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PSYCHIATRIC EMERGENCIES: MYTH OR REALITY IN ESPÍRITO SANTO'S URGENT AND EMERGENCY CARE NETWORK?

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Abstract: Objective: To characterize the epidemiological profile and verify factors associated with the types of psychiatric emergencies of patients assisted by SAMU 192 in Espírito Santo. **Method:** Cross-sectional observational study, CEP opinion 4.308.858, composed of psychiatric emergency patients assisted by SAMU 192 in ES, from 01/01/2020 to 31/12/2021. Data was analyzed using descriptive and inferential statistics, with a significance level of 5%. **Results:** There were 7,732 attendances, categorized as agitation/violence (65.4%), self-harm/suicide attempt (21.9%) and alcohol intoxication/abstinence (12.7%). Attendance prevailed in 2021 (52.7%), males (53.5%), average age 36 years. Death rate of 0.5%. Males were associated with agitation/violence, while females were associated with self-harm/suicide attempts and alcohol intoxication/abstinence ($p < 0.001$); children were associated with alcohol intoxication/abstinence, adolescents and adults with self-harm/suicide attempts and the elderly with agitation/violence ($p < 0.001$); Saturday-Sunday was associated with alcohol intoxication/abstinence, while Monday-Friday was associated with agitation/violence ($p < 0.001$); severity level 1 and level 2 was associated with self-harm/suicide attempt and alcohol intoxication/abstinence, and level 3 was associated with agitation/violence ($p < 0.001$); death was associated with self-harm/suicide attempt ($p < 0.001$). **Conclusion:** Analysis by the SAMU 192 observatory in ES revealed the need for public policies to respond effectively to the suffering of the population in psychiatric emergencies. In addition, there is a need for an integrated approach to mental health care, not only during crises, but also with an emphasis on prevention and awareness in the territories analyzed.

Keywords: Emergency Medical Services; Mental health. Epidemiology

INTRODUCTION

The Mobile Emergency Care Service (SAMU) is responsible for providing pre-hospital care, as early as possible, to individuals in imminent distress and who present a risk of sequelae or even a threat to life. Among the events that lead to this service being activated are psychiatric emergencies, especially situations of agitation and/or aggression (65.7%), psychotic outbreaks (8.5%) and suicidal attempts or ideations (7.6%), according to SAMU records for the municipality of Teresina in 2015 (VELOSO, 2018).

In view of the above, it is of fundamental importance to emphasize what psychiatric emergencies are, seeking a better understanding of their triggering factors and the clinical management of these illnesses. Thus, any acute alteration in behavior, thinking, mood or social relationships can be considered a psychiatric emergency, when they require immediate intervention. This is because they can evolve into psychological distress, suicide, loss of autonomy and potential risk to the psychological and physical integrity of the individual or others (DEL-BEN, 2017).

It is currently known that psychiatric illnesses have a high prevalence in Brazil, especially generalized anxiety disorder and depressive disorder (MANGOLINI, 2019). In addition, there has been a significant increase in anxiety and depression disorders as a result of the coronavirus pandemic and its consequences, especially social isolation and unemployment. A study published by the State University of Rio de Janeiro (UERJ) in the scientific journal "*The Lancet*" found an increase of approximately 90% in cases of depression and a doubling of cases of anxiety. In view of this, it is expected that the number of cases of psychiatric emergencies treated by the SAMU has also grown in the last two years, reflecting the increase in the incidence and prevalence of these illnesses in the country (BRITO, 2021).

In this context, a study was carried out in Teresina, Piauí, in 2014, which analyzed the incidents attended by the Mobile Emergency Care Service, of which 2.8% were of a psychiatric nature. The results concluded that the majority of cases were directed at men (64.8%) and females were the majority (54.9%) for suicide ideation and attempts. In addition, the study showed that 81.4% of the individuals were aged between 20 and 59, with an average age of 35, the 0-19 age group accounted for 7.8% of the visits and the 60+ age group accounted for 5.4%. Situations involving both agitation and aggression were prevalent in all age groups (VELOSO, 2018). Furthermore, in this same context of psychiatric emergencies, a study found that Sunday (16.5%) and Saturday (15.9%) were the days with the highest number of suicidal attempts, as well as the evening (34.9%) and afternoon (32.9%) shifts (MOURA, 2022). Finally, a study was carried out on pre-hospital care for psychiatric emergencies in a municipality in the interior of the state of Ceará, which analyzed the signs, symptoms and complaints presented by patients. These included agitation (54.82%), aggression (44.85%), self-harm (16.51%) and suicidal ideation (14.62%) (GONÇALVES, 2019).

