

DOI: 10.5281/zenodo.19439838

A QUANTITATIVE STUDY ON INTERVENTIONS BASED ON NURSES INTRUSIONS THAT CAN AFFECT PATIENT RESULTS

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Received: 01/08/2025

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Accepted: 26/10/2025

ABSTRACT

In the context of basic health care in China, nurse-led interventions improve patients' ability to take care of themselves and their overall quality of life. This is useful for keeping individuals well and preventing them from becoming sick in a basic health care environment. Nonetheless, just a few studies completed in China have concentrated on the manpower shortage, diverse training approaches, and the support provided by the relevant authorities. The major purpose of this research is to evaluate the efficacy of nurse-led interventions in improving patient outcomes. The present study used a quantitative, cross-sectional research methodology to investigate the relationships between nurse-led interventions and the enhancement of patient outcomes across several regions of China. The most important quantitative data came from a survey that used a questionnaire. The researcher did a statistical analysis to make it easier to evaluate the quantitative data we had gathered. The researchers used purposive sampling to choose 778 nurses from hospitals in China identified as being of standard size. The research produced substantial data demonstrating that nurse-led interventions positively influenced patient outcomes. The study findings underscored the significance of nursing interventions on patient outcomes in Beijing, China. These efforts included checking nurses' qualifications, making sure nurses and patients could talk to each other, making sure nurses worked well with other professionals, and following ethical standards. In conclusion, it is possible to demonstrate that proficiency in effective strategies for nurse-led interventions is crucial for the health of patients in Beijing Province. Also, improved training for nurses, better communication between nurses and patients, and more chances for nurses and patients to work together will all assist Beijing, China, attain better patient outcomes.

KEYWORDS: Patients' Ability, Ethical Norms, Patient Outcomes, Health Care Environment, Nurse Interventions.

1. INTRODUCTION

The notion of nurse-led interventions began to gain traction as an effective method for enhancing patient outcomes across various healthcare environments. In healthcare, nurse-led interventions are systematic procedures where professional nurses oversee planning, providing, and supervising patient care. The treatments were based on nurses' clinical knowledge, professional skills, and competence to make judgements. Therapy was simpler to go to and treatment was more constant since these sorts of therapies were used in many different healthcare locations, such as hospitals, primary care clinics, community health centres, and home-based care settings (Zhang et al., 2024).

Self-management programs offered by nurses have grown increasingly important to the healthcare systems that exist today. People are now more conscious of their health, more in charge of their treatment, and more active in their own care because of these programs. This made them more inclined to follow their treatment regimens and helped them feel better in general. Studies have shown that the quality of care provided by nurse-led treatments often aligns with that delivered by doctors in some settings. In the past, the success of treatments delivered by nurses depended on a number of attributes that were regarded to be particularly essential. Getting nurses certified has been a big element of making sure that patients receive good treatment. This was because nurses who had the right training and experience were better prepared to deal with difficult clinical circumstances (Chen et al., 2025).

Everyone knows that good communication between nurses and patients is a key determinant in how satisfied, trusting, and involved patients are in their care. When the patients spoke to one other, they were better able to comprehend their health concerns and treatment plans. Also, working together with diverse kinds of healthcare experts made it easier to coordinate care, which led to improved clinical outcomes and fewer mistakes during treatment. It was also extremely vital to stress that ethical norms were still very crucial in nursing. These values helped nurses protect their

patients' privacy, keep their dignity, and keep their professional integrity (Qiu, 2024).

A variety of features were used to see how well the patients performed, who were the dependent variable in this study. Several factors were considered, such as patient satisfaction, adherence to therapy, recovery rates, and overall quality of life. Prior studies have shown that nurse-led interventions correlate with improved symptom management, a reduction in the rate of hospital readmissions, and an increase in patient engagement. Despite the increasing volume of research, there is a deficiency of comprehensive empirical data investigating the collective influence of critical components of nurse-led interventions, such as nursing credentials, communication, collaboration, and ethical standards, on patient outcomes (Li et al., 2025).

2. BACKGROUND OF THE STUDY

Over the years, the healthcare industry has evolved a lot since there is now a greater focus on patient-centred care, improving quality, and providing services quickly. Even though things are continually changing, nurse-led interventions have been shown to be a key aspect of improving healthcare. Since they are the ones that care for patients the most, nurses are a significant element in making sure that healthcare services are always available, organised, and comprehensive. As a result of their enlarged responsibilities in planning, implementing, and evaluating treatment, they had become major contributors to better patient outcomes in a variety of clinical and community settings (Shi & Zhu, 2025).

