

Relationship between Patient Centered Care, and Empathy among Nursing Students at Alexandria Technical Health Institute

Eman Atef Hikal, B.Sc. in Nursing

Teacher in El-Gmhoria Institution of Nursing, - El-Gmhoria hospital, Alexandria

Fatma Mostafa Baddar, Professor

Nursing Administration Department, Faculty of Nursing ,Alexandria University

Sabreïn Mahmoud Khalifa Khattab, Assistant Professor

Nursing Administration Department, Faculty of Nursing ,Alexandria University

Abstract

Background: Empathy and patient-centered care have been associated with better patient outcomes. Active listening and self-awareness are suggested to be associated with empathy, and, in turn, patient-centered care. The concept of empathy has been a considerable subject of interest in students nursing research. PCC dimensions are critical for a Health Care Provider (HCP) to understand a patient's experience, develop a therapeutic relationship with the patient, and deliver care based on this understanding. So, the delivery of PCC is critical for better patient outcomes such as safety, as well as patient values and needs. **Objective:** To determine the relationship between patient-centered care and empathy among nursing students at the Alexandria Technical Health Institute. **Settings:** The study was carried out at the Technical Health Institute that affiliated with the Ministry of Health and Population at Alexandria Governorate, Egypt. **Subjects:** A convenient sample of 300 Nursing Students who are in the fourth, and fifth years of technical nursing diploma at the previous mentioned setting. **Tools:** Four tools were used in this study Namely; The Patient-Practitioner Orientation Scale (PPOS), Active-Empathic Listening Scale (AELS), Self-Consciousness Scale-Revised (SCS-R), and Kiersma Chen Empathy Scale (KCES). **Results:** The study showed that there was a significant positive correlation between PCC, active listening, self-awareness, and empty respectively ($p=0.000$, $p=0.001$, $p=0.004$). **Conclusion:** Improvement in active listening and self-awareness may lead to improvement in empathy, and, in turn, improvement in patient-centered care. **Recommendations:** nurse educators need to teach nursing students how to improve active listening and self-awareness to improve their levels of empathy.

Keywords: Patient-centered care, Active listening, self-awareness, Empathy, Nursing students.

Introduction

Empathy and patient-centered care (PCC) have been associated with better patient outcomes. Active listening and self-awareness are suggested to be associated with empathy, and, in turn, PCC.

Patient-Centered theory by Rogers (2007), suggested several modifiable

factors affecting PCC. (Fig. 1). The theorist suggested that empathy affect PCC, while active listening and self-awareness affect empathy. The author defined empathy as the ability to recognize, understand, and share a patient's experience. According to Rogers (2007), empathy has cognitive and affective characteristics. The relationship between empathy and PCC suggested by the theory has been supported in some studies (Jones & Huggins, 2014; Mercer,

Neumann, Wirtz, Fitzpatrick, & Vojt, 2008; Neumann et al., 2007).

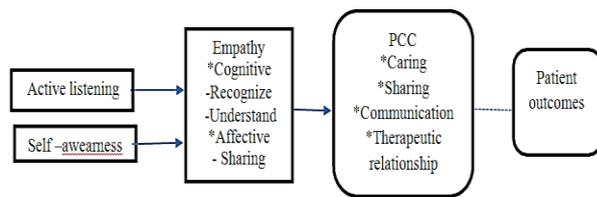


Figure (1): Theoretical Framework of Rogers' Patient-Centered Theory

Rogers (2007) and the findings of the studies cited showed the importance of empathy in Health Care Provider's (HCPs). Nurses are HCPs who spend the most time with patients (Westbrook, Duffield, Li, & Creswick, 2011), therefore, it is important for nurses to have optimal levels of empathy. Nursing students are future nurses, so it is imperative that they have appropriate levels of empathy which will help them in delivering PCC.

