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Reichian elongation effect in anxiety and quality of life in nursing students: a randomized clinical trial

Efeito do alongamento reichiano na ansiedade e na qualidade de vida em estudantes de enfermagem: um ensaio clínico randomizado

Efecto del estiramiento reichiano sobre la ansiedad y la calidad de vida en estudiantes de enfermería: un ensayo clínico aleatorizado

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Abstract

This study aims to evaluate of Reichian Elongation effect in anxiety and quality of life in nursing students. This is a prospective randomized clinical trial (Registration: RBR-2y6qcg). 143 nursing students were interviewed. The General Identification, the State-Trait Anxiety Inventory (STAI), The World Health Organization Quality of Life (WHOQOL-BREF) and MINI (Mini International Neuropsychiatric Interview) questionnaires were used. 33 received the intervention and 37 belonged to the control group. The evaluation of the elongation effect was conducted by 1, 3 and 5 months. Before intervention, experimental group presented higher trait (p= 0.005) and state anxiety mean (p= 0.049), compared to control group. There was a decrease in the state anxiety mean with 1 (p= 0.028), 3 (p= 0.031) and 5 months (p= 0.010) in experimental group. Physical (p= 0.002), psychological (p= 0.010) and social relations domain (p= 0.026) showed an increase in quality of life. Reichian Elongation contributes in reducing the symptoms of anxiety and improving the students' quality of life.

Keywords: Complementary therapies; Anxiety; Nursing students; Quality of life.

Resumo

Este estudo tem como objetivo avaliar o efeito do alongamento reichiano na ansiedade e na qualidade de vida de estudantes de enfermagem. Este é um ensaio clínico randomizado prospectivo (Registro: RBR-2y6qcg). Foram entrevistados 143 estudantes de enfermagem. Foram utilizados os questionários de Identificação Geral, Inventário de Ansiedade Traço-Estado (STAI), Qualidade de Vida da Organização Mundial de Saúde (WHOQOL-BREF) e MINI (Mini Entrevista Neuropsiquiátrica Internacional). 33 receberam a intervenção e 37

pertenciam ao grupo controle. A avaliação do efeito de alongamento foi realizada em 1, 3 e 5 meses. Antes da intervenção, o grupo experimental apresentou maior média de ansiedade traço (p = 0,005) e de ansiedade do estado (p = 0,049), em comparação ao grupo controle. Houve uma diminuição na média da ansiedade do estado com 1 (p = 0,028), 3 (p = 0,031) e 5 meses (p = 0,010) no grupo experimental. Os domínios físicos (p = 0,002), psicológico (p = 0,010) e relações sociais (p = 0,026) apresentaram aumento na qualidade de vida. O alongamento reichiano contribui para reduzir os sintomas de ansiedade e melhorar a qualidade de vida dos alunos.

Palavras-chave: Terapias complementares; Ansiedade; Estudantes de enfermagem; Qualidade de vida.

Resumen

Este estudio tiene como objetivo evaluar el efecto del estiramiento reichiano sobre la ansiedad y la calidad de vida de los estudiantes de enfermería. Este es un ensayo clínico prospectivo aleatorizado (Registro: RBR-2y6qcg). Se entrevistaron 143 estudiantes de enfermería. Se utilizaron la Identificación General, el Inventario de Ansiedad Rasgo-Estado (STAI), la Calidad de Vida de la Organización Mundial de la Salud (WHOQOL-BREF) y la MINI (Mini Entrevista Neuropsiquiátrica Internacional). 33 recibieron la intervención y 37 pertenecían al grupo control. El efecto de estiramiento se evaluó a los 1, 3 y 5 meses. Antes de la intervención, el grupo experimental tenía un promedio más alto de ansiedad rasgo (p = 0,005) y ansiedad estado (p = 0,049), en comparación con el grupo de control. Hubo una disminución en la ansiedad media del estado a 1 (p = 0,028), 3 (p = 0,031) y 5 meses (p = 0,010) en el grupo experimental. Los dominios físico (p = 0,002), psicológico (p = 0,010) y relaciones sociales (p = 0,026) mostraron un aumento en la calidad de vida. El estiramiento Reichian ayuda a reducir los síntomas de ansiedad y mejora la calidad de vida de los estudiantes.

Palabras clave: Terapias complementarias; Ansiedad; Estudiantes de enfermeira; Calidad de vida.

1. Introduction

College causes many changes in student lives as doubts regarding about new phase and requirement that brings from many hours of studies and involvement in projects, knowledge of new colleagues and establishment of bonds, new Responsibilities among others.

Actually, those requirements influence student to be able in managing cognitive and emotional resources to cope situations. However, individual does not always have skills to balance their quality of life and high levels of anxiety which may trigger generalized anxiety disorder (GAD) (Lantyer, Varanda, Souza, Padovani, & Viana, 2016; Monteiro, Freitas, & Ribeiro, 2007). Quality of life is an eminently human denomination that is approaching of satisfaction levels in family, loving, social and environmental (Minayo, Hartz, & Buss, 2000).

GAD is characterized by a state of anxiety and excessive preoccupation with routine events of life and hard tension which occurs in most days for at least 6 months (Who, 2014).

