

Empathy's Relationship with Adult Attachment, Self-Esteem, and Communication Self-Efficacy in Nurses

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Abstract

This study used descriptive correlation to examine factors affecting empathy in nurses, specifically, how empathy relates to adult attachment, self-esteem, and communication self-efficacy. Data were collected from March 16 until March 27, 2015. A survey was administered to 100 nurses working in two university hospitals located in D city and K province. All data were analyzed using IBM SPSS Statistics version 20.0; general characteristics and variables were tested using descriptive statistics including frequencies and percentages. At-test and one-way ANOVA were used to test empathy according to general characteristics; Pearson's correlation coefficient was used to test empathy's correlation with each variable. Factors affecting empathy were analyzed using stepwise multiple regression. The results are as follows:

No differences in participants' general characteristics were found. Participants exhibiting higher attachment avoidance exhibited lower empathy; higher attachment anxiety and communication self-efficacy were correlated with higher empathy. Self-esteem was not significantly correlated with empathy. Attachment avoidance, attachment anxiety, and communication self-efficacy were found to affect empathy, with 13.1% total explanatory power. This study is significant as it identifies factors affecting empathy in nurses; this basic information may be used to structure intervention studies on empathy enhancement.

Keywords: Empathy, Adult attachment, Self-esteem, Communication self-efficacy

1. Introduction

1.1 Background

We presently live in a society that has rapidly evolved from a community-centered culture to a self-centered culture, as well as in a period characterized by a mixture of diverse cultures and values. Although various cultures are understood and accepted in liberalized society, interpersonal relationships that take others into consideration are weakened by the prioritization of self-focused values. Interpersonal relationships begin with empathy, which involves one person's understanding of another. Empathy is the emotional understanding, and shared experience, of another person's situation [1] and an element of communication that reflects an ability to understand even irrational thoughts or motivations that cannot be clearly expressed by the subject [2]. In interpersonal relationships, empathy inhibits the other individual's psychological defense mechanisms, and may promote open and honest expression of thoughts and feelings [3]; hence, greater

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empathy may enhance interpersonal relationship skills [4].

Inasmuch as empathy involves understanding of other individuals, it is essential in people who are in a position involving caring for others. Empathy may be considered especially important in nurses, who provide care to many patients in a treatment setting [5]. Empathy in nurses has the positive effect of helping patients control their emotions and remain hopeful, while controlling anxiety and pain [6]. Therefore, in order to be effectively empathetic, nurses in clinical settings need to provide understanding, awareness, and a supportive attitude, and comfort loneliness and anxiety felt by patients [2].

Empathy is expected to importantly affect the relationship between nurses and patients; however, patients often feel that nurses do not provide enough empathy. Moreover, it has been shown that patients feel distanced from less empathetic nurses, and that, among the various services nurses provide, areas relating to empathy (*e.g.*, listening attentively to patients; understanding their needs) are often perceived as inadequate [7-9].

There are various reasons why nurses struggle to empathize with patients. Currently, in treatment environments, nurses often prioritize practical work and other related duties rather than direct patient care [6]. Moreover, nurses also face difficulty in building empathetic interpersonal relationships, as this often entails the psychological burden of relating to patients whose conditions are difficult to treat [10]. Further, factors such as stress, nurses' emotional state, and lack of communication caused by excessive workload also require consideration; additionally, individual nurses' personal attributes may affect empathy. As a personal characteristic, empathy may be improved by expanding the individual's scope of human understanding and through various education and training measures [11]; nurses' personal attributes are therefore considered to be primary factors influencing empathy.

Personal attributes that influence empathy include adult attachment, self-esteem, and communication self-efficacy. Attachment may be considered a strong and continuous emotional bond that a person forms with close others [12], and a personal attribute that is formed in childhood, which plays a cognitive role in the anticipation of the reactions of oneself and others, and in the interpretation of the significance of situations in interpersonal relationships, and thus affects interpersonal relationships [13]. Adult attachment that has developed since childhood through relationships with parents and other close individuals maybe divided into attachment anxiety, which is the expression of fear of rejection and abandonment, and attachment avoidance, which is the expression of fear of intimacy and encroachment on independence due to dependency [14]. According to a study conducted on married men and women, higher attachment avoidance is correlated with lower empathy, while higher attachment anxiety is correlated with higher cognitive empathy, a subcategory of empathy [15]. Moreover, according to a study conducted on adults, higher attachment avoidance is correlated with lower empathy, and higher attachment anxiety is correlated with higher emotional empathy, a subcategory of empathy [16].