According to Rogers (2017), to improve empathy effectively, active listening and self-awareness as modifiable factors of it must be improved. Active listening was defined as the inner process of deciding whether listening to what another person said provided insight to self-emotions and feelings (Arnold, 2014), which may help develop empathy. Some research findings support this relationship. For example, King et al., (2015) found that, listening to the patient lead a HCP to develop empathy for patients, and, in turn, develop a therapeutic relationship with them, which is one characteristic of PCC. Improvement in empathy is vital because empathy is linked to delivering PCC and patient outcomes (Rogers, 2017). Jones and Huggins (2014) reported that empathy may increase communication between patients and their HCPs, and was positively associated with better adherence to self-

management, higher levels of satisfaction, and lower levels of anxiety in patients. Improvement in PCC is also important because it was linked to patient outcomes and better patient satisfaction (Evans et al., 2015). However, the literature shows suboptimal levels of empathy in nursing students, and levels of empathy in nursing students were lower compared to those in other healthcare disciplines (McKenna et al., 2012; Schweller, Costa, Antônio, Amaral, & de Carvalho-Filho, 2014; Williams, Brown, Boyle et al., 2014; Williams, Brown, McKenna et al., 2014). Thus, empathy may need to be improved in nursing students.

The relationships between active listening, self-awareness, empathy, and patient-centered care have not been investigated enough., The concept of empathy has been a considerable subject

of interest in nursing research. PCC dimensions are critical for a Health Care Provider (HCP) to understand a patient's experience, develop a therapeutic relationship with the patient, and deliver care based on this understanding (Raja et al.,2015). It may make the patient feel listened to, respected, and understood (Raja et al., 2015). So, Thus, the delivery of PCC is critical for better patient outcomes.

Aim of the study:

This study aims to identify the relationship between PCC and empathy among nursing students at Alexandria Technical Health Institute.

Research Questions:

- Q1. What is the relationship of empathy, active listening, and self-awareness, to Patient cantered care (PCC)?

Q2. Is there a relationship between empathy, active listening, self-awareness, Patient centered care and subjects' demographic characteristics?

Materials and Method

Materials

Research Design

A descriptive correlational design was used to conduct this study.

Setting

This study was conducted at the Technical Health Institute. This is the only institute affiliated to Ministry of Health and Population at Alexandria Governorate Egypt. It provides 2 years of studying nursing after preliminary stage which provide three years of studying nursing.

Subjects

The study subjects include Nursing Students in the pre-selected setting, who are in the fourth, and fifth years of technical nursing diploma. the Epi-Info program was used to estimate the sample size using Expected frequency = 50 %, Acceptable error = 5 %., Confidence coefficient = 95 %, and the total at two years of Nursing students' population is 1360. The program revealed the minimum sample size to be 300 nursing students.

Tools:

Four tools were used in this study as follows:

Tool (1): The Patient-Practitioner Orientation Scale (PPOS)

This scale was developed by (Krupat et al., 2000). It was adopted by the

researcher to assesses nursing students' PCC and it consists of 18 self-assessment items using a six-point Likert scale, where 6 indicating strongly agree and 1 indicating strongly disagree. The PPOS measures the four characteristics of PCC (caring, sharing, communication, and therapeutic relationship). Total scores range from 18 to 108, where; Low level of PCC score ranges from $18 < 48$, Moderate level ranges from $48 < 78$, while high levels range from 78-108. This tool was tested for reliability using Cronbach's alpha, ($r=0.92$) (Brandy et al.2017)

Tool (2): Active-Empathic Listening Scale (AELS)

This tool was developed by Gearhart & Bodie, (2011). It was adopted by the researcher to assesses nursing students' active listening through three stages of the listening process; sensing (4 items), processing (3 items), and responding (4 items), using a seven-point Likert scale, ranged from never or almost never (1) to always or almost always true (7), The overall score ranges from 11 to 77, where; the Low level of active listening ranges from $11 < 33$, Moderate level ranges from $33 < 55$, while, high levels ranges from 55-77.