It was vital to come up with new and long-lasting care models to fulfil the growing demand for healthcare services generated by more chronic illnesses and an older population. This was a crucial step that had to be made since the demand for healthcare services is expanding. Nurse-led interventions have been largely regarded as an effective approach of resolving shortcomings in healthcare delivery in response to the problems emerging from these restrictions. These treatments, which mostly taught patients how to take care of

their own health, found issues early, and kept an eye on them, made it simpler for patients to take responsibility of their own health problems. Nurse-led projects are becoming more common in hospitals and community health care settings, particularly in countries like China and others like it (Feng et al., 2025). Several prior studies have shown that nurse-led interventions favourably impact patient outcomes. Some of these results include persisting with therapy, dealing with symptoms, recovery rates, and overall quality of life. Patients were more involved and happier with their treatment because the nurses were actively involved in teaching them, giving follow-up care, and helping them change their behaviour. The efficacy of these therapies was not only dependent on the used approach; rather, it was shaped by additional intrinsic factors. It was important to look at a variety of various things to see how well nurse-led treatments worked (Li et al., 2025).

In the same way, good communication between nurses and patients is important for getting patients to stick to their treatment plans, finding out what they need, and building trust between the two sides. Interprofessional cooperation has improved care coordination even further by making sure that all healthcare providers work together to address all of a patient's needs. Also, preserving ethical standards has made sure that patients' rights, dignity, and privacy were all respected (Zhang & Cao, 2024).

3. PURPOSE OF THE RESEARCH

The primary aim of the present study was to assess the influence of nurse-patient communication on patient care outcomes. This was considered in relation to the interventions performed by nurses. Communication between nurses and patients was considered a fundamental aspect of nursing practice because to its capacity to facilitate information exchange, foster trust, and enhance patient engagement in the care process. The objective of the study was to determine the extent to which communication strategies influence significant outcome features and to assess the significance of this impact. The study also aimed to examine the significance of communication

between nurses and patients as a crucial element within the broader context of nurse-led interventions. There has been a limited amount of empirical investigation that particularly focused on the role that communication plays in impacting patient outcomes. Because of this, the study aimed to provide quantitative evidence on the relationship between nurse-patient communication and patient outcomes. The research also looked at several other things that were important to nurse-led therapy. As part of these concerns, nurses had to have the right certifications, work with other professionals, and follow ethical norms. After looking at all of these factors, it was clear that they affected the overall quality of care that had been given, thus they had to be taken into account. A quantitative research methodology was used throughout the study to achieve the stated objectives of the inquiry. Utilising this technique enabled the execution of statistical analysis with the methodical collection of data. To choose people who possessed the right skills for nurse-led care practices, the selection method utilised was called deliberate sampling. Standardised questionnaires were used to collect data so that researchers could see how well communication worked and how it affected patient outcomes.

4. LITERATURE REVIEW

A growing body of studies has shown that nurse-led interventions may make a big difference in how well patients do in many different hospital settings. Previous studies show that nurse-led interventions lead to better clinical outcomes, higher patient satisfaction, and overall better healthcare quality, particularly when it comes to managing chronic illnesses and preventing illness. Numerous studies have shown the effectiveness of nurse-led initiatives designed to improve patient self-management and promote patient empowerment. Research on the management of individuals with heart disease and other chronic diseases shown that nurse-led educational initiatives and follow-up tactics significantly enhanced patients' comprehension of their ailments and their capacity to adhere to treatment regimens and implement lifestyle modifications. Patients who received these

specific therapies showed more involvement and an improved capacity to make educated health decisions based on trustworthy information (Wu et al., 2025). A lot of research has been done on why nurses need to be qualified to lead interventions. This is because acquiring a nursing license is a significant element of determining out how effectively these therapies perform. (Yang et al., 2025).

In healthcare, the quality of communication between patients and nurses was another significant thing that influenced the patients' health. Researchers concluded that one of the most critical components of patient-centred care is communication that is clear and rapid. Because of this communication, nurses can earn patients' confidence, show that they care about their requirements, and provide them the proper information. Studies demonstrate that clear and caring communication may make patients happier, help them stick to their treatment programs, and make it simpler for patients and healthcare practitioners to make decisions together. Patients who got along well with their nurses were more likely to feel safe and supported while they tried to deal with their health issues (Han et al., 2025).