Self-esteem is a positive or negative self-evaluation reflecting the individual perception that one is or is not worthy [17]. Individuals with high self-esteem accept positive events positively, and inhibit or limit negative events' influence on their interactions with their environment; self-esteem hence importantly affects interpersonal relationships [18]. A study on the relationship between empathy and interpersonal relationships in nursing students found that self-esteem is positively correlated with empathy [4]; further, a study examining occupational therapists found that subjects with higher self-esteem exhibited greater understanding and empathy towards others [19].

Communication self-efficacy is the belief or judgment that one is able to communicate effectively with a patient [20, 2]. Communication importantly affects interpersonal relationships by influencing people's ability to understand how others think of and react to them [21]. Moreover, the ability to know and accurately express one's thoughts and

emotions benefits interpersonal relationships [22]. In a study examining general and psychiatric ward nurses, higher communication self-efficacy was correlated with greater empathy [2].

Extant research has examined empathy in pediatric nurses, empathy and influencing factors in geriatric nurses, empathy and job satisfaction in general and psychiatric ward nurses, development of empathetic capacity measurement tools, and nurses' cultural competency and empathy [23-26]; however, no extant research has examined the relationship between nurses' empathy and nurses' personal attributes.

The present study therefore examined the relationship between nurses' empathy and factors extant research indicates are likely to affect empathy, such as adult attachment, self-esteem, and communication self-efficacy, in order to provide basic data for future intervention studies aiming to enhance empathy in nurses by identifying factors that influence empathy.

1.2 Purpose

The present study aimed to examine the relationship between empathy and adult attachment, self-esteem, and communication self-efficacy in nurses, and to identify factors affecting empathy. Detailed purposes are as follows:

- Investigate empathy, adult attachment, self-esteem, and communication self-efficacy in nurses
- Identify differences in empathy correlated with sociodemographic characteristics
- Identify relationships between empathy and adult attachment, self-esteem, and communication self-efficacy in nurses
- Identify factors affecting empathy.

2. Methods

2.1 Study Design

This descriptive cross-sectional research was conducted to investigate relationships between nurses' empathy and adult attachment, self-esteem, and communication self-efficacy, and to identify the factors affecting empathy.

2.2 Participants

Research participants, who had understood the research and provided informed consent to participate in the study, were 100 nurses working in K and D university hospitals in D city, K Province.

The required number of participants was calculated using G*power 3.1, with parameters of significance level $\alpha = .05$, power = .80, and effect size = .15. The minimum sample size required was calculated to be 92; this number was satisfied.

2.3 Measurement

2.3.1 Empathy

Empathy was measured using Jeon's tool [27], which included elements of the Questionnaire Measure of Emotional Empathy [28], Interpersonal Reactivity Index [1], and Empathy Index [29]. This index includes 30 questions, with responses provided using a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating higher levels of empathy. The reliability of the scale was verified, with Cronbach's α of .87.

2.3.2 Adult Attachment

Kim [30] translated and validated a version of the Experiences in Close Relationships-Revised Questionnaire, which was originally developed by Fraley, Waller, and Brennan [31]. The questionnaire contains 36 items: 18 concerning attachment-related anxiety and 18 concerning attachment-related avoidance. Responses for each item were provided using a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher total scores indicated a higher number of characteristics from the domain in question, suggesting the formation of unstable attachment. Cronbach's α s were .91, .92, and .81 for adult attachment, attachment-related anxiety, and attachment-related avoidance, respectively, demonstrating the reliability of the scale.

2.3.3 Self-esteem

Jeon's revised version [32] of Rogenberg's Self-Esteem Evaluation Scale [17] was used to measure self-esteem. The questionnaire contains 10 items, with responses provided using a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). Negative questions are reverse scored, and higher scores indicate higher self-esteem. The reliability of the scale was verified, with Cronbach's α of .83.