This tool was tested for its internal reliability using Cronbach's alpha, and it was reliable ($r=0.89$) (Gearhart & Bodie, 2011)

Tool (3): Self-Consciousness Scale-Revised (SCS-R)

This scale was developed by (DaSilveira, DeSouza, & Gomes,2015). It was adapted by the researcher to assesses nursing students' self-awareness. This scale consists of 22 self-assessment items

using a three-point Likert-type scale, whereas;1 indicates is not like me at all up to 3 which indicates a lot like me. Total scores range from 22 to 66 where; Low level of self-awareness score ranges from 22 - 36, Moderate level ranges from 37-51, while, High levels of it ranges from 52-66. This tool was tested for reliability using Cronbach's alpha, it was reliable ($r=0.91$). (DaSilveira et al., 2015)

Tool (4): Kiersma Chen Empathy Scale (KCES):

This tool was developed by Kiersma, Chen, Yehle, & Plake, (2013) to assesses nursing students' empathy. It will be adapted by the researcher. It consists of 15 self-assessment items using a Seven-Point-Likert type scale ranging from strongly disagree (1) to strongly agree (7). Total scores range from 15 to 105, where, Low level of empathy score ranges from 15 < 45, Moderate ranges from 45<75, while, High levels ranges from 75-105. This tool was tested for the reliability by using Cronbach's alpha, and it was reliable ($r=0.80$) in nursing students (Kiersma et al., 2013)

Method

An approval for conducting the study was obtained from the Research Ethics Committee of the Faculty of Nursing, Alexandria University. A Permission for conducting the study was obtained from the Faculty of Nursing, Alexandria University, and the administrators of the identified institution to collect the necessary data. All the study tools were translated into Arabic language, a back-to-back translated (Arabic to English) was done. The study tools were tested for their content validity by (5) experts in the field of the study and the necessary

modifications were done. A pilot study was carried out on 5% ($n= 26$) of the study sample in order to test the clarity and applicability of the research tools, all modifications were done. The study tools were tested for their reliability. using Cronbach's Alpha test. The reliability coefficient was .773 for tool one and .821 for tool two, .929 for tool three and .804 for tool four which were acceptable.

Data were gathered from the study subjects through hand delivered questionnaire by the researcher after explaining the purpose of the study. Written informed consent was obtained from the study subjects to collect the necessary data and the need explanations were given when requested. The time needed to fill the previously mention questionnaire was about 40 minutes. Data collection take a period of three months from 1\12\2021 to 3\3\2022. The confidentiality of the data and the anonymity of the study subjects were assured.

Ethical considerations:

Informed written consent was obtained from the participants for participating in the study after explanation of the aim of the study to each one. Participants were informed that they had the right to participate in the study and to withdraw at any time. Participant anonymity was respected. The confidentiality of the data was adequately maintained.

Statistical Analysis:

The collected data were analysed using the statistical package for social science SPSS (version 20). The following statistical analysis measures were used:

- **Descriptive statistical measures**, which included: numbers, percentages, and averages (Minimum, Maximum, Arithmetic mean (\bar{X}), Standard

deviation (SD).

- **Statistical analysis tests**, which included: Chi square, student T test and paired T test.

Results

The present study mainly concerned with identify relationship between patient centered care and empathy among nursing students at the Alexandria Technical Health Institute. Results are presented for each research question. The main variables that were measured in this study included relationship of empathy, active listening, and self-awareness, to PCC.

Table (1) presented characteristics of the study subjects. The results revealed that the highest percentage of students (65.3%) aged 19 years. While, the lowest percentage (11.7%)aged 20-<21 years. The findings showed that 74 % of the students were in the fourth year, Moreover, less than half of them (44.3 %) were have excellent academic performance according to GPA.

Table (2) represents level of PCC as perceived by the study subjects, the findings revealed that, mean percent score of PCC was 64.94% as perceived by the study subjects. Also, the majority of the subjects (93.7%) had a moderate level of PCC

Table (3): In relation to level of active listening as perceived by the study subjects, the results revealed that more than half percent of the study subjects (56%) had a moderate level of active listening. On the other hand, the majority of them (91.7%) had a high responding level, and 73.7% of students had moderate level of sensing.

Table (4): In relation to mean percent score of active listening as perceived by the study subjects. The study concluded that, the total mean percent score of active listening was 69.87%. The results revealed that the highest mean present percentage of students (77.43%) was related to responding as a one dimension of active listening, while the sensing dimension had the lowest mean percent score (62.36).

Table (5): In relation to level of self-awareness as perceived by the study subjects, the results revealed that mean percent of self-awareness was (75.5%), the majority of the subjects (71.0 %) had a moderate level of self-awareness.