A lot of study has also been done on how well professionals from different professions can work together, and the results of this research have been published in academic journals that are relevant. When nurses undertake interventions, they usually collaborate with other medical professionals, including physicians and therapists, to make sure that the patient gets all the treatment they need. Studies show that when healthcare professionals work well together, it makes treatment more consistent, cuts down on needless procedures, and lowers the chance of making clinical errors. Nurses have used therapies that have been shown too effective for persons with severe, long-term illnesses (Wu et al., 2025).

It was also thought that defining ethical standards was a crucial aspect of nursing practice that had an impact on how well patients performed. It was extremely vital to obey the principles of ethics while protecting the patients' right to privacy, respecting their independence, and making sure

that the treatment they received was fair and just. The research indicated that when nurses and patients followed ethical principles, it was simpler for them to communicate to their other.

Earlier research have used a variety of indicators to evaluate patient outcomes, including patient satisfaction, quality of life, symptom management, hospital readmission rates, and medication adherence. The patients' results were the dependent variable, and the impacts that these patients had were taken into account at every step of the way. One example is a program run by nurses that helps individuals be ready to leave the hospital and get follow-up care. This program has been connected to fewer patients having to go back to the hospital and a speedier recovery. This makes it look like the program is excellent for both the patient and the facility where they are obtaining treatment. Community-based nurse-led programs not only helped individuals develop healthy behaviours, but they also made it simpler for them to get medical treatment (Lin & Liu, 2025).

5. RESEARCH QUESTIONS

- What is the influence of nurse-patient communication on patient outcomes?

6. RESEARCH METHODOLOGY

6.1 Research Design

The researcher used Version 25 of SPSS for data analysis. The researcher used the odds ratio and 95% confidence interval to ascertain the strength and direction of the statistical link. The researchers set a statistically significant criterion at $p < 0.05$. A descriptive analysis was performed to ascertain the principal characteristics of the data. People usually use quantitative methods to look at data from surveys, polls, and questionnaires, as well as data that has been changed by computer programs have adjusted for statistical analysis.

6.2 Sampling

Participants in the research completed questionnaires to furnish data for the study. The researcher used the Rao-soft program to find a study population of 657 people, which led to the

sending out of 896 questionnaires. Out of these, 823 were returned, with 45 classified as incomplete and therefore destroyed. The ultimate number of sample is 778.

6.3 Data and Measurement

The research used a questionnaire survey as the primary data collection technique. The poll included two parts: (A) basic information about the participant and (B) a 5-point Likert scale for how they felt about the characteristics of both online and physical channels. The researcher collected secondary data from many sources, mostly from online websites.

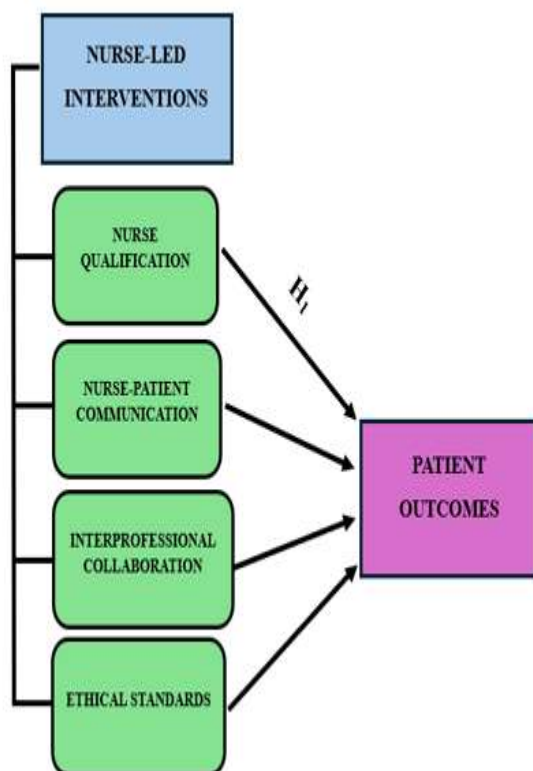
6.4 Statistical Software

The researcher utilised SPSS 25 and Microsoft Excel to do a statistical analysis of the study's data..

