
Sexual orientation and gender identity: homosexuality and its reflexes on the mental health of medical students from a university in Sergipe

Orientação sexual e identidade de gênero: a homossexualidade e seus reflexos na saúde mental de estudantes de medicina de uma universidade sergipana

Orientación sexual e identidad de género: la homosexualidad y sus reflejos en la salud mental de estudiantes de medicina de una universidad de Sergipe

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ABSTRACT:

Introduction: Sexual orientation is understood as an individual's pattern of physical and emotional arousal, including fantasies, behaviors and activities, and the gender(s) to which an individual is physically or sexually attracted. Lesbians, gays, bisexuals and transgenders (LGBT acronym) are part of a minority that suffers a lot of prejudice and is under constant stigma, therefore, they are involved in several stressors. **Objective:** To

estimate the prevalence of the lesbian, gay, bisexual and transgender (LGBT) population in the medical course of a university in Sergipe; to identify possible discomfort regarding sexual orientation in the student body; to detect evidence of depression in the participants according to their sexual orientation; to determine the relationship between discomfort and the academic social relationship. **Method:** Sample of convenience type with 142 students who signed the Free and Informed Consent Form and answered four questionnaires: a demographic one, Beck Depression Inventory, LGBT Campus Climate Scale and Perceived Social Support Scale. **Result:** The LGBT minority presented higher levels of acceptance and perception of social support, however, regarding the knowledge of public policies specific to them in the academy, both groups showed lack of knowledge about the subject. **Conclusion:** It is important to discuss gender and mental health issues, seeking psychological and social support for those who are suffering.

Keyword: homosexuality, depression, medical students

RESUMO:

Introdução: Por orientação sexual despreende-se como padrão de excitação física e emocional de um indivíduo, incluindo fantasias, comportamentos e atividades, e o(s) gênero(s) a quem um indivíduo é física ou sexualmente atraído. Lésbicas, gays, bissexuais e transgêneros (sigla LGBT) fazem parte de uma minoria que sofre muito preconceito e está sob constante estigma, logo, estão envoltos em diversos estressores. **Objetivo:** Estimar a prevalência da população de lésbicas, gays, bissexuais e transexuais (LGBT) no curso de medicina de uma universidade sergipana; identificar possível desconforto quanto à orientação sexual no corpo discente; descobrir indícios de depressão nos participantes da pesquisa segundo a sua orientação sexual; determinar a relação entre desconforto e o relacionamento social acadêmico. **Método:** Amostra do tipo conveniência com 142 acadêmicos que assinaram o Termo de Consentimento Livre e Esclarecido e responderam quatro questionários: demográfico, Inventário de Depressão de Beck, Escala de Avaliação do Ambiente Acadêmico Frente às Necessidades da População LGBT e a Escala de Percepção de Suporte Social. **Resultados:** A minoria LGBT apresentou níveis maiores de aceitação e de percepção de suporte social, porém, quanto ao conhecimento de políticas públicas específicas para eles na academia, ambos os grupos demonstraram desconhecimento sobre o tema. **Conclusão:** Importante discutir sobre questões de gênero e saúde

mental, tendo como finalidade buscar suporte psicológico e social aos que estão sofrendo.

Palavras-chave: homossexualidade, depressão, estudantes de medicina

RESUMEN:

Introducción: La orientación sexual se entiende como el patrón de excitación física y emocional de un individuo, incluidas las fantasías, los comportamientos y las actividades, y los géneros por los que un individuo se siente atraído física o sexualmente. Las personas lesbianas, gays, bisexuales y transgénero (siglas LGBT) forman parte de una minoría que sufre muchos prejuicios y está bajo un estigma constante, por lo que se ven envueltos en diversos factores estresantes. **Objetivo:** Estimar la prevalencia de la población lesbiana, gay, bisexual y transgénero (LGBT) en la carrera de medicina de una universidad de Sergipe; identificar posibles malestares con respecto a la orientación sexual en el estudiantado; detectar evidencias de depresión en los participantes según su orientación sexual; determinar la relación entre el malestar y la relación social académica. **Método:** Muestra de tipo conveniencia con 142 estudiantes que firmaron el Término de Consentimiento Libre e Informado y respondieron cuatro cuestionarios: uno demográfico, Inventario de Depresión de Beck, Escala de Clima del Campus LGBT y Escala de Apoyo Social Percibido. **Resultado:** La minoría LGBT presentó mayores niveles de aceptación y percepción de apoyo social, sin embargo, en cuanto al conocimiento de las políticas públicas específicas para ellos en la academia, ambos grupos mostraron desconocimiento sobre el tema. **Conclusión:** Es importante discutir cuestiones de género y salud mental, buscando apoyo psicológico y social para quien sufre.