In addition, factors related to graduation. There are personal problems and social life issues that can contribute to mental illness. That is necessary to think of how students will cope about the illness, the pain and suffering experienced in practices of discipline studied in the future, in their professional practice. Students need care and maintain their balance in physical and mental health (Monteiro, Freitas, & Ribeiro, 2007).

Reichian Elongation is a care practice that may contribute to improving the quality of life of its practitioners by allowing a rescue of self-regulation through the body work based on the principles of Reich. The Austro-Hungarian Wilhelm Reich (1897-1957) created armor and conceptualized notion in sense of body defense. In face of its stiffening of hard experienced in daily. The “armor” term allows one thought about protective and malleability aspect of the leather as well as clearly organic tonicity (Almeida & Albertini, 2014).

Reichian methods can contribute to the development of a better capacity to express feelings and self-consciousness, breaking armor and releasing blocked emotional reactions chronically since childhood (Cornell, 1975). They got tensed in the past and then body will relax apart mechanisms of defense by increasing the perception and self-consciousness. Reichian Elongation can contribute to improve students’ quality of life since it appropriates their potential life, because it integrates parts of them that were previously trapped in the blockade.

At college there are few policies to promote quality of life for students. Often, College does not contribute to student so it knows how to deal with frustrations and uncertainties from their academic reality. At that positioning way it is the only responsible for maintaining their physical and mental health. Student’s mental health should not just be a concern of mental health professionals. This issue must involve managers, teachers, educators, social workers and should be disseminated and valued by higher education institutions, covering the learning environment as a role (Nogueira-Martins & Nogueira-Martins, 1985).

Thus, this study aims to answer the main question: What is the Reichian Elongation effects in anxiety and quality of life in nursing students? The objective was to evaluate of practicing Reichian Elongation in anxiety and quality of life in nursing students from the Federal University of Alagoas (UFAL).

2. Methodolody

This is a prospective randomized clinical trial. The randomized clinical trial is a type of experimental study that aims to assess the effect of a given intervention on health. It is considered the most effective means of obtaining evidence in clinical practice and, in order to develop it, it is necessary that the researcher actively plans and intervenes throughout the development of the study (Oliveira, Velarde & Sá, 2015).

The intervention (Reichian Elongation) was planned in advance and the exposure was controlled by the researchers. The location of the research was the undergraduate nursing course from UFAL, A.C. Simões Campus. In our study, the inclusion criteria were as follows: students aged 18 years or older enrolled between the first and eighth periods of the nursing course in the semester 2017.1. We excluded those who gave up the course during data collection and who were in the 9th and 10th periods acting as a trainee outside the UFAL. This study was approved by the Research Ethics Committee (REC) of UFAL and the Brazilian Registry of Clinical Trial.

All nursing students were invited to participate in the initial moment of the research, except those who were in a supervised internship outside UFAL. A total of 143 nursing students from UFAL, A.C. Simões Campus were interviewed to trace signs and symptoms of anxiety. Of these 70 participated in the clinical trial. For the division of the experimental and control groups, the simple random sampling method was used by lot. The following questionnaires were used: the General Identification Questionnaire, the State-Trait Anxiety Inventory (STAI), The World Health Organization Quality of Life (WHOQOL-BREF) questionnaire and MINI (Mini International Neuropsychiatric Interview). The student approach was made from electronic contact (email) and via telephone. Finally, to ensure the subject anonymity was defined a code number in ascending order as the interviews were happening.

MINI is a structured interview used for evaluation and screening of mental disorders based on the Diagnostic and Statistical Manual of Mental Disorder and needs to be used by a trained individual for application (Sheehan et al., 1998).

The STAI was developed (Spielberger, Gorsuch, & Lushene, 1970), translated and adapted (Biaggio, Natalício, & Spielberger, 1977) to Brazil. The STAI presents a scale that evaluates anxiety as a state (STAI -E) and another that evaluates anxiety as a trait (STAI -T). It is a self-applicable scale that can be used individually or in groups (Capitão & Tello, 2004). State anxiety refers to a transient emotional state and is characterized by subjective feelings of tension that may vary in intensity over time. Trait anxiety is a personal, relatively stable disposition, to respond to stressful situations and there is a tendency to perceive a greater number of situations as threatening (Spielberger, Gorsuch, & Lushene, 1970).

The WHOQOL-abbreviated is an instrument that allows quality of life analizes through four domains: physical, psychological, social relations and environment that was validated in Portuguese (Fleck et al., 2000).

Among the interviewees, 33 students who received the intervention of Reichian Elongation were selected, and 37 were control group. The Reichian Elongation meetings were once a week for one hour during five months. The evaluation of the anxiety effects of elongation was conducted in three phases: Baseline: for a month of the training; Follow up: for 3 months of the training; Deadline: for 5 months of the training. In those three moments, STAI, WHOQOL and general identification questionnaire were reapplied. The reapplication of those questionnaires was made in the experimental and control groups.

For the data analysis was used SPSS 20 software. The Statistical analysis included chi-square test, t test, logistic regression and statistical correlation. The significance of p value < 0,05 was used to measure the probability level. All tests were applied with 95% confidence level.

3. Results

Among 70 nursing students who were interviewed, 55 (78.6%) were female and 15 (21.4%) were male, the age mean was 22.2 (± 3.5) years old (Table 1).

Table 1. Distribution by age, sex, semester of university, and absences among experimental and control groups during Reichian Elongation in nursing students of the Federal University of Alagoas, Brazil-2018.

