



Original research article

Nursing students' communication attitudes: the effectiveness of an educational intervention and clinical-internships

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Abstract

Introduction: Effective communication is of paramount importance for nursing students, and having positive attitudes towards learning can result in the achievement of effective communication skills.

Objective: The aim of this study was to assess the impact of a specific communication educational course and an experience of clinical internship on nursing students' attitudes toward effective communication.

Methods: A before-after study design was used. We evaluated communication attitude using the Italian version of the Communication skills Attitude Scale (I-CSAS). The scale was submitted before starting a new Communication Skills educational intervention (T₀), one month after the end of the intervention (T₁), and after the clinical internship (T₂).

Results: The Positive Attitude Scale (PAS) was 53.9 ± 5.3 at T₀, while the Negative Attitude Scale (NAS) was 26.9 ± 5.0. PAS scores increased one month after the educational intervention (T₁) (Me = 55.8 ± 5.1, *p* = 0.058) and after the internship experience (T₂) (57.2 ± 4.5, *p* = 1.243), while the NAS's average scores decreased (24.0 ± 4.5 at T₁, *p* = 0.0002, and 23.5 ± 3.7 at T₂, *p* = 0.1120).

Conclusions: Our results suggest that a structured educational intervention can significantly improve student attitudes, and that subsequent clinical training helps to consolidate the levels achieved.

Keywords: Attitude; Communication; Educational intervention; Nursing; Students

Introduction

Nurses are health team members who work in coordination, supervision, and specialized technical care. In this role, knowledge of medical management, ethical/legal issues, end-of-life care, team collaboration, and communication skills (Tuohy, 2019) are required. The latter is fundamental to the provision of quality patient care and safety (Allenbaugh et al., 2019; Castello et al., 2019; Kerr et al., 2020). Previous studies have demonstrated how healthcare communication skills lead to greater therapy adherence and overall satisfaction among patients (Allenbaugh et al., 2019), reducing depression and anxiety symptoms. Thus effective clinical practice involves many instances where critical information must be accurately communicated. When health care professionals are not communicating effectively, patient safety is at risk for several reasons: lack of critical information, misinterpretation of information, unclear orders over the telephone, and overlooked changes in status. Moreover, the nursing process – as a scientific method of exercise and implementation of nursing – is achieved through dialogue, interpersonal environment and with specif-

ic skills of verbal communication (Ferrara et al., 2017). In order to be successful in this field, nurses should study communication and interpersonal relations in their education, with special courses and internships, learning the various aspects and applications of communication in various fields of nursing. Despite this, the literature still shows a lack of adequate communicative abilities in nurses (Bullington et al., 2019), and that various sociodemographic characteristics like gender and ethnicity (Nourein et al., 2021) could influence students' attitudes towards the learning of communication skills. Several studies have investigated students' attitudes toward effective communication skills, using the Communication Skills Attitude Scale (CSAS) (Busch et al., 2015; Ferrari et al., 2017; Gutiérrez-Puertas et al., 2020; Laurence et al., 2012; Panczyk et al., 2019; Przymuszała et al., 2021; Zhang et al., 2018). Few studies have examined the influence of skills training courses on communication ability (MacLean et al., 2017; Murray and Buckley, 2017). In Italy, the CSAS was recently used to investigate communication attitudes in a small cohort of nursing students in a validation study of the Italian version of the tool (I-CSAS) (Ferrari et al., 2017). However, there are no papers investigating the impact of training courses and internship

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experience on a student's communication skills and attitudes (Palese et al., 2016). The attitude towards the relevance of adequate communication skills is a key point in the educational curriculum of nursing students, because effective communication is a fundamental part of high-quality care.

This highlights the need for educational institutions to understand the students' perception of the topic, as well as to identify educational methods aimed at improving and strengthening such skills.

The aim of the present study was to measure the impact of a specific communication educational course and internship experience on nursing students' attitudes towards effective communication (applying the I-CSAS scale).

