

EFFECTS OF EDUCATIONAL INTERVENTION ON EMPATHY LEVEL AND CARING BEHAVIOUR AMONG NURSING INTERNS

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Abstract:

Empathy and caring behaviors are foundational to high-quality, patient-centered nursing care, yet nursing interns frequently experience empathy erosion during challenging clinical transitions without structured institutional support. This quasi-experimental study evaluated the efficacy of an 8-week structured educational intervention utilizing Hojat's Ten Approaches to Empathy Enhancement on the communication, therapeutic interaction, and reflective learning abilities of 94 nursing interns allocated into experimental and control groups across two major hospital settings in Lahore. While baseline assessments confirmed that no statistically significant differences existed between the cohorts ($p > 0.05$), post-intervention results revealed robust, highly significant improvements within the experimental group. Specifically, the experimental group's empathy scores escalated dramatically from 18.17 ± 7.50 to 55.29 ± 2.08 ($p < 0.001$), while their caring behavior scores rose from 48.40 ± 5.35 to 87.85 ± 5.26 ($p < 0.001$). Independent t-tests verified that the multi-modal curriculum, which seamlessly combined interactive lectures, self-directed booklet learning, and experiential simulations, exerted a powerful, statistically significant effect on both primary outcomes compared to the minimal, non-significant variations observed in the control group ($p < 0.001$). In conclusion, this structured training program is highly effective in systematically cultivating professional compassion among transitioning clinicians. These definitive empirical findings strongly advocate for the permanent integration of dedicated empathy frameworks into standard nursing curricula and hospital internship programs, offering a scalable method to strengthen therapeutic relationships, reinforce professional ethics, and ultimately elevate the clinical quality of patient care.

Introduction:

Human-to-human connection is the very principle that underlies the nursing profession. Empathy and Caring Behavior are the two constructs at the core of this practice (1). It is the "cognitive bridge" which enables the practitioner to offer care that is specific to the person rather than the diagnosis (2). When nurses practice empathy, they form meaningful and trusting relationships with patients, which helps them to find specific needs and provide appropriate and compassionate interventions (3). This kind of care interaction promotes individualized care and has been associated with better patient experiences and improved clinical outcomes (4). Empathy has been categorized into various perspectives by scholars, including emotional, cognitive, behavioral, moral, and clinical perspectives (2). In nursing practices, empathy plays an important role in enhancing patient satisfaction, improving diagnostic accuracy, decreasing emotional distress, and enhancing adherence to treatment plans (5). Nursing interns are transitional students who are in between learning and practice. They are given the chance to participate in a real clinical setting during the course of their internship and are required to apply the theoretical knowledge to the skills they learned (6). Several studies, however, have suggested that the level of empathy in nursing students and interns is on the decline during their clinical experiences because of stress, heavy workload, time constraints, emotional fatigue and complex patient situations (7). Moreover, the emphasis on task-oriented care and clinical efficiency might also make it difficult to establish emotional connections and offer empathetic care (8). Empathy is the ability to recognize the other person's realities, and to respond

in a way that demonstrates understanding. Empathy is a key skill for nurses to show when caring for patients and building therapeutic relationships (9). Empathetic nurses promote trust and provide emotional support to patients, helping them feel understood during times of discomfort, pain, or psychological distress (5). The cognitive element is about identifying another person's thoughts, feelings, and concerns correctly, while the emotional element is about connecting and sharing another person's concerns, experiences, feelings (10). Empathy and perspective taking are considered to be essential qualities of medical and health care practices (11). Empathy in clinical practice is mostly viewed as the cognitive aspect of understanding the inner world of the patient and appropriately expressing this understanding (12). Empathic communication practitioners also say they are more satisfied with their jobs and less burned out (13). Upon completing their final academic year, nursing students transition into an internship period that marks a significant shift from theoretical learning to direct clinical practice (14). During this duration, interns rotate through different health care settings such as emergency departments, psychiatric units, operating rooms, and primary health clinics, where they refine their clinical judgment and technical skills (15). However, the demanding nature of the internship includes long shifts and increased responsibilities, which can be overwhelming (16). Although empathy is an essential quality of nurse-patient interaction and clinical effectiveness, it is often taught indirectly through courses such as psychology, ethics, and fundamentals of nursing, rather than a complete and specialized programme in most nursing programmes (10). Caring behaviour is fundamental to showing humanistic values in nursing (17). Empathy and caring behaviour in the practice of nursing are of paramount importance. Empathy has been demonstrated to be related to increased patient satisfaction, treatment adherence, decreased anxiety and distress, and overall better health outcomes (18). An important part of this study is the assessment of caring behaviour and empathy of the nursing interns. This research is designed to fill this gap in nursing education on the development of affective competence by developing an educational programme and assessing its results.

