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Short Communication

"Effects of Exercise Programs Using Smartphone in Patients Undergoing Hemodialysis"

Evangelia Prevyzi*

Pathological Nursing Specialty, Director of the Public Training Institute for Nursing Assistants, General Hospital of Piraeus "Tzaneio", Greece

***Corresponding Author**: Evangelia Prevyzi, Pathological Nursing Specialty, Director of the Public Training Institute for Nursing Assistants, General Hospital of Piraeus "Tzaneio", Greece.

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The need for exercise as a quality of life factor in patients undergoing dialysis has been demonstrated. The evolution of technology through exercise programs using Smartphones has been the subject of research by many researchers as they seem to have an impact on the way these patients exercise.

The literature review aimed to highlight the effects of Exercise Programs using Smartphones on patients undergoing dialysis.

It's a literature review on the effects of exercise programs using a smartphone on patients undergoing dialysis. 25 articles were collected from the online PubMed database in the period 2013-2021. 10 were selected after reading the full article. Articles that did not concern patients undergoing dialysis and those that were not in English were excluded from the work.

The review by Schoeppe St., *et al.* showed that interventions based on smartphone applications to improve diet, physical activity, reduce sedentary lifestyle, can be effective but this should be confirmed by more research [1].

Maurícia C., *et al* concluded that strength training and aerobic exercise can improve the respiratory, muscular and functional performance of dialysis patients as well as their quality of life when they apply them, compared to those who have not developed any physical type [2].

The exercise program based on the smartphone application based on the theory of self-improvement according to Eun Jeong Ki., *et al.* significantly improved the level of fitness and activity in patients undergoing dialysis. It has been shown to be an effective nursing intervention tool for improving fitness and physical activity [3].

The same exercise program based on the smartphone application based on the theory of self-improvement was also studied by Min Y., *et al.* It increased the positive behavior and helped to meet psychological needs in elderly patients undergoing dialysis, while the normal parameters were maintained within the normal range. Future studies are required for the development of such applications and for high-risk patients as well as for the management of non-compliant patients [4].

It would be an important intervention step for patients undergoing dialysis and following a sedentary lifestyle according to Jagannathan R., *et al.* They suggest using the strengths of health systems to start promoting exercise and community planning. It would be important, as they say with Community resources, to provide these applications to professionals with specialized knowledge to help patients undergoing dialysis [5].

This meta-analysis by Romeo A., *et al.* provides evidence to support the effectiveness of smartphone applications in increasing physical activity. Untill now, applications have been more effective in the short term (eg up to 3 months). Future researches are needed to understand the timing of intervention effects and to explore strategies for sustaining intervention effects over time [6].

As far as we know, this systematic review by Daryabeygi-Khotbehsara R., *et al.* is the first to report on smartphone-based studies to reduce sedentary lifestyle and promote exercise. The limited number of studies incorporating these models shows many promising findings. Future research is needed to evaluate the effectiveness of dynamic models for promoting exercise and reducing sedentary lifestyle [7].

Smartphone-based mHealth interventions aimed at promoting PA have shown promising results, as reported by Domin A., *et al*. for behavior change. Although there are a number of published studies for the target group of adults, the number of studies and therefore the database for adolescents is limited. Overall, the effectiveness of smartphone-based mHealth PA interventions can be significantly improved through a more systematic approach to developing, reporting and coding interventions [8].

To understand the added value of MHApps in supporting behavior change, it seems important, according to Aromatario O., *et al,* to rely on examples related to health technology evaluation taking into account the characteristics of technologies and evaluating complex interventions taking into account the characteristics of prevention. This combined approach can help clarify how these patient-focused MHApps work and is a prerequisite for improved evaluation of MHApps in terms of efficacy, portability, and scalability [9].

Both BC and ER resulted in moderate improvements in sedentary living standards, with no significant differences between groups. Adequate compliance with ER program sessions has led to significant improvements in compliance with BC aerobic exercise recommendations. These results by Gallegos-Carrillo K., *et al.* can help guide the development and implementation of programs that incorporate standard PA evaluation, counseling, and referrals through clinical community links in Mexico and other low- and middle-income countries in the region [10].

Bibliography

1. Schoeppe ST., *et al*. "Efficacy of interventions that use apps to improve diet, physical activity and sedentary behaviour: a systematic review". *International Journal of Behavioral Nutrition and Physical Activity* 13.1 (2016): 127.

2. Maurícia C., *et al*. "Effect of exercise performed during hemodialysis: strength versus aerobic". *Renal Failure* 35.5 (2013): 697-704.

3. Eun Jeong Ki and Hyang Sook So. "Development and Effects of Smartphone App-Based Exercise Program for Hemodialysis Patients". *Journal of Korean Academy of Nursing* 50.1 (2020): 52-65.

4. Min Y and Park M. "Effects of a Mobile-App-Based Self-Management Support Program for Elderly Hemodialysis Patients". *Healthcare Informatics Research* 26.2 (2020): 93-103.

5. Jagannathan R., *et al*. "Physical activity promotion for patients transitioning to dialysis using the "Exercise is Medicine" framework: a multi-center randomized pragmatic trial (EIM-CKD trial) protocol". *BMC Nephrology* 19 (2018): 230.

6. Romeo A., *et al*. "*Journal of Medical Internet Research* 21.3 (2019): e12053.

7. Daryabeygi-Khotbehsara R., *et al*. "Smartphone-Based Interventions to Reduce Sedentary Behavior and Promote Physical Activity Using Integrated Dynamic Models: Systematic Review". *Journal of Medical Internet Research* 23.9 (2021): e26315.

8. Domin A., *et al*. "Smartphone-Based Interventions for Physical Activity Promotion: Scoping Review of the Evidence Over the Last 10 Years". *JMIR mHealth and uHealth* 9.7 (2021): e24308.

9. Aromatario O., *et al*. "How do mobile health applications support behaviour changes? A scoping review of mobile health applications relating to physical activity and eating behaviours". *Public Health* 175 (2019): 8-18.

10. Gallegos-Carrillo K., *et al*. "Brief Counseling and Exercise Referral Scheme: A Pragmatic Trial in Mexico". *American Journal of Preventive Medicine* 52.2 (2017): 249-259.

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