It's worth noting, however, that behavioral changes have various etiologies that must be identified in emergency care. These include organic and neurological dysfunctions, trauma and psychiatric disorders. Therefore, when approaching the patient, it is essential to check vital signs, blood glucose, look for neurological deficits and take their temperature in order to make a differential diagnosis with psychiatric disorders.

Therefore, this study aims to characterize the epidemiological profile of individuals treated in psychiatric urgencies and emergencies in the state of Espírito Santo, which is extremely important for planning primary care and adapting care according to patients' needs.

METHOD

This is a cross-sectional observational study with data collected from the SAMU 192 Medical Regulation System in the state of Espírito Santo. The patients selected were those assisted by the SAMU-192 mobile pre-hospital service in primary care from January 1, 2020 to December 31, 2021. The inclusion criteria were municipalities in the Metropolitan Region of ES (RM - ES) PDR 2020, 2 municipalities in the Southern Region of ES (RS - ES) - Anchieta and Piúma, attendances with an appeal sent by the regulatory doctor, primary attendances, type of incident of the occurrence: psychiatric occurrence data provided by the *E-Cops software*. The exclusion criteria were three municipalities in the RM-ES PDR 2020 - Aracruz, Ibraçu and João Neiva, other municipalities in the Southern region, municipalities in the Central-Northern region and incomplete information on care.

We obtained a figure of 7.732 psychiatric emergencies, assessed according to the following variables: year 2020 and 2021, IBGE age group 0-4 years, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74 and 75 years or more, life cycle baby, child, adolescent, adult and elderly, day of the week Monday to Sunday, period of the week Monday to Friday and Saturday and Sunday, request period dawn, morning, evening and afternoon, period of day and night duty, region Cariacica/Viana, Domingos Martins, Guarapari, Santa Teresa, Venda Nova do Imigrante, Serra, Vila Velha and Vitória, origin of calls commerce/companies, home, school, health establishment, beach/river, state highway, federal highway, bus terminal, public road, rural area and other locations.

Furthermore, in order to make it easier to prioritize the different emergency cases, we can classify them didactically as follows: level 1: absolute priority emergency. Cases in which there is an immediate risk to life and/or the existence of an immediate or secondary risk

of serious functional loss; descriptively, categorical variables will be analyzed by frequency and percentages and quantitative variables by output summary median such as mean, standard deviation, median and percentiles. Level 2: moderate priority urgency, includes cases in which there is a need for medical attention, not necessarily immediately, but within a few hours. Level 3: low priority urgency, cases in which there is a need for medical assessment, but there is no risk to life or limb, and it can wait several hours. Level 4: minimum priority urgency; these include situations in which the medical regulator can give advice over the phone, advise on the use of medication, general care and other referrals. The destinations analyzed were: fire department, concessionaire (outsourced removal) and municipal ambulance, hospitals, released at the scene, not located, deaths, PA/UPA, those who refused care, refused transport, removed by third parties and others. Finally, deaths were analyzed: yes and no, transport to the specialized health service: yes and no, the resource sent: advanced support unit (USA), basic support unit (USB) and intermediate support unit (USI) and the type of destination: philanthropic, private or public.