6.5 Statistical Tools

The researcher used descriptive analysis to understand the fundamental attributes of the collected data. Analysis of variance (ANOVA) and factor analysis (FA) were also performed to check for validity.

7. CONCEPTUAL FRAMEWORK



8. RESULT

Factor Analysis

The goal of FA is to find hidden factors in data that can be seen. When there aren't any strong

visual clues or diagnostic criteria, tests usually use regression coefficients. The basic purpose of modelling is to uncover flaws, rule breaches, and linkages. The Kaiser-Meyer-Olkin (KMO) Test is used to look at a bunch of datasets from studies that utilise regression. In summary, the results suggest that the theoretical model and the parameters used to generate predictions are valid. The data may show symptoms of being copied. Also, having things smaller makes it simpler to grasp the information. KMO gives a value that is between 0 and 1. The KMO value says that a good sample size is between 0.8 and 1.

Kaiser thinks these are the right limits: The following are the requirements that Kaiser has set for approval:

A score of 0.050 to 0.059, which is very low and below average. Most of the time, the grades in the middle are between 0.70 and 0.79.

It obtained a score of 0.80 to 0.89 on the quality point scale. They are quite good between 0.90 and 1.00.

Table 1: The KMO test and Bartlett's Sampling Adequacy provide a score of 0.920.

Here are the findings of Bartlett's test for Sphericity: The calculated chi-square is 3252.968, with 190 degrees of freedom and a significance level of 0.000.

Table 1: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.920
Bartlett's Test of Sphericity	Approx. Chi-Square	3252.968
	df	190
	Sig.	.000

Bartlett's Test of Sphericity also highlighted how crucial correlation matrices were in general. According to the KMO test, the sample adequacy result is 0.920. The researchers used Bartlett's test, yielding a p-value is 0.00. The correlation matrix cannot be considered a standard correlation matrix due to the notable outcome from Bartlett's Sphericity test.

❖ □DEPENDENT VARIABLE

Patient outcomes

Patient outcomes were the measured effects of medical and nursing care on a patient's health, well-being, and general quality of life. The outcomes were evaluated in relation to the patient's original health condition at the start of the experiment. Measurements were taken to find out these findings, which were dubbed the outcomes of patients. Healthcare systems used these outcomes all the time as vital signs of how well, how quickly, and how well they were providing care. The therapies that are part of offering medical care reflected their final consequences in their look, which was a mirror of themselves. In nurse-led treatments, it was believed that the most crucial aspect to evaluate about the impact of nursing practices on patient recovery, happiness, and long-term health enhancements was the patient's outcome (Guo & Xiao, 2024).

The spectrum of patient outcomes included several dimensions, including clinical, functional, psychological, and experiential elements of patient

care. Changes in a patient's physical health that may be quantified are called clinical outcomes. These benefits mean fewer symptoms, improved vital signs, better disease management, and fewer deaths or illnesses. After obtaining medical treatment, the most important thing was how well a person could take care of themselves and complete their everyday activities. While thinking about the psychological effects, a number of things were taken into account. These criteria included the patient's mental health, emotional well-being, and stress levels. The goal of the project was to assist the patient get well, and all of these items were needed for that to happen (Chen et al., 2024).

Also, the outcomes for patients were typically judged by how well they followed their therapy, how often they had to go back to the hospital, how long they were there, and how engaged they were in seeking medical care. These symptoms were used to find out how the patient's health was becoming worse. Patients were able to follow the medical advice and treatment plans they were provided, which led to improved health outcomes in the end. Along with fewer patients having to go back to the hospital, the total length of time that patients spent in the hospital also went down. It was thought that patient involvement, which includes being involved in decision-making and taking care of oneself, was an important aspect of getting great results (Callum et al., 2024).

Research indicates that many variables substantially affect the results of patient care in nurse-led interventions. This section covers topics like the quality of nursing care, how effectively healthcare professionals can interact with each other, their level of professional competence, their ethical standards, and how well they work together. Nurses had to watch after their patients, train them, and make sure they got the care they needed. All of these things were significant elements of their professions, and they all helped make things better. Because of this, patient outcomes became a whole metric that was used to assess not just how well clinical treatments performed, but also how well the overall healthcare delivery system operated (Wang et al., 2024).