2.3.4 Communication Self-efficacy

Larson et al.'s Counselor Self-Evaluation Questionnaire [33], translated by Hong [34] and revised by Park [2], was used to determine nurses' communication self-efficacy. The questionnaire contains 37 items, with responses provided using a 6-point scale ranging from 1 (never) to 6 (always), and higher scores indicating higher communication self-efficacy. The reliability of the scale was verified, with Cronbach's α of .92.

2.4 Data Collection

Data were collected from March 16 until March 27, 2015.

Before data collection, the researcher visited the nursing departments at these hospitals to explain the purpose of the study and request nurses' cooperation. With the help of the educational team leaders and chief nurses in each nursing unit, questionnaires were distributed to hospital wards.

The study was conducted only on participants who gave their written consent after receiving an explanation of the purpose and scope of the study, possible effects of participation, protection of personal information, and a declaration that participants were not subject to any negative consequences from mid-study drop-out. The present study used a structured self-report questionnaire, which required approximately 15 minutes to complete.

In total, 120 questionnaires were issued, and 110 were collected. Of the 110 questionnaires collected, 10 were excluded due to incomplete responses, and the data from the remaining 100 were analyzed.

2.5 Data analysis

Participants' demographic characteristics, empathy, adult attachment, self-esteem, and communication self-efficacy were analyzed using frequencies, percentages, means, and standard deviations. Empathy levels were compared according to participants' general demographics using *t* tests and a one-way ANOVA. The relationships between empathy and adult attachment, self-esteem, and communication self-efficacy were examined using Pearson's correlation coefficient, and stepwise multiple regression analysis was performed to identify the factors affecting empathy.

3 Results

3.1 General Characteristics of Participants

The total number of participants was 100; most participants (99,99.0%) were female. The mean age was 30.63 years; the percentage aged under 30 years was 55.6%. Regarding demographics, 52.6% of participants had ≥ 5 years of experience, 60.0% were unmarried and 55.0% possessed at least a bachelor's degree. Internal medicine was the department with the highest number of participants (47.0%); most participants (91.1%) were regular nurses; 54.5% of participants indicated no religion; 53.0% had two or more siblings (Table 1).

Table 1. Empathy According to General Characteristics (N=100)

Characteristic	Category	n(%)	M \pm SD	t or F	ρ
Sex	Male	1 (1.0)			
	Female	99 (99.0)			
Age*	<30	55 (55.6)	104.11 \pm 12.13	0.60	.552
	≥ 30	44 (44.4)	102.73 \pm 10.54		
Clinical experience* (years)	<5	46 (47.4)	102.72 \pm 11.27	-2.82	.779
	≥ 5	51 (52.6)	103.35 \pm 10.93		
Marital status	Yes	40 (40.0)	104.90 \pm 11.52	0.80	.427
	No	60 (60.0)	103.00 \pm 11.78		
Education	Associate degree	45 (45.0)	101.78 \pm 8.78	-1.55	.125
	\geq Bachelor's degree	55 (55.0)	105.38 \pm 13.43		
Working Unit	Medical	47 (47.0)	104.11 \pm 12.09	0.25	.862
	Surgery	33 (33.0)	102.52 \pm 11.93		
	Intensive care	10 (10.0)	104.10 \pm 6.28		
	Chemotherapy administration	10 (10.0)	105.90 \pm 13.84		
Position*	Staff	88 (91.0)	103.60 \pm 11.54	-0.42	.673
	Chief	9 (9.0)	105.33 \pm 13.49		
Religion*	Yes	45 (45.5)	105.44 \pm 11.52	1.28	.203
	No	54 (54.5)	102.43 \pm 11.80		
Siblings	≤ 1	47 (47.0)	104.06 \pm 13.41	0.24	.811
	≥ 2	53 (53.0)	103.49 \pm 9.97		

*Missing data excluded

3.2 Descriptive Data of Empathy, Adult Attachment, Self-esteem, Communication Self-efficacy

Participants' mean empathy score was 103.8 ± 11.66 ; the mean adult attachment score was 118.1 ± 19.57 . The mean self-esteem score was 28.6 ± 3.22 , while mean scores for the sub-factors adult attachment, attachment anxiety and attachment avoidance were 52.3 ± 13.23 and 65.7 ± 10.23 , respectively. The mean communication self-efficacy score was 142.3 ± 17.58 (Table 2).