	Experimental N = 33 (47.1%)		**Control** N = 37 (52.9%)		**Total N = 70**	
	Mean (SD)		**Mean (SD)**			
Age	22.64(3.32)		21.78(3.65)			
Age x Sex						
Female	22.79(3.47)		20.77(1.7)			
Male	21.50(1,91)		24,18(5.64)			
Sex	**N**	**%**	**N**	**%**	**N**	**%**
Female	29	87,9	26	70,3	55	78,6
Male	4	12,1	11	29,7	15	21,4
Semester of the university						
1srt	9	27,3	4	10,8	13	18,6
2nd	3	9,1	8	21,6	11	15,7
3rd	5	15,2	7	18,9	12	17,1
4th	3	9,1	1	2,7	4	5,7
5th	1	3	5	13,5	6	8,6
6th	6	18,2	3	8,1	9	12,9
7th	5	15,2	5	13,5	10	14,3
8th	1	3	4	10,8	5	7,1
Absences during stretching					**N**	**%**
0					1	10,2
5					2	6,2
7					5	15,6
8					4	2,5
9					1	3,1
+ 10					20	62,4

Source: Authors.

All participants of the clinical trial presented GAD, according to the MINI. Before the intervention, the experimental group presented higher Trait Anxiety mean [F(1.69)= 8.324, p= 0.005] and state [F(1.69)= 4.016, p= 0.049], compared to the control group. The mean was decreasing in the state anxiety (F(1,69)= 5.048, p= 0.028), three (F(1,69)= 4.849, p= 0.031) and (F(1,69)= 7.076, p= 0,010) in five months in the experimental compared to the control group (Table 2).

Table 2. Frequency and scores of the IDATE-E and IDATE-T among nursing students of the Federal University of Alagoas, Brazil-2018.

Classification		Baseline				1 month				3 months				5 months			
		Exp.		Control		Exp.		Control		Exp.		Control		Exp.		Control	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Idate-E	High	1	3,03	0,0	0,0	0,0	0,0	2	5,4	1	3,03	0,0	0,0	0,0	0,0	1	2,7
	Mod.	32	96,9	37	100	33	100	35	94,6	32	96,9	37	100	33	100	36	97,3
Idate-T	High	1	3,03	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,0	2,7	0,0	0,0	0,0	0,0
	Mod.	32	96,9	37	100	33	100	37	100	33	100	36	97,3	33	100	37	100
Total		33	100	37	100	33	100	37	100	33	100	37	100	33	100	37	100

Classification	Exp. Mean (SD)	Control Mean (SD)	Exp. Mean (SD)	Control Mean (SD)	Exp. Mean (SD)	Control Mean (SD)	Exp. Mean (SD)	Control Mean (SD)
Idate-E (High+Mod.)	53.8 (11.2)	48.8 (9.7)	49.7 (9.7)	55.9 (12.9)	46.3 (10.0)	51.9 (11.2)	41.8 (10.7)	48.7 (11.0)
ANOVA	F(1,69)= 4.016, p= 0.049		F(1,69)= 5.048, p= 0.028		F(1,69)= 4.849, p= 0.031		F(1,69)= 7.076, p= 0,010	
Idate-T (High+Mod.)	56.3 (9.8)	49.6 (9.4)	51.8 (8.2)	53.8 (9.8)	49.7 (11.0)	51.9 (10.5)	47.0 (12.1)	52.0 (9.3)
ANOVA	F(1,69) = 8.324, p= 0.005		F(1,69)= 0,890, p= 0.349		F(1,69)= 0.728, p= 0.397		F(1,69)= 3.782, p= 0.056	

Exp. = Experimental; Mod. = Moderate. Source: Authors.

Other disorders showed statistical significance as social phobia (p = 0.009) and lifetime psychotic syndrome (p = 0.000) (Table 3). Of those 27 (81.8%) students of the experimental group and 30 (81.1%) of the control group had comorbidity with more than one mental disorder (Table 3), which refers to a greater severity in their mental health conditions.

The results of suicide risk in the experimental group (12 – 36.4%) and control group (13 – 35.1%) was similar. Most students of experimental group presented a high risk (7 – 21.2%), requiring immediate care (Table 3).

Table 3. Frequency of mental disorders among experimental and control groups in nursing students of the Federal University of Alagoas, Brazil-2018.