❖ □INDEPENDENT VARIABLE

Nurse-led interventions

Nurse-led interventions were defined as organised healthcare activities in which nurse's assumed substantial responsibility for the design, execution, coordination, and assessment of patient care. This was selected when it was shown that nurse-led therapy incorporated these things. The basis for these treatments was the knowledge, clinical experience, and ability to make decisions that nurses have. Nurse-led interventions enabled nurses to assume leadership roles in overseeing patient care protocols, especially in the management of chronic diseases, health promotion, and sickness prevention. This category comprises hospitals, primary care clinics, community health centres, and facilities that cared for patients at home. These treatments usually comprised a lot of various things, such counselling, checking on patients' health, keeping an eye on clinical difficulties, educating patients, and offering them follow-up care after the treatment was complete. One of the most important features of nurse-led interventions was that they gave patients the skills they needed to take an active role in their own medical treatment. Because of the training and help they had from nurses, patients were able to learn how to take care of themselves, follow their treatment plans, and make sensible choices about their health (Guo et al., 2025).

Also, nurse-led treatments were strongly tied to the philosophy of patient-centred care, which stressed how crucial it is to fulfil each patient's individual needs, desires, and values. During their shift, it was the nurses' obligation to make sure that each patient got the care they needed based on their requirements and condition. Nurses also have to be able to talk to people and build therapeutic connections. Patients reported more satisfaction with their healthcare experiences due to this individualised approach, which also enhanced the overall quality of those interactions (Bulto et al., 2024).

There are a few essential elements that determine how effectively nurse-led treatments operate, and these things are crucial because of the consequences they have. In this situation, the nurse's

qualifications, capacity to communicate, ability to collaborate with other professionals, and dedication to upholding ethical standards are all elements that are taken into consideration. Nurses who had good training and were credentialed were better at giving care based on evidence and dealing with tough clinical circumstances. The patient received treatment that was both comprehensive and well-structured, facilitated by collaboration between the patient and the medical personnel (Qu et al., 2025).

❖ □FACTOR

Nurse qualification

The communication between nurses and patients was characterised as the intentional exchange of information, feelings, and meanings in order to improve understanding, trust, and the delivery of the right medical care. Both spoken and unspoken interactions were taken into account when looking at how nurses and patients communicated with each other. Verbal communication included talking, explaining things, asking questions, and paying attention to what the other person was saying (Zhang & Cao, 2024).

There are several features that have been linked to good communication between nurses and patients. Nurses were supposed to provide patients information about their diagnosis, treatment options, and care procedures that was not only clear but also easy to understand. Using empathy and compassion, which were very important, met the emotional needs of patients, lowered their anxiety, and improved their mental health. The communication process was strengthened by showing respect for the patients' values, beliefs, and preferences. This resulted to therapy that was more focused on the patient and more able to adapt to changes in cultural norms (Wang et al., 2023).

As part of the process of getting patients more involved and making decisions together, the nurse and the patient had to talk to each other. Patients were deemed to be more proactively involved in their care when they were prompted to express their concerns and opinions on their treatment. Research has shown a correlation between active involvement and enhanced treatment adherence,

better self-management of health issues, and overall improvements in health-related outcomes. Effective communication also made it easier to find probable barriers to treatment, such as misunderstandings, phobias, or not having enough information. It was also found that talking to patients and nurses helped to improve the coordination of care and lower the chance of doctors making errors while giving patients treatment. In order to make sure that care plans were carried out in a way that was both appropriate and consistent, it was important to convey information clearly (Han et al., 2025).

Relationship between nurse qualification and patient outcomes

The connection between nurse-patient communication and patient outcomes in the clinic is one of the most important things that can be done to make sure that healthcare is administered efficiently. The communication that took place between nurses and patients, which included the exchange of information between the two parties in a way that was not only clear but also empathetic and timely, had a crucial role in defining the experiences that patients had and the consequences that they encountered in terms of their health. In the end, the nurses were able to accurately assess what the patients needed, identify what was wrong with them, and provide them care that was both suitable and tailored to each patient, which led to improved results for the patients. The nurses' ability to talk to each other clearly made all of this feasible, which helped them figure out what the patients really needed (Wang et al., 2024). One of the most important ways that better communication between nurses and patients improved patients' outcomes was by making them more knowledgeable about their condition and how to follow their treatment plan (Yang et al., 2025). Patients felt less worried and stressed after getting this emotional assistance. As a direct result of this, patients have said they are happier with their healthcare professionals and have had more entertaining encounters with them. Good communication helped cut down on medical errors and make the healthcare system safer for patients.