Palabras clave: homosexualidad, depresión, estudiantes de medicina

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Introduction

Depression is the most common psychiatric disorder in the general population [1] and the most common mental health condition found among primary care patients [2, 3, 4, 5]. Few openly discuss their symptoms with their doctor, and a considerable portion of patients with depression present with somatic symptoms in the clinic, such as headaches and back pain, complicating the early diagnosis of depression [6, 7]. Therefore, if not asked about their mood/mental state, patients tend to withhold information about depressive symptoms for various reasons, including stigma, the belief that depression is not a real illness but a personal failing, fear of breaching medical confidentiality, and concerns about being prescribed antidepressants or referred to a psychiatrist [8].

Sexual orientation is understood as an individual's pattern of physical and emotional arousal, including fantasies, behaviors, and activities, and the gender(s) to whom an individual is physically or sexually attracted. Classifications include homosexual sexual orientation—sexual attraction to the same gender, with "gay" referring to homosexual males and "lesbian" to homosexual females; heterosexual sexual orientation—sexual attraction to the opposite gender; bisexual sexual orientation—sexual attraction to both the same and opposite genders; and pansexual—sexual attraction to individuals of any biological gender or to the gender identity with which the person identifies [9].

Lesbians, gays, bisexuals, and transgender individuals (LGBT) are part of a minority that suffers significant prejudice and is under constant stigma [10, 11], and thus, they are subject to various stressors [12]. The literature shows that they experience negative events, such as chronic stress among adolescents and adults [13, 14], resulting in higher rates of depression, suicide attempts, and substance abuse [15, 16]. Consequently, acceptance of the LGBT community may be related to the academic success of students within this group [17].

Considering the perception of the prevalence of depressive symptoms across various social groups, medical students are those with a high prevalence of depression [[18](#), [19](#), [20](#)].

Given the relevance of addressing the mental health of the LGBT academic population in Medicine, the widely used research framework abroad, and the limited depth of this topic in national literature, this work aims to bring this discussion to light and its repercussions on the experiences of the LGBT community within the medical field.

Objective

To estimate the prevalence of lesbian, gay, and bisexual individuals in the medical course at a university in Sergipe; to identify possible discomfort regarding sexual orientation among the student body; to discover signs of depression among the research participants according to their sexual orientation; and to determine the relationship between discomfort and social academic relationships.

Methods

This is a cross-sectional, quantitative, analytical study with a convenience sample, conducted in Aracaju, Sergipe, using four types of questionnaires administered to medical students. The research was carried out in the pre-COVID-19 pandemic period, between April and May 2017.

The sample calculation was based on Santos [[21](#)] for finite populations, with an error margin of up to 5%, a confidence level of 90% for a student population of 593, assuming that 10% of them might experience some type of distress related to their sexual orientation, resulting in a sample size of 84 participants.

A total of 142 questionnaires were distributed to the medical students, and those that met the inclusion criteria—being of legal age (18 years) and having signed the Informed Consent Form (ICF)—were evaluated and validated.

The data collection instruments consisted of four questionnaires. Two of them were: a demographic questionnaire for the studied population and the Beck Depression Inventory (BDI), a self-report scale capable of providing a quantitative assessment of depressive symptoms. This questionnaire has undergone several revisions and its national validity for application in the country has been confirmed [[22](#)]. The instrument is

divided to classify the degree of depression according to the obtained score. Two other self-report questionnaires were also available: the LGBT Campus Climate Scale [23] and the Perceived Social Support Scale [24].

Data were described using simple and percentage frequencies for categorical variables and mean and standard deviation for interval variables. Fisher's Exact Test was used to assess the association between categorical variables, and analysis of variance (ANOVA) was used to evaluate mean differences. The differences in responses to the Perceived Social Support Scale questionnaires, considering sexual orientation with the Beck Depression Inventory, were evaluated using a generalized linear model with multinomial distribution and cumulative logit link function, with significance assessed by the Wald Chi-Square Test.

This study was approved by the Research Ethics Committee involving Human Subjects of Universidade Tiradentes CEP/UNIT under protocol 64634417.1.0000.5371.