	Experimental		Control		p	OR	x^2
Mental Disorder	**N**	**%**	**N**	**%**			
Current major depressive episode	14	43,8	15	40,5	0.533	1.08	0.00
Recurrent major depressive episode	11	33,3	11	29,7	0.473	1.18	0.00
Major depressive episode with melancholic characteristics	8	24,2	9	24,3	0.608	1.00	0.00
Current dysthymic disorder	3	9,1	0	0	-	-	-
Past dysthymic disorder	0	0	0	0	-	-	-
Suicide risk	12	36,4	13	35,1	0.556	1.05	0.00
Low suicide risk	5	15,2	7	18,9	0.046	0.76	0.01
Medium suicide risk	0	0	2	5,4	-	-	-
High suicide risk	7	21,2	4	10,8	0.194	2.22	0.75
Current manic episode	7	21,2	10	27	0.388	0.73	0.08
Manic episode past	0	0	5	13,5	-	-	-
Current episode hypomanic	5	15,2	1	2,7	0.075	6.43	2.04
Hypomanic episode past	2	6,1	1	2,7	0.457	2.32	0.01
Current panic disorder	5	15,2	3	8,1	0.292	2.02	0.30
Past panic disorder	1	3	0	0	-	-	-
Agoraphobia	17	51,5	13	35,1	0.127	1.96	1.30
Social phobia	11	33,3	3	8,1	0.009	5.67	5.45
Obsessive-compulsive disorder	4	12,1	3	8,1	0.435	1.56	0.02
Post-traumatic stress disorder	4	12,1	1	2,7	0.145	4.97	1.13
Alcohol addiction	3	9,1	2	5,4	0.445	1.75	1.13
Alcohol abuse	2	6,1	2	5,4	0.648	1.13	0.00
Substance dependence (not alcohol)	1	3	0	0	-	-	-
Substance abuse (not alcohol)	2	6,1	0	0	-	-	-
Lifetime psychotic syndrome	8	24,2	4	10,8	0.000	13.2	10.9
Current psychotic syndrome	2	6,1	1	2,7	0.457	2.32	0.01
Psychotic mood disorder	3	9,1	1	2,7	0.265	3.60	0.40
Nervous anorexia	0	0	1	2,7	-	-	-
Nervous bulimia	0	0	0	0	-	-	-
Nervous anorexia (periodic purgative compulsion)	0	0	0	0	-	-	-
Generalized Anxiety Disorder	33	100	37	100	-	-	-
Antisocial Personality Disorder	0	0	0	0	-	-	-
Comorbidity	27	81,8	30	81,1	0.591	1.05	0.00
Total	33	100	37	100			

Source: Authors.

Students had some complaints and it was analyzed at the beginning and throughout the execution of the Reichian Elongation. The headache symptom was more present in the fifth month of the control group (p = 0.036) (Table 4). It noticed the number of the experimental student group has decreased after having those symptoms of tiredness, insomnia, and

difficulty concentrating in class, impatience, headaches, suffering in advance and irritability. Only two groups have related difficulty to increase of dealing with slow people (Table 4).

Anxiety and related symptoms have decreased in the experimental group. Students had an increase in the amount of evaluative tests during the course but that didn't work as a trigger to increase the level of Anxiety among them (Table 4). Students were increased and became part of research or extension groups which could require more overload and impair the anxiety evaluation but didn't work (Table 4). Physical activity practices were decreased in the experimental group and increased in the control group. There were higher anxiety scores by the STAI in the experimental group, although it didn't interfere (Table 4). Both groups started using less medication during the development of this research and reported a very good experience of fewer stressful episodes in the last month (Table 4).

Table 4. Questions about life and symptoms of anxiety of the nursing students of the Federal University of Alagoas, Brazil-2018.

		Exp.		Control		Exp.		Control		Exp.		Control		Exp.		Control	
		Baseline				1 Month				3 Months				5 Months			
Questions		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Have a job	Yes	5	15,6	8	29	2	6,2	6	16,2	6	20	7	19,4	6	18,8	6	16,7
	No	27	84,4	21	78,4	30	93,8	31	83,8	24	80	29	80,6	26	81,2	30	83,3
Wake up tired	Yes	28	87,5	29	80,6	23	71,9	33	89,2	26	86,7	31	86,1	19	59,4	29	80,6
	No	4	12,5	7	19,4	9	81,1	4	10,8	4	13,3	5	13,9	13	40,6	7	19,4
Have insomnia	Yes	9	28,1	6	16,2	5	15,6	9	24,3	4	13,3	10	27,8	2	6,2	3	8,3
	No	5	15,6	13	35,1	9	28,1	14	37,8	10	33,3	12	33,3	9	28,1	10	27,8
	Sometimes	18	56,2	18	48,6	18	56,2	14	37,8	16	53,3	14	38,9	21	65,6	23	63,9
Have difficulty of concentration in classrooms	Yes	15	46,9	9	24,3	9	28,1	10	27	11	36,7	13	36,1	7	21,9	11	30,6
	No	0	0	3	8,1	3	9,4	1	2,7	3	10	1	2,8	4	12,5	1	2,8
	Sometimes	17	53,1	25	67,6	20	62,5	26	70,3	16	53,3	22	61,1	21	65,5	24	66,7
Presents impacience	Yes	20	62,5	16	44,4	15	46,9	22	59,5	11	36,7	20	55,6	10	31,2	19	52,8
	No	0	0	1	2,8	0	0	1	2,7	3	10	1	2,8	4	12,5	2	5,6
	Sometimes	12	37,5	19	52,8	17	53,1	14	37,8	16	53,3	15	41,7	18	56,2	15	41,7
Have a headache	Yes	11	34,4	18	48,6	6	18,8	13	35,1	11	36,7	13	36,1	5	15,6	16	44,4
	No	4	12,5	3	8,1	7	21,9	5	13,5	7	23,3	5	13,9	10	31,2	8	22,2
	Sometimes	17	53,1	16	43,2	19	59,4	19	51,4	12	40	18	50	17	53,1	12	33,3
Have difficulty dealing with slow people	Yes	19	61,3	19	51,4	15	46,9	21	56,8	12	40	21	58,3	27	84,4	28	75,7
	No	5	16,1	5	13,5	5	15,6	5	13,5	4	13,3	2	5,6	1	3,1	2	5,4
	Sometimes	7	22,6	13	35,1	12	37,5	11	29,7	14	46,7	13	36,1	4	12,5	7	18,9
Have suffering by anticipation	Yes	27	84,4	28	75,7	22	71	29	78,4	23	76,7	28	77,8	20	62,5	29	80,6
	No	1	3,1	2	5,4	0	0	2	5,4	1	3,3	2	5,6	0	0	1	2,8
	Sometimes	4	12,5	7	18,9	9	29	6	16,2	6	20	6	16,7	12	37,5	6	16,7
Irritability	Yes	17	53,1	17	45,9	13	40,6	21	56,8	14	46,7	18	50	8	25	19	52,8

