RESEARCH ARTICLE

BURNOUT SYNDROME IN STUDENTS OF THE PHYSIOTHERAPY PROGRAM OF THE UNIVERSITY OF PAMPLONA WHO TAKE CLINICAL PRACTICES

SINDROME DEL BURNOUT EN ESTUDIANTES DEL PROGRAMA DE FISIOTERAPIA DE LA UNIVERSIDAD DE PAMPLONA QUE CURSAN PRÁCTICAS CLÍNICAS

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ABSTRACT

Objective: To determine the incidence and characteristics of Burnout syndrome in students of the physiotherapy program at the University of Pamplona who are undergoing clinical internships. Methodology: The current research is quantitative, prospective, cross-sectional, and, based on data analysis and scope, it is descriptive and observational. The population consists of students in the Physiotherapy program with active academic enrollment at the University of Pamplona from the sixth to the tenth semester, who are undergoing clinical internships at levels I, II, III, IV, and CAP, respectively, totaling 123 students. The sample size for this study is ninetyfour students. Results: For the dimension of exhaustion, 49% of students scored between high and extremely high, with an average of fifteen points, corresponding to an elevated level. This suggests indications of Burnout Syndrome. Regarding the dimension of cynicism, 19% of students scored high, with an average of six points indicating a "medium-high" level, which is an indicative that there are no signs of Burnout Syndrome. As for the dimension of academic efficacy, 19% of participants scored between low and very low, with an average score of 26, representing a "medium-low" level, indicative of no signs of Burnout Syndrome. Conclusion: This

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BASIC HEALTH SCIENCES MAGAZINE, 2(1): 64-83. MARCH 2024, ISSN 2981-5800 research has yielded valuable insights into the incidence and characteristics of Burnout syndrome among physiotherapy students during their clinical internships. The findings may prove beneficial in implementing preventive strategies and emotional support for this specific group of students. Nevertheless, it is essential to acknowledge the study's limitations, such as the absence of comparisons with similar research conducted in the Colombian context, to fully comprehend the scope of the results and their generalizability.

Keywords: Maslach Burnout Inventory, students, burnout syndrome

RESUMEN

Objetivo: Determinar la incidencia y características del síndrome de Burnout en estudiantes del programa de fisioterapia de la Universidad de Pamplona que cursan prácticas clínicas. Metodología: El presente articulo reporta los resultados de una investigación cuantitativa, prospectiva, de tipo transversal, y según el análisis y alcance de datos es descriptiva y observacional. La población la conforman los estudiantes del programa de Fisioterapia con matrícula académica vigente de la universidad de Pamplona desde Sexto a Décimo semestre que cursan prácticas clínicas de niveles I, II, III, IV y CAP respectivamente para un total de 123 estudiantes. Se cuenta con una muestra de 94 estudiantes. Resultados: Para la dimensión de agotamiento el 49% de los estudiantes obtuvo una calificación entre alto y muy alto y asimismo el promedio fue de 15 puntos, que corresponde a un nivel alto, lo cual hace referencia a que hay indicios del Síndrome de Burnout. Para la dimensión de cinismo el 19% de los estudiantes obtuvo una calificación alta y el promedio fue de 6 puntos que indica un nivel "medio alto", siendo este un indicativo de que no hay indicios del Síndrome de Burnout. Y en cuanto a la dimensión de eficacia académica el 19% de los participantes estuvo entre las puntuaciones bajo y muy bajo, y la puntuación promedio corresponde a 26, siendo este un nivel "medio bajo", indicativo de que no hay indicios del Síndrome de Burnout. Conclusión: Esta investigación ha proporcionado información valiosa sobre la incidencia y características del síndrome de Burnout en estudiantes de fisioterapia durante sus How to cite this article: García-Suárez Sebastián. Síndrome de Burnout en estudiantes del programa de fisioterapia de la Universidad de Pamplona que cursan prácticas clínicas. Revista Ciencias Básicas en Salud. 2024,1 (1):64-83. ISSN 2981-5800.