Results

[Table 1](#) presents the demographic characteristics of the respondents. Among the 142 respondents, there is a higher prevalence of female students (n = 92) compared to male students (n = 50).

Most respondents are between 18 and 35 years old. Regarding race, the most evident were White (n = 68) and Pardo (n = 66); regarding religion, Catholicism (n = 70) stands out. The majority of respondents were first-year students (n = 56), while those from the second and third years did not respond. Approximately 91.5% of the respondents identified as exclusively heterosexual, with the remaining fitting into the LGBT spectrum as assessed by the Kinsey Scale.

[Table 2](#) provides a more comprehensive overview, disregarding the Kinsey Scale, and stratifies the above values concerning the heterosexual and LGBT populations of the studied university.

Regarding the analysis of depression levels obtained through the Beck Depression Inventory (BDI), it was observed that both heterosexual and LGBT populations indicated minimal depression levels. No student was found to have severe depression. According to the BDI, the heterosexual population showed higher levels of moderate depression [[Table 3](#)].

[Graph 1](#) shows the stratification of depression levels according to the respondents' sexual orientation.

It was found that medical students have relatively high rates of perceived social support, regardless of sexual orientation.

Regarding the results of the LGBT Campus Climate Scale, it is evident that medical students lack knowledge about aspects involving LGBT life in academia [[Table 4](#)].

Discussion

This study aimed to investigate a possible correlation between homosexual orientation among medical students at a university in Sergipe and its repercussions on their mental health, such as depression; to estimate the prevalence of lesbian, gay, and bisexual populations; to identify possible discomfort regarding sexual orientation; and to examine the relationship between this discomfort and social relationships within the academic environment.

Medical students are part of a group with higher experience and higher prevalence of depression, burnout syndrome, and other mental health disorders compared to the general population, showing a deterioration in mental health as the course progresses [[25](#)].

Suicidal ideation, suicide, and burnout are scientifically proven to exist at higher rates in this segment of the population compared to the general population [[26](#)]. Contrary to what one might expect, despite being part of the medical field, medical students who suffer from mental disorders seek appropriate treatment less frequently compared to the general population [[27](#)].

Some risk factors are associated with the onset of depression in these students, namely: academic pressure itself [[28](#)], financial problems, sleep deprivation [[29](#)], exposure to patient suffering and their deaths [[30](#)], and extensive workloads [[29](#)].

Studies show that psychological stress among medical students can negatively impact academic performance [[28](#), [31](#), [32](#)], resulting in academic dishonesty [[33](#)] and being a contributing factor to the abusive use of alcohol and other psychoactive substances as a form of escape [[34](#)].

Regarding the appearance of depressive symptoms among these students, studies have not reached a common denominator regarding the academic period in which students are most affected. Some authors discuss a higher prevalence of depression among students in the early periods of the course [31, 32, 35], while others report a progressive prevalence as the student progresses to higher periods [36]. In this sense, it is noteworthy that the motivations or risk factors leading to depression among medical students differ according to the period they are in during their studies.

Among students in the early years of the course, the triggering factors are perceived as the large amount of information received in studies, changes in the teaching-learning method from traditional to active methodologies, and the workload to be fulfilled. On the other hand, those who are about to graduate face different concerns, such as insecurity about their own performance, as well as doubts regarding the upcoming job market and the need to pass medical residency exams [37, 38].

A contributing factor to the lack of seeking appropriate treatment is the stigma inherent to depression and the use of mental health services, constituting the primary barrier. Another associated factor is the fear that depression is associated with students being less competitive or suitable for medical residency positions, which could further compromise their education during medical school [39].

Most of the surveyed students, regardless of sexual orientation, demonstrated a lack of knowledge about aspects involving LGBT life at the university, whether in the realm of public policies or institutional support for this population. This differs from observations in other studies, where students assert that there is no inclusion in their respective institutions [40, 41, 42].

It is important to note that in this study there was no correlation between homosexuality and depression, with students from this sexual orientation being classified within the spectrum of mild depression according to the Beck Inventory. This is significant because, in various studies, homosexual students develop depression more frequently compared to their heterosexual peers [13, 14].