Materials and methods

Participants

All students ($n = 120$) enrolled in the first year of the bachelor's degree in Nursing, of any age, in a school affiliated with the University of Milan, Italy (academic year 2019/2020) were invited to participate in the study. Students who attended less than 90% of the classes on communication skills were excluded from the study. The study was approved by the Nursing School Administrators. The students' attitudes were evaluated through the Italian version of the Communication skills Attitude Scale (I-CSAS).

Data collection

A before-after study design was used. The I-CSAS was administered during classroom tutoring (T_0) in March 2020. The authors explained the objectives and methods of the survey, and organized the distribution of a printed copy and the collection of the questionnaires. Nursing students were asked to complete the questionnaire again one month after the educational intervention on effective communication (T_1), and one month after an internship in a medical or general surgery (T_2). Written consent was collected for each of the participants. The questionnaire was anonymous.

The educational communication course

A new specific communication and relationship course was planned in the training curriculum. It consisted of 60 hours overall, scheduled as six hours twice a week. The proposed contents concerned the following areas of investigation:

- acquisition of communication and educational skills needed for the relationship with patient and their relatives;
- basic concepts for understanding mental processes and individual behavior;
- theories and constructs related to the psychology of health;
- ethical responsibility within a relationship with patients.

The teachers were a psychologist and nurse. They had more than ten years of experience in the field of education related to the topics of communication and therapeutic relationship. Compared to the standard approach of our school – which is based almost exclusively on frontal lessons – the new teaching methods consisted of simulations, role plays, and viewing and analyzing movies.

The experience of clinical internship

Every year, after the end of the academic period, students conducted a two-month clinical internship in different medical and surgical units of the affiliated university hospital.

During this period, each student took a practical approach to the learned principles, guided by an internship nurse assistant (expert nurse, with more than five years of clinical experience). During daily clinical experience, each student also had the opportunity to learn the role of communication skills in establishing a successful supportive relationship with the patient, thus consolidating or further improving his/her attitudes towards the topic.

Tool description

The questionnaire comprised two parts: the first investigated demographic data such as age, gender, nationality, first spoken language, and type of diploma gained. The second included the I-CSAS for measuring attitudes toward communication skills, with 26 items divided into two sub-scales previously identified by the original author and subsequently confirmed in other works (Busch et al., 2015; Molinuevo and Torrubia, 2011) and in the Italian version of the tool (Ferrari et al., 2017). One of the sub-scales indicates the positive attitude (*Positive Attitude Scale*, PAS) and the other one the negative attitudes (*Negative Attitude Scale*, NAS) towards learning communication skills. Possible responses are structured according to a Likert scale ranging from 1 (strongly disagree) to 5 (totally agree). The theoretical score range for each sub-scale is 13–65. Higher scores indicate more positive or negative attitudes, according to the specific sub-scale.

Ethical principles

The research was approved by the dean of the nursing degree course and the directors of the courses involved in the study. Participation in the study took place on a voluntary basis. Each student signed a written informed consent form, which stated that participation in the study was unpaid and their data would be treated confidentially. Data were collected and processed anonymously in accordance with the current Italian legislation and the principles of the Helsinki Declaration.

Statistical analysis

Continuous variables were described by mean and standard deviation if normally distributed, or by median and interquartile range. The Kolmogorov–Smirnov test was used for normality assessment. To compare the levels of attitude in relation to the main variables considered, Mann–Whitney's U (two-groups) and Kruskal–Wallis tests (three or more groups) were used. A multivariate analysis was conducted to determine the association of negative attitudes with the most important demographic and educational variables. The difference in PAS and NAS scores was investigated using the t -test for independent samples and Spearman's rho coefficient for non-Gaussian variables. The statistical significance threshold was set at 5%. All calculations were performed with SAS® University Edition for MacOS (SAS Inc., Cary, NY).

