exercise' among college students and found that the intervention did not promote physical activity. However, it had a positive impact on mental health.

It is somewhat surprising that depression showed an increase in the mean post-intervention assessment compared to the baseline. This might be related to premenstrual syndrome (PMS) and premenstrual dysphoric disorder

(PMDD), which occur in nearly 20–40% of women, affecting their mood (Itriyeva, 2022).

Limitations

This study has several limitations. First, there was no control group that could help in comparing the results with the intervention group. Second, this study was conducted on third-year female psychology students at Shaqra University. Adding students from other disciplines and male students may add strength to the study. Third, there was a dust storm in the third week of the intervention, which might have affected students' exercise and physical activity.

Conclusion

This study concludes that using the application called My Health, watching videos conducted by the Ministry of Health ('Live well, walk 30') and engaging in physical activity did not show significant results in the following variables for third-year female psychology students: sleep disorders, healthy behaviours, depression, anxiety, and stress. However, improvements were observed in some variables—sleep disorders, healthy behaviours, anxiety, and stress—in post-intervention assessments. Future and large randomised controlled trials (RCT) with two groups are recommended to establish reliable results.

References

- Alfawaz RA, Aljuraiban GS, AlMarzooqi MA, Alghannam AF, BaHamman AS, Dobia AM, Allothman SA, Aljuhani O, Aljaloud KS. The recommended amount of physical activity, sedentary behavior, and sleep duration for healthy Saudis: A joint consensus statement of the Saudi Public Health Authority. *Annals of Thoracic Medicine*. 2021 Jul;16(3):239.

- Alkhateeb, S. A., Alkhameesi, N. F., Lamfon, G. N., Khawandanh, S. Z., Kurdi, L. K., Faran, M. Y., ... & Safdar, O. Y. (2019). Pattern of physical exercise practice among university students in the Kingdom of Saudi Arabia (before beginning and during college): a cross-sectional study. *BMC Public Health*, 19(1), 1-7.
- Fletcher, G. F., Landolfo, C., Niebauer, J., Ozemek, C., Arena, R., & Lavie, C. J. (2018). Promoting physical activity and exercise: JACC health promotion series. *Journal of the American College of Cardiology*, 72(14), 1622-1639.
- Fukui, K., Suzuki, Y., Kaneda, K., Kuroda, S., Komiya, M., Maeda, N., & Urabe, Y. (2021). Do “Stay-at-Home Exercise” Videos Induce Behavioral Changes in College Students? A Randomized Controlled Trial. *Sustainability*, 13(21), 11600.
- Ghalib, W. A. M., Mansoor, A. M., & Ponnappa, S. C. (2021). Environmental Factors that Influence the Geography of Yemen Leading to Dust and Sand Storms - A Case Study. *Journal of Environmental Geography*, 14(1-2), 24–37. <https://doi.org/10.2478/jengeo-2021-0003>
- Itriyea, K. (2022). Premenstrual syndrome and premenstrual dysphoric disorder in adolescents. *Current Problems in Pediatric and Adolescent Health Care*, 101187.
- Kotarska, K., Nowak, M. A., Nowak, L., Król, P., Sochacki, A., Sygit, K., & Sygit, M. (2021). Physical Activity and Quality of Life of University Students, Their Parents, and Grandparents in Poland— Selected Determinants. *International Journal of Environmental Research and Public Health*, 18(8), 3871.
- McDonough, D. J., Helgeson, M. A., Liu, W., & Gao, Z. (2022). Effects of a remote, YouTube-delivered exercise intervention on young adults’ physical activity, sedentary behavior, and sleep during the COVID-19 pandemic: Randomized controlled trial. *Journal of sport and health science*, 11(2), 145-156.
- Snedden, T. R., Scerpella, J., Kliethermes, S. A., Norman, R. S., Blyholder, L., Sanfilippo, J., ... & Heiderscheid, B. (2019). Sport and physical activity level impacts health-related quality of life among

collegiate students. American Journal of Health Promotion, 33(5), 675-682.

- Watanapisit, A., & Thanamee, S. (2017). Evidence behind 10,000 steps walking. Journal of Health Research, 31(3), 241-248.
- Wilde, B. E., Sidman, C. L., & Corbin, C. B. (2001). A 10,000-step count as a physical activity target for sedentary women. Research quarterly for exercise and sport