	No	0	0	0	0	1	3,1	3	8,1	4	13,3	0	0	4	12,5	0	0
	Sometimes	15	46,9	20	54,1	18	56,2	13	35,1	12	40	18	50	20	62,5	17	47,2
Had evaluation	No	20	62,5	24	64,9	4	12,5	5	13,5	5	16,7	5	13,9	11	34,4	20	55,6
	Had in the last 15 days	0	0	3	8,1	10	31,2	13	35,1	10	33,3	9	25	11	34,4	6	16,7
	Will have in the next 15 days	12	37,5	10	27	12	37,5	6	16,2	19	30	12	33,3	10	31,2	10	27,8
Participation in some extension project	Yes	20	62,5	28	75,7	18	56,2	25	69,4	24	80	28	80	28	87,5	28	77,8
	No	12	37,5	9	24,3	14	43,8	11	30,6	6	20	7	20	4	12,5	8	22,2
Practice of physical activity	Yes	14	43,8	13	36,1	8	25	12	32,4	10	33,3	10	27,8	6	18,8	9	25
	No	18	56,2	23	63,9	24	75	25	67,6	20	66,7	26	72,2	26	81,2	27	75
Use of medication	Yes	8	25	6	16,2	7	21,9	6	16,7	6	20	4	11,1	4	12,5	5	13,9
	No	24	75	31	83,8	25	78,1	30	83,3	24	80	32	88,9	28	87,5	31	86,1
Psychotherapy	Yes	5	15,6	3	8,1	6	18,8	4	10,8	6	20	6	16,7	7	21,9	5	13,9
	No	27	84,4	34	91,9	26	81,2	33	89,2	24	80	30	83,3	25	78,1	31	86,1
Stressful episode in the last month	Yes	25	80,6	22	59,5	22	71	26	72,2	19	63,3	22	61,1	16	50	20	55,6
	No	6	19,4	15	40,5	9	29	10	27,8	11	36,7	14	38,9	16	50	16	44,4
Total		33	100	37	100	33	100	37	100	33	100	37	100	33	100	37	100

Exp. = experimental. Source: Authors.

The domains of quality of life were analysed and through pathological anxiety and social interactions domains presented higher averages in Reichian Elongation group, while control group presented a decrease (Table 5). The physical and environment domains presented higher averages in the group that performed the Reichian Elongation. There was also a small increase in the averages in these domains in control group (Table 5).

There was a decrease in the mean of state anxiety in one ($F(1.69)= 5.048$, $p= 0.028$), three ($F(1.69)= 4.849$, $p= 0.031$) and five ($F(1.69)= 7.076$, $p= 0.010$) months in experimental group, compared to control group. The physical domain [$F(1.76)= 9.856$, $p= 0.002$], psychological [$F(1.76)= 7.011$, $p= 0.010$] and social relations [$F(1.76)= 5.194$, $p= 0.026$] showed an increase in the mean of quality of life in 1, 3 and 5 months, compared to the control group (Table 5).

Table 5. Average of the domains of quality of life related to signs and symptoms of anxiety, during the 5 months of application of Reichian Elongation, in nursing students of Federal University of Alagoas, Brazil-2018.

	Baseline	1 Month	3 Month	5 Month	Anova
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	
Physical domain X Anxiety					
Experimental	34,5 (16)[a]	38,6 (14,4)	40,9 (16,3)	45,5 (14,3)	[a]F(1,76)= 9,856, p= 0,002
Control	44,7 (12,2)	39,2 (11,8)	38,7 (12,1)	44,8 (13,1)	
Psychological domain x Anxiety					
Experimental	45,2 (16,5)[b]	54,1 (13,1)	54,6 (13,9)	57 (15,6)	[b]F(1,76)= 7,011, p= 0,010
Control	54,1 (12,5)	51 (16,2)	50 (14,3)	52 (12,9)	
Social relations domain x Anxiety					
Experimental	53,8 (19,8)[c]	60,2 (16,9)	58,3 (20,1)	64,1 (16,5)	[c]F(1,76)= 5,194, p= 0,026
Control	63,6 (17,7)	55,6 (19,6)	56,9(17,5)	60,5 (19,5)	
Environment domain X Anxiety					
Experimental	46,8 (14,1)	48,5 (14,3)	51,7 (12,3)	50,3 (13,6)	--
Control	46,9 (9,7)	48,5 (13,2)	49,3(14,4)	52,3 (12,7)	
General QV x Anxiety					
Experimental	43,9 (21)[d]	56,2 (14,5)	52,5 (18,4)	58,6 (15,4)	[d]F(1,76)= 7,762, p= 0,007
Control	56,2 (17,6)	54,7 (20,1)	54,2 (21,1)	51,7 (15,9)	

[a, b, c e d]: There is a significant difference between the two groups (Anova two way). Source: Authors.

