Quantitative Literature Review

“Effect of a Nurse-Led Diabetes Self-Management Education Program on Glycosylated Hemoglobin Among Adults With Type 2 Diabetes”

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Literature Review:

Literature reviews are organized summations of available research and existing

knowledge on a given subject. It analyzes what the current understanding is, how accurate the evidence is, and reinforces efforts to continue to analyze the subject matter. It is particularly preoccupied with numerical data points and may involve multiple pieces of research in an aggregated fashion (Houser, 2023). In the nursing realm, this is often done to maintain up-to-date evidenced-based practice efforts and guide clinical measures to the best outcomes that our current understanding of a given disease process allows. This is particularly critical with novel or poorly understood diseases, or those with significant routine evolution in its continued understanding.

One such disease is diabetes. Type 2 diabetes, for example, continues to rank simultaneously as one of the most prevalent and most preventable major chronic health conditions on the globe. The nursing field is intrinsically linked with the chronic management of diabetes and plays a roll in prevention education, disease management, patient monitoring, and harm reduction related to this disease. Literature review is therefore significantly focused on these aspects and how nurses can, to the best of our knowledge at any given moment, address the impacts of Diabetes. Studies such as the meta-analysis performed by Azami et al. (2018) do just this and seek to refine what constitutes best-practice in nursing as it relates to Type 2 Diabetes by examining what works well and what does not.

Introduction:

In the meta-analysis ”Effect of a Nurse-Led Diabetes Self-Management Education Program on Glycosylated Hemoglobin Among Adults With Type 2 Diabetes” performed by Azami et al. (2018), the authors sought to examine how much of an impact nursing interventions

have on the effort to reduce HbA1c levels – which is data point that offers insight into a clients long-term management successes/failures to control their blood glucose levels. Data was collected from multiple clinical trials, and their study was to determine what, if any, the positive impacts on effect A1c management were made by having direct nursing management of client Type 2 Diabetes Mellitus (T2 DM).

Key Points:

The review performed was a meta-analysis of quantitative and randomized controlled trials (RCTs). Analysis was conducted on 24 different RCTs, each of which was focused on nurse-led T2DM management, from around the world over a 20-year period from the years 2000 to 2020. Participants were legal and consenting adults. Interventions were delivered by nurses. The metric for intervention success was derived from A1c levels taken before and after intervention. The results of which demonstrated that nursing-led intervention of T2DM contributed a decrease of nearly half a percentage point (0.44%), on average, to clients A1c levels. This was noted to be significant when set against a p-value of less than 0.05, suggesting that nurse-led intervention was in fact the contributing force, and the degree of impact they made was notable (Azami et al., 2018). This review therefore supports that nursing-led T2DM management is an effective approach for improving glycemic control for clients receiving treatment/guidance from them.

Assumption:

As such, the study reinforces that nurses who are adequately trained and supported are able to make a significant impact on modifying patient knowledge, behavior, and adherence to

T2DM in ways that have positive real-world and measurable outcomes. Assuming, of course, that these nurses are capable of independently tackling these aspects with the patient on their own. As well as assuming that nurses will have adequate access to the patient such that they can engage and educate/motivate them as needed to effectuate and sustain such changes (Azami et al., 2018).

Deficits/Conclusion:

The authors did an excellent job of pooling data from numerous sources to improve the credibility of their central claim(s). Their argument for nursing-led T2DM interventions represents a significant opportunity in healthcare to increase the use of nurses in chronic diabetes management, and the positive impacts on glycemic control in patients it offers. Further, these improvements represent potential financial cost offsets to healthcare organizations looking to improve independent T2DM efforts with downstream benefits to reducing recidivism of primary or emergent care visits related to T2DM mismanagement in those they serve. The analysis the authors conducted, however, was limited in scope, utilizing only about 142 adults, and only over a 24-week duration (Azami et al., 2018). Further, they lacked specificity in which interventions were most recommended/not recommended and further failed to stratify the patient populations targeted. That is to say they didn't discern whether outcomes were influenced by the context of a given client – be it their geographical location, cultural/ethnic background, or socioeconomic status. As such, further study into these disparities would be highly valuable and may even influence outcomes as to which interventions work best based on their contextual use.

References:

Azami, G., Soh, K. L., Sazlina, S. G., Salmiah, M. S., Aazami, S., Mozafari, M., & Taghinejad, H. (2018). Effect of a nurse-led diabetes self-management education program on glycosylated hemoglobin among adults with type 2 diabetes. *Journal of Diabetes Research, 2018,* 4930157. https://doi.org/10.1155/2018/4930157

Houser, J. (2023). *Nursing research: Reading, using, and creating evidence* (5th ed.). Jones & Bartlett Learning.