

Relación entre estilos parentales disfuncionales, empatía y variables sociodemográficas en estudiantes de Enfermería, Medicina Humana y Psicología

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Resumen

El presente estudio tuvo como objetivo establecer la relación entre los estilos parentales disfuncionales y la empatía en estudiantes universitarios de Lima, además de comparaciones según su carrera profesional (Enfermería, Medicina Humana y Psicología). La muestra estuvo compuesta por 599 estudiantes de ambos sexos, con edades entre los 21 y 25 años, a quienes se les aplicó la Escala de Estilos Parentales Disfuncionales –de Parker et al. (1979)–, la Escala de Empatía Personal y Profesional –diseñada por Yaraskavitch et al. (2009)–, ambas adaptadas para los fines del estudio, y una ficha sociodemográfica elaborada por los autores. Los resultados muestran una relación no significativa entre los puntajes totales de estilos parentales disfuncionales y de empatía, aunque se obtuvo una relación inversa entre la subescala de estilo disfuncional paterno “autoritario-controlador” con las dimensiones “empatía personal cognitiva” y “empatía profesional cognitiva”, y una relación directa entre la subescala de estilo disfuncional materno con las dimensiones “empatía personal emotiva” y “empatía profesional emotiva”; además de que, respecto al género, las mujeres presentaron mayor nivel de empatía, y, según carrera, los estudiantes de Enfermería presentaron mayores niveles de empatía, mientras que los de Medicina mostraron más estilos parentales disfuncionales. Finalmente, los estudiantes que llevaron a cabo cursos de desarrollo personal en su formación profesional presentaron un mayor nivel de empatía.

Palabras clave: empatía, estilos parentales disfuncionales, ciencias de la salud.

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Dysfunctional parenting styles, empathy and socio-demographic variables in Nursing, Human Medicine and Psychology students

Abstract

The objective of this study was to establish the relationship between dysfunctional parenting styles and empathy in Nursing, Human Medicine and Psychology students. The study's sample consisted of 599 students, from both genders, and from different cycles of their university studies. Their ages ranged between 21 and 25 years. To assess them, the Dysfunctional Parenting Styles Scale by Parker, et al. (1979) was used, previously adapted to Peruvian population. The participants were also evaluated with the Personal and Professional Empathy Scale designed by Yaraskavitch (2009), and completed a socio-demographic data sheet created *ad hoc*. General results showed no significant relationships between the dysfunctional parenting styles and empathy total scores. In contrast, considering the father figure, an inverse relationship between the authoritarian-controlling dysfunctional parenting style and the personal and professional cognitive empathy was found, while the indifference – negligence dysfunctional parenting style was inversely associated with the emotive personal empathy. As to the mother figure, there is a significant and direct relationship between authoritarian-controlling dysfunctional parenting style and personal and professional emotive empathy. It was also found that regarding gender, women have higher levels of empathy. With respect to professional degree courses, Nursing students have a higher level of empathy than Medicine and Psychology students, while Medicine students have more dysfunctional parenting styles than the Nursing and Psychology groups. Finally, students that had taken personal development courses showed a higher level of empathy.

Key words: empathy, dysfunctional parental styles, majors in health sciences.

Relação entre estilos parentais disfuncionais, empatia e variáveis sociodemográficas em estudantes de Enfermagem, Medicina Humana e Psicologia

Resumo

O presente estudo teve como objetivo estabelecer a relação entre os estilos parentais disfuncionais e a empatia em estudantes universitários de Lima, além de comparações de acordo com a carreira profissional (Enfermagem, Medicina Humana e Psicologia). A amostra foi composta por 599 estudantes de ambos os sexos, com idades entre 21 e 25 anos, a quem foi aplicada a Escala de Estilos Parentais Disfuncionais –de Parker et al. (1979)–, a Escala de Empatia Pessoal e Profissional –desenhada por Yaraskavitch et al. (2009)–, ambas adaptadas para os fins do estudo, e uma ficha sociodemográfica elaborada pelos autores. Os resultados mostram uma relação não significativa entre as pontuações totais de estilos parentais disfuncionais e de empatia, mas obteve-se uma relação inversa entre a subescala de estilo disfuncional paterno “autoritário-controlador” com as dimensões “empatia pessoal cognitiva” e “empatia profissional cognitiva”, e uma relação direta entre a subescala de estilo disfuncional materno com as dimensões “empatia pessoal emotiva” e “empatia profissional emotiva”. Além disso, com respeito ao gênero, as mulheres apresentaram maior nível de empatia e, de acordo com o curso, os estudantes de Enfermagem apresentaram maiores níveis de empatia, enquanto os de Medicina mostraram mais estilos parentais disfuncionais. Finalmente, os estudantes que fizeram cursos de desenvolvimento pessoal em sua formação profissional apresentaram maior nível de empatia.

Palavras-chave: empatia, estilos parentais disfuncionais, ciências da saúde.