Methodology: The purpose of this study is to assess the effectiveness of an educational intervention on the level of empathy and caring behaviour of nursing interns using a two-group quasi-experimental design pre test / post test approach. This study was carried out at Ittefaq Hospital Trust, Lahore, and Government Teaching Hospital Shahdara Lahore over a nine-month period. The number of 94 nursing interns were chosen by simple random sampling and equally divided into the experimental group (n = 47) and control group (n = 47). The educational intervention group received interactive lectures, self-directed learning, reflective discussions, role-play, simulation, and empathy-enhancement approaches by Hojat for eight weeks. In contrast, the control group received regular clinical training. Week Interventional Planner

Weekly Schedule

- **Week 1: Intro to Empathy** – Concepts, dimensions, and professional value. Activity: Read booklet; share personal definitions and good clinical examples.
- **Week 2: Foundations** – Emotional sensitivity, clinical advantages, and scoring factors. Activity: Booklet review; discuss active clinical scenarios.
- **Week 3: Hojat Approach 1** – Overview of the 10 approaches; focus on interpersonal skills. Activity: Assigned readings; analyze nurse-patient relationship reactions.
- **Week 4: Hojat Approaches 2 & 3** – Interaction recordings and positive role models. Activity: Booklet review; analyze simulated patient videos and exemplary pros.
- **Week 5: Hojat Approaches 4 & 5** – Role-playing and patient shadowing/navigation. Activity: Independent booklet study; map patient journeys and emotional stress points.
- **Week 6: Hojat Approaches 6 & 7** – Simulated hospitalization and building empathy through arts/literature. Activity: Read narratives; discuss patient vulnerability and illness stories.
- **Week 7: Hojat Approaches 8 & 9** – Clinical storytelling and theatrical performance. Activity: Content review; perform and discuss challenging clinical situations.
- **Week 8: Hojat Approach 10 & Wrap-up** – Introduction to the Balint Method and final integration. Activity: Final booklet review; present and analyze complex patient interactions.

Valid and reliable instruments were used to gather data, including a demographic questionnaire, Toronto Empathy Questionnaire (TEQ), and a Caring Dimensions Inventory (CDI-25). Changes in empathy and caring behaviours were measured using pre-test and post-test assessments. IBM SPSS Statistics Version 26.0 was used for data analysis using descriptive statistics and Kolmogorov-Smirnov test for normality, paired and independent t-test with p value <0.05 taken

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as statistically significant. Ethical approval was granted by the University of Lahore Ethical Review Committee, and informed consent, confidentiality, anonymity, voluntary participation, and the right to withdraw of the participants were ensured throughout the study.

Results:

Table 1: Demographic Characteristics of the Participants (N = 94)					
		Control (n=47)		Interventional (n=47)	
		N	%	N	%
Gender	Male	23	48.9	24	51.1
	Female	24	51.1	23	48.9
Residence	Urban	29	61.7	31	66.0
	Rural	18	38.3	16	34.0
Marital status	Single	42	89.4	47	100.0
	Married	5	10.6	0	0.0
Hospitals	Ittefaq Hospital Trust Hospital	23	48.9	24	51.1
	Govt Teaching Hospital Shahdara	24	51.1	23	48.9
Total		47	100.0	47	100.0

The study participants' demographic information is presented in Table 1. There were 94 participants, equally divided between control (50.0%) and interventional (50.0%). As far as the gender distribution is concerned, there was a balance of 50.0% male and 50.0% female. Most of the respondents were in urban areas (63.8%), with the rest coming from rural areas (36.2%). The majority of participants were unmarried (94.7%), with 5.3% being married. Ittefaq Hospital Trust and Govt Teaching Hospital, Shahdara, were both sources for participant recruitment, at 50.0% each.

Table 2: Descriptive Statistics of Age and GPA of Participants (N = 94)				
	N	Min	Max	Mean + SD
Age in years	94	20.00	29.00	24.56+2.85
Grade Point Average (GPA)	94	2.90	3.80	3.35+0.28
<i>Analyzed by mean and standard deviation</i>				

The descriptive statistics for age and GPA of the participants are shown in Table 2. The age of the subjects ranged from 20 to 29 years, with a mean age of 24.56 ± 2.85 years. The mean GPA was 3.35 ± 0.28, with a minimum GPA of 2.90 and a maximum GPA of 3.80.