4. Discussion

This study showed most nursing students of UFAL have suffered of mental disorder, but the GAD was the most present among them. Anxiety is common in most people; however, it is only classified as a pathological disorder when you have extreme intensity and duration (Cavaler & Gobbi, 2013). There are two concepts of anxiety: the state-anxiety refers to a transitory emotional state characterized by subjective feelings of tension that may vary in intensity over time; and trait-anxiety refers to a personal disposition, relatively stable and people who have anxiety reply to stressful situations and also have tendency to perceive a greater number of situations as threatening (Gama, 2008).

In GAD, the anxiety is persistent and is not restricted to a single fact. Insomnia is common in Students. Also their difficulty of concentrating in classes, impatience, headache, difficulty of dealing with slow people, suffering due to anticipation and irritability could contribute to the lower quality of life of students and interfere in the daily academic activities.

A study conducted in São Paulo, Brazil, evaluated 49 students and found that there was impairment in their sleep. This study showed worse of quality of sleep has a direct relation to trait anxiety (Coelho, Lorenzini, Suda, Rossini & Reimão, 2010). Another study was conducted in Hong Kong (Cheung et al., 2016) found 661 nursing students were recruited in the survey, 484 (73.2%) had sleep problems. This study showed presence of insomnia in students in the current research may be related to signs and symptoms of anxiety and may interfere in performance and well-being.

Moreover, those complaints were related to family problems and academic activities that students are experiencing. That makes their lives to perform academic demands, submitting to sedentary and unhealthy life, distancing them from leisure activities and even moments with their families and internalization. Cheung et al. (2016) identified a significant relationship between lack of entertainment, financial difficulty, poor diet, sedentary lifestyle, relaxation time and the level of emergence in increase anxiety and stress. Alleviating these complaints and seeking ways to provide well-being may contribute to the reduction of signs and symptoms of anxiety and improvement of their quality of life.

Noteworthy a small portion of students were interviewed had psychological support, also is essential for maintaining the mental health, especially when they face exhaustive routines, pressure for production. In addition, other problems can cause them strong emotional tension. Nursing students have disregarded their illness or even believed that overcome the problems without professional support.

Study conducted in Taiwan found anxiety in nursing students increased gradually before entering their clinical stage (Sun et al., 2016). Students who are enrolled in the university face new, unknown and threatening world and will need support and they are learning a good environment to develop themselves (Nogueira-Martins & Nogueira-Martins, 1985).

A study in Rio Grande do Sul, Brazil, evaluated 167 university students and identified 77 (46.1%) anxiety cases (mild, moderate and severe) (Brandtner & Bardagi, 2009), a lower result was found in the current study. Anxiety disorder was greater than in results that were found in the literature. The present study presented the proposal of achievement of Reichian Elongation and its effect on anxiety's signs and symptoms in nursing students that improved their quality of life. This result was perceived by the improvement in anxiety scores and averages of the quality of life domains among those students as compared to the control group.

In study, some students reported they did not experience stressful events. This may have contributed to decrease in anxiety scores and quality of life. Or, this can be a reflection of Reichian Elongation effect by allowing students to take care of themselves, look more at themselves, cover less themselves and worry less. Difficulties may appear seeing them lighter and less stressful. It is no useful to take care of the body and forgetting the psychological.

This study identified an increase in psychological and social relationships domains in their students who participated of the Reichian Elongation. These domains are responsible for issues in positive feelings, memory, concentration, self-esteem, body image, personal relationships and social support. Those aspects may have been improved by performing the Reichian Elongation. They're moving and stretching their body and following the Reich precepts that contributed to improve quality of life and anxiety in students. Students who didn't participate in the elongation showed a reduction in quality of life.

Physical and environment domain showed an increase in experimental and control group and was more frequent in experimental group. Those domains are linked to factors such as pain and discomfort, energy and fatigue, sleep and rest, mobility, work capacity, physical security and protection, home environment, financial resources, transport and health.

A study conducted in São Paulo, Brazil reported 264 nursing students had quality of life are closer to the maximum value 30 (According to Quality of Life Index of Ferrans and Powers), 25.17 health/functioning domain; 25.24 socioeconomic status; 25.91 psychological/spiritual; 25.66 family domain and 25.40 Total Quality of life (Kawakame & Miyadahira, 2005) which had differed from the present study compared to quality of life average that are mostly below 55 (maximum represented by 100, according Whoqol).

A study conducted in São Paulo, Brazil, 60 students indicated a high level of stress in a private university and the social domain reached the highest score in quality of life. It was also found moderate correlation between stressors and physical and psychological domains, and low correlation with the social and environmental domains (Oliveira et al., 2015). The current study identified an improvement in quality of life through the Reichian Elongation in psychological and social relations domains and a minor improvement in the physical and the environment domains.

