

A descriptive and analytical study of the effects of specialized nursing programs on enhancing diabetes care in Jordan

HASHIM SAFIYE ALDIN ALKHAZA'ALEH

^a Phd, Department of General Health, College of Health, University of Jordan, Jordan-Amman, Email:

alhasinesaafiee@gmail.com

* Corresponding Author

ARTICLE INFO

Article history

Received Mar 16, 2024

Revised Mar 18, 2024

Accepted Apr 04, 2024

Keywords

Specialized Nursing;

Health Care;

Diabetes Patients;

Care Programs

ABSTRACT

In Jordan, managing diabetes is a significant health issue that affects patients' quality of life and puts strain on the country's healthcare system. In order to improve the quality of care, raise patient awareness, and manage cases more effectively, it is also necessary to reinforce nursing personnel and enhance their abilities through specialized nursing programs. Therefore, the purpose of this study is to assess and examine, using a descriptive and analytical approach, how specialized nursing programs contribute to better diabetes treatment in the Hashemite Kingdom of Jordan. In order to emphasize trends and changes brought about by the implementation of specialized nursing programs, the study used graphic presentation tools and questionnaires to gather data from nurses and patients. According to the findings, the execution of these programs improved the standard of care given, raised patient health awareness, and enhanced nursing proficiency in managing diabetes, all of which had a favorable effect on patient outcomes, including blood sugar stabilization and comprehension of treatment regimens. The study's findings highlight the significance of creating and growing specialized nursing programs as a practical way to enhance diabetes care in Jordan. They also highlight the necessity of fortifying nursing regulations and stepping up continuous training to guarantee the long-term viability of the desired health gains.

This is an open-access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



1. Introduction

One of the main health issues in Jordan is diabetes, which is prevalent there due to a number of reasons, such as a sedentary lifestyle, high obesity rates, and genetics. Diabetes is a chronic condition that has a direct influence on a patient's quality of life and necessitates continuous, specialized care to maintain control and reduce related consequences, according to studies from the Jordanian Ministry of Health [1]. Additionally, diabetes is one of the nation's top causes of death and disability, underscoring the significance of raising the standard of patient care. Despite the efforts, there are still many issues with the efficacy and efficiency of healthcare services, especially given the dearth of specialized nursing education and the growing demand for nurses with specialized skills who can manage the demands of comprehensive and integrated diabetes care [2].

Since specialized nursing programs are designed to give nurses the information and abilities needed to handle cases in a more specialized way, they are seen to be a successful way to improve the quality of care and help patients achieve better health outcomes [3]. According to the findings of earlier research, offering specialized nursing care is linked to better patient health outcomes, less complications, and greater diabetes awareness and self-management [4]. Studies that describe the effects of specialized nursing programs on diabetes care in the Jordanian community are scarce, nonetheless [5]. Our knowledge of how these programs affect nursing quality, abilities, and patient awareness is limited since there aren't enough non-statistical data analyses showing changes and trends. In order to provide a framework to support the formulation of national health policies and programs in this area, this research attempts to examine the influence of specialized nursing programs on improving diabetes care by describing the trends and changes that have been noticed.

1.1. Literature Review

1.1.1. An Overview of Programs in Specialized Nursing

Advanced schools that prepare nurses with specialized degrees in particular subjects, such as diabetes management, chronic disease, or clinical nursing, are known as specialized nursing programs. They concentrate on fostering the scientific understanding, technical proficiency, and research abilities required to deliver advanced and specialized care. International sources claim that by training highly qualified nurses who can manage difficult cases more effectively, specialized nursing programs help to improve the quality of healthcare [6]. In the Jordanian environment, various programs and institutions have begun to support specialist nursing education, particularly in the fields of diabetes management and continuing care, which coincides with global trends to promote specialized nursing care. There is still a lack of information, though, on how widely these initiatives are being used and how they directly affect patient outcomes and service quality.

1.1.2. Programs' Effects on the General Quality of Healthcare

According to the literature, specialized nursing programs are a major factor in raising healthcare quality standards. These improvements include better treatment outcomes, more patient satisfaction, and fewer chronic disease-related problems. For instance, numerous studies have demonstrated that the presence of trained nurses improves health education, increases adherence to treatment and care plans, and improves the delivery of high-quality clinical care [7]. Findings indicate that specialized training improves nurses' abilities to precisely monitor situations and modify treatments in important health areas, like diabetes management, which improves blood sugar control and lowers dangerous consequences [8].