Results

119 (99.17%) students were enrolled in the study at T_0 . All students filled the I-CSAS (T_1) as expected one month after the end of the educational course. 89.10% ($n = 106$) completed the study by filling the instrument one month after the end of the clinical training experience (T_2). The enrolled subjects (96 females and 23 males) had a median age of 21 years (IQR [20; 23], Shapiro–Wilk $p < 0.05$), ranging from 19 to 41 years. 86.55% ($n = 103$) were Italian and 91% spoke Italian as their first language. 40.34% ($n = 48$) had a scientific diploma, 25% ($n = 30$) had a technical high school diploma.

I-CSAS scores

At T_0 , the Positive Attitude Scale (PAS) had an average score of 53.9 ± 5.3 . Considering that the theoretical quartile III corresponds to 52 points, the average value of PAS scores corresponds to a high positive attitude. The Negative Attitude Scale (NAS) obtained an average score of 26.9 ± 5.0 , corresponding

to a negative attitude slightly above the quartile I, equal to 26, and clearly below the median. No statistically significant differences ($p > 0.05$) were found in scores obtained in PAS scales and NAS, considering variables such as sex, possession of a degree in a psychopedagogical, or communicative environment and nationality (Table 1).

Table 1. Relationship between I-CSAS scores and sociodemographic characteristics

	PAS	<i>p</i>	NAS	<i>p</i>
Nationality				
Italian	53.8 ± 5.4	0.56	26.8 ± 5.0	0.24
Foreign	53.9 ± 5.9		27.0 ± 4.8	
Gender				
Male	53.7 ± 5.9	0.24	26.8 ± 4.0	0.56
Female	54.0 ± 4.3		27.2 ± 6.1	
Diploma in psychopedagogical, social and communication sciences				
Yes	53.6 ± 5.3	0.29	26.8 ± 3.9	0.66
No	54.1 ± 5.3		26.9 ± 6.1	

PAS scores increased one month after the educational intervention (T_1) ($Me = 55.8 \pm 5.1$) and after the internship experience (T_2) (57.2 ± 4.5), while the NAS's average scores decreased (24.0 ± 4.5 at T_1 and 23.5 ± 3.7 at T_2) (Table 2).

Table 2. I-CSAS scores at T_0 , T_1 , T_2

	T_0			T_1			T_2		
	Me	Ds	Min–Max	Me	Ds	Min–Max	Me	Ds	Min–Max
PAS	53.9	5.3	38–63	56.8	5.1	41–64	57.7	4.5	44–63
NAS	26.9	5.0	19–37	23.9	4.5	18–37	23.3	3.7	17–32

Significant differences were found in the PAS scores between T_0 and T_1 ($p = 0.0058$), while no statistically significant differences were detected between T_1 and T_2 ($p = 0.1243$). The same trend was observed in NAS scores ($p = 0.0002$ between T_0 and T_1 , $p = 0.1120$ between T_1 and T_2).

Discussion

The impact of a targeted pathway on the attitudes of undergraduate nursing students had already been studied in other topics (Bollo et al., 2019; Ruta et al., 2021). Therefore, the primary aim of this study was to measure the impact of a specific communication training course and a clinical internship on nursing students' attitudes toward effective communication (using the validated instrument I-CSAS).

The average scores obtained in the PAS (50.7 ± 5.7) and NAS (30.9 ± 5.2) sub scales show an high positive attitude and low negative one, demonstrating the presence of a positive attitude to developing appropriate communicative skills among students. In part, our results confirm the previous observation of Ferrari et al. (2017) in the same professional category. Similar results were also found in a sample of medical students (Busch et al., 2015).

The comparison between I-CSAS scores obtained in T_0 and T_1 showed an improvement at the threshold for statistical significance ($p = 0.05$ for both sub scales). This result underlines the positive impact of the theoretical educational intervention on single positive predisposition. It also suggests progressive positive changes in students' attitudes during their academic course. The comparison between T_1 and T_2 does not show a statistically significant difference in either PAS or NAS, but in both cases there was a tendency to improve the scores. The internship strengthens the benefits of the training received. To our knowledge, similar studies are not available in the lit-

erature. There were no significant differences in the scores of the PAS and NAS sub scales, taking into account the sample personal and age variables (gender, nationality, type of diploma gained), as previously shown (Ferrari et al., 2017). In particular, the possession of diplomas in psychopedagogical or communicative contexts did not seem to affect the ability to develop adequate communication skills. However, the data should be revised and analyzed on a larger sample, as few subjects were enrolled in previous studies.