Introduction

The healthcare system in the community plays the role of promoting a good quality of life and the ability to enjoy, through the prevention and treatment of health problems. The professional in the healthcare field is part of a team which offers a service to human beings, who not only show the symptomatology in consultations, but also belong to a society and need to feel heard and treated with respect and dignity. That's why it is important to analyze if the healthcare systems in the country respond to their inhabitant's basic needs, from the solution of medical problems to the essential need

of human interaction when looking for relief. Cuba, Jurado and Estrella (2011) identified that 52% of health services users feel satisfied with the medical solutions and 47% feel satisfied at a medium level with the attention received. So, it is pertinent to evaluate what happens with the other 50% of users that don't feel satisfied. It should be pondered on whether or not the healthcare personnel is properly prepared and trained to give a humanized attention that, although is not the only factor that can provide the solution to the medical problem, it helps to generate wellbeing and satisfaction to the user. That's how *the art of curing* validates the personal encounter between the doctor and the ill patient, considering

the diagnostic-therapeutical relationship to be essential for a human practice (Lain, 1964). Therefore, the present study tries to identify the empathetic abilities in students majoring in Health-related careers, associating them with dysfunctional parenting styles and socio-demographic variables that could explain the importance of the development of this ability to give an appropriate and human attention. As Lain says (1964), the relationship with the person who needs help must go beyond strictly medical aspects and consider the patient as an individual being of rational nature: a person, not an object. Therefore, the author reaffirms that the medical relationship should be framed in an inter-human help relationship.

As to the empathy variable, the present research is based on the proposal made initially by Rogers (1959; cited by Yarascavitch, et al., 2009) defining empathy as the accurate perception of the other person's perspective taking into account the emotional components and meanings experienced by this person, without losing the own point of view. The vast majority of experts agree that empathy is a multidimensional construct, composed of emotional processes (reflexive feeling) and cognitive ones (imaginative thinking). According to the socio-psychological definition by Davis (1994) regarding empathy, the emotive processes reflect the general emotional reactivity of a person. In other words, the emotive empathy entails the intuitive consciousness of the other person's feelings without being part directly of the patient's complete emotional experience. In contrast to the emotional part, the author describes the cognitive processes as an ability to assume the other person's mental point of view. This implies breaking away from one's own perspective to consider another person's thoughts and attitudes at any given individual circumstance. Together, these emotional and cognitive processes reflect the general willingness of a person to suppress his own thoughts and feelings in order to feel and imagine what it is like to be in the other person's skin.

Several studies have been carried out to evaluate empathy in students and healthcare professionals. For instance, Sánchez (2010) conducted a comparative study of medical empathy, emotional sensitivity and psycho-socio-demographic characteristics between medicine students and professors who were specialized doctors in Venezuela. His results showed a high level of empathy and a positive interpersonal sensitivity in both groups, as well as a high level of empathy in students with social responsibility that were young, women, and single, whereas 6th year students who didn't show social responsibility and whose fathers were specialized laborers got low scores in interpersonal sensitivity. In another research conducted by Esquerda, Yuguero, Viñas and Pifarré (2015) in Spain, empathy development in medicine students was studied and the results showed more empathy in women. On the other hand, men as well as individuals having doctors as family members,

showed less empathy. Those who have made voluntary work and who have got a sick friend, showed the highest empathy. In Brasil, Moreto, Gonzales, Pessini and Craise (2014) studied the loss of empathy in medicine students and concluded that the level of empathy can change and that the study plans in Health sciences can influence the development of the students' empathy level. So it may be convenient to focus the educational actions on maintaining or increasing it. Intervening in this process would mostly imply, instead of teaching new things, teaching how to be empathetic and how to prevent the loss of this characteristic. Bilbao et al. (2005) who studied empathetic orientation in medicine students from *Libre* and *San Martín* Universities, in Colombia, found that the level of their empathetic orientation was low.

Furthermore, Diaz et al. (2015) studied the levels of empathy in kinesiology students in Chile, and found that the students showed relatively high empathy levels. In Peru, Salcedo – Rioja and Diaz – Narvaez (2015) analyzed empathy in dentistry students from the *Universidad Nacional Mayor de San Marcos*. The authors didn't find significant differences in empathy, considering the year of the degree course and the student's gender. They found that there are family, institutional, and socio-demographic variables that influence the level of empathy in students from Health-related majors, which is where the importance of their study lies. In that line, Madera, Tirado and Gonzalez (2015) studied the factors related to empathy in medicine students from the *Universidad de Cartagena*. They concluded that empathy levels in students can vary depending on gender, first option of studies, average marks, and academic performance as well as family functionality. The authors stressed the importance of implementing pedagogic strategies in the human areas that involve the students' families, in order to improve the empathy levels and the healthcare attention.