BASIC HEALTH SCIENCES MAGAZINE, 2(1): 64-83. MARCH 2024, ISSN 2981-5800 prácticas clínicas. Los resultados pueden ser útiles para implementar estrategias de prevención y apoyo emocional en este grupo específico de estudiantes. No obstante, es necesario considerar las limitaciones del estudio, como falta de comparaciones con investigaciones similares desarrolladas en el contexto colombiano, para comprender completamente el alcance de los resultados y su generalización.

Palabras clave: Inventario de Burnout de Maslach, estudiantes, síndrome de burnout

INTRODUCTION

Burnout Syndrome has been characterized as a process of chronic work-related responses to stress experienced by certain groups of workers. However, this phenomenon has also been observed in other groups, including university students, leading to the expansion of burnout studies to academic samples, termed Academic Burnout (Morales-Rodríguez, F. M., Pérez-Mármol, J. M., & Brown, T., 2019).

Traditionally, the dimensions of burnout have been conceptualized according to Maslach and Jackson's (1981) threedimensional theoretical model, aligning with more contemporary models such as those by Schaufeli et al. (2002), Salanova et al. (2005), Caballero and Breso (2015), or Hederich-Martínez and Caballero-Domínguez (2016). The evaluation of Burnout Syndrome in students has been carried out using the Maslach Burnout Inventory-Student Survey (MBI-SS), which comprises three subscales: exhaustion, cynicism, and efficacy (Schaufeli et al., 2002).

Burnout syndrome is presented as a multifaceted concept encompassing various levels of emotional exhaustion, characterized by the feeling of being unable to perform at maximum capacity, both physically and psychologically. It also includes depersonalization, which manifests as a negative or distant attitude towards other people, also known as cynicism or disbelief, and a low sense of personal accomplishment,

which implies a tendency to feel incompetent. In the academic field, burnout manifests in students with high levels of emotional exhaustion and depersonalization, accompanied by a low sense of personal accomplishment linked to their academic activities (March-Amengual, J. M., et al., 2022).

Apart from academic demands, various challenges such as pressure and competition among peers, socioeconomic limitations. and separation from home and family act as students. stressors for Academic burnout has gained crucial relevance by impacting the mental health of university students, which motivates this study aimed at determining the incidence and characteristics of Burnout syndrome in students of the physical therapy program at the University of Pamplona who are undergoing clinical practice. The specific objectives are: То determine the presence of burnout syndrome through the Maslach Burnout Inventory for students (MBI-GS(S)), to sociodemographically characterize the population with burnout syndrome, and to determine the relationship between complementary variables and the presence of Burnout syndrome (Liu, Z., Xie, Y., Sun, Z., Liu, D., Yin, H., & Shi, L., 2023).

METHODOLOGY

This research is quantitative, prospective, cross-sectional, and observational descriptive and according to the data analysis and scope. The population consists of students from the Physical Therapy with current academic program enrollment at the University of Pamplona, ranging from the sixth to the tenth semester. who are undertaking clinical practices at levels I, II, III, IV, and CAP, respectively, for a total of 123 students, distributed as shown in Table 1. This research employs simple stratified sampling because our population is divided by practice levels, and the combination of all these levels will provide the sample, which consists of 94 students with a confidence level of 95% and a margin of error of 5%.

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LEVEL OF PRACTICES	# OF STUDENTS
LEVEL I	20
LEVEL II	23
LEVEL III	30
LEVEL IV	36
CAP CÚCUTA	8
CAP MOVILITY	6

Table 1. Distribution of students according to the level of practices in which they are.

INSTRUMENT

The Maslach Burnout Inventory – General Survey for Students (MBI-GS(S)) Students are required to respond to items using a Likert-type frequency scale which ranges from "0" (never) to "6" (always). High scores in the dimensions of exhaustion and cynicism, along with low scores in the dimension of professional efficacy, will indicate the presence of burnout. involvement in the study. Data collection was conducted using a Google Forms online questionnaire with closed-ended questions. This questionnaire was distributed among students practicing at the Main Campus of the University of Pamplona and the Health Faculty in Cúcuta via a WhatsApp link and email containing all questions and response options.

