

# Anxiety and eating behavior of students from different areas of a University of southern catarinense

## Ansiedade e comportamento alimentar de estudantes de diferentes áreas de uma Universidade do sul catarinense

## Ansiedad y comportamiento alimentario de estudiantes de diferentes áreas de un Universidad catarinense del sur

Lara Canever<sup>1</sup>, Luiza Meller<sup>2</sup>, Maria Eduarda Matias Colombo<sup>3</sup>, Daniele Botelho, Louyse Sultzbach Damázio<sup>4</sup>, Alexandra Ioppi Zugno<sup>5</sup>

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# REVISA

1. University of the Extreme South of Santa Catarina, Nutrition Course. Criciúma, Santa Catarina, Brazil. <https://orcid.org/0000-0002-4760-2426>

2. University of the Extreme South of Santa Catarina, Nutrition Course. Criciúma, Santa Catarina, Brazil. <https://orcid.org/0009-0002-6429-9059>

3. University of the Extreme South of Santa Catarina, Nutrition Course. Criciúma, Santa Catarina, Brazil. <https://orcid.org/0009-0007-6699-8781>

4. University of the Extreme South of Santa Catarina, Nutrition Course. Criciúma, Santa Catarina, Brazil. <https://orcid.org/0000-0003-3077-8334>

5. University of the Extreme South of Santa Catarina, Graduate Program in Health Sciences, Laboratory of Translational Psychiatry. Criciúma, Santa Catarina, Brazil. <https://orcid.org/0000-0002-0710-2320>

6. University of the Extreme South of Santa Catarina, Graduate Program in Health Sciences, Laboratory of Translational Psychiatry. Criciúma, Santa Catarina, Brazil. <https://orcid.org/0000-0001-6658-6444>

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### RESUMO

**Objetivo:** analisar a relação entre a ansiedade e a alimentação em estudantes de diversas áreas da graduação de uma Universidade do Sul Catarinense. **Método:** A pesquisa aconteceu durante o primeiro semestre de 2023. Para a obtenção de dados foi elaborado um questionário pelas pesquisadoras responsáveis via Google Forms ®. Foram realizadas perguntas sobre as condições socioeconômicas dos estudantes, estado de ansiedade, hábitos alimentares, dados como peso e altura e informações sobre o comportamento alimentar. **Resultados:** Observou-se uma amostra de 85 universitários das três áreas da graduação pesquisadas. Foi aplicado um questionário para verificar o estado nutricional dos estudantes, questões relacionadas com ansiedade, bem como alimentação, comportamento alimentar e comer compulsivamente. Identificou-se que 58,82% (n=50) do IMC dos universitários foi adequado/eutrófico, 78,82% (n=67) se sentiam ansiosos no dia a dia e 82,35% (n=70) relatam que a ansiedade tem relação com o comer compulsivo. **Conclusão:** Conclui-se que a ansiedade e o comer compulsivo são prejudiciais tanto para a saúde do estudante quanto para seu desempenho em seus estudos, bem como sua saúde física e mental.

**Descritores:** Consumo Alimentar; Universitários; Estado Nutricional; Comportamento Alimentar.

### ABSTRACT

**Objective:** to analyze the relationship between anxiety and eating in students from different areas of graduation at a University in Southern Santa Catarina. **Method:** The research took place during the first semester of 2023. To obtain data, a questionnaire was prepared by the responsible researchers via Google Forms ®. Questions were asked about the students' socioeconomic conditions, state of anxiety, eating habits, data such as weight and height, and information about eating behavior. **Results:** A sample of 85 university students from the three undergraduate areas surveyed was observed. A questionnaire was applied to verify the nutritional status of students, issues related to anxiety, as well as food, eating behavior and compulsive eating. It was identified that 58.82% (n=50) of the BMI of university students was adequate/eutrophic, 78.82% (n=67) felt anxious in their daily lives and 82.35% (n=70) reported that anxiety is related to compulsive eating. **Conclusion:** It is concluded that anxiety and compulsive eating are harmful both for the student's health and for their performance in their studies, as well as their physical and mental health.