As to dysfunctional parenting styles, they are a constellation of parent harmful attitudes towards child upbringing, that are communicated in their daily interaction and that, as a whole, create a dysfunctional emotional atmosphere in which the parents' behaviors in relation to their children are manifested. The theory which started this line of studies is the one by Parker et al. (1979), which describes the dysfunctional parenting styles as follows: Indifference – Negligence, and Authoritarian – Controlling. Likewise, that dichotomy can also be found in Bumrind (1996), who describes them as extreme stances or viewpoints, where neither the conservative authoritarian attitude nor the more liberal permissive position offer the parents a proper model for their children's upbringing.

In addition, Camacho (2006), based on studies done by Lain in 1964, issued a publication about the doctor – patient relationship, where he recommends that healthcare professionals must get a specific education on the interpersonal relationship and the way of communicating with the people

they are going to deal with. A recent study emphasized that 7 out of each 10 users of *Essalud* and 5 out of each 10 users of *MINSA* are satisfied with the empathetic attention from the health personnel (García y Galvez, 2016). Providing a better attention from the health personnel requires, in part, revising the professional training they receive, which points to the important role universities play in this matter. In their study plans, they should include aspects related to formation in values and teaching to be empathetic; preserving that ability is a relevant way of humanizing the education in healthcare related majors. Even though empathy refers to a basic process in human development, identifying social and family factors associated with it, will help to explain the variable in a better way and also its future modalities of intervention. It is important to mention that the development of empathy also stems from parenting styles, considering the individual as the result of the significant and meaningful experiences lived during their upbringing. In this context, the present study is a correlational and comparative one, whose main objective is establishing the relationship between dysfunctional parental styles and the level of empathy in students from Lima, based on their major degree courses (Nursing, Human Medicine and Psychology).

Method

Type of study and design

Based on the objective formulated, a type of substantive – descriptive study, with correlational comparative, descriptive analysis was used (Sánchez and Reyes, 2015). A non-experimental, cross-sectional, correlational design was used in the present study.

Population and sample

The target population consisted of the enrolled students from the 3rd to the 9th cycle of studies from the majors of Nursing, Medicine and Psychology. They studied at a state university and at a private one, both of them located in Metropolitan Lima. The representative sample was selected by purposive sampling (Otzen and Monterol, 2017) and it consisted of 599 students aged between 21 and 25 years ($M=23.20$, $DS=3.34$), with a higher percentage of women (65.9%) than men (34.1%). Data from students in their 3rd to 9th year of studies in the three different majors were obtained, where 54.6% of them were in their 6th year of studies. In addition, a similar percentage of students was obtained from Nursing (34.4%), Medicine (34.6%) and Psychology (31.1%) majors. And 32.1% of the whole sample of students reported having taken a course in personal

development during their educational training in university. The data obtained from the participants were treated in an anonymous way, with prior informed consent. The study was assessed as a project by the Vice-Rector for Research from the *Universidad Nacional Mayor de San Marcos*.

Data collection techniques and instruments

The study technique was the survey and the instruments used were:

Dysfunctional Parenting Styles Scale (DPSS). The test was created by Parker, Tupling and Brown (1979). It consists of 15 items that can be administrated in an individual or a collective way, and it takes an average time of 10 to 15 minutes to be completed. The reliability analysis for internal consistency for the mother and father sub-scales reached a moderate level with values of .88 and .89. Matalinares, Raymundo and Baca (2014) reported a Cronbach's alpha of .82 for the father scale, and .78 for the mother scale.

The instrument validity was analyzed by means of exploratory factor analysis (EFA) of both sub-scales, which shows a distribution of the items in two factors (father sub-scale=43.79% of explained variance; mother sub-scale=40.20% of explained variance). Factor 1 of the father sub-scale and factor 2 of the mother sub-scale received the label of “indifference – negligence” based on the content analysis of the items; on the other hand, the label of “authoritarian – controlling” was assigned to factor 2 of the father sub-scale and factor 1 of the mother sub-scale, respectively. Although these results do not coincide with the study by Matalinares, Raymundo and Baca (2014), where they report three factors (father sub-scale=53.82% of explained variance; mother sub-scale=49.26% of explained variance), it is possible this incongruity is due to the fact that the present study consists of university students and the former study consisted of high school students.

The scales were worked upon with direct scores. The cut-off points for the father sub-scale were 14-17 (low), 18-22 (medium) and 23-26 (high); whereas for the mother sub-scale they were 14-17 (low), 18-22 (medium) and 23-26 (high).

Personal and Professional Empathy Scale (PPES). This test was created by Yarascavitch, Regehr, Hodges and Hass (2009) and it was translated to Spanish by Carrasco, Fasce and Perez (2014) by means of a retro-translation process. The questionnaire consists of 52 Likert-format items of 5 points. 26 of them assess professional empathy while the remaining 26 items assess personal empathy. The scale compresses 14 inverse items, from both the personal and professional scales (3, 7, 8, 9, 15, 23 and 26).

The reliability was analyzed by the internal consistency method. Previous studies of the PPES weren't found in the national literature. In a preliminary analysis of both sub-scales, the inverse items (3, 7, 8, 13, 20, 25 and 29) obtained item-test correlation values below .20; therefore, they were deleted. A second reliability analysis determined proper values and a Cronbach alpha of .80 for the personal empathy scale and .85 for the professional empathy scale.