To make sure that symptoms, medical histories, and concerns were properly handled and documented, nurses and patients were required to talk to each other so they could share accurate information. This action has made it less likely that doctors would make wrong diagnoses, give patients medicines that aren't right, or make other kinds of clinical blunders. Also, having strong communication skills made it simpler for healthcare teams to work together, which made sure that treatment was given in a way that was both continuous and consistent (Zhang et al., 2024). Based on the above discussion, the researcher formulated the following hypothesis to investigate the correlation between nurse-patient communication and patient outcomes.

"H01: There is no significant relationship between nurse-patient communication and patient outcomes."

"H1: There is a significant relationship between nurse-patient communication and patient outcomes."

Table 2: H₁ ANOVA Test

Table 2: H₁ ANOVA Test

ANOVA					
Sum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	67785.480	319	6217.479	990.202	.000
Within Groups	927.190	458	6.279		
Total	68712.670	777			

The investigation yielded significant results. A p-value of less than 0.05 and an F-value of 990.202 show that the results are statistically significant. This meant that the null hypothesis was rejected and the alternative hypothesis, **"H1: There is a significant relationship between nurse-patient communication and patient outcomes,"** was accepted.

9. DISCUSSION

This research was conducted with the intention of determining the extent to which nurse-led interventions have an effect on the outcomes of patients, with a specific emphasis on the communication that occurs between nurses and patients within the context of healthcare in China. According to the data that was gathered, it was shown that nurse-led interventions had a substantial and favourable impact on the outcomes that patients attained on their own. To be more explicit, the statistical study that was conducted with the assistance of analysis of variance (ANOVA) indicated that there is a significant correlation between the communication that occurs between nurses and patients and the results that patients experience. When considering the high F-value (990.202) and the significance criterion of $p < 0.05$, it became obvious that this was really the case. As a result of this study, which proved that effective communication between nurses and patients had a significant influence on improving the outcomes for patients, the alternative hypothesis was determined to be acknowledged as a possible explanation for the findings that were discovered.

Patients were much better able to comprehend treatment plans and were more likely to adhere to the recommendations of medical professionals when they were provided with communication that was prompt, shown empathy, and was unambiguous. Patients were more inclined to follow to the suggestions of medical experts, as shown by the results of this research, which were consistent with the findings of other studies that demonstrated the same principle. These patients were more likely to take an active role in their own therapy, which resulted in enhanced self-management, significantly higher rates of recovery, and increased levels of satisfaction. It was shown that patients who had positive experiences with communication were more likely to take an active part in their own treatment. In addition, it has been shown that the communication that takes place between nurses and patients has a major contribution to the psychological well-being of patients.

Furthermore, despite the fact that communication was the major focus of the research, it underlined the significance of other topics such as the qualifications of nurses, the necessity of interprofessional cooperation, and the worth of ethical values. The success of the treatments that were administered by nurses resulted in a significant improvement as a consequence of the combination of these elements. Those nurses who had successfully finished their training were better able to convey complex medical information to patients, and the teamwork that occurred between various healthcare providers guaranteed that patients received treatment that was well coordinated. In addition, patients reported feeling more trusting and enjoying their experiences as a result of the activities that were conducted in an ethical manner.

The high KMO value (0.920), which provided evidence that the sample size was sufficient, led to a rise in the dependability of the results, which in turn led to an increase in the reliability of the findings. As a consequence of the findings of the research, it was determined that communication between nurses and patients was not only a contributing factor, but also an essential factor in the process of producing positive outcomes for patients. All things considered, this was the conclusion that was reached as a result of the results of the investigation. These results are significant because they shed light on the need for current healthcare systems to include communication skills as an essential component of nursing practice. This is the reason why these findings are relevant.

10. CONCLUSION

The study showed that nurse-led interventions were particularly important in improving healthcare delivery in China, especially when it came to meeting patients' needs in a manner that was both more personalised and more effective. This was one of the most crucial parts of the research. It was also observed that other things, such nursing qualifications, working together with other professionals, and ethical standards, were also big reasons why patient outcomes became

better. Even though it was proven that communication between nurses and patients was the most important part, there were a number of other factors that were also seen as important drivers.

A quantitative study design and purposive sampling were used to achieve the objective of investigating the relationships between the

variables. The results of this investigation showed that this method was both dependable and based on good evidence. It was suggested that healthcare facilities focus on improving nurses' communication skills.

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