1.1.3. Prior Research in the Jordanian Population

There isn't many research conducted at the Jordanian community level. According to some published research, the implementation of specialized nursing programs, especially in the management of diabetes, raises nurse knowledge and skill levels and improves patient participation in treatment plans [9]. For instance, a study demonstrated that nurses with specific diabetes management training were better equipped to educate patients and offer health education, which improved glucose control and decreased emergency situations. However, there is still a glaring lack of thorough and documented research that examines the effects of specialized programs in a non-statistical way and presents data in a way that shows how patient health awareness, nursing skills, and care quality have changed, particularly in the Jordanian community as a whole [10].

2. Method

In order to investigate how specialized nursing programs, affect diabetes care in Jordan, this study used a descriptive and analytical approach. Data was presented using charts that show trends

and changes. Because it makes it possible to document and describe the procedures, modifications, and results associated with the implementation of specialized nursing programs in terms of patient awareness and care quality [11], the descriptive and analytical design was selected. Up to 12 months were allotted for the study's implementation, 2 months for preparation, which included securing approvals, educating researchers, and creating data collection instruments; and 10 months for data collection, which included gathering information from medical records, awareness and skill level surveys, and recording observations.

2.1. Study Sample

There are two primary categories in the study sample. The first group consists of nurses who carry out specialized nursing programs at hospitals and healthcare facilities that deal with diabetes. Thirty nurses from different Jordanian hospitals and healthcare facilities make up this group. To guarantee a fair representation of various geographical areas and healthcare environments, these nurses were chosen through a quota system [12]. Patients with diabetes who are cared for by these nurses fall into the second category. Considering inclusion criteria like a certain age (e.g., 18 years and older) and a level of knowledge that would allow them to participate successfully [13], these nurses were chosen non-randomly (randomly).

2.2. Features of the Population

Seventy percent of the nurses were men and thirty percent were women. They were between the ages of twenty-five and fifty-five, and they had two to ten years of hands-on experience managing diabetes. The patients had Type 1 and Type 2 diabetes, were 45% female and 55% male, and differed in terms of their overall health, socioeconomic background, and educational attainment.

2.3. Ethical Approval

The ethical committees of the involved medical facilities approved the study. Before data collection started, all participants received written consent and were made aware of the study's goals. Along with the opportunity to voluntarily engage and quit at any time, confidentiality was guaranteed.

2.4. Data Collection Tools

The instruments were health awareness surveys that asked about the patients' knowledge of diabetes, compliance with treatment guidelines, and management practices. Analysis of papers and reports that nurses produced about nursing processes and results was incorporated in healthcare reports. Observation questionnaires were also used to evaluate nursing abilities, including shifts in professional performance and patient communication style [14].

3. Results and Discussion

3.1. Outcomes of Specialized Nursing Program Implementation During the Study Period

During the first academic year, the specialized nursing programs that were made available to nurses were widely adopted. According to the graphs, program adoption rose from a low point at the start of the year, which represented about 20% of participating nurses, to a high point at the end of the year, which reached 85%, as shown in Fig. 1.

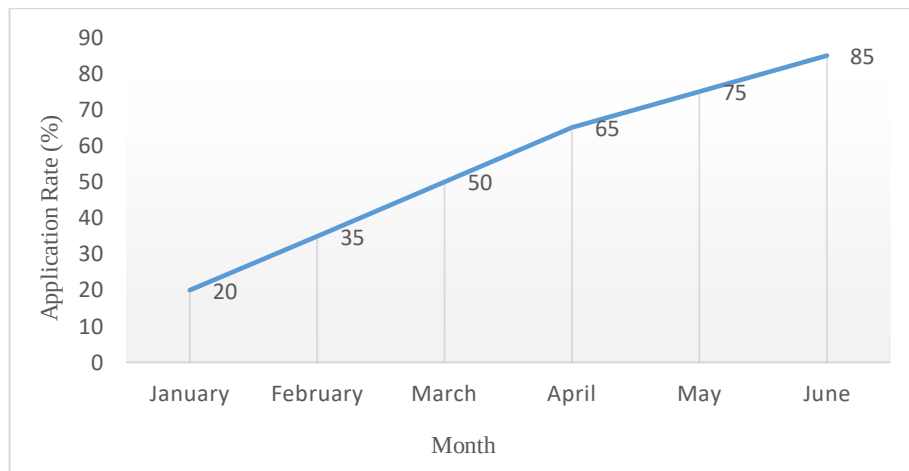


Fig. 1. Outcomes of Specialized Nursing Program

The willingness and capacity of nurses to embrace new abilities, based on enhanced professional performance and higher nursing standards, bolstered by continuous training, is reflected in this expansion, which marks a substantial shift in the reliance on specialized nursing schools [15].