As to the instrument validity, the exploratory factor analysis (EFA) was used for the personal empathy scale as well as for the professional empathy scale, where two predominant factors were revealed: emotive and cognitive. The personal empathy scale was explained at a 30.80% of its variance by both factors (KMO=.849; Barlett test with $p < .05$), whereas the professional empathy scale was explained at 44.16% of its variance by both factors (KMO=.889; Barlett test with $p < .05$). These two factors followed the same item distribution as the study by Carrasco et al. (2014).

The scales used by the PPES were direct scores. The personal empathy dimension had a score of 17 - 44 (low score), 45-50 (medium), and 51-68 (high). Furthermore, the professional empathy dimension had a score of 17-42 (low), 43-49 (medium), and 50-68 (high).

Socio-demographic form: A structured survey for the students to complete was designed, where the following points were asked: family information; choice of major degree course; motivations to study that course; university teaching data, and whether or not the person had taken courses in personal development during their university training.

Data collection process

The instruments were applied in the universities, by asking permission in advance to the professor responsible for the classroom. The evaluation was carried out by healthcare professionals (psychologists) properly trained to do it. In the first place, the students were informed of the ethical aspects of the study. Then, with the explicit consent (informed consent), the socio-demographic form was applied, followed by the Empathy scale. Finally, the Dysfunctional Parental Styles Scale was applied.

Data analysis procedure

The data collection was transcribed to a data base template and was exported to SPSS version 21. Subsequently, frequency and percentage statistics were used for the descriptive analysis. For a better examination of the parental styles and empathy variables, they were grouped into three categories: low, medium, and high, based on the present study's data. Afterwards, the inferential analysis – processed with the instruments' direct scores – was performed with

statistical tests of non-parametric type due to the absence of a probabilistic sampling that guaranteed the representativeness of the sample (Manterola and Otzen, 2015).

Results

The results show, in the first place, descriptive data of the study variables (dysfunctional parenting styles and empathy) through the low, medium, and high levels in relation to the socio-demographic variable *major* (nursing, medicine and psychology). That socio-demographic variable was used only because of the existence of a similar percentage of university students in the three majors (around 30%). Afterwards, the inferential analysis was made in order to establish correlations and comparisons based on the study objectives using, to that end, the variables' direct scores.

Descriptive results

Table 1 shows the results of 572 university students instead of 599, because 27 of them did not perceive the presence of a paternal figure in their first 16 years of life. The dysfunctional parenting styles sample in the father sub-scale was predominantly at a medium level in all the majors. However, there was a slightly higher percentage of medicine students in the high level of dysfunctional paternal style. A similar situation is observed in the authoritarian – controlling dimension as well as in the indifference – negligence one.

Table 2 shows the results of 598 university students instead of 599 because 1 student didn't perceive the presence of the maternal figure in his or her 16 years of life. The dysfunctional parenting styles of the mother sub-scale reached a medium level in all the majors, having a higher percentage of medicine students in a high level of dysfunctional maternal style. The same applies to the authoritarian – controlling and indifference – negligence dimensions.

According to the data displayed on Table 3, there is a medium level of personal empathy in all the majors. There was a higher percentage of nursing students with a high level of personal empathy. On the contrary, a higher percentage of psychology students showed a low level of personal empathy. A similar situation happens in both dimensions: emotive personal empathy and cognitive personal empathy.

Professional empathy reached a medium level in the students of all the majors (See Table 4). The table shows a slightly higher percentage of nursing students with a high level of professional empathy and its dimensions in comparison with psychology students who have a slightly higher percentage in the low level of professional empathy and its dimensions.

Table 1.
Levels of EEPD father sub-scale and its dimensions according to major degree courses in university students (N=572)

Sub-scale and dimensions according to levels	Major degree courses					
	Nursing (n = 194)		Medicine (n = 198)		Psychology (n = 180)	
	N	%	N	%	N	%
<i>Sub-scale Father</i>						
High	42	7.3	58	10.12	43	7.5
Medium	85	14.9	86	15.0	94	16.5
Low	67	11.78	54	9.4	43	7.5
<i>Indifference-negligence Dimensions</i>						
High	43	7.5	50	8.7	31	5.4
Medium	109	19.1	121	21.2	100	17.5
Low	42	7.3	27	4.7	49	8.6
<i>Authoritarian-controlling Dimension</i>						
High	25	4.4	46	8.0	45	7.9
Medium	118	20.6	102	17.8	95	16.6
Low	51	8.9	50	8.87	40	7.1
<i>Total</i>	194	100.0	198	100.0	180	100.0

Note. N= number of cases=, %= percentage.

