

ORIGINAL ARTICLE

EMPATHY OF NURSING STUDENTS IN A SIMULATED CLINICAL ACTIVITY

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ABSTRACT

Objective: To identify and evaluate the empathy of nursing students before and after a simulated clinical activity.

Method: This is a quantitative and quasi-experimental study, carried out in the inland of the state of São Paulo. 107 nursing students participated in the study. A medium-fidelity clinical simulation scenario was built and validated. Empathy was evaluated through the Empathy Inventory before and after the simulated clinical activity.

Results: There were positive changes after the simulated clinical activity in the cognitive components of empathy and there were no changes, in parts, in the affective component of empathy.


Conclusion: The simulated clinical activity, well outlined in a validated clinical simulation scenario, was able to improve the cognitive component of empathy but was not susceptible to changes in the affective component of empathy, which transfigures into feelings of compassion and altruism.


DESCRIPTORS: Empathy; Teaching; Education; Nursing; Humanization of Care.

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EMPATIA DE ESTUDANTES DE ENFERMAGEM EM ATIVIDADE CLÍNICA SIMULADA

RESUMO

Objetivo: identificar e avaliar a empatia de estudantes de enfermagem antes e após atividade clínica simulada.

Método: trata-se de um estudo quantitativo e quase-experimental, realizado no interior do Estado de São Paulo. Fizeram parte do estudo 107 estudantes de graduação em enfermagem. Foi construído e validado um cenário de simulação clínica de média fidelidade. A empatia foi avaliada por meio do Inventário de Empatia antes e após a atividade clínica simulada.

Resultados: houve mudanças positivas após a atividade clínica simulada nos componentes cognitivos da empatia e não houve mudanças, em partes, no componente afetivo da empatia. *Conclusão:* a atividade clínica simulada bem delineada em um cenário de simulação clínica validada foi capaz de melhorar o componente cognitivo da empatia, porém não foi passível de mudanças no componente afetivo da empatia, o qual transfigura em sentimentos de compaixão e altruísmo.

DESCRITORES: Empatia; Ensino; Educação; Enfermagem; Humanização da Assistência.

EMPATÍA DE ESTUDIANTES DE ENFERMERÍA EN ACTIVIDAD CLÍNICA SIMULADA

RESUMEN:

Objetivo: Identificar y evaluar la empatía de estudiantes de enfermería antes y después de actividad clínica simulada.

Método: estudio cuantitativo e cuasi experimental, realizado en el interior del Estado de São Paulo. Participaron del estudio 107 estudiantes de grado de enfermería. Se construyó y validó un escenario de simulación clínica de fidelidad media. La empatía se evaluó utilizando el Inventario de Empatía antes y después de la actividad clínica simulada.

Resultados: hubo cambios positivos después de la actividad clínica simulada en los componentes cognitivos de la empatía mientras que no los hubo en el componente afectivo de la empatía.

Conclusión: la actividad clínica simulada bien diseñada en un escenario de simulación clínica validado pudo mejorar el componente cognitivo de la empatía, pero no estuvo sujeta a cambios en el componente afectivo de la empatía, lo que se transfigura en sentimientos de compasión y altruismo.

DESCRITORES: Empatía; Enseñanza; Educación; Enfermería; Humanización de la Asistencia.

INTRODUCTION

In the health service, the interaction between professionals and patients occurs routinely, and this is essential for care to be effective. One of the components that facilitate such an interpersonal relationship is empathy⁽¹⁾.

Empathy is a social skill developed during childhood, but it can be learned during adulthood⁽²⁾. The empathetic individual is one who is able to understand the feelings of others in a sensitive way, demonstrating their full understanding through their behavior. In the context of health education, this skill has been developed through strategies such as art teaching, reflexive writing, and clinical simulation^(1,4-6).

Empathy is divided into three components: cognitive – a phase in which the individual understands precisely the feelings and perspective of other people; affective – a period in which there is an interest in meeting the needs of others with compassion, sympathy, and concern, without necessarily living the experience of the other, but an understanding of what is felt by them; and behavioral – in which one demonstrates to the other a full understanding of their feeling and perspective⁽³⁾.

When the individuals are empathetic, it is easier for them to create quality affective bonds, they better develop interpersonal relationships and social coexistence through favorable communication, greater ability to solve problems, increased self-esteem and self-confidence, thus overcoming the feeling of inferiority and ability to listen, understand, and reduce emotional problems⁽⁷⁻¹⁰⁾.