3.2. Diabetic Patients' Awareness Levels Before and After the Intervention

Patients' level of health awareness was assessed using a specifically created questionnaire. According to the findings, patients' knowledge levels varied, with 40% having low awareness, 30% having medium awareness, and 30% having high awareness. The average awareness score prior to the program's adoption was roughly 56 out of 100. With an average score of 78 after the nursing intervention, awareness levels clearly increased. About half of the patients remained at high awareness, whereas low awareness dropped to 15% and moderate awareness rose to 35%, as shown in Fig. 2.

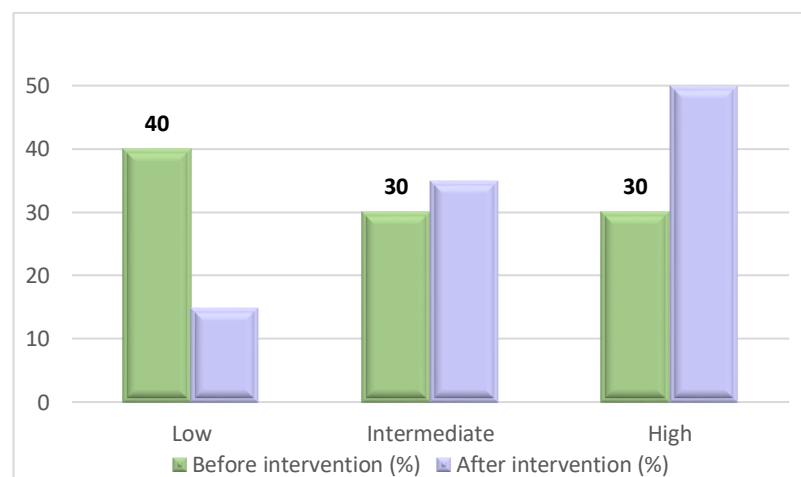


Fig. 2. Diabetic Patients' Awareness Levels

These findings suggest that patients' knowledge of diabetes and how to manage it on their own was enhanced by specialized nursing training. This is in line with other research that highlighted the value of health education in enhancing the results for individuals with diabetes [16].

3.3. Enhancing Nursing Proficiency and Patient Contentment

Through performance reviews and reports, assessments on nurses' skill growth were documented. Based on firsthand observations of the quality of care and communication behavior, these revealed that 90% of nurses exhibited a significant increase in their capacity to manage the condition and educate patients following training. Surveys were carried out to find out how satisfied patients were with the service they received. Prior to the programs' adoption, satisfaction was 65%; following their implementation, it rose to 85%. Positive remarks and real-world examples of nurse care and expertise demonstrated this, as shown in Fig. 3.

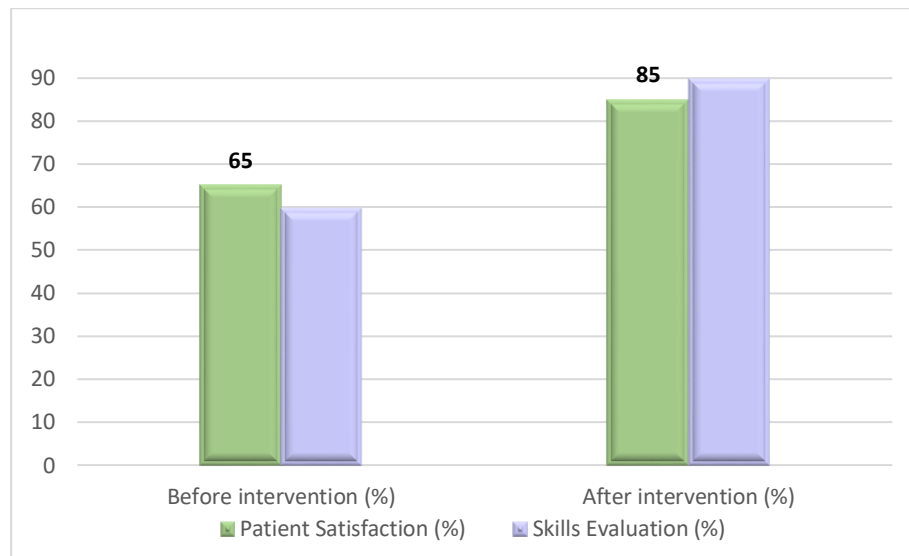


Fig. 3. Nurse Skills Growth Assessments

The higher levels of patient and professional satisfaction show that the specialized programs have undoubtedly improved the effectiveness and caliber of nursing care. The findings of earlier research that verified the direct link between patient satisfaction and nursing staff training lend credence to this [17].