Table 2. Descriptive Data of Empathy, Adult Attachment, Self-esteem, Communication Self-efficacy(N=100)

Variable	M ± SD	Min-Max	Range
Empathy	103.8 ± 11.66	71-138	30-150
Adult attachment	118.1 ± 19.57	66-162	36-252
Attachment anxiety	52.3 ± 13.23	23-84	18-126
Attachment avoidance	65.7 ± 10.23	38-92	18-126
Self-esteem	28.6 ± 3.22	21-38	10-40
Communication Self-efficacy	142.3 ± 17.58	100-192	37-222

3.3 Empathy According to General Characteristics

No correlation was found between empathy and general participant characteristics (Table 1).

3.4 Correlations between Empathy and Adult Attachment, Self-esteem, and Communication Self-efficacy

Analysis of correlations between empathy and adult attachment, self-esteem, and communication self-efficacy indicated that empathy was significantly negatively correlated with attachment anxiety, a sub-factor of adult attachment ($r = -.26, p = .008$), and that communication self-efficacy was significantly positively correlated with empathy ($r = .28, p = .004$)(Table 3).

Table 3. Correlations between Empathy and Adult Attachment, Self-esteem, and Communication Self-efficacy (N = 100)

Variable	Attachment anxiety	Attachment avoidance	Self-esteem	Communication self-efficacy
	<i>r (p)</i>			
Empathy	.00 (.972)	-.26 (.008)	.13 (.126)	.28 (.004)

3.5 Variables influencing empathy

Multiple regression analysis was used to examine factors affecting empathy. Attachment avoidance and communication self-efficacy, which exhibited significant correlations in the correlation analysis, were added. Attachment anxiety and self-esteem, which did not exhibit significant correlations in the correlation analysis, were also added as previous studies have found them to be significantly correlated with empathy. The total explanatory power of the regression model of empathy in nurses was 13.1% ($F = 5.98, p = .001$); attachment anxiety ($B = .25, p = .017$), attachment avoidance ($B = -.26, p = .036$), and communication self-efficacy ($B = .23, p = .004$) were supported as variables significantly affecting empathy. Among these, communication self-efficacy ($\beta = .34, p = .004$) was found to be the factor with the greatest influence on empathy (Table 4).

Table 4. Variables Influencing Empathy (N = 100)

Variable	B	<i>B</i>	t	<i>p</i>	R ²	Adj. R ²	F(<i>p</i>)
Constants	75.31		4.35	.000	.157	.131	5.98(.001)
Attachment anxiety	.25	.28	2.43	.017			
Attachment avoidance	-.26	-.22	-2.12	.036			
Communication self-efficacy	.23	.34	2.93	.004			

4. Discussion

The present study examined factors affecting empathy in nurses by investigating empathy, adult attachment, self-esteem, and communication self-efficacy, and identifying correlations between empathy and each of the sevariables. Discussions based on key results are as follows:

The mean empathy score of participants was 103.76, which was similar to the mean score found in another study (103.8) on nurses that used a similar tool [26]. This score was lower than the mean score (107.1)obtained in a study examining married men and women [15] and a study that administered multicultural programs to control and experimental groups of nursing students, which obtained mean scores of 111.48 and 115.5, respectively [35]. The empathy level of participants in the present study was thus found to be lower than examined groups in other research; however, considering that this study's participants were nurses in university hospitals, empathy may have been lower due to empathy fatigue caused by emotions generated in the process of nursing suffering patients with high health care needs [36]. Empathy fatigue and exhaustion may promote indifference towards patients and loss of emotion [37]. This suggests that future studies should examine the relationship between empathy levels and empathy fatigue.

No significant correlations were found between empathy and general characteristics; this result is consistent with another study on nurses that found no correlation between empathy and age, marital status, and work department, but found correlations with workplace, work hours, and job position [26]. Moreover, a study on general and psychiatric ward nurses found significant correlations between empathy and age, marital status, education, job position, and clinical experience. These results are inconsistent with the results of the present study [2]; hence, a repeat study examining relationships between empathy and general characteristics and using similar tools is necessary.