RESULTS AND DISCUSSION

There were 7,732 cases of psychiatric emergencies assisted by SAMU 192, between January 1, 2020 and December 31, 2021, in the Regions/Municipalities delimited by the study, with the main causes being agitation/violence with 5,058 cases (65.4%), followed by self-harm/attempted suicide with 1,693 cases (21.9%) and alcohol intoxication/abstinence with 981 cases (12.7%). The mean age of the patients was 36 years, median 34 years, minimum 0 and maximum 100 years, with a standard deviation of 16. In addition, there were significant associations between the municipalities analyzed and the outcome type of

psychiatric emergency. The municipalities of Anchieta, Ibatiba, Itaguaçu and Santa Maria de Jetibá were associated with cases of alcohol intoxication/abstinence, Guarapari was associated with cases of agitation/situations of violence, and Laranja da Terra was associated with self-harm/suicide attempts ($p < 0.001$). The other epidemiological variables examined are shown in the table below.

DISCUSSION

Compared to 2020, 2021 showed an increase in the number of cases of psychiatric emergencies. This may be due to several factors, including the COVID-19 pandemic, which has possibly aggravated or triggered psychiatric symptoms in a large part of the population. The period of social isolation, together with apprehension about the disease and the anxiety caused by worrying about loved ones, has contributed to the establishment of an environment conducive to the emergence of mental disorders.

Furthermore, when analyzing the subcategories of psychiatric emergencies, it was noted that self-harm, attempted suicide and alcohol intoxication or withdrawal were predominantly made up by females. This pattern can be attributed to various reasons, such as sociocultural differences in the way men and women deal with emotional distress. Women are often more likely to express their emotions, so the majority of psychiatric cases are related to this sex. This finding corroborates the study by Veloso et al¹, which showed that most suicidal ideations and attempts were committed by women. Furthermore, in this same study by Veloso et al¹ carried out in the municipality of Teresina, the main psychiatric complaints were aggression (65.7%), psychotic outbreaks (8.5%) and suicidal attempts or ideations (7.6%), with the average age of the cases being 35 years, as in the present study.

Variables/Categories	Agitation and violence n(%)	Self-harm and attempted suicide n(%)	Alcohol intoxication or withdrawal n (%)	Total n (%)	p†
<i>Year</i>					
2020	2397 (47,4)	779 (46,0)	483 (49,2)	3659 (47,3)	0,271
2021	2261 (52,6)	914 (54,0)	498 (50,8)	4073 (52,7)	
<i>Sex</i>					
Female	2070 (40,9)	1018 (60,1)*	508 (51,8)*	3596 (46,5)	< 0,001
Male	2988 (59,1)*	675 (39,9)	473 (48,2)	4136 (53,5)	
<i>Age group IBGE</i>					
0 to 4 years	4 (0,1)	4 (0,2)	7 (0,7)	15 (0,2)	< 0,001
5 to 14 years	146 (2,9)	51 (3,0)	32 (3,3)	229 (3,0)	
15 to 24 years old	1118 (22,1)	478 (28,2)*	225 (22,9)	1821 (23,6)	
25 to 34 years old	1219 (24,1)	454 (26,8)*	226 (23,0)	1899 (24,6)	
35 to 44 years old	1110 (21,9)	377 (22,3)	236 (24,1)	1723 (22,3)	
45 to 54 years old	714 (14,1)	210 (12,4)	144 (14,7)	1068 (13,8)	
55 to 64 years	405 (8,0)*	80 (4,7)	78 (8,0)	563 (7,3)	
65 to 74 years	200 (4,0)	28 (1,7)	20 (2,0)	248 (3,2)	
75 years and over	142 (2,8)	11 (0,6)	13 (1,3)	166 (2,1)	
<i>Life cycle</i>					
Baby	3 (0,1)	4 (0,2)	1 (0,1)	8 (0,1)	< 0,001
Child	16 (0,3)	2 (0,1)	12 (1,2)*	30 (0,4)	
Teenager	607 (12,0)	256 (15,1)*	119 (12,1)	982 (12,7)	
Adult	3914 (77,4)	1361 (2,3)*	783 (79,8)	6058 (78,3)	
Elderly	518 (10,2)*	70 (4,1)	66 (6,7)	654 (8,5)	
<i>Day of the week</i>					
Sunday	764 (15,1)	273 (16,1)	218 (22,2)*	1255 (16,2)	< 0,001
Monday	738 (14,6)	249 (14,7)	142 (14,5)	1129 (14,6)	
Tuesday	783 (15,5)*	233 (13,8)	125 (12,7)	1141 (14,8)	
Wednesday	717 (14,2)	257 (15,2)	109 (11,1)	1083 (14,0)	
Thursday	712 (14,1)*	191 (11,3)	98 (10,0)	1001 (12,9)	
Friday	656 (13,0)	237 (14,0)	127 (12,9)	1020 (13,2)	
Saturday	688 (13,6)	253 (14,9)	162 (16,5)	1103 (14,3)	
<i>Period of the week</i>					
Monday to Friday	1452 (28,7)	526 (31,1)	380 (38,7)*	2358 (30,5)	< 0,001
Saturday and Sunday	3606 (71,3)*	1167 (68,9)	601 (61,3)	5374 (69,5)	
<i>Application period</i>					
Dawn	792 (15,7)	304 (18,0)	232 (23,6)*	1328 (17,2)	< 0,001
Morning	1388 (27,4)*	316 (18,7)	140 (14,3)	1844 (23,8)	
Evening	1027 (20,3)	428 (25,3)*	268 (27,3)	1723 (22,3)	
Afternoon	1851 (36,6)	645 (38,1)	341 (34,8)	2837 (36,7)	
<i>Period of duty</i>					
Daytime	3239 (64,0)*	961 (56,8)	481 (49,0)	4861 (60,5)	< 0,001
Evening	1819 (36,0)	732 (43,2)*	500 (51,0)*	3051 (39,5)	
<i>Region</i>					
Cariacica/Viana	1125 (22,2)	379 (22,4)	192 (19,6)	1696 (21,9)	< 0,001
Domingos Martins	131 (2,6)	39 (2,3)	28 (2,9)	198 (2,6)	
Guarapari	482 (9,5)*	121 (7,1)	97 (9,9)	700 (9,1)	
Santa Teresa	175 (3,5)	79 (4,7)	64 (6,5)*	318 (4,1)	
Venda Nova do Imigrante	330 (6,5)	101 (6,0)	83 (8,5)	514 (6,6)	
Serra	1008 (19,9)	373 (22,0)	206 (21,0)	1587 (20,5)	