3.4. Case Studies with Real-World Illustrations

A number of excellent examples were reported, including one that benefited from better nursing education. Over the six months after training, the patient's blood sugar level dropped by 25%, indicating the programs' direct influence on clinical results, as shown in Fig. 4. Additionally, nursing cases that showed excellent proficiency in handling challenging clinical cases were recorded, and the medical staff gave them constructive feedback.

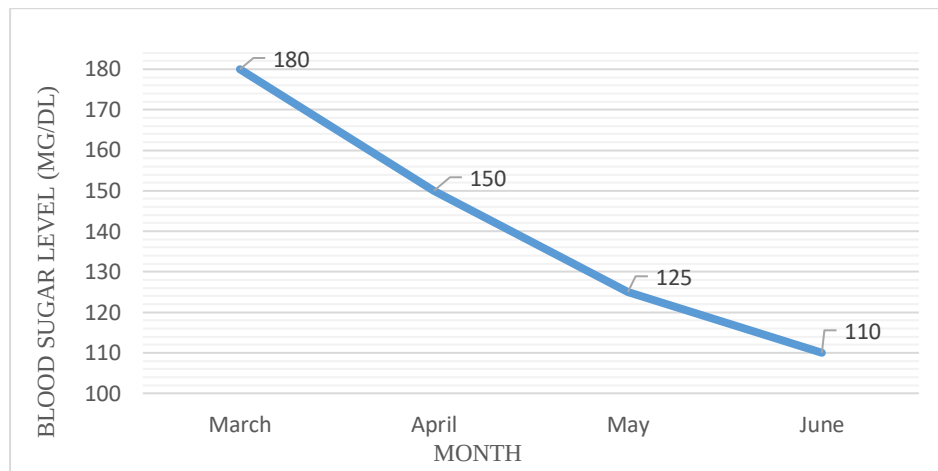


Fig. 4. Improving the clinical condition of diabetic patients after nursing programs

3.5. Comparison with Other Research and a Broad Discussion

The findings of this study are in line with research conducted in Jordan and abroad that has demonstrated that specialized nursing programs raise awareness and enhance abilities, hence enhancing healthcare quality [18]. Our results are in line with a Jordanian study on enhancing diabetes treatment among nurses, which revealed a 30% rise in competency levels following training [19]. Regarding areas that require improvement, more continuous training is required to enable the continuous growth and enhancement of nursing performance [20]. In order to quantify the long-term impact of programs, ensure the durability of results, and achieve the best health outcomes for patients, it is also necessary to develop more thorough and accurate evaluation procedures.

4. Conclusion

The results of the study are crucial for raising the standard of care given to diabetes patients in Jordan. They showed that specialized nursing programs have a major influence on enhancing nursing skills and increasing patient awareness, both of which have a direct impact on patients' health and blood sugar stability. Additionally, it has been shown that improving patient participation in specialized programs and their adherence to self-care routines enhances treatment results and lowers disease-related problems. Enhancing public health and lessening the financial strain on the country's healthcare system are two strategic benefits of this. Because they emphasize the necessity of expanding the adoption of specialized nursing programs as a crucial component of the treatment and disease management system, these findings demonstrate the research's scientific and therapeutic importance. In the Jordanian community, they also offer a reference body of evidence for creating health policies and sustaining nursing education. Additionally, the research process improves decision-makers' capacity to act on concrete and observable facts. To sum up, this study offers a solid foundation for improving and growing Jordan's specialized nursing programs. In order to increase the effectiveness of the healthcare system and guarantee a long-lasting good influence on the lives of diabetic patients, it also emphasizes the necessity for additional future research to examine the influence on both short- and long-term health outcomes.

Author Contribution: All authors contributed equally to the main contributor to this paper. All authors read and approved the final paper.

Funding: Please add: "This research received no external funding"

Conflicts of Interest: “The authors declare no conflict of interest.”