Patients who receive empathetic care from a professional show greater satisfaction with the service, resulting in improved prognosis and greater adherence to the treatment^(1,11). Health professionals with a higher level of empathy have been associated with lower levels of stress in the work environment, and less depression and burnout syndrome, and are less likely to perform acts of neglect in health care⁽¹¹⁾.

In this context, aiming at the training and performance of more humanized health professionals, with greater relationship skills, assertiveness in the relationship processes with the patient and health team, it is essential to shape teaching strategies that increase their levels of empathy, since the level of empathy of the students has been declining throughout their training⁽¹¹⁻¹³⁾.

Clinical simulation has been considered an inevitable and necessary teaching method in the training of health professionals and can be defined as the attempt to imitate a certain situation of the real scenario in an artificial context. Its purpose is to promote in the students the development of technical skills, clinical reasoning, decision making, and evaluation, among others. In addition, it provides a better understanding and control of the real situation through prior training in a totally safe and risk-free environment for both the patient and the apprentice^(4,14).

In view of this strategy, in the daily nursing practice, it is common to come across patients who require care in their physiological elimination needs, who require individualized care, considered a delicate and intimate situation for both patient and professional. When physiological elimination needs are altered, the individuals become fragile, vulnerable, and easily exposed and, at that moment, the ethical and empathetic work of the nurse is indispensable⁽¹⁵⁾.

In this context, this study aimed to identify and evaluate the empathy of the nursing students before and after a simulated clinical activity in a scenario that promotes nursing care in the physiological elimination needs.

METHOD

This is a quasi-experimental study of a quantitative approach⁽¹⁶⁾. It was carried out in September 2017 in a public university in the inland of São Paulo, Brazil. The study included 107 students who met the following inclusion criteria: undergraduate nursing students regularly enrolled in 2017, from the bachelor's course or teaching-license degree course, between the 1st and 5th course year, and who participated in all the activities of the simulated event during which the study was carried out.

The event in question was built by the researchers, teachers, and postgraduates of the university and had "Clinical Simulation of the Hospitalized Patient" as its main topic; the scenario used for the study was one of medium-fidelity, entitled "Use of disposable diapers in the elimination needs", about the use and change of disposable diapers in the elimination needs, considering all the items of the script proposed by Fabri⁽¹⁷⁾.

Fermented food remains were used to give more veracity to the physiological eliminations to be portrayed, due to the characteristic smell recreated by the food and to the characteristics of the feces reproduced. It is important to point out that, although the scenario is of medium-fidelity, a mannequin of low-fidelity was used, whose characteristic is not conducting interactions with the apprentices, being only an anatomical piece. This maintenance of the level of scenario fidelity is due to the reactions aroused in the group when introducing a real element to the scenario: the characteristics of the physiological eliminations.

The hospital structure of the scenario and the learning objectives intended by the mediators contribute to the fidelity level defined. Before being used, the scenario was validated in appearance and content by a group of 5 judging nurses with experience in clinical practices, whose educational level varied between PhD and full professor, with more than two years of practice, and who had already employed clinical simulation in their teaching process learning. 100.0% of agreement level among the judges was obtained⁽¹⁸⁾.

For data collection, a Characterization Instrument of the research subjects developed by the researchers themselves was used, with the purpose of obtaining sociodemographic data from the participants. The Empathy Inventory (EI)⁽³⁾ was also applied to evaluate the participants' empathy. It is a validated instrument consisting in 40 questions, grouped into 4 factors (Factor 1 – Perspective Taking, Factor 2 – Interpersonal Flexibility, Factor 3 – Altruism, Factor 4 – Affective Sensitivity), whose answers are indicated on a 5-point Likert-type scale that measures cognitive, affective, and behavioral components of empathy, namely: 1 = Never, 2 = Rarely, 3 = Regularly, 4 = Almost always, and 5 = Always.

Among the 40 EI items, 17 are reverse, that is, the answers to these items must be reversed to obtain the final score. Thus, if 5 was the response, it should be changed to 1 or vice-versa; if 4, it should be changed to 2 or vice-versa. The answer must be kept when it is 3. The 17 reverse items of the final version are the following: 3, 4, 5, 8, 9, 13, 16, 19, 20, 22, 24, 26, 30, 32, 35, 38, and 40. According to the study⁽³⁾, the more frequent the behavior indicated by the item, the closer the individual is to the concept of empathy. However, when it comes to a reverse item, the low frequency of the behavior is what indicates the proximity to the concept of empathy.