Table (6): In relation to mean percent of empathy as perceived by the study subjects. The study concluded that, the total mean percent score of empathy was 67.79%. Also, the study revealed that, 65% of the study subjects had a moderate level of empathy.

Table (7): shows a relationship between the studied subjects' demographic characteristics and PCC, self-awareness, empathy, and active listening. The findings revealed a significant relationship between students' academic performance according to GPA and PCC, self-awareness, empathy, and active listening respectively ($p=0.000$, $p=0.000$, $p=0.002$). Where, the findings indicated that the study subject who have "Excellent" GPA (72.81 ± 2.064) had higher perception about PCC than the others.

Moreover, the findings indicated that the students who have "Good" GPA (51.65 ± 3.058) had higher perception about self -awareness than the others degrees. While no relationship between others subjects' demographic characteristics and self -awareness.

Table (8) shows a significant positive correlation between PCC, active listening, self-awareness and empathy respectively ($p=0.000$, $p=0.001$, $p=0.004$).

Discussion

This study examining the relationship between active listening, self-awareness, empathy, and PCC based on Rogers' theory. Specially, there no study has tested the relationships among all the four variables in Egypt. The study revealed a significant positive relationship of active listening and self-awareness with empathy. The findings of the current study support the relationship of active listening and self-awareness to empathy in Rogers' theory.

In the same line, Haleya et al (2017) found that Active listening and self-awareness were significantly associated with empathy. Rogers' theory suggests that active listening and self-awareness lead to empathy, which leads to PCC. Therefore, active listening and self-awareness can be the targets of interventions to improve levels of empathy and may result in improvement in PCC.

The findings of the current study also support the relationship between empathy and PCC, which Rogers' theory suggests and has been also supported in the study carried out by Jones and Huggins, (2014) PCC was measured using an instrument that measured the four main characteristics of PCC, which are caring, sharing, communication, and therapeutic relationship.

The present study showed an interesting finding that there was a positive significant correlation between PCC, and empathy. The findings of the current study

support the relationship of active listening and self-awareness to empathy in Rogers' theory. The result of the current study align with previous research findings that support the relationship between empathy and PCC (Price et al., 2006, Mercer et al., 2008, Neumann et al., 2007)

Furthermore, the study findings revealed a relationship between students' academic performance according to GPA and their perception of PCC, with a significant relation to those who have an Excellent GPA than the other degrees, while no significant difference present regarding academic grades of students and PCC, this is in agreement with a Canadian study that reported that the PCC score did not change with student grade or semester (Dwamena 2012).

Also, the study findings revealed a significant relation between students' academic performance according to GPA and both of active listening ($P=0.002$) as well as students' self-awareness ($p=0.000$) and empathy ($p=0.00$). this could be attributed to the fact that students who have high academic performance are more knowledgeable, have an increase in their cognitive ability to consider others' perspectives and provide skills that encourage thoughts about others. this finding is consistent with Schieman & Van's study (2000). Moreover, Rogers (2007) suggested active listening and self-awareness as factors affecting empathy. In this concern, Waite & McKinney, (2016). Stated that, as a result of gaining active listening and self-awareness, level of empathy may improve.

Conclusion

Improvement in active listening and self-awareness may lead to improvement in empathy, and, in turn, improvement in patient-centered care.

Recommendations

The findings of the current study suggest that if nursing students can incorporate active listening and becoming self-aware into their practice, this may increase their empathy and, in turn, increase PCC. Future studies are needed to

develop and deliver interventions aimed at increasing active listening and self-awareness, and to test whether improvement in active listening and self-awareness increases empathy and, in turn, increases PCC.

Nurse educators need to teach nursing students how to improve active listening and self-awareness to improve their levels of empathy

Table (1): Distribution of the studied students according to their selected characteristics.