Table 2.
Levels of EEPD mother sub-scale and its dimensions according to major degree courses in university students (N=598)

Sub-scale and dimensions according to levels	Major degree courses					
	Nursing (n = 205)		Medicine (n = 207)		Psychology (n = 186)	
	N	%	N	%	N	%
<i>Sub-scale Mother</i>						
High	36	6.0	48	8.0	38	6.4
Medium	130	21.7	113	18.9	114	19.1
Low	39	6.5	46	7.7	34	5.7
<i>Indifference-negligence Dimensions</i>						
High	46	7.7	49	8.2	52	8.7
Medium	109	18.2	113	18.9	72	12.0
Low	50	8.4	45	7.5	62	10.4
<i>Authoritarian-controlling Dimension</i>						
High	46	7.7	57	9.5	42	7.0
Medium	120	20.1	102	17.1	112	18.7
Low	39	6.5	48	8.0	32	5.4
<i>Total</i>	205	100.0	207	100.0	186	100.0

Note. N= number of cases=, %= percentage.

Inferential Result

In this analysis, the direct scores of the study variables and their dimensions were used. Due to the absence of a probabilistic sampling, the non-parametric Spearman's *rho* test was used for the correlational analysis, and the non-parametric Mann-Whitney *U* and Kruskal-Wallis tests were both used for the comparative analysis.

Table 5 shows inverse correlations, of little magnitude, between cognitive personal empathy and cognitive professional empathy dimensions with the authoritarian-controlling dimension. This suggests the absence of a correlation due to the size of the big sample (N=572), so future research is needed to deepen the analysis of these variables. A similar situation can be found between the emotive personal empathy

Table 3.

Levels of EEPP personal empathy and its dimensions according to major degree courses in university students (N=599)

Variable and dimensions according to levels	Major degree courses					
	Nursing (n = 206)		Medicine (n = 207)		Psychology (n = 186)	
	N	%	N	%	N	%
<i>Personal Empathy</i>						
High	68	11.4	46	7.7	13	2.2
Medium	112	18.7	114	19.0	102	17.0
Low	26	4.3	47	7.9	71	11.8
<i>Emotive Personal Empathy</i>						
High	60	10.0	41	6.8	12	2.0
Medium	107	17.9	111	18.5	106	17.7
Low	39	6.5	55	9.2	68	11.4
<i>Cognitive Personal Empathy</i>						
High	45	7.5	39	6.5	24	4.0
Medium	131	21.9	121	20.2	103	17.2
Low	30	5.0	47	7.9	59	9.8
<i>Total</i>	206	100.0	207	100.0	186	100.0

Note. N= number of cases=, %= percentage.

Table 4.

Levels of EEPP professional empathy and its dimensions according to major degree courses in university students (N=599)

Variable and dimensions according to levels	Major degree courses					
	Nursing (n = 206)		Medicine (n = 207)		Psychology (n = 186)	
	N	%	N	%	N	%
<i>Professional Empathy</i>						
High	78	13.0	48	8.0	12	2.0
Medium	104	17.4	111	18.5	92	15.4
Low	24	4.0	48	8.0	82	13.7
<i>Emotive Professional Empathy</i>						
High	58	9.7	41	6.8	11	1.8
Medium	120	20.0	118	19.7	118	19.7
Low	28	4.7	48	8.0	57	9.6
<i>Cognitive Professional Empathy</i>						
High	69	11.5	41	6.8	22	3.8
Medium	120	20.0	133	22.2	96	16.0
Low	17	2.8	33	5.5	68	11.4
<i>Total</i>	206	100.0	207	100.0	186	100.0

Note. N= number of cases=, %= percentage.

dimension and the indifference-negligence dysfunctional paternal style. Also, it was found that the effect size in significant correlations was small (Castillo, 2014).

According to Table 6, there were direct associations between the emotive personal empathy and the emotive professional empathy dimensions with the authoritarian-controlling dysfunctional maternal style. In other words,

a higher emotive personal empathy would be related to a higher authoritarian-controlling dysfunctional maternal style. A similar situation occurs with the emotive professional empathy dimension. It's important to highlight that the effect size (r^2) in the correlations was small (Castillo, 2014).

Gender differences, estimated by the Mann-Whitney test, were significant in the personal empathy variable and

Table 5.
Correlations of paternal dysfunctional parenting styles with personal and professional empathy in university students (N=572)

Variable and Dimensions		Faher sub-scale		
		Indifference-negligence	Authoritarian-controlling	Sub-scale
Personal empathy	Rho	.052	-.029	.003
	r^2	-	-	-
Emotive personal empathy	Rho	.095*	.037	.055
	r^2	.009	-	-
Cognitive personal empathy	Rho	-.044	-.117**	-.085*
	r^2	-	.014	.007
Professional empathy	Rho	.009	-.047	-.028
	r^2	-	-	-
Emotive professional empathy	Rho	.048	.039	.044
	r^2	-	-	-
Cognitive professional empathy	Rho	-.054	-.159**	-.126**
	r^2	-	.025	.016

Note. ** $p < .01$; * $p < .05$; r^2 = determination coefficient.

