Patient Preference and Adherence

Dovepress

open access to scientific and medical research

Open Access Full Text Article

LETTER

The Mediating Effect of Self-Efficacy on the Relationship Between Medication Literacy and Medication Adherence Among Patients with Type 2 Diabetes [Letter]

Vishvan Naidu*, Akalya Ganeshamoorthy*, Caitlin Allwin*

Faculty of Life Sciences and Medicine, King's College London, London, UK

*These authors contributed equally to this work

Correspondence: Vishvan Naidu, Faculty of Life Sciences and Medicine, King's College London, London, UK, Tel +447306343834, Email Vishvan.naidu@kcl.ac.uk

Dear editor

We read with great interest the study conducted by Liu et al[1] titled "The Mediating Effect of Self-Efficacy on the Relationship Between Medication Literacy and Medication Adherence Among Patients with Type 2 Diabetes." The study's focus on self-efficacy as an important factor in ultimately increasing medication adherence levels is certainly intriguing, however we believe that confounding variables should be identified and addressed more strictly in order to strengthen the study's conclusions.

The health literacy of the study population, defined as the ability for patients to access, understand and process information with the aim of improving their own health, was a variable that was not explored in the study design. This could have been assessed using the Brief Health Literacy Screen (BHLS), the validity and reliability of which has been evidenced in multiple studies, including by Sand-Jecklin et al.[2] Health literacy has been shown to directly influence self-efficacy,[3] and hence would act as a strong confounding variable in the mediating role of self-efficacy. This therefore was a variable that should have been explored.

Additionally, the study does not specify which diabetic medications patients were taking. This variable acts as a confounding factor, for multiple reasons. Patients on injectable therapies, such as insulin and glucagon-like peptide-1 agonists, are more likely to exhibit lower adherence rates, as per a review conducted by Lee et al.[4] Furthermore, medications which can induce hypoglycaemia as a side effect, such as gliclazides, would likely have increased medical counselling in comparison to non-hypoglycaemic inducing medications, as a method of hypoglycaemia prevention and awareness. Patients on these medications therefore would have greater adherence resultant of the greater emphasis on the importance of medication adherence and blood glucose monitoring. Medication type therefore acts as a confounding variable in this study and hence should be studied in depth.

Self-efficacy scores were ultimately seen to be positively correlated with medication adherence scores ($p < 0.001$). The study however fails to explore practical implications for the results, such as recommendations to improve self-efficacy for patients. A potential method in increasing self-efficacy could include educating patients and assessing patient views about the condition, which has been seen to positively impact self-efficacy in glaucoma patients.[5]

In summary, while this study on the mediating effect of self-efficacy on the relationship between medication literacy and adherence offers valuable insights, there are multiple confounding factors which were not identified and hence not controlled. Addressing these factors would greatly fortify the conclusion of the study, and hence practical implications of the study's results could then be explored.

Received: 1 August 2023
Accepted: 1 August 2023
Published: 4 August 2023

Disclosure

The authors report no conflicts of interest in this communication.

References

1. Liu H, Yao Z, Shi S, Zheng F, Li X, Zhong Z. The mediating effect of self-efficacy on the relationship between medication literacy and medication adherence among patients with type 2 diabetes. *Patient Prefer Adherence*. 2023;17:1657–1670. doi:10.2147/PPA.S413385
2. Sand-Jecklin K, Coyle S. Efficiently assessing patient health literacy. *Clin Nurs Res*. 2013;23(6):581–600. doi:10.1177/1054773813488417
3. Bohanny W, Wu SFV, Liu CY, Yeh SH, Tsay SL, Wang TJ. Health literacy, self-efficacy, and self-care behaviors in patients with type 2 diabetes mellitus. *J Am Assoc Nurse Pract*. 2013;25(9):495–502. doi:10.1111/1745-7599.12017
4. Lee DSU, Lee H. Adherence and persistence rates of major antidiabetic medications: a review. *Diabetol Metab Syndr*. 2022;14:1. doi:10.1186/s13098-022-00785-1
5. Carpenter DM, Blalock SJ, Sayner R, et al. Communication predicts medication self-efficacy in glaucoma patients. *Optometry Vision Sci*. 2016;93(7):731–737. doi:10.1097/OPX.0000000000000856

https://doi.org/10.2147/PPA.S432752