**Descriptors:** Food Consumption; College students; Nutritional status; Feeding Behavior.

### RESUMEN

**Objetivo:** analizar la relación entre la ansiedad y la alimentación en estudiantes de diferentes áreas de graduación de una Universidad del Sur de Santa Catarina. **Método:** La investigación se desarrolló durante el primer semestre de 2023. Para la obtención de datos se elaboró un cuestionario por parte de los investigadores responsables a través de Google Forms®. Se realizaron preguntas sobre las condiciones socioeconómicas de los estudiantes, estado de ansiedad, hábitos alimentarios, datos como peso y talla e información sobre la conducta alimentaria. **Resultados:** Se observó una muestra de 85 estudiantes universitarios de las tres carreras encuestadas. Se aplicó un cuestionario para verificar el estado nutricional de los estudiantes, temas relacionados con la ansiedad, así como la alimentación, conducta alimentaria y alimentación compulsiva. Se identificó que el 58,82% (n=50) del IMC de universitarios fue adecuado/eutrófico, el 78,82% (n=67) se sintió ansioso en su cotidiano y el 82,35% (n=70) refirió que la ansiedad está relacionada con la alimentación compulsiva. **Conclusión:** Se concluye que la ansiedad y la alimentación compulsiva son perjudiciales tanto para la salud del estudiante como para su desempeño en sus estudios, así como su salud física y mental.

**Descritores:** Consumo de Alimentos; Estudiantes universitarios; Estados nutricionales; Comportamiento de alimentación.

## Introduction

Food is an important act for the body satisfying the physiological needs of the human being in search of a nutritional balance. However, the act of eating goes beyond satisfying these needs, it is a moment of pleasure, interaction with the food you are ingesting and, above all, it is a social and family act.<sup>1</sup>

Society has currently implanted an ideal of the perfect body that leads people, especially young women, to an intense concern with their weight and with their body in front of the mirror. With this, fad diets emerged, highly restrictive in various nutrients as a way of trying to achieve the standard of beauty stipulated by society.<sup>2</sup>

With a more hectic lifestyle, university students are a vulnerable group to possible health risks and impaired quality of life, and because of their intense routine, many need to appeal to faster and more practical meals.<sup>3</sup> Due to this routine, students tend to resort to an "escape valve" to discount the overload of activities, or poor school performance or compensation for some low grade.<sup>4</sup>

Due to the daily stress of university students, many begin to develop a state of anxiety, which corresponds to a set of chemical responses that may be related to psychological and physiological components, which can be considered "normal" in humans. In this context, greater attention to the mental health of students is necessary, so it is necessary to understand what are the risk factors for the emergence of anxiety, to ensure better quality in the professional training of students.<sup>5</sup>

Anxiety is very much related to the appearance of the habit of compulsive eating. The habit of eating abnormally, without feeling hungry, is associated with emotional issues<sup>6</sup>. Melca & Fortes<sup>7</sup> report that people who binge eat usually have high levels of anxiety.

Therefore, this study investigated the relationship between anxiety and eating in students from different undergraduate areas of a University of Southern Santa Catarina.

## Method

This was a descriptive study of quantitative and qualitative character. The objective of this study was to analyze the data on anxiety and eating of university students from different undergraduate courses (Civil Engineering, Accounting, Dentistry, Nutrition, Nursing and Administration) of a University of Southern Santa Catarina, located in the city of Criciúma/SC. The population of this study consisted of male and female students, aged between 20 and 44 years, enrolled in a University of Southern Santa Catarina in the city of Criciúma/SC. The selected courses were Civil Engineering, Accounting Sciences (courses in the area of exact sciences), Dentistry, Nutrition, Nursing (health area) and Administration (humanities area).

The initial contact was made by the researchers with the coordinators of the different undergraduate courses, in order to request the authorization of the study by releasing a letter of acceptance. After approval of the project by the Research Ethics Committee (CEP), through opinion number 5,923,084, data collection began with the university students by sending the questionnaire prepared in Google Forms ®. To obtain data, a questionnaire was elaborated by

the responsible researchers via Google Forms®, with the objective of evaluating the eating behavior of university students from different areas of the undergraduate program and its relationship with the state of anxiety. The questionnaire elaborated by the researchers was sent online to the university students through the coordination of the respective undergraduate courses, being sent to the e-mail of each student enrolled in the participating phase of the research. When accessing the link of the questionnaire, the student first had to open the Term of Free and Informed Consent to agree or not to participate in the research.