Table 6.
Correlations of maternal dysfunctional parental styles with personal and professional empathy in university students (N=598)

Variable and Dimensions		Mother sub-scale		
		Indifference-negligence	Authoritarian-controlling	Sub-scale
Personal empathy	Rho	.049	.097	.098*
	r^2	-	-	.010
Emotive personal empathy	Rho	.075	.107**	.116**
	r^2	-	.012	.014
Cognitive personal empathy	Rho	-.014	.015	.005
	r^2	-	-	-
Professional empathy	Rho	.034	.071	.066
	r^2	-	-	-
Emotive professional empathy	Rho	.037	.093*	.084*
	r^2	-	.009	.007
Cognitive professional empathy	Rho	.010	.004	.002
	r^2	-	-	-

Note. ** $p < .01$; * $p < .05$; r^2 = determination coefficient.

its emotive dimension. In both, there was a higher level of empathy in favor of women. Likewise, there were significant differences in favor of women in the professional empathy variable and its dimensions, emotive and cognitive (See Table 7). In all the differences found, a medium level of effect size (PS) was observed (Castillo, 2014). It is important to mention that differences based on gender in the dysfunctional parental styles were not found.

Table 8 shows the differences, based on age, in the study variables, which were estimated by the Kruskal-Wallis test. The personal empathy variable showed differences in favor of the students younger than 21 years old and in the emotive personal empathy dimension the differences

were in favor of the 22-year-old students. Similarly, there were differences in the professional empathy variable in favor of the students younger than 21 years old and in the emotive professional empathy dimension it is observed that the differences are in favor of the 22-year-old students. The effect size, Cramer's V, was of a small level in the significant differences (Castillo, 2014). It is suggested to review these results in future research. It's important to mention that there weren't significant differences in the dysfunctional parenting styles.

To make the comparisons based on the major degree courses, the Kruskal-Wallis test was used (See Table 9), obtaining significant differences in the authoritarian-controlling

Table 7.

Comparison of dysfunctional parental styles and personal and professional empathy, according to gender in university students (N=599)

Variable and Dimensions	Average range		Mann-Whitney U	PS
	Men (n = 204)	Women (n = 395)		
<i>Paternal dysfunctional Style</i>	296.80	281.01	35064.00	-
Indifference-negligence	299.09	279.78	34608.50	-
Authoritarian-controlling	293.52	282.75	35716.50	-
<i>Maternal dysfunctional Style</i>	297.16	300.71	39710.50	-
Indifference-negligence	302.02	298.19	39673.00	-
Authoritarian-controlling	295.48	301.58	39367.00	-
<i>Personal Empathy</i>	266.44	317.33	33444.500**	.41
Emotive	263.20	319.00	32783.500**	.49
Cognitive	294.74	302.72	39217.000	.42
<i>Professional Empathy</i>	262.22	319.51	32583.00**	.42
Emotive	268.06	316.49	33775.00**	.44
Cognitive	275.89	312.45	35371.50*	.40

Note: ** $p < .01$; * $p < .05$; PS = probability of superiority.

Table 8.

Comparison of dysfunctional parenting styles and personal and professional empathy, according to age, in university students (N=599)

Variable and Dimensions	Average range according to age							Chi ² (gl)	Cramer's V
	Less than 21	21	22	23	24	25	More than 25		
<i>Paternal dysfunctional Style</i>	281.5	284.1	272.5	308.2	277.2	303.0	280.8	3.353(6)	-
Indifference-negligence	300.0	295.3	287.8	302.8	229.8	304.2	277.4	10.649(6)	-
Authoritarian-controlling	266.1	272.0	270.1	310.9	304.0	297.9	288.7	6.051(6)	-
<i>Maternal dysfunctional Style</i>	305.6	290.3	292.7	313.1	278.7	302.5	306.1	2.230(6)	-
Indifference-negligence	323.1	282.9	309.3	296.7	256.5	305.0	308.9	7.593(6)	-
Authoritarian-controlling	293.4	293.7	289.9	313.0	296.6	302.7	305.7	1.301(6)	-
<i>Personal Empathy</i>	355.8	334.3	291.4	325.8	219.7	265.5	275.9	33.816(6)**	.10
Emotive	347.8	350.4	303.9	320.4	234.1	266.7	253.6	34.459(6)**	.10
Cognitive	333.7	304.0	287.2	311.0	243.4	275.7	318.5	13.970(6)*	.06
<i>Professional Empathy</i>	347.7	336.5	302.9	312.3	249.0	297.6	245.4	26.929(6)**	.09
Emotive	337.5	346.7	326.6	312.3	265.7	279.2	223.8	36.134(6)**	.10
Cognitive	329.5	310.4	274.3	304.1	250.4	311.2	310.6	11.384(6)	-

Note. gl degrees of freedom; * $p < .05$; ** $p < .01$.

and indifference-negligence dimensions of the dysfunctional paternal style. In both dimensions, the medicine students got a higher score. Those differences got a small effect size (Castillo, 2014). In addition, there were significant differences between personal and professional empathy with higher scores in the nursing students; and the effect size was medium (Castillo, 2014).