Vila Velha	1079 (21,3)	366 (21,6)	176 (17,9)	1621 (21,0)	
Victoria	728 (14,4)	235 (13,9)	135 (13,8)	1098 (14,2)	
Origin					
Commerce/Companies	79 (1,6)	17 (1,0)	13 (1,3)	109 (1,4)	
Home	4141 (81,9)	1445 (85,4)*	772 (78,7)	6358 (82,2)	
School	2 (0,0)	2 (0,1)	2 (0,2)	6 (0,1)	
Health establishment	15 (0,3)*	1 (0,1)	1 (0,1)	17 (0,2)	
Beach/River	1 (0,0)	3 (0,2)	3 (0,3)	7 (0,1)	
State highway	1 (0,0)	0 (0,0)	0 (0,0)	1 (0,0)	< 0,001
Federal highway	0 (0,0)	2 (0,1)	0 (0,0)	2 (0,0)	
Bus terminal	32 (0,6)	4 (0,2)	6 (0,6)	42 (0,5)	
Public roads	649 (12,8)	191 (11,3)	168 (17,1)	1008 (13,0)	
Rural areas	14 (0,3)	5 (0,3)	4 (0,4)	23 (0,3)	
Another location	124 (2,5)	23 (1,4)	12 (1,2)	159 (2,1)	
SAMU risk level					
Level 1	193 (3,8)	437 (25,8)*	176 (17,9)*	806 (10,4)	
Level 2	2458 (48,6)	1010 (59,7) *	595 (60,7)*	4063 (52,5)	< 0,001
Level 3	2390 (47,3)*	241 (14,2)	209 (21,3)	2840 (36,7)	
Level 4	17 (0,3)	5 (0,3)	1 (0,1)	23 (0,3)	
Destination					
CB/Concessionaire/ Municipality	6 (0,1)	7 (0,4)*	2 (0,2)	15 (0,2)	
Hospital	2591 (51,2)*	647 (38,2)	211 (21,5)	3449 (44,6)	
Released on site	186 (3,7)*	31 (1,8)	25 (2,5)	242 (3,1)	
Not located	383 (7,6)*	64 (3,8)	38 (3,9)	485 (6,3)	
Death	2 (0,0)	36 (2,1)	0 (0,0)	38 (0,5)	< 0,001
PA/UPA	851 (16,8)	508 (30,0)*	441 (45,0)*	1800 (23,3)	
Refusal of service	338 (6,7)	107 (6,3)	61 (6,2)	506 (6,5)	
Refusing transport	232 (4,6)	101 (6,0)	75 (7,6)	408 (5,3)	
Removed by third parties	154 (3,0)	103 (6,1)*	88 (9,0)*	345 (4,5)	
Others	315 (6,2)	89 (5,3)	40 (4,1)	444 (5,7)	
Death					
No	5056 (100,0)*	1657 (97,9)	981 (100,0)*	7694 (99,5)	< 0,001
Yes	2 (0,0)	36 (2,1)*	0 (0,0)	38 (0,5)	
Transportation to health services					
No	1608 (31,8)	533 (31,5)	328 (33,4)	2469 (31,9)	0,542
Yes	3450 (68,2)	1160 (68,5)	653 (66,6)	5263 (68,1)	
Resource					
USA	326 (6,4)	187 (11,0)*	85 (8,7)	598 (7,7)	
USB	4664 (92,2)*	1473 (87,0)	879 (89,6)	7016 (90,7)	< 0,001
USI	68 (1,3)	33 (1,9)	17 (1,7)	118 (1,5)	
Type of destination					
Philanthropic	206 (6,0)	75 (6,5)	62 (9,5)*	343 (6,5)	
Private	201 (5,8)	98 (8,4)*	73 (11,2)*	372 (7,1)	< 0,001
Public	3043 (5,2)*	987 (85,1)	518 (79,3)	4548 (86,4)	