This instrument was chosen because this scale has a good internal consistency in each factor it evaluates, with the value of Cronbach's Alpha varying between 0.72 and 0.85. The EI also makes it possible to check the effectiveness of a certain activity on the empathetic levels of the participant, enabling a pre- and post- intervention comparison. In addition, this scale evaluates the concept of empathy in all its dimensions (cognitive, affective, and behavioral components).

The EI and the subject's characterization instrument were applied before the medium-fidelity simulated clinical activity. Right after the activity, a debriefing session took place conducted by two professionals, one being a specialist in the activity's subject and the other a specialist in simulated clinical activities, with a mean duration of 15 minutes. Then, the EI was applied again to compare the difference of the empathy level before and after the intervention.

Data was analyzed in the Statistical Package for the Social Sciences, version 24, through descriptive statistics and parametric and non-parametric tests, as proposed by the author of the EI in the original study. For all the statistical tests performed, the value of $p < 0.05$ was assumed as the critical significance value.

This study was approved by the Research Ethics Committee of the Ribeirão Preto Nursing School, University of São Paulo, under opinion No. 1,937,736, and CAAE No. 56451216.2.0000.5393.

RESULTS

107 nursing student participated in the study. Among them, nine (8.4%) were male and 98 (91.6%) female. The mean age of the participants was 23.8 years old, the median was 22 years old, the minimum age was 18, and the maximum was 48. Among the participants, 23 (21.5%) were in the 1st year, 21 (19.6%) were in the 2nd year, 25 (23.4%) were in the 3rd year, 18 (16.8%) were in the 4th year, and 20 (18,7%) were in the 5th year of the course. Among the students, 40 (37.4%) had no clinical experience and 67 (62.6%) had some kind of practical experience.

Table 1 shows the comparison of the EI score before and after the simulated clinical activity (intervention).

Table 1 – Empathy score according to the students (n=107) before and after the simulated practice. Ribeirão Preto, SP, Brazil, 2019

Before	Minimum	Maximum	Mean	Standard Deviation
Factor 1 – Perspective Taking	2.5	5.0	3.8	0.552
Factor 2 – Interpersonal Flexibility	1.8	4.4	3.3	0.568
Factor 3 – Altruism	1.6	4.9	3.6	0.665
Factor 4 – Affective Sensitivity	3.0	5.0	4.2	0.476
General	2.7	4.6	3.7	0.392
After				
Factor 1 – Perspective Taking	2.6	5.0	3.9	0.614
Factor 2 – Interpersonal Flexibility	1.8	4.9	3.4	0.663
Factor 3 – Altruism	1.7	5.0	3.7	0.691
Factor 4 – Affective Sensitivity	3.2	5.0	4.2	0.542
General	2.8	5.0	3.8	0.428

‡: Statistical test: T-test.

The Kolmogorov–Smirnov test analysis showed normal distribution (>0.05) of the sample. Thus, to compare the student's empathy before and after the activity, the T-test was used and a value of $p < 0.05$ was assumed, as shown in Table 2.

Table 2 - Empathy of the students (n=107) before and after the simulated practices. Ribeirão Preto, SP, Brazil, 2019

Empathy Inventory (EI)	Mean		T-test	p (value)
	Before	After		
Factor 1 – Perspective Taking	3.8	3.9	-2.0	0.047
Factor 2 – Interpersonal Flexibility	3.3	3.4	-3.9	0.000
Factor 3 – Altruism	3.6	3.7	-2.5	0.014
Factor 4 – Affective Sensibility	4.2	4.2	-0.5	0.578
General	3.7	3.8	-4.1	0.000

‡: Statistical test: T-test.

The empathy analysis showed significant results in the general scale (0.000) and in factors 1 (0.047), 2 (0.000), and 3 (0.014), whose assigned significance value was $p (<0.05)$, and it was not significant in factor 4 ($p=0.578$). This result demonstrates that positive changes in the cognitive components of empathy occurred after the simulated activity, represented by factors 1, 2, and 3 (Perspective Taking, Interpersonal Flexibility, and Altruism, respectively).