Additionally, comparisons were made based on whether they had taken courses in personal development in their majors or not. Table 10 shows significant differences in

the authoritarian-controlling dimension of the father subscale, with a higher score in the students who claimed not having taken any courses in personal development. The personal and professional empathy variables and their dimensions also had significant differences, where the students who had taken courses in personal development obtained a higher score. It's important to mention that all the significant differences showed a medium level of effect size (Castillo, 2014).

Table 9.

Comparison of dysfunctional parenting styles and personal and professional empathy, according to major degree courses in university students (N=599)

Variable and Dimensions	Average Range according to majors			Chi ² (gl)	Cramer's V
	Nursing (n = 206)	Medicine (n = 207)	Psychology (n = 186)		
<i>Paternal dysfunctional Style</i>	266.1	302.8	290.6	5.010(2)	-
Indifference-negligence	283.4	310.1	263.9	7.698(2)*	.08
Authoritarian-controlling	259.9	293.0	308.0	8.501(2)*	.09
<i>Maternal dysfunctional Style</i>	300.0	305.7	292.0	.629(2)	-
Indifference-negligence	299.8	308.4	289.2	1.278(2)	-
Authoritarian-controlling	300.1	303.8	294.1	.317(2)	-
<i>Personal Empathy</i>	366.0	308.4	217.5	72.921(2)**	.25
Emotive	352.7	306.3	234.6	46.198(2)**	.20
Cognitive	343.0	306.5	245.1	32.077(2)**	.16
<i>Professional Empathy</i>	378.8	307.9	203.9	100.805(2)**	.29
Emotive	360.9	300.5	232.0	54.527(2)**	.21
Cognitive	360.5	305.4	227.0	59.528(2)**	.22

Note. gl degrees of freedom; * $p < .05$; ** $p < .01$.

Table 10.

Comparison of dysfunctional parenting styles and personal and professional empathy, according to personal development courses in university students (N=599)

Variable and Dimensions	Rango promedio		Mann-Whitney U	PS
	Took (n = 192)	Didn't take (n = 407)		
<i>Paternal dysfunctional Style</i>	279.68	300.55	33370.00	-
Indifference-negligence	287.43	284.58	35638.50	-
Authoritarian-controlling	275.41	309.34	31726.00*	.44
<i>Maternal dysfunctional Style</i>	298.24	302.17	38908.00	-
Indifference-negligence	300.41	297.59	38463.00	-
Authoritarian-controlling	299.67	299.15	38608.50	-
<i>Personal Empathy</i>	325.09	246.82	28862.00**	.40
Emotive	319.15	259.41	31278.50**	.42
Cognitive	315.70	266.71	32681.00**	.37
<i>Professional Empathy</i>	330.12	236.16	26814.50**	.39
Emotive	321.58	254.25	30287.50**	.38
Cognitive	322.64	252.00	29855.50**	.34

Note: ** $p < .01$; * $p < .05$; PS=probability of superiority,

Discussion

The present study was conducted with a sample of 599 university students from a state university and a private one, both located in Metropolitan Lima. The ages fluctuated between 21 and 25 years old (M=23.20, DS=3.34). There was a higher percentage of women (65.9%), than men (34.1%). Information was collected from students of all years, being the sixth year the one that grouped a greater number of students (54.6%).

At a descriptive level, it was found that the dysfunctional parenting styles in the father sub-scale were predominantly at a medium level in all the major degree courses. However, there was a slightly higher percentage of medicine students at a high level of dysfunctional paternal style. A similar pattern was found in the dysfunctional parenting styles in the mother sub-scale, where they reached a medium level in all the major degree courses, having a slightly higher percentage of medicine students at a high level of dysfunctional maternal style, which indicates that medicine students have experienced a higher level of dysfunctional parenting styles

during their upbringing than the psychology and nursing students. Therefore, there are more medicine students with dysfunctional parenting styles. These results are similar to the findings by Peñaherrera and Moscoso (2016) who found that medicine and psychology students showed a chaotic family functionality and agglutinated with higher recurrence, concluding that the majority of the students of those two careers belong to dysfunctional families.

Regarding the personal and professional empathy variables, in all the degree courses, they were ranked at a medium level. However, there was a higher percentage of nursing students with a high level of personal empathy. This coincides with the study by Diaz, et al. (2014), who concluded that nursing students are characterized by having relatively high levels of empathy. Moreno, et al. (2014) found that the medicine students' level of empathy could change as they continue their professional studies, and especially it could deteriorate even more, which points out the importance of intervening in the process, not only by teaching new contents but by preventing that loss. This coincides with the higher levels of empathy in 21 and 22-year-old students (See Table 8), with respect to the other age groups, where a decrease of empathy levels was observed. Furthermore, there was a higher percentage of psychology students with a low level of personal empathy. That fact stands out because empathy is an indispensable requisite to the psychologist's professional practice. The Psychology courses must promote the development of empathy, which is really important and crucial in the therapist-patient relationship. In the same way, multiple studies link a better empathy with a higher clinical competence as well as with a better communication and a better doctor-patient relationship. Ogle, et al. (2013) point out that high levels of empathy are linked with a higher ease of patients to express symptoms and worries, which not only helps obtaining a better anamnesis and diagnostic accuracy, but also a higher participation and health education. In general, a better quality of life and less stress in the patient's life.