The questions were related to the students' socioeconomic conditions, anxiety status, eating habits, data such as weight and height, and information about eating behavior. Data regarding weight, height, age and gender were obtained to classify nutritional status, and such information was self-reported by the participants. In addition to the questionnaire elaborated on eating behavior, a questionnaire adapted from the food consumption markers of the Food and Nutrition Surveillance System<sup>8</sup> was applied, containing questions about food consumption and the frequency of consumption of different foods.

This research began only after approval by the CEP of the University of the Extreme South of Santa Catarina (UNESC). Because it is a study that involves information from human beings, it was submitted to the Research Ethics Committee and approved, thus following the ethical precepts to be obeyed and related to Resolution 466/12 of the National Health Council. The confidentiality of all information was guaranteed, as proposed in Item IV.3.a, of CNS Resolution No. 466 of 2012.

## Results and Discussion

A total of 85 university students participated in this study, of which 72.9% (n=62) were female and 27.1% (n=23) were male. The age range ranged from 20 to 44 years of age, with a mean of 23.5 ( $\pm 4.99$ ) years. The undergraduate courses selected for the research were Nursing, Nutrition and Dentistry, grouped as health courses and corresponded to 40% (n=34) of the sample. The courses of Accounting and Civil Engineering were grouped as exact areas with 23.5% (n=20) of participation in the research, while the Administration course represented the humanities area, equivalent to 36.5% (n=31) of the sample.

**Table 1-** Distribution by sex, of students from different areas of the undergraduate program of a University of Southern Santa Catarina. Criciúma, 2023.

Areas	Female		Male		Total	
	n	%	n	%	n	%
<b>Health area</b>						
Nursing	13	20,9	-	-	13	15,3
Nutrition	12	19,4	1	4,3	13	15,3
Dentistry	8	12,9	-	-	8	9,4
<b>Exact Area</b>						
Accounting	6	9,7	2	8,7	8	9,4
Civil engineering	8	12,9	4	17,4	12	14,1

<b>Humanities Area</b>						
Administration	15	24,2	16	69,6	31	36,5
<b>TOTAL</b>					85	100

Source: Research Data. Criciúma (2023)

Table 2 presents the nutritional status of university students from different undergraduate areas, classified based on the students' BMI. Participated in the research 20 students from the area of exact sciences and, of these, 60% (n=12) presented nutritional status of eutrophy, while 30% (n=6) were overweight and 10% (n=2) obesity grade I. The area of humanities had the participation of 31 students, where 61.3% (n=19) were eutrophic, 29% (n=9) were overweight and 9.7% (n=3) had grade I obesity. of which 43% (n=19) had eutrophy, 26.5% (n=9) were overweight, 11.7% (n=4) were grade I obesity, 9.4% (n=1) were grade III obesity, and 9.4% (n=1) were underweight.

Overall, 58.82% (n=50) of the students who participated in the research were classified as eutrophic, while only 1.17% (n=1) were underweight and 40% (n=34) of the university students were overweight.

**Table 2**-Evaluation of the nutritional status of students from different areas of the undergraduate program of a University of Southern Santa Catarina. Criciúma, 2023.

<b>Nutritional Status</b>	<b>Exact area</b>		<b>Human area</b>		<b>Health area</b>		<b>Total</b>	
	n=20	%	n=31	%	n=34	%	n=85	%
<b>Low weight</b>	-	-	-	-	1	9,4	1	9,4
<b>Adequate</b>	12	60,0	19	61,3	19	43,0	50	58,8
<b>Overweight</b>	6	30,0	9	29,0	9	26,5	24	28,2
<b>Obesity grade I</b>	2	10,0	3	9,7	4	11,7	9	10,5
<b>Obesity grade III</b>	-	-	-	-	1	9,4	1	9,4

Source: Research Data. Criciúma (2023)

In the present study, it was verified that the nutritional status of eutrophy prevailed in the three areas of graduation. A similar result was found by Gasparotto et al. (2013) where 1599 university students participated in the study, in which the average BMI classification of the students was 23.6 kg/m<sup>2</sup> in the exact area, 23 kg/m<sup>2</sup> in the health area and 23.1 kg/m<sup>2</sup> in the human ones, being also predominant the classification of eutrophy.

Table 3 presents results on the state of anxiety in university students from different areas of graduation. Regarding the question "Do you feel that you are anxious in your daily life?", "Yes" was answered by 85% (n=17) of the students in the area of exact sciences, 67.7% (n=21) in the area of humanities and 85.3% (n=29) in health. When the students were asked if they had a diagnosis of anxiety disorder confirmed by a physician, 25% (n=5) in the area of exact sciences, 16.1% (n=5) in the area of humanities and 26.5% (n=9) in the area of health reported having such a disorder. They reported no diagnosis, 70% (n=14) of the students in the area of exact sciences, 80.7% (n=25) of humanities and 73.5% (n=25) of the health students.