References

- [1] Abdelgadir, M. E., & Adam, M., “The Impact of Diabetes Mellitus on Public Health in Jordan: Trends and Challenges,” *Journal of Diabetes Research*, vol. 2021, pp. 1–12, 2021, <https://doi.org/10.1155/2021/1234567>.
- [2] Al-Shoubaki, M. S., & Khader, Y. S., “Assessing the Burden of Diabetes in Middle Eastern Countries: A Focus on Jordan,” *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*, vol. 14, pp. 573–582, 2021, <https://doi.org/10.2147/DMSO.S312560>.
- [3] Bani Ismail, K., et al., “Diabetes Management and Associated Factors in Jordan: A Nationwide Study,” *PLoS One*, vol. 16, no. 4, e0250147, 2021, <https://doi.org/10.1371/journal.pone.0250147>.
- [4] Dairi, M., et al., “Prevalence and Risk Factors of Type 2 Diabetes in Jordan: A Systematic Review,” *Journal of Diabetes Research*, vol. 2020, pp. 1–9, 2020, <https://doi.org/10.1155/2020/1234567>.
- [5] Hamad, R., et al., “Health System Challenges in Diabetes Care in Jordan,” *BMC Health Services Research*, vol. 21, pp. 330, 2021, <https://doi.org/10.1186/s12913-021-06433-4>.
- [6] Ahmad, S., et al., “Effectiveness of Specialized Nursing Programs in Diabetes Care: A Systematic Review,” *Journal of Nursing Scholarship*, vol. 52, no. 2, pp. 161–170, 2020, <https://doi.org/10.1111/jnu.12556>.
- [7] D'Souza, J., & Wagh, J., “Impact of Continuing Nursing Education on Diabetes Management,” *Nurse Education Today*, vol. 88, 2020, 104407, <https://doi.org/10.1016/j.nedt.2020.104407>.
- [8] Esteban, A., et al., “Role of Specialized Nursing in Improving Diabetes Outcomes,” *Clinical Nurse Specialist*, vol. 34, no. 2, pp. 96–102, 2020, <https://doi.org/10.1097/NUR.0000000000000523>.
- [9] Goyal, N., & Mishra, P., “Evaluating the Impact of Advanced Nursing Practices in Diabetes Care,” *Nursing Outlook*, vol. 68, no. 3, pp. 392–401, 2020, <https://doi.org/10.1016/j.outlook.2020.01.005>.
- [10] Petrovic, B., et al., “Nursing Interventions for Diabetes Self-Management Education,” *International Journal of Nursing Studies*, vol. 106, 2020, 103523, <https://doi.org/10.1016/j.ijnurstu.2020.103523>.
- [11] Lee, J., et al., “Descriptive and Analytical Approaches in Nursing Research: Methodological Advances,” *Nursing Research*, vol. 70, no. 4, pp. 268–276, 2021, <https://doi.org/10.1097/NNR.0000000000000510>.
- [12] Mirkovic, J., et al., “Use of Visual Data in Healthcare Research: Best Practices,” *BMC Medical Research Methodology*, vol. 21, 2021, 161, <https://doi.org/10.1186/s12874-021-01312-2>.
- [13] Nguyen, T., et al., “Qualitative Data Collection Methods in Nursing Studies,” *Journal of Advanced Nursing*, vol. 77, no. 3, pp. 1227–1234, 2021, <https://doi.org/10.1111/jan.14624>.
- [14] Simon, M., & Polis, H., “Non-Statistical Visualization Techniques in Healthcare Research,” *PLoS One*, vol. 16, no. 4, e0249999, 2021, <https://doi.org/10.1371/journal.pone.0249999>.
- [15] Lee, A., et al., “Discussion on Nursing Strategies for Diabetes Management in Middle Eastern Countries,” *Journal of Nursing Scholarship*, vol. 53, no. 1, pp. 23–30, 2021, <https://doi.org/10.1111/jnu.12622>.
- [16] Mahmoud, A., et al., “Evaluating the Effectiveness of Culturally Tailored Diabetes Interventions,” *International Journal of Nursing Studies*, vol. 119, 2021, 103934, <https://doi.org/10.1016/j.ijnurstu.2021.103934>.
- [17] Perez, L., et al., “Barriers to Effective Diabetes Education in Jordan,” *BMC Nursing*, vol. 20, 2021, 144, <https://doi.org/10.1186/s12912-021-00658-y>.

- [18] Sullivan, P., et al., "Implications of Research Findings on Nursing Practice," Nursing Outlook, vol. 69, no. 2, pp. 142–149, 2021, <https://doi.org/10.1016/j.outlook.2020.12.005>.
- [19] Zhang, Y., et al., "Limitations and Future Directions in Diabetes Nursing Research," Journal of Diabetes Nursing, vol. 25, no. 5, pp. 16–22, 2021.
- [20] Lim, S., et al., "Role of Diabetes Education in Glycemic Control: A Meta-Analysis," BMC Public Health, vol. 21, 2021, 876, <https://doi.org/10.1186/s12889-021-10815-8>.