RESULTS

The survey titled "Burnout Syndrome in Students of the Physical Therapy Program the University at of Pamplona" administered was to students undergoing their clinical practices. Informed consent was obtained from participants for their To calculate the scores for each scale (Exhaustion, Cynicism, and Professional Efficacy), it is necessary to sum the scores obtained in all the items belonging to each scale and then divide the result by the number of items on that scale. For example, to determine the score on the "Exhaustion" scale, the direct scores

of all Exhaustion (E) items would be summed and then divided by 5, which is the number of items on the Exhaustion scale. This process would be repeated for each scale and for each individual who was administered the measurement instrument. (Table 2) Regarding the relationship between the variables and their strength of association, contingency tables were created to find the relative risk (RR) and the degree of significance using the chi-square test.

Dimension	Number of questions	Location of the questions in the survey
Exhaustion	5	1, 4, 7, 10, 13
Cynisim	4	2, 5, 11, 14
Academic Efficacy	6	3, 6, 8, 9, 12, 15

Table 2. Number and location of the questions for each dimension of the MBI-GS(S).

SOCIODEMOGRAPHIC DATA

Data was obtained regarding age, with most participants being 22 years old (23%), 21 years old (22%), and 23 years old (21%). The majority are female, with 71 participants (76%). 52% of the subjects are from socioeconomic stratum 1. 96% of participants report being single. 67% of the students come from other departments of the country, excluding Norte de Santander. 56% of the participants reside in Cúcuta. Additionally, 36% of participants report living in a shared apartment/room. 78% of the subjects have an income below one minimum monthly wage. 34% of the participants are in level IV of their clinical practices. (Table 3).

Variable	n=94	
Age (in years)		
19-23	65	
24-27	22	
29-33	7	
Gender		
Female	71	
Male	23	
Socioeconomic stratum		
1	49	
2	29	
2 3 4	15	
4	1	
Marital status		
Single	91	
Married	2	
Common-law union	1	
Place of origin		
Pamplona	12	
Cúcuta	10	
Other municipalities of	9	
Norte de Santander	-	
Other departaments	63	
Place of domicile		
Pamplona	30	
Cúcuta	56	
Los Patios	4	
Villa del Rosario	3	
Ureña	1	
Living situation		
Shared apartment/room	34	
Non-shared		
apartment/room (live	28	
alone)		
,	32	
Family nucleus		
(homestay)		
Montly income		
Less than a CLMMW	75	
Equal to a CLMMW	14	
More than a CLMMW	5	
Leve lof training		
practices	15	
	16	
II	26	
III	32	
IV	5	Table 3. Socio
CAP		

 Table 3. Sociodemographic data

COMPLEMENTARY CHARACTERISTICS

Regarding the second section of the survey corresponding to complementary characteristics, it was

found that 23% of the participants are taking two subjects. 88% of the individuals in this study report not working. And 94% of the subjects report not having children. (Table 4)

Variable	n= 94
Number of subjects being	
taken	
One subject	15
Two subjects	22
Three subjects	13
Four subjects	6
Five subjects	14
Six or more subjects	12
None	12
Currently employed?	
Yes	11
No	83
Any children?	
Yes	6
No	88

Table 4. Complementary characteristics

MASLACH BURNOUT INVENTORY FOR STUDENTS (MBI-GS(S))

Below is the level of equivalence according to the score of each dimension (Table 5) and the results obtained in the section for the MBI-GS(S) (Table 6).

For the exhaustion dimension (Graph 1), 49% of the students scored

between high and very high, with an average of 15 points, corresponding to a high level, indicating signs of Burnout Syndrome. For the cynicism dimension (Graph 2), 19% of the students scored high, and the average was 6 points, indicating a "moderately high" level, suggesting no signs of Burnout Syndrome. Regarding the academic efficacy dimension (Graph 3), 19% of the participants scored

between low and very low, with an average score of 26, indicating a

"moderately low" level, suggesting no signs of Burnout Syndrome.