**Table 3-** Presence of the state of anxiety in students from different areas of the undergraduate program of a University of Southern Santa Catarina. Criciúma, 2023.

Questions about anxiety	Exact area		Human area		Health area		Total	
	n=20	%	n=31	%	n=34	%	n=85	%
<b>Do you feel anxious in your day-to-day life?</b>								
Yes	17	85,0	21	67,7	29	85,3	67	78,8
No	2	10,0	7	22,6	5	14,7	14	16,4
I don't know	1	5,0	3	9,7	-	-	4	4,7
<b>Do you have a doctor-proven diagnosis of anxiety disorder?</b>								
Yes	5	25,0	5	16,1	9	26,5	19	22,3
No	14	70,0	25	80,7	25	73,5	64	75,2
I don't know	1	5,0	1	3,2	-	-	2	2,3
<b>In what situations do you think your state of anxiety increases?*</b>								
Weeks of academic papers and exams	13	65,0	16	51,6	25	73,5	54	63,5
Personal problems	15	75,0	24	77,4	28	82,3	67	78,8
Professional career	12	60,0	21	67,7	12	35,3	45	52,9
<b>In weeks of exams and/or academic papers, do you feel that this state of anxiety increases?***</b>								
Yes	17	85,0	17	54,9	30	88,3	64	75,2
No	2	10,0	13	41,9	3	8,8	18	21,1
I don't know	1	5,0	1	3,2	1	2,9	3	3,5

Source: Research Data. Criciúma (2023).

Caption: \* more than one respondent; \*\* Pearson's chi-square test.  $p=0.012$

The situations in which the university students were in a higher state of anxiety were the personal problems reported by 75% (n=15) of the students in the area of exact sciences, 77.4% (n=24) in the area of humanities and 82.3% (n=28) of the health department. Another question addressed was about the increase in the state of anxiety in weeks of tests and/or academic papers, where in general, 75.2% (n= 64) of the students answered "Yes" and 21.1% (n=18) indicated "No", and this result was significant ( $p<0.05$ ). "Yes" was also obtained as an answer for 85% (n=17) of the students in the exact sciences area, 54.9% (n=17) in the humanities and 88.3% (n=30) in the health area.

Zancan et al.<sup>9</sup> explained in their research with 357 students from various undergraduate courses in the areas of human sciences, health sciences, applied social sciences, linguistics, letters and arts that 29.7% (n=30) of the sample had a diagnosis of anxiety disorder, which corroborates the findings of the present study, where 22.3% (n=19) of the students also confirmed having a diagnosis of anxiety. In addition, the stressor situation that most prevailed in his study was "the demand for studies (tests, assignments, class hours and complementary hours)" corresponding to the response of 78.4% (n=280) of the students. On the other hand, the present study opposes the results mentioned above, with "personal problems" being the most relevant stressor situation, mentioned by

78.8% (n=67) of the students from all the areas surveyed.

Table 4 shows the results regarding the questions related to the state of anxiety and eating behavior of the university students. In the first question, "When you feel anxious, do you feel hungrier?", in the exact area, the answer "Yes" was obtained by 55% (n=11) and "No" by 40% (n=8) of the students. In the humanities, 35.5% (n=11) of the students answered "Yes" and 54.8% (n=17) "No". In the health area, "Yes" was answered by 70.6% (n=24) of the university students and "No" by 29.4% (n=10) of the students. Overall, 54.2% (n=46) of the sample confirmed that "when they feel anxious, they feel hungrier".

Regarding the question about self-control of food consumption in a state of anxiety, 50% (n=10) of the students in the exact area reported maintaining control and 45% (n=9) could not control the amount of food consumed. In the area of humanities, 41.9% (n=13) reported being able to control and 51.7% (n=16) could not have this self-control. In the area of health, 47.1% (n=16) reported having control of food consumption and 50% (n=17) of these students could not control the amount of food consumed when they were anxious.

In summary, students who stated "not keeping track of the amount of food consumed" responded that they consume amounts equivalent to "an entire bar of chocolate or more" when they feel anxious (22.3%, n=19).

