приводят к поломке механизмов саморегуляции. Прежде всего изменяются функции коры головного мозга (неврозы, нарушения сна, психозы), а также снижается иммунитет. У таких людей чаще диагностируются ССЗ, формируется гормональный дисбаланс и нарушение функций половых гормонов. Все это увеличивает риск развития РМЖ [5].

Выводы

Таким образом, к основным факторам риска, обуславливающим высокую заболеваемость и смертность от РМЖ, можно отнести: избыточную массу тела, отсутствие физической активности, наличие хронических заболеваний, депрессию и другие факторы. Среди внешних факторов – это солнечное излучение, электрическое и магнитное антропогенное воздействие. Также следует учитывать такие факторы, как наследственность и наличие наследственно обусловленной онкологии (отягощенные возрастной и расовой принадлежностью, употреблением алкоголя, применением различных видов гормональной терапии (прием оральных контрацептивов, гормональная терапия менопаузы).

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ASSESSMENT OF THE ATTENTION PARAMETERS AND THE ANXIETY LEVELS IN STUDENTS

Introduction

Attention, the process of selectively concentrating on a discrete aspect of the environment, is fundamental to all aspects of human functioning. From learning and memory to decision-making and social interaction, the ability to focus and maintaining attention is critical. The external manifestations of attention are accompanied by physiological changes, particularly within the brain and nervous system. Anxiety, a pervasive human experience, ranges from normal feelings of apprehension to debilitating disorders. Anxiety is the tendency of an individual to experience anxiety, characterized by a low threshold for the occurrence of an anxiety reaction [1, 2].

Attention and anxiety are fundamental cognitive and emotional processes that profoundly influence human behavior and performance across various domains. The ability to focus attention effectively is crucial for learning, productivity, and decision-making, while anxiety, when excessive, can significantly impair cognitive function and overall well-being [2, 3]. By this study we mainly focus on the assessment of these interconnected parameters, their implications

for understanding individual differences and potential interventions. The aim is to study the assessment of attention and anxiety levels in students, exploring the relationship between these cognitive and emotional processes, and to understand how anxiety affects attention.

Objective

The aim of this study is to analyze the levels of personal and reactive anxiety and to evaluate the correlations between the attention and anxiety parameters in students.

Material and methods of research

Our research involved randomly selecting Sri Lankan and Nigerian medical university students. A total of 30 students were involved in the research. Individuals who fall within the age of 18–25, including 14 male students and 16 female students, underwent this study. To obtain results for attention parameters, each individual was tested by the means of a special standard table of Bourdon. The levels of personal and reactive anxiety were evaluated with the help of Spielberger-Hanin anxiety test.

Statistical analysis of the obtained results was carried out using «Statistica 10.0.» software package. Since the received data was not subjected to the law of normal distribution according to Kolmogorov-Smirnov criterion, they were presented as Me (25%; 75%) format, where Me is the median, 25% is the lower percentile, 75% is the upper percentile. The non-parametric method – Mann-Whitney U-criterion was used when comparing groups of students. Differences were considered statistically significant at $p < 0,05$. To assess the revealed dependence between the parameters, the Spearman rank correlation coefficient was used. The detection frequency of different levels of anxiety and attention parameters is presented as the number of examined students and percentage (%).

The results of the research and their discussions

To analyze the data, the examined students were divided to male and female groups, which included 14 male students and 16 female students. The students were grouped to the levels low, moderate and high according to the point each of them received in the Spielberger-Hanin anxiety test. For the reactive and the personal anxiety tests, the ranges for each level was: low (0-30 points), moderate (31–45 points), high (46 points and more).

Amount of participants having different personal and reactive anxiety levels are presented in the table 1. The data are presented as absolute and relative (% calculated from the amount of participants in the certain group) amount of students.

Table 1 – Reactive and personal anxiety levels in students (n, %)

Parameter		Males (n=14)		Females (n=16)
Reactive anxiety	Low	10 (71.43%)		12 (75.0%)
	Moderate	3 (21.43%)		2 (12.5%)
	High	1 (7.14%)		2 (12.5%)
Personal anxiety	Low	–		1 (6.3%)
	Moderate	7 (50.0%)		6 (37.5%)
	High	7 (50.0%)		9 (56.3%)

Reactive anxiety is characterized by the emotions experienced in a given specific environment: tension, anxiety, anxiety, nervousness. Such states arise as an emotional reaction to the current situation, can be different in intensity. According to the reactive anxiety test results on the below table, among the participants 71.4% (10 students) males and 75.0% (12 students) females has low levels. Approximately 21.4% (3 students) males and 12.5% (2 students) females has moderate levels. Students with high levels include 7.2% (1 student) males and 12.5% (2 students) females. Thus, the majority of the students have low levels of reactive anxiety than high levels, both male and female.

Personal anxiety is a constant value and is determined by the temperament, character, upbringing of a person and the ability to apply certain strategies for responding to external factors. According to the personal anxiety test results (table 1), males have no low level results shown but 6.2% (1 student) females has low levels. Students with moderate level anxiety include 50% (7 students) males and 37.5% (6 students) females. Among the students with high personal anxiety, there are 50% (7 students) males and 56.3% (9 students) females. Thus, according to results of this study a higher percentage of females has high personal anxiety compared to males, dominating type in females was high level.