† Chi-square test; * Residual greater than 1.96; CB: Fire Department; PA: Emergency Room; UPA: Emergency Care Unit; USA: Advanced support unit; USB: Basic support unit; USI: Intermediate support unit.

Table 1 - Association between types of psychiatric emergencies and epidemiological variables

Source: Prepared by the author (2023)

With regard to the days of the week, an investigation carried out by Moura et al⁴ in 2022 revealed that both Sunday and Saturday stood out as the days with the highest incidence of suicide attempts, a trend that is in line with the results obtained in this study. In addition, the analyses also pointed to the afternoon and evening periods as times when such occurrences were more frequent, corroborating the findings presented here.

Psychiatric emergencies predominated in 2021, male, age 36, represented by agitation and violent situations. Males were associated with agitation/violence, while females were associated with self-harm/suicide attempts and alcohol intoxication/abstinence; children were associated with alcohol intoxication/abstinence, adolescents and adults with self-harm/suicide attempts and the elderly with agitation/violence; Saturdays-Sundays were associated with alcohol intoxication/abstinence, while Mondays-Fridays were associated with agitation/violence; severity levels 1

and 2 were associated with self-harm/suicide attempts and alcohol intoxication/abstinence, while level 3 was associated with agitation/violence; death was associated with self-harm/suicide attempts. The research emphasizes the need for integrated approaches to mental health, including prevention and awareness. These findings inform improvements in care protocols, staff training and resource allocation. In short, the study highlights the relevance of a comprehensive approach to mental health, aimed not only at crises, but also at preventive measures, targeted at the particularities of the populations assisted. Top of the form