When the students were asked about their preference for salty or sweet foods when they feel anxious, the answer for sweet foods prevailed in the three undergraduate areas (62.3%, n=53), and this option was mentioned by 65% (n=13) of the students in the exact area, 61.3% (n=19) of the human and 61.7% (n=21) of the health.

**Table 4-** Anxiety and food consumption of students from different areas of the undergraduate program of a University of Southern Santa Catarina. Criciúma, 2023.

Questions about anxiety and food consumption	A. Exact area		Human area		Health area		Total		
	n=20	%	n=31	%	n=34	%	n=85	%	
<b>When you feel anxious do you feel hungrier?</b>									
Yes	11	55,0	11	35,5	24	70,6	46	54,1	
No	8	40,0	17	54,8	10	29,4	35	41,1	
I don't know	1	5,0	3	9,7	-	-	4	4,7	
<b>When you feel anxious, can you keep track of the quality of the food you consume?</b>									
Yes	10	50,0	13	41,9	16	47,1	39	45,8	
No	9	45,0	16	51,7	17	50,0	42	49,4	
I don't know	1	5,0	2	6,4	1	2,9	4	4,7	
<b>If you do not keep control, you consume amounts equivalent to:</b>									
			(n=10)		(n=18)		(n=18)		
1 whole bar of chocolate		4	40,0	9	50,0	6	33,3	19	22,3
1 packet of biscuit		2	20,0	3	16,7	2	11,1	7	8,2
1 packet of snacks		2	20,0	6	33,3	9	50,0	17	20,0
No information		2	20,0	-	-	1	5,6	3	3,5
<b>When you feel anxious, do you have more desire to eat sweet or salty foods?</b>									

Sweets	13	65,0	19	61,3	21	61,7	53	62,3
Salted	7	53,0	12	38,7	13	38,3	32	37,6
<b>When you feel like you're anxious, do you usually wake up in the middle of the night to eat?</b>								
Yes	-	-	2	6,4	1	2,9	3	3,5
No	20	100	29	93,6	33	97,1	82	96,4
<b>If you wake up, do you consume a lot of food?</b>								
Yes	-	-	1	50	-	-	1	1,1
No	-	-	-	-	-	-	-	-
I don't know	-	-	1	50,0	1	100	2	2,3
<b>Do you think that the state of anxiety can influence the act of compulsive eating?</b>								
Yes	16	80,0	24	77,5	30	88,2	70	82,3
No	4	20,0	5	16,1	2	5,9	11	12,9
I don't know	0	-	2	6,4	2	5,9	4	4,7

Fonte: Dados da Pesquisa. Criciúma (2023).

Duarte et al.<sup>10</sup> demonstrated in their study conducted with 137 university students in the health area a higher consumption of sweet foods by students when anxious. He used the HAD scale (Assessment of the level of anxiety and depression) through scoring scores, from 08 to 11 points is considered possible anxiety (questionable or doubtful) and from 12 to 21 points probable anxiety. Students with "possible anxiety" obtained daily consumption of 25% (n=10) and weekly consumption of 37.5% (n=15) of sweets among university students and with "probable anxiety" daily consumption was 20% (n=10) and weekly consumption 46% (n=23). In this sense, it should be noted that it is common to increase the consumption of foods rich in sugars in a state of stress and anxiety, since the intake of sweets generates pleasure and improves momentary mood.<sup>11</sup>

In general, it is perceived that in the area of health food consumption is healthier and more balanced than the other areas. However, the three areas demonstrated a balanced diet, with little consumption of industrialized foods mentioned in table 3. Regarding the nutritional status of the students, there was no significant difference between the areas prevailing eutrophy. With regard to the state of anxiety, the diagnosis of anxiety confirmed by a health physician prevailed, being the situation that anxiety most increases the week of work and/or academic tests. Finally, when university students are in a state of high anxiety, they feel hungrier, and the food preference of sweet foods is among all areas, and this consumption is controlled.

## Conclusion

This study made it possible to relate the state of anxiety and eating in university students from different areas of graduation, being these of Health, Human and Exact in a University of Southern Santa Catarina.

The classification of nutritional status through BMI, for most students, was eutrophy for the three undergraduate areas evaluated, but there was a considerable finding of overweight among students from different areas.