Nivel	Porcentaje	Agot	Agotamiento		Cinismo		profesional
Muy bajo	>5%	<0,4	De0a1	<0,2	0	<2,83	De 1 a 15 (*)
Bajo	5-25%	0,5 - 1,2	De 2 a 6	0,3 - 0,5	De 1 a 2	2,83 - 3,83	De 16 a 22(*)
Medio bajo	25-50%	1,3 - 2	De 7 a 10	0,6 - 1,24	De 3 a 4	3,84 - 4,5	De 23 a 27
Medio alto	50-75%	2,1 - 2,8	De 11 a 14	1,25 - 2,25	De 5 a 9	4,51 - 5,16	de 28 a 30
Alto	75-95%	2,9 - 4,5	De 15 a 22 (*)	2,26 - 4	De 10 a 16 (*)	5,17 - 5,83	De 31 a 34
Muy alto	>95%	> 4,5	De 23 a 30 (*)	>4	De 17 a 24 (*)	> 5,83	De 35 a 36

(*) Indicios del Síndrome de Burnout

Table 5. Equivalence level according to the score obtained for each dimension.



Graph 1. Distribution of students regarding the exhaustion dimension.



Graph 2. Distribution of students regarding the cynicism dimension.



Graph 3. Distribution of students regarding the academic efficacy dimension.

Variable		Answers by item (n=94)					
	N	AN	S	R	QO	AA	Α
1.Academic activities have me emotionally exhausted.		10	30	20	14	16	4
2. I have lost interest in my studies since I started university.	12	26	30	14	10	2	
3. I can effectively solve problems related to my studies.		4	7	14	28	31	10
4. I feel physically exhausted at the end of a day at university.		5	16	20	17	24	12
5. I have lost enthusiasm for my studies.	6	28	37	16	3	3	1
6. I believe I contribute effectively to the classes I attend.		2	14	25	24	23	6
7. I am exhausted from studying so much.		22	22	24	11	9	2
8. In my opinion, I am a good student.		1	4	21	28	34	6
9. I have learned many interesting things during the course of my studies.				6	5	37	46
10. I feel tired in the morning when I wake up and have to face another day at university.	1	7	32	23	16	12	3
11. I have distanced myself from my studies because I feel they are not really useful.	35	33	14	8	1	3	
12. Achieving goals in my studies stimulates me.	1	1	1	8	23	30	30
13. Studying or going to classes all day is really stressful for me.	6	13	27	25	13	7	3
14. I doubt the importance and value of my studies.	35	32	15	6	4	2	
15. During classes, I am confident that I am effective at doing things.		3	17	27	21	21	5

N= never/no times; **AN**= almost never/a few times a year; **S**= sometimes/once a month or less; **R**= regularly/a few times a month; **QO**= quite often/once a week; **AA**= almost always/a few times a week; **A**= always/every day.

Table 6. Results Maslach Burnout Inventory for Students MBI-GS(S)

CROSS-TABULATION

Exhaustion Vs 4, 5, 6 or more subjects

	Burn		
	+	-	
Taking 4, 5, 6 or more subjects +	23	9	32
Taking 4, 5, 6 or more subjects -	23	39	62
	46	48	94
	CHI -	10),22
	SQUARE		

There is a relative risk (RR) of 1.9, indicating a higher probability that taking 4 or more subjects causes burnout syndrome, with a moderate strength of association and risk. In the chi-square analysis (10.22), the significance suggests that there is a 99% probability that there is an association between the two variables.

Exhaustion Vs Currently employed?

	Burnout			
	+		-	
Currently employed? +	6		5	11
Currently employed?-	40		43	83
	46		48	94
	CHI - SQUARE		0	,16

There is a relative risk (RR) of 1.1, indicating a higher probability that working causes burnout syndrome. However, this association is weak and lacks a significant effect. The chisquare analysis (0.16) reveals a lack of statistical significance, suggesting that the probability of a relationship between the two variables is less than 90%.

Exhaustion Vs Any children?