THANKS

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REFERENCES

1. VELOSO, C. *et al.* Atendimentos de natureza psiquiátrica realizados pelo serviço pré-hospitalar móvel de urgência. **Texto Contexto Enferm.**, [s. l.], v. 27, n. 2, e0170016, 2018. Disponível em: <https://www.scielo.br/j/tce/a/3xQqfKn4yFZy36rCqfktXD/?lang=pt>. Acesso em: 5 jul. 2022.
2. BRITO, H. K. M. *et al.* Agravamento das doenças psiquiátricas durante o período de isolamento social: uma breve revisão de literatura. **Brazilian Journal of Health Review**, Curitiba, v. 4, n. 2, p. 4678-4691, mar./abr. 2021. Disponível em: <https://brazilianjournals.com/index.php/BJHR/article/view/25779/20480>. Acesso em: 5 jul. 2022.
3. MANGOLINI, V. I.; ANDRADE, L. H.; WANG, Y. Epidemiologia dos transtornos de ansiedade em regiões do Brasil. **Revista de Medicina**, [s. l.], v. 98, n. 6, p. 415-422, 2019. Disponível em: <https://www.revistas.usp.br/revistadc/article/view/144226>. Acesso em: 5 jul. 2022.
4. MOURA, E. H. *et al.* Atendimento pré-hospitalar às tentativas de suicídio: um estudo transversal. **J. bras. psiquiatr.**, [s. l.], 21 fev. 2022. No prelo. Disponível em: <https://www.scielo.br/j/jbpsiq/a/V4Fz7GsFnnYNjK9jLRhgbNx/?lang=pt#>. Acesso em: 5 jul. 2022.
5. GONÇALVES, K. G. *et al.* Caracterização do atendimento pré-hospitalar às urgências psiquiátricas em um município do interior do estado do Ceará. **Revista Nursing**, [s. l.], v. 22, n. 253, p. 2930-2934, 2019. Disponível em: <https://revistas.mpmcomunicacao.com.br/index.php/revistanursing/article/view/334/318>. Acesso em: 5 jul. 2022.
6. DEL-BEN, C. M.; SPONHOLZ-JUNIOR, A.; MANTOVANI, C.; FALEIROS, M. C. de M.; OLIVEIRA, G. E. C. de; GUAPO, V. G.; MARQUES, J. M. de A. Psychiatric emergencies: psychomotor agitation management and suicide risk assessment. **Medicina (Ribeirao Preto)**, [S. l.], v. 50, n. supl.1, p. 98-112, 2017. DOI: 10.11606/issn.2176-7262.v50isupl1.p98-112. Disponível em: <https://www.revistas.usp.br/rmrp/article/view/127543>. Acesso em: 5 jul. 2022.

PRODUÇÃO GERADA PELO PROJETO, COM A PARTICIPAÇÃO DO ESTUDANTE DE IC (Todos os documentos devem ser anexados ao final do relatório, seção 11)

Produção Intelectual			Quantidade
Autoria ou coautoria de resumos publicados em anais de eventos locais			
Autoria ou coautoria de resumos publicados em anais de eventos nacionais ou internacionais			
Autoria ou coautoria de trabalhos completos publicados em anais de eventos			
Autoria ou coautoria de artigos completos publicados em periódicos indexados			
Autoria ou coautoria de livro publicado com ISBN*			
Autoria ou coautoria de capítulo de livro publicado com ISBN*			
Trabalhos de conclusão de curso (TCC)			
Produtos/Processos/ <i>Software</i> com patente			
Premiações			
Alunos que ingressaram em programas de pós-graduação (<i>lato sensu</i>)			
Alunos que ingressaram em programas de pós-graduação (<i>strictu sensu</i>)			
Difusão de Ciência e Tecnologia – Participação em Eventos (inserir número de linhas necessárias)			
Nome do Evento	Classificação do Evento (Internacional, Nacional, Regional ou Local)	Forma de Participação (convidado, participante ou ouvinte)	Tipo de Participação ou Apresentação (pôster/painel, apresentação oral ou outra)

*International Standard Book Number.

EM TERMOS DE CAPACITAÇÃO, AMADURECIMENTO E CRESCIMENTO PROFISSIONAL, COMO O(S) ESTUDANTE(S) AVALIA(M) AS ATIVIDADES DESENVOLVIDAS? JUSTIFIQUE A AVALIAÇÃO, INDICANDO PONTOS POSITIVOS E NEGATIVOS.