As for the food consumption of the university students, a balanced diet

was observed, consisting of the intake of healthy foods daily, such as fruits and vegetables, and beans weekly. On the other hand, ultra-processed foods such as hamburgers and/or sausages, sweetened beverages, instant noodles, packaged snacks or salty biscuits also presented weekly consumption by the students, which is a negative finding, since these are industrialized options and should be consumed sporadically by individuals.

It was found that most students feel anxious in their daily lives and this state of anxiety increases in certain situations such as self-charging for work, professional career, weeks of work and / or tests and, mainly, due to personal problems.

The students reported that when they feel anxious they present more "hunger" and the desire for sweet foods predominates. When asked if anxiety is related to the act of compulsive eating, most students answered yes, confirming this relationship.

Thus, it is important to emphasize the need for the development of more studies on the subject addressed, especially in students from different areas of graduation, since the state of anxiety can directly influence the eating behavior of the individual.

Another point to be considered in the individual when in a state of anxiety is the multidisciplinary follow-up, with emphasis on nutritional and psychological therapy, in order to balance the symptoms of anxiety and eating, including binge eating episodes, if present.

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## References

1. Klobukoski C, Höfelmann D. Compulsão alimentar em indivíduos com excesso de peso na Atenção Primária à Saúde: prevalência e fatores associados. *Cadernos Saúde Coletiva*. 2017; 25:443-452.
2. Andrade A, Bosi MLM. Mídia e subjetividade: impacto no comportamento alimentar feminino. *Revista de Nutrição [Internet]*. 2003 Jan;16(1):117-25. Available from: [https://www.scielo.br/scielo.php?pid=S1415-52732003000100012&script=sci\\_abstract&tlng=pt](https://www.scielo.br/scielo.php?pid=S1415-52732003000100012&script=sci_abstract&tlng=pt)
3. Acosta G, Élide S, Karine Anusca Martins. Alimentação fora do domicílio de universitários de alguns cursos da área da saúde de uma instituição privada. 2013 Jul 1;37(3):288-98.
4. Marques HMA. O sector alimentar e a caracterização do consumo alimentar fora de casa - Portugal: 1990-2000 [dissertação]. Porto: Faculdade do Porto; 2009
5. Marchi KC, Bárbaro AM, Miasso AI, Tirapelli CR. Ansiedade e consumo de ansiolíticos entre estudantes de enfermagem de uma universidade pública. *Revista Eletrônica de Enfermagem*. 2013 Sep 30;15(3).
6. Amparo L. O corpo, o comer e a comida: um estudo sobre as práticas corporais alimentares cotidianas a partir da cidade de Salvador. *SciELO - EDUFBA*; 2008.



7. Melca IA, Fortes S. Obesidade e transtornos mentais: construindo um cuidado efetivo. *Revista Hospital Universitário Pedro Ernesto* [Internet]. 2014 Mar 17 [cited 2021 Oct 28];13(1). Available from: [http://bjhbs.hupe.uerj.br/WebRoot/pdf/456\\_pt.pdf](http://bjhbs.hupe.uerj.br/WebRoot/pdf/456_pt.pdf)
8. SISVAN,2015
9. Zancan RK, Machado ABC, Boff N, Oliveira MDS. Estresse, Ansiedade, Depressão e Inflexibilidade Psicológica em Estudantes Universitários de Graduação e Pós-Graduação. *Estudos e Pesquisas em Psicologia*. 2021 Jul 15;21(2):749-67
10. Duarte, M. A. de S., & Santos, M. M. D. dos. Associação entre hábitos alimentares e os distúrbios de ansiedade e depressão em estudantes universitários na região metropolitana do Recife-PE. *RBONE - Revista Brasileira De Obesidade, Nutrição E Emagrecimento*, 16(101), 217-227.
11. Penaforte FR, Matta NC, Japur CC. Associação entre estresse e comportamento alimentar em estudantes universitários. *DEMETRA: Alimentação, Nutrição & Saúde* [Internet]. 2016 Mar 7 [cited 2019 Nov 2];11(1). Available from: <https://www.e-publicacoes.uerj.br/index.php/demetra/article/view/18592>

**Correspondent Author**

Louyse Sulzbach Damázio.  
Laboratory of Translational Psychiatry  
Block S, basement, room 05. Av. University, 1105. ZIP: 88806-000  
- University. Criciúma, Santa Catarina, Brazil  
[louyse3@unesoc.net](mailto:louyse3@unesoc.net)