In the empathy affective component (factor 4: Affective Sensibility), there was no significant change in the levels recorded before and after the simulation. In other words, after the simulated clinical activity, the participants increased their capacity to understand the other's perspective (the cognitive component), without, however, altering the levels of altruism and compassion (the affective component) demonstrated to and for the other. Thus, it can be inferred that a greater understanding of empathy as a phenomenon has occurred, but without a noticeable change in the acts performed by the participants.

DISCUSSION

Empathy is a social skill that has cognitive, affective, and behavioral components⁽¹⁾. When the interaction between the professional and the patient is empathetically established, the bond between them improves, leading to satisfaction, to greater adherence to the treatment, and to an improvement in the patients' clinical outcome, which has repercussions on the quality of the care provided⁽¹¹⁾. In this sense, it is important that training institutions develop strategies to improve communication skills and empathy among their learners and, in this study, the use of simulated clinical practices was stimulated for this purpose.

The development of empathy, as demonstrated by the mean scores found in "Altruism" and "Affective Sensitivity", before (3.6 and 4.2, respectively) and after (3.7 and 4.2, respectively) the simulated clinical activities, highlights an advance in the "Altruism" factor, but not in "Affective Sensitivity", which evaluates the altruism and compassion levels of the individuals. Low scores on this item reflect little attention or importance given to the needs of others^(1,3). These characteristics are of extreme importance in the future clinical practice of the health professionals, since verbal and non-verbal communication with the patient, the center of the care provided, transforms the assistance given to them, and can facilitate or hinder it^(1,3,4).

According to the literature^(4,11), as also found in the present study, after the clinical simulation activity, the students demonstrated an improvement in the score obtained, using a validated empathy assessment scale. Besides, nursing students demonstrate, even before any intervention, good levels of empathy⁽¹⁹⁾, and they still have improved empathy

immediately after meetings held to discuss issues related to the subject and reflections⁽¹⁾.

In health education in some countries, throughout the individuals' training, it was found that there is a decline in the level of empathy^(20,21). However, strategies using simulated patients in a simulated clinical activity have proved to be effective for the development and improvement of this skill^(4,22). The improvement and development in the level of empathy of the apprentices using this strategy occur because this method allows the apprentice, during the activity, to interact with the simulated patient and, after the activity, makes it possible to reflect on their performance and also listen and understand the perspective of the next (patient)^(4,22). Such reflection, promoted by the feelings experienced in the activity and by the discussions promoted in the debriefing, evidence the increase in the perception of empathy as a skill and a phenomenon necessary for the clinical practice, as demonstrated by the significant increase in the cognitive components in this study. In addition, some factors can influence the empathy level of the individuals: gender, personality, culture, emotional intelligence, course period, and specialties, among others^(11,23-26).

The development of empathy in its affective factor, which values the feeling of compassion and altruism of the professional towards the patient and their family, enables the creation of bonds and the development of trust, essential elements for care to be provided with quality and safety. An empathetic nurse is able to perceive the patient as a holistic being, improving the effectiveness of communication and developing evidence-based care, valuing patient safety and the quality of the service provided.

As a limiting factor of this study it can be pointed out that the instrument used is made up by a self-assessment questionnaire, thus being susceptible to biases in the research caused by inadequate completion (questions that are/are not socially accepted). To minimize such occurrences, the results obtained in this study can and should be compared and complemented by other studies that seek to evaluate student behavior, comparing the result obtained in the questionnaire with the conduct demonstrated by the participant^(1,4). The EI was also adapted to the simulated scenario, a different background from that in which it was conceived. However, it is possible to find in the literature other evidence that proves its good applicability in simulated clinical scenarios, without prejudicing its results.

CONCLUSION

For a good health practice, it is necessary that the professionals develop an effective relationship with the team and with the patients, with empathy being an essential and learnable skill, which helps in the interpersonal relationship and in the construction and/or establishment of bonds in both situations.

The application of an instrument for the evaluation of the empathy levels of the students inserted in the Brazilian health educational context allows for the verification of evidence that guides the investment in this area of education, aiming at the formation of professional character and at the improvement of health care, either through the reinforcement of empathetic postures already implemented or in the investment in activities for the development of such ability.

The simulated clinical activity, well outlined in a validated clinical simulation scenario, as elaborated and applied in this study, was able to improve the cognitive component of empathy, but its affective component, which transfigures into feelings of compassion and altruism, was not susceptible to change.

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