A pesquisa desempenhou um papel crucial em nossa formação como futuras médicas. Ela nos proporcionou conhecimentos sobre os processos envolvidos na realização de estudos e nos permitiu compreender melhor os fundamentos por trás de grande parte das pesquisas médicas. Adicionalmente, a pesquisa ofereceu uma oportunidade valiosa para aprofundar nosso conhecimento sobre o perfil dos pacientes psiquiátricos em nossa região. Isso nos permitiu uma visão mais precisa das necessidades e demandas da população local, preparando-nos para contribuir de maneira eficaz para seu bem-estar. No entanto, algumas limitações se fizeram presentes. Um desafio durante a realização do estudo, foi a coleta de dados, pois como os prontuários não eram digitais, ocasionalmente obtivemos dificuldades na leitura dos mesmos.

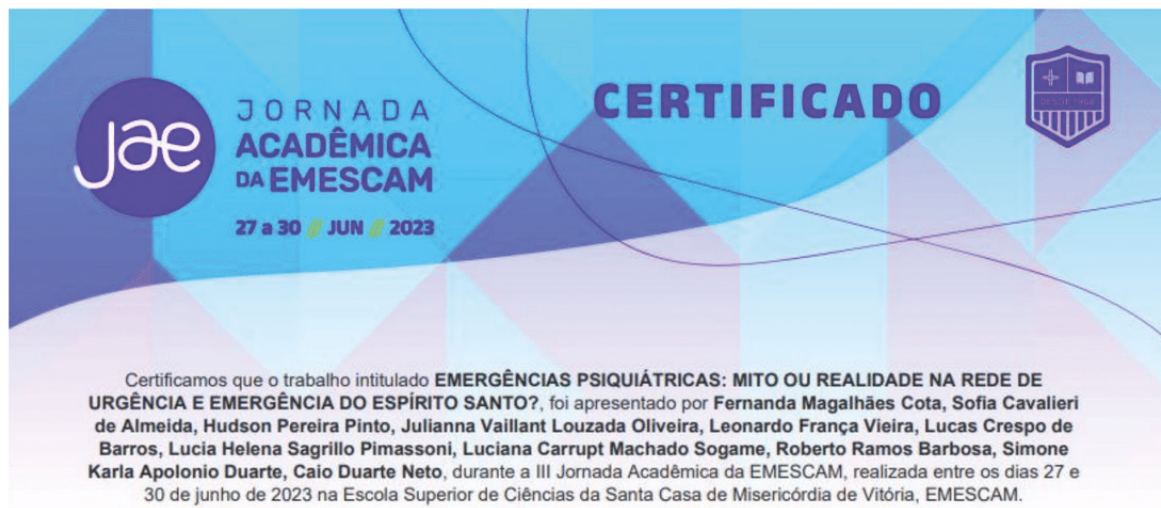
AVALIE, NUMA ESCALA DE 1 A 5, OS SEGUINTE ITENS

Orientação recebida	5
Infraestrutura da instituição para realização da pesquisa	5
Relacionamento com a equipe de pesquisa	5
Qualidade do trabalho desenvolvido durante a vigência do Edital	5

DESEMPENHO DO(S) ESTUDANTE(S) (BOLSISTA E/OU VOLUNTÁRIO)

É digno de nota o desempenho apresentado pelas estudantes integrantes desta iniciação científica. Tal apreciação favorável é corroborada não somente pela assídua participação, mas também pelo rigor no processo de coleta e tabulação de dados, culminando na elaboração deste relatório final. Cumpre-me destacar que a dedicação, a responsabilidade e a busca pelo aprimoramento intelectual se revelam como atributos estimáveis deste time.

ANEXOS



Vitória, ES, 30 de junho de 2023

Dr. Claudio Medina da Fonseca
Diretor da EMESCAM

Cláudia Camara de Jesus Weindler
Diretora Acadêmica da EMESCAM

Dr. Italla Maria Pinheiro Bezerra
Coordenadora do Centro de Pesquisa e Iniciação
Científica da EMESCAM



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