Table No 3: Comparison of the empathy level and caring behavior of the control group and interventional group, both before and after the intervention				
Empathy Level				
Study Groups	Pre-Data	Post-Data		
	Mean ± SD	Mean ± SD	d	P-value
Control (n=47)	17.63+7.29	30.00+7.03	-12.362	0.032
Interventional (n=47)	18.17+7.50	55.29+2.08	-37.000	0.000
Caring Behavior				
Study Groups	Pre-Data	Post-Data		
	Mean ± SD	Mean ± SD	d	P-value
Control (n=47)	47.12+ 5.26	58.97+ 3.17	-11.851	0.038
Interventional (n=47)	48.40+ 5.35	87.85+5.26	-39.447	0.000
<i>Analyzed by Paired t- test with Mean Difference (d) and p less than 0.05</i>				

Table 3 presents the comparison of empathy levels and caring behaviors between the control and intervention groups before and after the intervention. Regarding empathy levels, the control group demonstrated a significant increase in mean empathy scores from 17.63 ± 7.29 at pre-test to 30.00 ± 7.03 at post-test, with a mean difference of -12.362 ($p = 0.032$). Similarly, the intervention group showed a substantial improvement, with mean empathy scores increasing from 18.17 ± 7.50 before the intervention to 55.29 ± 2.08 after the intervention, yielding a mean difference of -37.000 ($p < 0.001$). The magnitude of improvement was considerably greater in the intervention group compared to the control group. In terms of caring behavior, the control group exhibited a significant increase in mean scores from 47.12 ± 5.26 at baseline to 58.97 ± 3.17 after the intervention, with a mean difference of -11.851 ($p = 0.038$). The intervention group demonstrated a markedly greater improvement, with caring behavior scores increasing from 48.40 ± 5.35 to 87.85 ± 5.26 , resulting in a mean difference of -39.447 ($p < 0.001$).

Table No 4: The difference in empathy level and caring behavior between the control group and the interventional group.					
		Study Groups			
		Control (n=47)	Interventional (n=47)		
Dependent Variable		Mean $\pm$ SD	Mean $\pm$ SD	d	P-value
Empathy Level	Pre-Data	17.63+7.29	18.17+7.50	-0.53	0.728
	Post-Data	30.00+7.03	55.29+2.08	-25.1	0.000
Caring Behavior	Pre-Data	47.12+5.26	48.40+5.35	-1.27	0.247
	Post-Data	58.97+ 3.17	87.85+5.26	-28.8	0.000
Analyzed by an independent t-test with Mean Difference (d) and p less than 0.05					

Table 4 presents the comparison of empathy levels and caring behaviors between the control and intervention groups at pre-test and post-test. For empathy levels, there was no statistically significant difference between the control group (17.63 ± 7.29) and the intervention group (18.17 ± 7.50) at baseline, with a mean difference of -0.53 ($p = 0.728$), indicating that both groups were comparable before the intervention. However, at post-test, the intervention group (55.29 ± 2.08) demonstrated significantly higher empathy scores than the control group (30.00 ± 7.03), with a mean difference of -25.1 ($p < 0.001$). Similarly, for caring behavior, no statistically significant difference was observed between the control group (47.12 ± 5.26) and the intervention group (48.40 ± 5.35) at pre-test, with a mean difference of -1.27 ($p = 0.247$), suggesting baseline equivalence between the groups. In contrast, post-test results revealed a significant difference, with the intervention group achieving a substantially higher mean caring behavior score (87.85 ± 5.26) compared to the control group (58.97 ± 3.17). The mean difference was -28.8 , and the difference was statistically significant ($p < 0.001$).

Discussion: In the present study, before the intervention, the nursing interns had low levels of empathy, but after the educational program, the interns in the intervention group showed statistically significant improvements with high empathy levels. In Saudi Arabia, Habib and colleagues found that after structured communication and empathy training, empathy was significantly improved among nursing students (19). In the same context, Bas-Robinson and colleagues in Spain revealed that constructive learning and interpersonal skills training were significant factors in enhancing the scores of empathy (20). In a similar study, Erica and colleagues in Italy showed significant improvements in empathy after simulation-based learning, which suggests that experiential learning is effective in developing emotional competence in nursing education (21). The integration of these results may be attributed to the pedagogical efficiency of the use of student-centered learning strategies such as simulation, role-play and reflective practice, which can make students emotionally involved and learn about empathy by going through experiences as opposed to passive learning. In other studies, however, mixed results have been yielded; Baugh, Hoogland (22) in the United Kingdom, Menezes, Guraya (23) in Australia and Stokken, Flaten (24) in Norway saw only small or inconsistent gains in empathy after educational interventions. The present study showed the intervention group's attitude towards caring, communication skills, and orientation to patient-centered care has been significantly higher than that of the control group, meaning that the educational intervention has succeeded in promoting professional attitudes toward caring, communication skills, and patient-centered care orientation. The results are in line with the global literature. In the United States, a study showed that caring theory educational interventions with nursing students significantly affected the students' caring behaviors and interpersonal sensitivity (25). Likewise, structured educational exposure also improved patient-centered communication and competence in providing patient care in China, as reported by Huang, Qiu (26). Similar to the findings of Yeom, Kim