It should be noted that, according to extensive literature, the LGBT population in the academic medical world experiences discomfort in

revealing their sexual orientation for fear of prejudice from their peers and professors. This leads to isolation and the loss of emotional ties with the community where they are embedded and in the process of formation [13]. To feel sufficiently capable of openly assuming their sexual orientation in front of others, LGBT students consider some prerequisites, such as the presence of support from peers, inclusive academic policies, and anti-discrimination policies on campus [43]. Thus, it can be assumed that the LGBT students at this university have experiences that differ from what is typically found in research.

This assumption is that the LGBT students at this university have experiences different from what is typically found in research, such as a heightened perception of integration within their own group, as well as support from other heterosexual friends and colleagues, greater family acceptance, considering a possible evolution of thought among their members, and the emergence of a pro-integration discussion following the evolution of laws in the country that allow marriage and child adoption by same-sex couples. This can be observed in question 5 of the Social Support Perception Scale, which concerns the existence of a person with whom the respondent feels comfortable being around. There is a higher rate of complete agreement among LGBT students (80%) compared to heterosexual students (75.8%) ($p=0.375$).

On the other hand, this research found interesting data on the mental health of heterosexual medical students: higher rates of mild to moderate depression were observed in this group, contrasting with the lower levels of this disorder in the LGBT group.

One hypothesis that can be inferred is the lack of adequate family interaction, which is a pillar for the biopsychosocial well-being of these students. Considering they are part of the majority group regarding sexuality, the data suggest that, in the absence of emotional support, they exhibit more depressive disorders (moderate and severe) than homosexuals, who report having had more support.

Despite an assumed immunity to sexual issues that could affect mental health, the student may feel lonely due to not being able to share their anxieties with others, triggering or worsening depressive conditions.

Considering the responses to the Social Support Perception Scale, it was observed that homosexual students have high levels of this type of

support, which is consistent with results obtained in similar research conducted by Lapinski and Sexton [44]. This result demonstrates good acceptance of sexual orientation, given the analyzed questions that assess the level of trust the student has in people within their circle.

Regarding the effectiveness of support for minority populations, and in this case, the LGBT population, according to Lapinski and Sexton [44], the creation of a culture of fruitful debates and a positive culture with the existence of inclusive institutional public policies and equitable opportunity measures bring better responses in welcoming this population.

These authors also suggest that the inclusion of affirmative policies where birth sex, sexual orientation, and gender expression can be determined, and the presence of a professional who promotes diversity and emphasizes the importance of good relationships are contributing factors to the well-being of this minority population.

Regarding prevalence, it was observed that only 7 (4%) respondents identified as homosexual, and another 3 (2%) identified as bisexual, totaling approximately 7% of the studied population as members of the LGBT group. The Informed Consent Form asked students to express their desire to receive psychotherapeutic referral, and there was a 100% refusal rate from the student body.

This study had some limitations: the first relates to measurement bias, considering a possible discomfort of the students in responding to the questionnaires, even though they were assured the right to anonymity. Another relevant point was the total number of questionnaires obtained, even though the sample was calculated satisfactorily according to the literature, as students from the second and third years of the course are not included in the results; a justification for this was the refusal of these groups to participate in the research, respecting the autonomy of each regarding their desire.

Conclusion

In this study, there was no significant evidence of the presence of depression among homosexual medical students. None of the homosexual participants exhibited depressive symptoms, whereas 21% of heterosexual students showed symptoms ranging from mild to moderate. Homosexual medical students demonstrated high levels of social acceptance; however,

they also showed a lack of awareness regarding public policies for the inclusion of the LGBT group in social and academic settings. Heterosexuals exhibited higher levels of depression and lower levels of social acceptance, indicating the need for further research into what might be affecting them.

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↑ **Table 1.** Demographic characteristics, Aracaju 2017

	N	%
1. Biological Gender		
Male	50	35,2
Female	92	64,8
2. Age		
18-25	113	79,6
26-35	29	20,4
3. Race		
White	68	47,9
Mixed race	66	46,5
Black	4	2,8
Yellow	4	2,8
4. Religion		
Catholic	70	49,3
Protestant	17	12,0
Spiritist	10	7,0
African matrix religion	1	,7
Agnostic	13	9,2
No religious practice	21	14,8
Atheist	7	4,9
Other	3	2,1
5. Year of medical school		
1st year	56	39,4
4th year	37	26,1
5th year	14	9,9
6th year	35	24,6
6. Sexual orientation		
Heterosexual	132	93,0
Homosexual	7	4,9
Bisexual	3	2,1
7. Kinsey Scale		
Exclusively heterosexual	130	91,5
Predominantly heterosexual, but only incidentally homosexual	2	1,4
Predominantly heterosexual, but more than incidentally homosexual	2	1,4
Bisexual	1	0,7
Predominantly homosexual, but only incidentally heterosexual	4	2,8
Exclusively homosexual	3	2,1