Table 2 presents the results of an assessment of attention parameters levels of male and female students. The data are presented as absolute and relative (% calculated from the amount of participants in the certain group) amount of students.

Table 2 – Attention parameters levels in students (n, %)

Parameter		Males (n=14)	Females (n=16)
Attention volume	Normal	14 (100%)	15 (93.75%)
	Low	–	1 (6.25%)
Concentration of attention	Normal (<5 mistakes)	8 (57.1%)	10 (62.5%)
	Low (>5 mistakes)	6 (42.9%)	6 (37.5%)
Stability of attention	Very high	1 (7.14%)	4 (25.00%)
	High	10 (71.43%)	8 (50.00%)
	Average	3 (21.43%)	3 (18.75%)
	Low	–	–
	Very low	–	1 (6.25%)

Attention was measured in three aspects.

Attention volume, first aspect, refers to overall capacity to attend to stimuli. Attention volume was calculated by the amount of total letters each students was able to go through during the given time period. The total number of letters were 1600, therefore 850 and more letters was considered normal, less than 850 was taken as low attention volume [3]. Here we can see that all 14 (100%) male students have normal attention volume. Meanwhile 15 (93.75%) of female students has normal attention volume, and only 1 (6.25%) had a low attention volume. Majority have normal attention volume.

Concentration of attention measures the ability to focus on the given task and avoid distractions. According to the test results for the concentration of attention, 57.1% (8 students) males and 62.5% (10 students) females has normal results, which is having 5 or less than 5 mistakes. And 42.9% (6 students) males and 37.5% (6 students) females has low results, which is having more than 5 mistakes. Therefore, more than half of the examined students have concentration for attention within the normal range.

Stability of attention (S) assesses the consistency of attention overtime. The ranges considered for the evaluation of stability of attention was: very high (S>3.25), high (S=2.1-3.25), average (S=1.6-2.0), low (S=1.3-1.5), very low (S=0.1.2). According to the below results of male students, 1 (7.14%) has very high stability, 10 (71.43%) has high stability and 3 (7.14%) has average stability, while none has low or very low stability. When analyzing results of female students, 4 (25.0%) has very high stability, 8 (50.0%) has high stability, 3 (18.75%) has average stability, 1 (6.25%) has very low stability and none has low stability. Thus, the majority of the students are ranging from average to very high stability of attention.

According to the results of the study, some gender differences of attention parameters were revealed at comparing male and female students with different personal anxiety levels. Attention parameters in students with the deferent levels of personal anxiety are presented in the table 3.

Table 3 – Attention parameters in students with the different levels of personal anxiety

Attention parameter	Moderate personal anxiety		High personal anxiety	
	Males	Females	Males	Females
Attention volume	1320 (1116; 1600)	1600 (1600; 1600) *	1511 (1356; 1600)	1346 (1134; 1600) *
Stability of attention	2,2 (1,8; 2,6)	2.8 (2.7; 3.5)	2,56 (2,3; 2,8)	2,2 (1,9; 3,2)
Concentration of attention	3 (1; 8)	4 (2:9)	4 (3; 6)	3 (2;7)

Notes: data are presented as Me (25%; 75%);
*– difference is statistically significant at p<0,05.

According to the results of Mann-Whitney test (table 3), females with high personal anxiety have significantly lower attention volume (p<0,05) then females with moderate personal anxiety. Additionally, there was the tendency for more low values of the stability of attention in females with high personal anxiety compared to females with moderate personal anxiety. The analysis of the relationships and correlations between the levels of anxiety and attention parameters in students was also performed using Spearman rank correlation coefficient. In females the negative correlation of the level of personal anxiety with the attention volume was revealed (r = -0,5236, p<0,05.). In males there was positive correlation between the levels of reactive and personal anxiety (r = 0,5642 p<0,05), but there were no correlations between anxiety and attention parameters.

Therefore, according to the results of the study, the conclusion can be presumed that there are gender differences of influence of anxiety on attention parameters. High levels of personal anxiety have impact on attention volume and stability of attention in females, but not in males.

Conclusion

As the result of the present study, the analysis of the levels of personal and reactive anxiety in Sri Lankan and Nigerian medical university students was performed, and the correlations between the attention and anxiety parameters in students were evaluated. Several peculiarities of examined parameters were revealed.

1. The majority of the examined students have low levels of reactive anxiety, while for personal anxiety 50 % of males and 56.3 % of females have high levels of personal anxiety. No significant gender differences were revealed between in the levels of personal and reactive anxiety in males and females.

2. Most of male and female students have normal attention volume and high stability of attention. However, the concentration of attention was low in 42.9% of male and in 37.5% of female students.

3. In female students the high levels of personal anxiety were associated with lower values of attention volume and stability of attention, while in male students there were no correlations between the levels of anxiety and the attention parameters.

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