Limitations

The main limitations of the study are the monocentric design and the small number of students. We included 119 students, who represent a small portion of students attending the nursing degree course of The University of Milan. It would be interesting to continue the study with a wider sample, in order to support the results that emerged from this study. Nevertheless, the results can be considered as an almost complete overview of the whole sample. The high number of questionnaires returned support the hypothesis of sample mapping, regardless of any different level of interest in the subject.

Conclusions

Communication skills have been regarded as fundamental competencies for nurses and other health care professionals. It is not only based on an innate ability that varies from person to person, but also on the necessary training and experience

that one acquires through practice. This need for education in communication has been recognized worldwide.

Despite the limitations of this study, our results on nursing students towards communication skills are satisfactory; as they show the presence of a positive attitude towards developing adequate communication skills. In agreement with the literature, the average scores obtained in the PAS and NAS subscales show a positive attitude that is definitely stronger than the negative one. As expected, PAS scores significantly increased one month after the educational intervention, while the negative scores decreased. These results suggest that a structured educational intervention may significantly improve student attitudes to communication skills. Furthermore, even in the absence of statistical significance we have found that the subsequent clinical training helps to consolidate the levels of positive attitudes achieved.

Practice implications

In Italian nurse education there is a growing interest in attitudinal research. The I-CSAS is a helpful instrument to evaluate students' attitudes towards communication skills.

This work provides the scientific community with evidence that a structured training course on communication skills, along with a clinical internship, can significantly improve the attitudes of future health professionals, and therefore, probably their knowledge and communication skills.

Ethical aspects and conflict of interests

The authors have no conflict of interests to declare.

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Author statement

P. Ferrara: methodology, data curation, writing original draft preparation. S. Terzoni: software, writing reviewing and editing. A. Destrebecq: methodology, supervision. M. Parozzi: visualization, investigation. P. Formenti: software, conceptualization.

Komunikační postoje studentů ošetrovatelství: efektivita edukační intervence a klinických stáží

Souhrn

Úvod: Efektivní komunikace má pro studenty ošetrovatelství prvořadý význam a pozitivní přístup k učení může vést k dosažení efektivních komunikačních dovedností.

Cíl: Cílem této studie bylo zhodnotit vliv konkrétního komunikačního vzdělávacího kurzu a zkušenosti z klinické praxe na postoje studentů ošetrovatelství k efektivní komunikaci.

Metody: Byl použit design studie před-po. Komunikační postoj jsme hodnotili pomocí italské verze škály komunikačních dovedností Attitude Scale (I-CSAS). Škála byla předložena před zahájením nové vzdělávací intervence komunikačních dovedností (T_0), jeden měsíc po ukončení intervence (T_1) a po klinické stáži (T_2).

Výsledky: The Positive Attitude Scale (PAS) byla $53,9 \pm 5,3$ u T_0 , zatímco Negative Attitude Scale (NAS) byla $26,9 \pm 5,0$. Skóre PAS se zvýšilo měsíc po edukační intervenci (T_1) ($Me = 55,8 \pm 5,1$, $p = 0,058$) a po zkušenostech ze stáže (T_2) ($57,2 \pm 4,5$, $p = 1,243$), zatímco průměrné skóre NAS se snížilo ($24,0 \pm 4,5$ u T_1 , $p = 0,0002$, a $23,5 \pm 3,7$ u T_2 , $p = 0,1120$).

Závěr: Naše výsledky naznačují, že strukturovaná edukační intervence může výrazně zlepšit postoje studentů a že následný klinický výcvik pomáhá upevnit dosažené úrovně.

Klíčová slova: edukační intervence; komunikace; ošetrovatelství; postoj; studenti

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