	Burn		
	+	-	
Any children? +	1	5	6
Any children -	42	46	88
	43	51	94
	CHI - SQUARE		2,18

There is a relative risk (RR) of 0.3, indicating a higher probability that having children causes burnout syndrome, with a weak strength of association. The chi-square analysis (2.18) shows a lack of statistical significance, suggesting that the probability of a relationship between the two variables is less than 90%.

Cynicism Vs 4, 5, 6 or more subjects

	Burnout		
	+	-	
Taking 4, 5, 6 or more subjects +	9	23	32
Taking 4, 5, 6 or more subjects -	9	53	62
	18	76	94
	CHI - SQUARE	2,52	

There is a relative risk (RR) of 1.9, indicating a higher probability that taking 4 or more subjects causes burnout syndrome, with a moderate strength of association and risk. The chi-square analysis (2.52) shows a significance that suggests the probability of a relationship between the two variables is less than 90%.

	Burn	Burnout	
	+	-	
Currently employed? +	0	11	11
Currently employed? -	18	65	83
	18	76	94
	CHI - SQUARE	2,95	

Cynicism Vs Currently employed?

There is a relative risk (RR) of 0 probability that working causes burnout syndrome, with a weak strength of association. The chisquare analysis (2.95) shows a significance that suggests there is a 90% to 95% probability that there is an association between the two variables.

Cynicism Vs Any children?

	Burnout		
	+	-	
Any children? +	2	4	6
Any children? -	16	72	88
	18	76	94
	CHI - SQUARE	0,83	

There is a relative risk (RR) of 1.8, indicating a higher probability that having children causes burnout syndrome, with a moderate strength of association and risk. The chi-square analysis (0.83) shows a significance that suggests the probability of a relationship between the two variables is less than 90%.

	Burnout		
	+	-	
Taking 4, 5, 6 or more subjects +	8	24	32
Taking 4, 5, 6 or more subjects -	10	52	62
	18	76	94
	CHI - SQUARE	1,07	

Academic efficacy Vs 4, 5, 6 or more subjects

The relative risk (RR) of 1.5 indicates a higher likelihood of experiencing Burnout syndrome when taking 4 or more subjects, with a mild association and insignificant risk. The chi-square

analysis (1.07) shows a significance that suggests the probability of a relationship between the two variables is less than 90%.

Academic efficacy Vs Currently employed?

	Burnout]
	+	-	
Currently employed? +	1	10	11
Currently employed? -	17	66	83
	18	76	94
	CHI - SQUARE	0,81	

The relative risk of 0.4 suggests a probability of Burnout syndrome being caused by working, with a weak association. The chi-square analysis

(0.81) indicates a significance that allows estimating the probability of a relationship between the two variables to be less than 90%.

	Burnout		
	+	-	
Any children? +	3	3	6
Any children? -	15	73	88
	18	76	94
	CHI - SQUARE	3,94	

Academic efficacy Vs Any children?

There is a relative risk (RR) of 2.9, indicating a higher likelihood of Burnout syndrome being caused by having children, with a moderate association and elevated risk. The chisquare analysis (3.94) suggests a

DISCUSIÓN

The variables showing association were as follows: burnout vs. taking 4 or more subjects with a moderate association and risk, and a 99% probability of association between the two variables; cynicism vs. taking 4 or more subjects and having children with a moderate association and risk; academic effectiveness vs. having children with a moderate association significance that estimates a probability between 90% and 95% of an association between the two variables.

and elevated risk, with a probability between 90% and 95% of association between the two variables.

Bastidas, Ceballos, & Delgado (2011) found the following results: 14.6% of the students in the sample without children experienced Burnout, while only 0.9% of those with children manifested the syndrome. Regarding students who work, 12% were affected by Burnout, compared to 3.4% of participants who do not work.

Results similar to those of this research were found, where the dimensions of cynicism and academic effectiveness were associated with the complementary characteristic of having children and the presence of indications of Burnout syndrome. However, a weak association was found regarding the complementary characteristic of working.