Other study conducted in São Paulo, Brazil, demonstrated the intervention (biofeedback) performed in 170 students had a significant reduction in trait and state anxiety levels and an improvement in the Mental Health in SF-36 questionnaire which is considered an important parameter for assessing the quality of life (Lantyer, Varanda, Souza, Padovani, & Viana, 2016). Another study using meditation reported 50 nursing students (21

experimental group and 23 control group), in South Korea, identified anxiety decrease (Song & Lindquist, 2015). In Thailand, a study declared 89 nursing students were doing meditation (29 students) and biofeedback (29 students) and also had reduced anxiety (Ratanasiripong, Park, Ratanasiripong & Kathalae, 2015).

Mental Health strategies have been used to reduce anxiety levels in students and should be encouraged in academic area. This fact is aiming to improve their mental health. Biofeedback, meditation and Reichian Elongation are good examples for the best results.

Even anxiety was the most frequent mental disorder in this sample a special attention should be given to major depressive episode, recurrent, with melancholic and agoraphobia in nursing students. Mental disorder is a risk factor for suicide attempt. Among students, risk of suicide was present and that's so important people improve their management of the course. University and professors are attentive to warning signs that refer cases of mental health among students. Thus, the results of this research are important and deserve academic discussions related to their mental health care.

A study conducted in Pelotas, Rio Grande do Sul, Brazil, evaluated 1560 young people were regarding of suicidal risk and identified a frequency of 8.6% cases (Ores et al., 2012). The current study identified 41 (28.7%) cases in 143 young students. This leads to an immediate concern on how to conduct and monitor that severe situation. Furthermore, students need an assistance programs at the university. Those services can bring new services to improve quality of life in students until the end of the course (Osse & Costa, 2011).

Another study conducted in Rio Grande do Sul, Brazil, evaluated 1.621 young people, of these 20.9% had anxiety disorder and 8.6% risk of suicide. Those results showed anxiety disorder was significantly associated with risk of suicide. This reinforces how importance is the greater attention to the risk of suicide in university students with anxiety disorders (Rodrigues et al., 2012). This study related to intense demand studies, difficulty in adjusting to environment academic, difficulties in moving from their city of origin, among others and through suicide ideation and suicide attempts in the academic context (Silva & Azevedo, 2018). In addition, university students are struggling of individual, family, social and economic repercussions that involve suicidal behavior.

A study pointed out how important is to evaluate emotional well-being during the graduation and emotional support services (Brandtner & Bardagi, 2009). University should be a place of training, health and well-being. Some universities have created psychopedagogical support offices and programs to prevent suicide among students (Gonçalves, Freitas, & Sequeira, 2011). Thus, university and professors have an important work in having an early

perception of psychological problems among their students and they can contribute more in referring them to specialized services (Gonçalves, Freitas, & Sequeira, 2011).

Reichian Elongation maybe is one of the care strategies in promoting mental health by nurses or other health professionals. The advantages are the low-cost care and an effective reduce in anxiety symptoms. The innovation of nursing care based on light technologies such as Reichian Elongation can thus contribute to improve the quality of life in patients or the nursing team. Limitations of this study must be considered. There were losses in follow-up due to absences in practices and unsuccessful attempts to contact the telephone.

5. Final Considerations

The Reichian Elongation reduced anxiety symptoms and improved the quality of life of the nursing students. This improvement can bring physical and psychological gains and, consequently, make this public more participative and productive in the academic area.

It is recommended that studies be carried out with shorter follow-up time, with the aim of better therapeutic adherence for the same outcome.

References

Almeida, B. P., & Albertini, P. (2014). A noção de couraça na obra de Wilhelm Reich: publicações de 1920 a 1933. *Psicologia USP*, 25(2), 134-143.

Biaggio, A. M. B., Natalício, L., & Spielberger, C. D. (1977). Desenvolvimento da forma experimental em português do Inventário de Ansiedade Traço-Estado (IDATE)*, de Spielberger. *Arquivos Brasileiros de Psicologia Aplicada*, 29(3), 31-44.

Brandtner, M., & Bardagi, M. (2009). Sintomatologia de Depressão e Ansiedade em Estudantes de uma Universidade Privada do Rio Grande do Sul. Gerais: *Revista Interinstitucional de Psicologia*, 2(2), 81 – 91.

Capitão, C. G., & Tello, R. R. (2004). Traço e estado de ansiedade em mulheres obesas. *Psicologia Hospitalar*, 2(2), 1-2.

Cavaler, C. M., & Gobbi, S. L. (2013). Transtorno de ansiedade generalizada. *2º Simpósio de Integração Científica e Tecnológica do Sul Catarinense*, Araranguá, SC, Brasil, 730.

Cheung, T., Wong, S. Y., Wong, K. Y., Law, L. Y., Ng, K., Tong, M. T., Wong, K. Y., Ng, M. Y., & Yip, P. S. F. (2016). Depression, Anxiety and Symptoms of Stress among Baccalaureate Nursing Students in Hong Kong: A Cross-Sectional Study. *International Journal of Environmental Research and Public Health*, 779(13), 1-25.

Coelho, A. T., Lorenzini, L. M., Suda, E. Y., Rossini, S., & Reimão, R. (2010). Qualidade de Sono, Depressão e Ansiedade em Universitários dos Últimos Semestres de Cursos da Área da Saúde. *Neurobiologia*, 73(1), 36-39.

Cornell, W. (1975). Wake up "sleepy": reichian techniques and script intervention. *Transactional Analysis Bulletin*, 5(2), 144-147.