Source: Prepared by the author

📌 **Table 2.** Demographic characteristics according to sexual orientation, Aracaju 2017

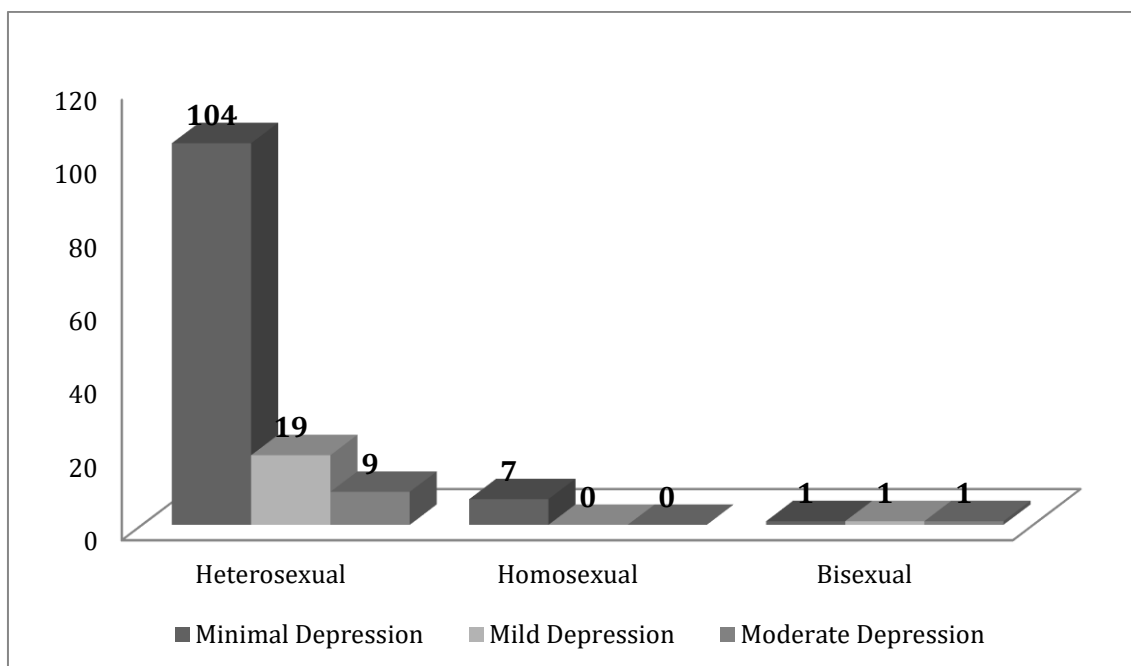
	Heterosexual N (%)	LGBT N (%)	p-value*
1. Biological Gender			
Male	44 (33,3)	6 (60)	0,166
Female	88 (66,7)	4 (40)	
2. Age			
18-25	106 (80,3)	7 (70)	0,427
26-35	26 (19,7)	3 (30)	
3. Race			
White	65 (49,2)	3 (30)	0,563
Mixed race	59 (44,7)	7 (70)	
Black	4 (3)	0 (0)	
Yellow	4 (3)	0 (0)	
4. Religion			
Catholic	69 (52,3)	1 (10)	0,001
Protestant	17 (12,9)	0 (0)	
Spiritist	9 (6,8)	1 (10)	
African matrix religion	0 (0)	1 (10)	
Agnostic	11 (8,3)	2 (20)	
No religious practice	17 (12,9)	4 (40)	
Atheist	7 (5,3)	0 (0)	
Other	2 (1,5)	1 (10)	
5. Year of medical school			
1st year	53 (40,2)	3 (30)	0,624
4th year	33 (25)	4 (40)	
5th year	14 (10,6)	0 (0)	
6th year	32 (24,2)	3 (30)	

Source: Prepared by the author; *Fisher's Exact Test

🏠 **Table 3.** Depression levels according to sexual orientation, Aracaju 2017

	Heterosexual N (%)	LGBT N (%)	p-value*
Depression			
Minimal	104 (78,8)	8 (80)	0,835
Mild	19 (14,4)	1 (10)	
Moderate	9 (6,8)	1 (10)	
BDI Mean (SD)	7,16 (6,04)	6,80 (6,14)	0,857**