Students' characteristics	Total N=300	
	No.	%
Age (years)		
▪ 18-	69	23.0
▪ 19-	196	65.3
▪ 20-<21	35	11.7
Min- Max 18.0-21.0 Mean \pm SD 18.89 \pm 0.579		
Academic Year		
▪ Fourth	222	74.0
▪ Fifth	78	26.0
Academic performance according to GPA		
▪ Acceptable	75	25.0
▪ Good	92	30.7
▪ Excellent	133	44.3

Table (2) The level and mean percent of PCC as perceived by nursing students.:

Items	Low		Moderate		High	
	No.	%	No.	%	No.	%
▪ Levels of Patient's Centered Care	0	0.0	281	93.7	19	6.3
▪ Min – Max	53.0-82.0					
▪ Mean \pm SD	70.14 \pm 4.897					
▪ Mean Percent Score	64.94%					

Table (3): Levels of active listening as perceived by nursing students (By domains).

Items	Levels of Active Listening					
	Low		Moderate		High	
	No.	%	No.	%	No.	%
- Sensing	0	0.0	221	73.7	79	26.3
- Processing	0	0.0	104	34.7	196	65.3
- Responding	0	0.0	25	8.3	275	91.7
Total Active Listening	0	0.0	168	56.0	132	44.0

Table (4): Mean percent of active listening as perceived by nursing students (By domains).

Items	Min -Max	Mean ± SD	Mean Percent Score	Rank
- Sensing	14.0-22.0	17.46±2.762	62.36%	3
- Processing	9.0-19.0	14.66±2.323	69.81%	2
- Responding	16.0-24.0	21.68±1.847	77.43%	1
Total Active Listening	40.0-60.0	53.80±3.778	69.87%	

Table (5): Distribution of the studied students according to the level and mean percent of self -awareness:

Items	Low		Moderate		High	
	No.	%	No.	%	No.	%
Levels of self-awareness	0	0.0	213	71.0	87	29.0
Min - Max	42.0-56.0					
Mean ± SD	49.83±3.218					
Mean Percent Score	75.50%					

Table (6): Mean percent and levels of empathy as perceived by nursing students.

Items	Low		Moderate		High	
	No.	%	No.	%	No.	%
▪ Levels of empathy	0	0.0	195	65.0	105	35.0
▪ Min – Max	57.0-79.0					
▪ Mean ± SD	71.18±4.851					
▪ Mean Percent Score	67.79%					

Table (7): Relationship between the nursing students’ demographic characteristics and their perception of PCC, active listening, self-awareness, and empathy.

Items	Patient’s centered care test of Significance	Active listening test of Significance	Self-awareness test of Significance	Empathy test of Significance
Age (years)				
▪ 18- ▪ 19- ▪ 20-<21	F=1.727 P=0.180	F=1.933 P=0.147	F=4.651 P=0.010*	F=1.063 P=0.347
Academic Year				
▪ Fourth ▪ Fifth	t=0.164 P=0.686	t=0.080 P=0.777	t=0.114 P=0.736	t=1.581 P=0.210
Academic performance according to GPA				
▪ Acceptable ▪ Good ▪ Excellent	F=23.24 P=0.000*	F=6.368 P=0.002*	F=35.791 P=0.000*	F=35.352 P=0.000*

Statistically significant at $p \leq 0.05$

Table (8): Correlation Matrix between the nursing students' empathy, active listening, self-awareness and PCC.

		PCC	Active Listening Sensing	Active Listening Processing	Active Listening Responding	Active Listening	Self-awareness	Empathy
Patient Centered Care	r							
	p							
Active Listening. Sensing	r	0.326						
	p	0.000*						
Active Listening. Processing	r	-0.222	-0.338					
	p	0.000*	0.000*					
Active Listening. Responding	r	0.251	-0.023	0.280				
	p	0.000*	0.692	0.000*				
Active Listening	r	0.225	0.512	0.505	0.645			
	p	0.000*	0.000*	0.000*	0.000*			
Self-awareness	r	-0.199	-0.250	-0.096	-0.133	-0.307		
	p	0.001*	0.000*	0.096	0.022*	0.000*		
Empathy	r	-0.164	0.013	-0.409	0.198	-0.145	0.140	
	p	0.004*	0.828	0.000*	0.001*	0.012*	0.015*	

R= Pearson Correlation *. Correlation is significant at $p \leq 0.05$

$r \geq 0.9$ very high correlation $r 0.7-0.9$ high correlation $r 0.5-0.7$ moderate correlation $r < 0.5$ low correlation

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