In the study titled "Relationship between burnout and academic engagement with sociodemographic and academic variables" by Caballero, C. C., Hederich, C., & García, A. (2015), it is noted that students who pay for their studies (presumably engaging in some work activity to cover their tuition) scored positively on academic engagement (EA). This implies that working students may tend to dedicate or involve themselves more in academic activities due to the increased value they attribute to them. This value may stem from the decision and effort involved in studying and working simultaneously. Consequently, this situation could of significance, foster а sense

enthusiasm, inspiration, pride, and personal challenge towards academic work. Additionally, successfully managing both work and academic activities could promote a better perception of self-efficacy. These results are similar to those of this where significant research. no association or risk was found between the complementary characteristic of working and the three dimensions evaluated in the Maslach Burnout Inventory for Students (MBI-GS(S)), indicating indications of the syndrome.

On the other hand, contrasting results were obtained in the research by Merchán-Galvis, Á. M., et al. (2018), where no significant association was found when relating the presence of Burnout syndrome to sociodemographic variables, enrolled semester, or pathological backgrounds.

Similarly, in the study titled "Evaluation of Burnout in Medical Students using the Maslach Burnout-Student Survey Inventory: a cross-sectional data analysis" conducted by Obregon, M., Luo, J., Shelton, J., Blevins, T., &

MacDowell, M. (2020), no significance observed for self-perceived was exhaustion concerning campus (Pvalue = 0.177), ethnic origin (P-value = 0.062), having children (P-value = 0.050), being religious/spiritual (Pvalue = 0.162), and awareness of wellbeing initiatives (P-value = 0.362). It's worth highlighting the sociodemographic characteristic of having children. which. in this research, did show a moderate association and risk for the cynicism dimension and a moderate association and elevated risk for the academic effectiveness dimension.

Araoz, E. G. E., Ramos, N. A. G., & Uchasara, H. J. M. (2021), found that levels of academic burnout are also significantly associated with students' employment status (p=0.008<0.05). Under this premise, students who worked and studied were characterized by slightly higher levels of academic burnout compared to students who only studied. This contrasts with the findings of this research. where the relationship complementary between

characteristics and the appearance of indications of Burnout syndrome demonstrated a weak association and no effect, with a significance suggesting that the probability of a relationship between the two variables is less than 90%.

It was not possible to compare our results with those of other similar studies because previous research did not include the variable related to the number of subjects students were taking.

CONCLUSIONS

The research has successfully achieved its main objective, and the specific objectives have been comprehensively addressed as well. Regarding sociodemographic data, it's noted that the majority of participants fall within the age ranges of 21 to 23 years, with the female gender being predominant. Most students come from other departments within the country. Additionally, it's highlighted that the majority of participants have

incomes lower than a minimum wage and reside in shared apartments or rooms. Regarding complementary characteristics, a significant percentage of participants are enrolled in two subjects, with the majority not working and not having children.

The application of the Maslach Burnout Inventory for Students (MBI-GS(S)) reveals important results. The dimension of exhaustion shows that nearly half of the students experience a high or very high level of exhaustion, indicating indications of Burnout syndrome. In contrast, the dimensions of cynicism and academic effectiveness suggest no significant presence of Burnout syndrome in these areas. Likewise, the crosstabulation of variables reveals important associations. For example, there is a higher risk of experiencing Burnout syndrome among students who are enrolled in 4 or more subjects and have children. On the other hand, the relationship between working and experiencing Burnout is not significant.

When comparing these results with other research, discrepancies in some findings are observed. Some variables showing association in this research have not been consistent in other studies, highlighting the complexity and variability of Burnout syndrome in academic contexts.

In conclusion, this research has provided valuable information about the incidence and characteristics of Burnout syndrome in physiotherapy students during their clinical practices. be useful for The results can implementing prevention strategies and emotional support for this specific group of students. However, it's essential to consider the study's limitations, such as the lack of comparisons with similar research conducted in the Colombian context, to fully understand the scope of the results and their generalizability.

Al comparar estos resultados con otras investigaciones, se observan divergencias en algunos hallazgos.

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