Source: Prepared by the author; SD – Standard Deviation; *Fisher’s Exact Test; **ANOVA



🏠 **Graph 1:** Stratification of depression levels by sexual orientation

📌 **Table 4.** Participants' responses to the Perceived Social Support Scale, Aracaju 2017

		Yes N (%)	No N (%)	I don't know N (%)	p-value
Inclusion of LGBT Policies					
1. Does your campus prohibit discrimination based on sexual orientation?	Hetero	30 (22,7)	18 (13,6)	84 (63,6)	1,000
	LGBT	2 (20)	1 (10)	7 (70)	
2. Does your campus include sexual orientation in public written statements about diversity and multiculturalism?	Hetero	21 (15,9)	12 (9,1)	99 (75)	0,388
	LGBT	3 (30)	1 (10)	6 (60)	
3. Does your campus prohibit discrimination based on gender identity?	Hetero	30 (22,7)	14 (10,6)	88 (66,7)	1,000
	LGBT	2 (20)	1 (10)	7 (70)	
Support and Institutional Commitment to the LGBT Population					
4. Does your campus provide training for health center staff to increase their sensitivity to the special health needs of LGBT individuals?	Hetero	6 (4,5)	38 (28,8)	88 (66,7)	0,382
	LGBT	0 (0)	5 (50)	5 (50)	
5. Does your campus have an office or resource center for LGBT students (i.e., an institutionally funded space for sexual education and support services for the LGBT community)?	Hetero	0 (0)	28 (21,2)	104 (78,8)	0,233
	LGBT	0 (0)	4 (40)	6 (60)	

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LGBT Academic Life					
6. Does your campus integrate LGBT issues into discussions when appropriate?	Hetero	36 (27,3)	23 (17,4)	73 (55,3)	0,198
	LGBT	5 (50)	0 (0)	5 (50)	
7. Does your campus have a significant number of books and journals on sexual orientation topics in the existing library/libraries?	Hetero	5 (3,8)	11 (8,3)	116 (87,9)	1,000
	LGBT	0 (0)	0 (0)	10 (100)	
LGBT Student Life					
8. Does your campus regularly offer activities and events to raise awareness of the experiences and concerns of lesbians, gays, and bisexuals?	Hetero	13 (9,8)	36 (27,3)	83 (62,9)	1,000
	LGBT	1 (10)	3 (30)	6 (60)	
9. Does your campus regularly hold social events specifically for LGBT students?	Hetero	3 (2,3)	42 (31,8)	87 (65,9)	0,221
	LGBT	0 (0)	6 (60)	4 (40)	
10. Does your campus have a recognized student organization for LGBT students and allies?	Hetero	3 (2,3)	29 (22)	100 (75,8)	0,106
	LGBT	0 (0)	5 (50)	5 (50)	
11. Does your campus have any academic organization for LGBT students?	Hetero	8 (6,1)	16 (12,1)	108 (81,8)	0,321
	LGBT	1 (10)	2 (20)	7 (70)	
LGBT Counseling and Health					
12. Does your campus offer support groups for	Hetero	0 (0)	20 (15,2)	112 (84,8)	0,066
	LGBT	0 (0)	4 (40)	6 (60)	

LGBT individuals who are in the process of publicly coming out?					
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Source: Prepared by the author; *Fisher's Exact Test

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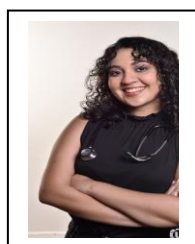
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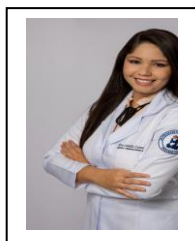


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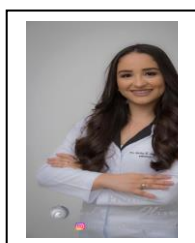
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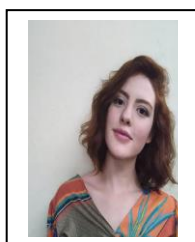
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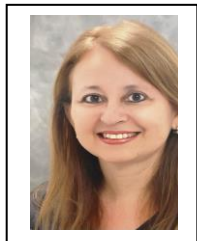
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