

**Interventions to Increase Patients' Medication Adherence: A Literature Review**

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Research is an essential part of the nursing profession and is a continuous process that helps establish and guide best practices within the healthcare field. An important topic of ongoing research in the field of nursing is how to improve patient adherence to their medications. Therefore, this literature review aims to analyze three quantitative studies that assess the effectiveness of different interventions in improving patient adherence to taking their medications. The primary goal of a literature review is to gather previously published research on a specific topic and then provide an in-depth analysis of the literature to establish what is known about the topic and to identify any gaps in current knowledge that would benefit from further research (Houser, 2023). Literature reviews help to add confidence to the importance of specific healthcare topics and determine procedures that can be replicated and adapted to real-life practice (Houser, 2023). Hence, this literature review aims to highlight the importance of patient medication adherence in improving health outcomes and identify what interventions to increase medication adherence could be easily replicated in current nursing practice.

### **“The effects of self-management education tailored to health literacy on medication adherence and blood pressure control among elderly people with primary hypertension: A randomized controlled trial”**

One quantitative study that examined an intervention to improve medication adherence was specifically interested in targeting elderly patients with uncontrolled hypertension (Delavar et al., 2020). The primary objective of their study was to evaluate the effectiveness of "self-management education," which was tailored to each participant's health literacy level, on antihypertensive medication adherence and overall blood pressure control (Delavar et al., 2020).

Self-management education involved face-to-face and telephone educational sessions over six weeks (Delavar et al., 2020). Results of the study found that the tailored self-management education provided to participants significantly improved medication adherence but had no significant effect on control of blood pressure between the control and intervention group (Delavar et al., 2020).

### **Key Points**

This research took place in Iran, and the authors of this study performed a randomized controlled trial on a population of 118 eligible elderly participants who had uncontrolled primary hypertension (Delavar et al., 2020). The participants of this study had to be older than 60, have a diagnosis of uncontrolled primary hypertension, be taking antihypertensive medications, have inadequate health literacy, and have no cognitive disorders (Delavar et al., 2020). Health literacy level was determined using the Health Literacy for Iranian Adults (HELIA) scale (Delavar et al., 2020). The 118 participants were obtained from referrals to the cardiovascular clinic of Fayyazbakhsh Hospital in Iran, and each participant was randomly allocated to a control or an intervention group through block randomization (Delavar et al., 2020).

The researchers of this study analyzed medication adherence and the proportion of participants with controlled blood pressures at the beginning of the study and six weeks afterward (Delavar et al., 2020). To collect and analyze this data, they used a demographic questionnaire, the eight-item Morisky Medication Adherence Scale, and a datasheet for recording blood pressure values (Delavar et al., 2020). The Morisky Medication Adherence Scale included seven “Yes/No” questions and one question answered on a four-point Likert scale where scores could fall between zero and eight (Delavar et al., 2020). A score of eight meant good medication adherence, six to seven meant moderate medication adherence, and a score of

less than six equated to poor medication adherence (Delavar et al., 2020). The authors did a variety of statistical analyses to establish the results of their data, some of which included Fisher's exact, Chi-square tests, and Mann-Whitney U tests to analyze between-group comparisons (Delavar et al., 2020).

As mentioned previously, the participants in this study were randomly assigned to a control and intervention group, where the control group only received routine care services provided to all patients with hypertension, such as one doctor's visit, a blood pressure measurement, and a medication prescription (Delavar et al., 2020). The intervention group, however, received hypertension self-management education tailored to their health literacy level via two face-to-face sessions lasting 30-45 minutes and four 15-minute telephone-based sessions (Delavar et al., 2020). The educational materials they received had information on what hypertension is, complications of the conditions, medications for hypertension, and the importance of taking those medications and routinely visiting the doctor for blood pressure monitoring (Delavar et al., 2020).

At the start of the study, 78.5% of participants in the intervention group and 82.7% in the control group had poor medication adherence with no statistically significant between-group differences ( $p = 0.639$ ) (Delavar et al., 2020). At the end of the six-weeks, the authors found that the self-management education resulted in significantly better medication adherence in the intervention group compared to the control group ( $p = 0.002$ ), where now 50% of those in the intervention group still had poor medication adherence compared to 79.3% in the control group (Delavar et al., 2020). Additionally, after the intervention, the rates of uncontrolled blood pressure decreased in the intervention group, but there was no statistically significant difference between the intervention and control group (Delavar et al., 2020).

## **Assumptions**

The authors' central assumption in this study is that educational materials provided to patients to increase their medication adherence should be based on their health literacy level and uniquely tailored to each individual (Delavar et al., 2020). The researchers make it a point to note that in previous studies, the researchers did not tailor educational materials to each patient's health literacy level, which would influence the effectiveness of the educational materials (Delavar et al., 2020). It can be assumed that the authors of this study believe that an increased health literacy level is associated with increased medication adherence.

## **Deficit/Conclusion**

The authors of this study have a valid line of reasoning. It is essential to consider a patient's health literacy level before providing them with educational materials because if the materials are presented in a manner that is above their understanding, it can significantly impede their ability to effectively follow physician recommendations. However, this study would be more beneficial to the nursing field if they provided examples of the types of educational materials that they provided to the participants. Instead, the authors only state that educational materials were gathered based on previous research (Delavar et al., 2020). Overall, this study shows that to promote adherence to antihypertensive medications, tailoring patient education to their health literacy level is the best practice (Delavar et al., 2020). It highlights the impact of health literacy on patient education and shows that providing more in-depth education positively affects medication adherence (Delavar et al., 2020). If nurses cannot recognize their patients' health literacy level, then the educational materials that nurses provide may not be as effective as they could be. Careful attention should be paid to each individual when providing educational

materials and having a variety of materials on hand at different health literacy levels would be beneficial.

## References

- Delavar, F., Pashaeypoor, S., & Negarandeh, R. (2020). The effects of self-management education tailored to health literacy on medication adherence and blood pressure control among elderly people with primary hypertension: A randomized controlled trial. *Patient Education and Counseling, 103*(2), 336–342. <https://doi.org/10.1016/j.pec.2019.08.028>
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