In the correlational analysis, the presence of inverse relationships between cognitive personal empathy and cognitive professional empathy dimensions and the authoritarian-controlling dysfunctional parenting style is evident. In the same way, a higher emotive personal empathy is associated with a lower level of indifference-negligence dysfunctional paternal style. In light of these results, it can be deduced that the dysfunctional paternal styles influence, in part, the development of empathy. It is clear that the multi-factor causal nature of the development of empathy is immersed in the family atmosphere and its functionality, regarding the

family and its systematization as the means where one learns to be empathetic. This is related to the study by Madera, et al. (2015), who concluded that the levels of empathy can change depending on gender, family functionality and academic performance. They propose the implementation of pedagogic strategies in the human areas involving the students' families, thus improving the levels of empathy and the healthcare attention.

There were direct associations between the emotive personal empathy and the emotive professional empathy dimensions with the authoritarian-controlling dysfunctional maternal style. It could be thought that there is a higher development of the emotive and professional empathy in the face of a high perception of dysfunctional styles related to the maternal figure as authoritarian-controlling. This is something to consider because in these results the cultural variables are evident, where the female figure is the one responsible for the care and upbringing of the child. Therefore, the existence of cultural factors can be interfering in these findings and further study would facilitate the identification of these factors.

At a comparative level, it was found that, based on gender, there were significant differences in the personal empathy variable and its emotive dimension, with a higher level of empathy in favor of women. This is similar to the study by Esquerda, et. al (2015), who found that female students are the ones who show higher empathy.

Based on the major degree course, there were significant differences in the authoritarian-controlling and indifference-negligence dimensions of the dysfunctional paternal style; in both dimensions the medicine students obtained a higher score. Taking into account that the dysfunctional parenting styles are related to diverse mental pathologies, it could be said that the medicine students show vulnerability or risk factors such as this one, which could explain their levels of empathy and the loss of it as they continue their professional training (See Table 8). The present study emphasizes that a training in empathy for students pursuing the medicine career must be done. The reason is that if a doctor is able to show adequate empathy with the patient, the latter will experience a higher satisfaction, develop treatment adherence and willingness to provide important information to allow establishing their diagnosis. Likewise, Donoso (2014) affirms that by being empathetic, the patient's participation and education increase, and the emotional distress decreases, hence, improving the patient's quality of life.

On the other hand, significant differences in personal and professional empathy were found in the nursing students. Variables in the nurses' practice and education that influence this result can be considered, taking into account that Diaz,

et al. (2014) found that the reasons why the nursing students showed a high level of empathy were: their perspective, their care with compassion and putting themselves in the patient's shoes. The authors justify it because of the students' high level of motivation and commitment to paying attention to the human suffering and the patients' care, identifying empathy as a precursor of genuine care. In our study, from the three degree courses that were evaluated, nursing is the one that in its practice has a greater interaction with the patients from the physical and emotional components.

The results based on whether the participants had taken courses in personal development during their professional education or not, showed that the personal and professional empathy and their dimensions presented significant differences, where students who had taken courses in personal development obtained higher scores. It can be highlighted that the healthcare personnel's professional education influences not only the learning acquisition and technical ability, but also the personal education such as the development and maintenance of empathy, thus providing society with professionals who humanize health. Frequently, sympathy and empathy are considered synonyms, but there are clear conceptual differences between them. Garcia and Alarcos explain that sympathy occurs "when a person, trying to understand the other one, experiences the other person's same feelings". It is not the goal of empathy to experience the other person's feelings but to understand them in the most accurate possible way in terms of how they are experienced. Therefore, empathy would include not only affective elements but also cognitive and behavioral ones and, hence, it might possibly be taught and practiced to turn it into a habit (García and Alarcos, 2002).

The results show low correlation coefficients despite the considerable size of the sample. It is recommended to take those results with caution. Future research which contrasts its results with the reported in the present study is encouraged.

It can be concluded that the study shows no correlation between the variables dysfunctional parenting styles (paternal and maternal) and empathy. However, inverse, low magnitude correlations, between the cognitive personal empathy and the cognitive professional empathy with the authoritarian-controlling dysfunctional paternal style are reported. On the contrary, the authoritarian-controlling dysfunctional maternal style showed direct associations with the emotive personal empathy and emotive professional empathy dimensions. These results should be taken with caution due to the little effect size reported.

Moreover, the students who took the courses in personal development got higher scores in the personal and

professional empathy variables and their dimensions, in comparison with those who didn't take that course in their education.

The results showed are open to discussion and could be part of further revisions.

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