In the present study, attachment avoidance, attachment anxiety, and communication self-efficacy were identified as factors influencing empathy. Participants with higher attachment avoidance showed lower empathy; those with higher attachment anxiety showed higher empathy; these results are consistent with those of studies examining married men and women and adults, which found that higher attachment avoidance was correlated with lower empathy [15, 16]. When attachment avoidance (*i.e.*, fear of depending on others or being in intimate relationships) is high, it is difficult to take another's perspective or attitude, or empathize with another's suffering [15]; hence, when attachment avoidance is high in nurses, it may inhibit nurses' empathy with patients.

The results of the present study regarding the relationship between attachment anxiety and empathy support the results of Jung and Kim (2010), who found that attachment anxiety affects empathy. Adults with high attachment anxiety fear rejection and abandonment, while desiring support from, and intimacy with, close others. Additionally, since suffering and anxiety felt by others may be empathized through psychological suffering experienced by the empathizer during the attachment formation process,

attachment anxiety may positively affect empathy [15]. This latter effect, however, must be confirmed in future repeat studies.

The present study demonstrated the importance of stable attachment formation in nurses. Although altering deeply entrenched attachment styles in nurses is difficult, symbols or strategies of adult attachment may be altered as an outcome of new attachments [38]; attachment intervention studies examining personal attachment characteristics in nurses are therefore required.

In the present study, no significant correlation was found between self-esteem and empathy; this result does not coincide with the results of studies conducted on nursing students that found a significant positive correlation between self-esteem and empathy [4]. The mean obtained self-esteem score was 28.6, which was lower than the average score of 29.89 inconvalescent hospital nurses [39]. A review of precedent studies indicated that higher self-esteem is correlated with higher levels of understanding and empathy towards others [19], and allows for successful formation of relationships [4], as well as the ability to respect the thoughts and emotions of others. By contrast, lower self-esteem is correlated with lack of confidence in interpersonal relationships, which may cause avoidance or dependence [40]. Self-esteem may be affected by the feedback or words of others, including when it is high; however, low self-esteem may manifest as characteristics of unstable self-esteem [18]. This relationship is supported by studies that have reported that high self-esteem is correlated with self-expansion and defense [41, 42, 18]. It is therefore necessary to conduct repeat studies that examine the stability of self-esteem, which is a sub-factor of self-esteem and may influence empathy.

In the present study, higher communication self-efficacy was found to be correlated with higher empathy; this result is consistent with the finding that higher communication self-efficacy in general and psychiatric ward nurses is correlated with higher levels of empathy [2]. This supports studies that have found that communication self-efficacy is an important factor in facilitative communication [43], and that increased communication self-efficacy enhance empathy levels and thereby facilitates communication with patients [2].

Nurses who interact with patients, who suffer both from physical pain due to ailment, and from psychological and emotional pain that may include loss of hope for life, fear of death, and anxiety [6], face difficulties in forming empathetic interpersonal relationships with patients due to the psychological burden that patients' conditions may impose [10]; hence, interventions aiming to promote empathetic relationships by increasing communication self-efficacy are required. That is, in accordance with a previous study [2] that found that a group that received communication improvement education exhibited higher communication self-efficacy and empathy than a group that did not receive this education, future research should use communication education techniques to promote empathy.

This study is significant as it may provide basic data to inform intervention studies aiming to enhance empathy, through its examination of empathy levels in nurses, and its verification of empathy's relationship with adult attachment, self-esteem, and communication self-efficacy, as well as its identification of factors that influence empathy. However, since the participants were convenience-sampled from a limited area, this study's results should be generalized with caution.

5. Conclusion

The purpose of the present study was to determine the relationship between empathy and adult attachment, self-esteem, and communication self-efficacy in nurses, in order to provide basic data to inform nursing interventions aiming to enhance empathy levels in nurses.

The present study found no correlation between empathy and participants' general

characteristics; however, empathy was shown to be significantly correlated with communication self-efficacy, and with attachment avoidance, which is a sub-factor of adult attachment. The present study is significant as its findings may serve as basic data informing intervention measures that aim to enhance empathy levels in nurses, as this study's results show that attachment avoidance, attachment anxiety, and communication self-efficacy significantly affect empathy.

Based on the present study's findings, the following recommendations are made:

Future studies should examine factors besides personal characteristics that may influence empathy in nurses; for instance, environmental factors including the work environment.

Additionally, future studies should aim to develop programs that enhance empathy in nurses, based on the factors this study has identified as affecting empathy.

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