Fleck, M. P. A., Louzada, S., Xavier, M., Chachamovich, E., Vieira, G., Santos, L., & Pinzon, V. (2003). Aplicação da versão em português do instrumento abreviado de avaliação da qualidade de vida "WHOQOL-bref". *Revista de Saúde Pública*, 34(2), 178-183.

Gama, M. M. A., Moura, G. S., Araújo, R. F., Silva, F. T. (2008). Ansiedade-traço em estudantes universitários de Aracaju (SE). *Revista de Psiquiatria do Rio Grande do Sul*, 30(1), 19-24.

Gonçalves, A., Freitas, P., & Sequeira, C. (2011). Comportamentos Suicidários em Estudantes do Ensino Superior: Factores de Risco e de Protecção. *Millenium*, 40, 149-159.

Kawakame, P. M. G., & Miyadahira, A. M. K. (2005). Qualidade de vida de estudantes de graduação em enfermagem. *Revista da Escola de Enfermagem da USP*, 39(2), 164-72.

Lantyer, A. S., Varanda, C. C., Souza, F. G., Padovani, R. C., & Viana, M. B. (2016). Ansiedade e Qualidade de Vida entre Estudantes Universitários Ingressantes: Avaliação e Intervenção. *Revista Brasileira de Terapia Comportamental e Cognitiva*, 18(2), 4-19.

Minayo, M. C. S., Hartz, Z. M. A., & Buss, P. M. (2005). Qualidade de vida e saúde: um debate necessário. *Ciência & Saúde Coletiva*, 5(1), 7-18.

Monteiro, C. F. S., Freitas, J. F. M., & Ribeiro, A. A. P. (2007). Estresse no cotidiano acadêmico: o olhar dos alunos de enfermagem da Universidade Federal do Piauí. Escola Anna Nery. *Revista de Enfermagem*, 11(1), 66-72.

Nogueira-Martins, L. A., & Nogueira-Martins M. C. F. (2018). Saúde Mental e Qualidade de Vida de estudantes universitários. *Revista Psicologia, Diversidade e Saúde*, 7(3), 334-337.

Oliveira, H. F. R., Risso, H. R. F., Vieira, F. S. F. K., Leal, A. S., Novelli, C., Noda, D. K. G., Martins, G. C., Casagrande, R. M., Camargo, L. B., Passos, R. P., & Junior, G. B. V. (2015). Estresse e qualidade de vida de estudantes universitários. *Revista CPAQV – Centro de Pesquisas Avançadas em Qualidade de Vida*, 7(2), 1-8.

Oliveira, M.A.P., Velarde, L.G.C., & Sá, R.A.M. (2015). Ensaios clínicos randomizados: Série Entendendo a Pesquisa Clínica 2. *Femina*, 43(1), 7-11.

Ores, L. C., Quevedo, L. A., Jansen, K., Carvalho, A. B., Cardoso, T. A., Souza, L. D. M., Pinheiro, R. T., & Silva, R. A. (2012). Risco de suicídio e comportamentos de risco à saúde em jovens de 18 a 24 anos: um estudo descritivo. *Cadernos de Saúde Pública*, 28(2), 305-312.

Osse, C. M. C., & Costa, I. I. (2011). Saúde mental e qualidade de vida na moradia estudantil da Universidade de Brasília. *Estudos de Psicologia*, 28(1), 115-122.

Ratanasiripong, P., Park, J. F., Ratanasiripong, N., & Kathalae, D. (2015). Stress and Anxiety Management in Nursing Students: Biofeedback and Mindfulness Meditation. *Journal of Nursing Education*, 54(9), 520-524.

Rodrigues, M. E. S., Silveira, T. B., Jansen, K., Cruzeiro, A. L. S., Ores, L., Pinheiro, R. T., Silva, R. A., Tomasi, E., & Souza, L. D. M. (2012). Risco de suicídio em jovens com transtornos de ansiedade: estudo de base populacional. *Psico-USF*,17(1), 53-62.

Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavs, J., Weiller, E., Hergueta, T., Baker, R., & Dunbar, G. C. (1998). The Mini-International Neuropsychiatric Interview (M.I.N.I.): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *Journal of Clinical Psychiatry*, 59(S20), 22-33.

Silva M. V. M., & Azevedo, A. K. S. (2018). Um olhar sobre o Suicídio: vivências e experiências de estudantes universitários. *Revista Psicologia, Diversidade e Saúde*, 7(3), 400-411.

Song, Y., & Lindquist, R. (2015). Effects of mindfulness-based stress reduction on depression, anxiety, stress and mindfulness in Korean nursing students. *Nurse Education Today*, 35, 86-90.

Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E. (1970). *Manual for the statetrait anxiety inventory ("self-evaluatin questionaire"*). Retrieved from https://twynhamschoolalevelpe.weebly.com/uploads/2/2/6/6/22662982/stai.pdf

Sun, F. K., Long, A., Tseng, Y. S., Huang, H. M., You, J. H., & Chiang, C. Y. (2016). Undergraduate student nurses' lived experiences of anxiety during their first clinical practicum: A phenomenological study. *Nurse Education Today*, 37, 21-26.

World Health Organization. (2014). DSM-5 - American Psychiatric Association. *Manual diagnóstico e estatístico de transtornos mentais*. (5th ed.) Porto Alegre: Artmed.

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