(27) in South Korea, the present study also revealed that the caring behaviour scores for the two groups of professionals were statistically significantly improved after the structured professional development programs. A study conducted in Egypt found relatively small gains in caring behaviors. Such inconsistencies can be attributed to the quality of mentorship, the variation in mentorship quality, and the lack of a seamless connection between classroom and clinical spaces, all of which may limit the extent to which behavior is changed despite theoretical exposure (3). The findings of our study showed that the intervention significantly improved caring behavior in all domains, suggesting a comprehensive improvement in the ability to provide patient-centered, empathetic, and professionally responsible care. It can be confirmed by international studies. In the U.S., Inocian and colleagues found that the models of caring education had a great impact on the communication skills and working behaviors of nursing students (28). In China, study found structured training to help with better clinical communication and patient engagement (29). In another similar study in China determined that educational interventions had a significant impact on the attitudes of caring and the process of developing professional identity among nursing students (30). The uniformity of these findings could be attributed to the growing importance of patient-centered care models and competency-based nursing education throughout the world, which focus on the patient's needs, feelings, and communication. However, Murphy and colleagues in Ireland and Loke and colleagues in Singapore found only moderate gains in caring behaviour (31). Such differences can be attributed to the variability in clinical exposure, support systems in the institutions, and implementation of caring theory in the clinical teaching environment. This present study showed that the intervention group had significant differences in the effectiveness of enhancing the abilities of nursing interns with respect to empathy and caring behavior, thus forming the basis for the effectiveness of the educational intervention in improving the key competencies of nursing interns in the psychosocial and professional fields. The results are similar to those of Brunero et al., (2010) in Australia, Ferri et al. (2019) in Italy, and Bas-Sarmiento et al. (2020) in Spain, who found that there was a statistically significant improvement in empathy and caring behaviour after structured educational programs. This consistency across studies could be explained by the use of multimodal approaches to teaching, such as the use of simulation-based learning, use of reflection and use of interactional teaching methods which enable internalization of behaviours and long-term learning. However, Batt-Rawden in Norway, Mullan in Ireland, and in the United Kingdom, found weaker intervention effects (32). However, post-intervention analysis showed that the intervention group showed a very significant improvement in comparison to the control group, which shows the effectiveness of the educational program. The results of the present study agree with the results of Yang, Zhu (33), who found significantly higher post-intervention scores in the intervention groups in China, and Mirzaei Maghsud, Abazari (34), who reported comparable results in Iran, and Ahmad, Wahab (35) in Malaysia, who also found significantly higher scores in intervention groups after the intervention, indicating that structured educational approaches have positive effects on improving nursing competence. The similarity can be explained in terms of standardized interventions frameworks, competency-based curricula, and the incorporation of clinical simulation which aids in the enhancement of the learning transfer from theory to practice. In the USA, Williams and colleagues and Murphy and colleagues in Ireland found no significant differences between groups (32). These differences could be attributed to heterogeneity of samples, limited intervention period, and intervention fidelity differences.

Conclusion: The results of this quasi-experimental study reveal that after the process of giving the structured educational intervention, the level of empathy and caring behaviors of nursing interns improves significantly after 8 weeks. Although baseline skill levels were initially low for all 94 participants, there were statistically better gains for the intervention group than for the control group. The results highlight the effectiveness of mental preparation in developing professional qualities and show that the inclusion of structured training in empathy and care-based modules in training programs and in practice.

Recommendations

- Education: Embed simulations, role-plays, and reflective learning into core curricula and clinical supervision.
- Practice: Reinforce communication via regular hospital workshops and supportive workplace cultures.
- Research: Conduct longitudinal tracking, compare modern tools (like VR vs. mentorship), and gather qualitative student insights.

Limitations

- Restricted Scope: Limited to nursing interns in one city, reducing generalizability.
- Response Bias: Dependency on self-reported data risks social desirability bias.

- Confounding Factors: Participant personalities, backgrounds, and prior experiences were not fully controlled.

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