

PREVELANCE OF ALEXITHYMIA AMONG DOCTOR OF PHYSICAL THERAPY STUDENTS AT ISRA UNIVERSITY HYDERABAD

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Abstract

Background: Alexithymia characterized by difficulty identifying and expressing emotions. Medical students are at higher risk of developing alexithymia due to the nature of their studies.

Objective of the study: The objective of the study was to determine the prevalence of alexithymia and its associated factors in Doctor of Physical Therapy (DPT) students at Isra University Hyderabad, Pakistan.

Methodology: In this cross-sectional study, participants were recruited from the department of Doctor of Physical Therapy (DPT) IIRS of Isra University Hyderabad. In this study convenient sampling technique was used. The questionnaire in this study contained 20 close ended questions. The duration of this study was from July to December. The data analysis was done using statistical package for social sciences (SPSS).

Result: The total population of 234 students of Doctor of Physical Therapy (Dpt) from Isra University Hyderabad. 133(56.8%) respondents had alexithymia present, 63(26.9%) participants had possible alexithymia, 38(16.2%) participants had no alexithymia.

Conclusion: It was concluded that there was a high prevalence of alexithymia among the Doctor of Physical Therapy (DPT) students.

CHAPTER I INTRODUCTION

1.Alexithymia

Students who transition from school life to college may experience several challenges such as loneliness, alexithymia, substance abuse, and anxiety. Researchers have found that alexithymia

is one of the significant issues faced by students, and it surpasses other academic and non-academic problems faced by student populations because it is non-clinical. This means that individuals who suffer from alexithymia are often unable to recognize that they have a problem unless they have adequate mental health awareness and

knowledge. The term alexithymia (Greek; a = lack, lexis = word, thymus = emotion, mood, or feeling) was coined by Sifneos and introduced in the early 1970s. Alexithymia is a subclinical experience of a lack of emotional awareness, or more specifically, difficulty in identifying and describing feelings and distinguishing feelings from the bodily sensations of emotional arousal. (1) Alexithymia is a mental condition in which a person is unable to recognize or categorize emotions. The inability of the person to discriminate between emotions, bodily symptoms, and difficulty sharing feelings with others are characteristics that set it apart. (2) Due to the demanding nature of their studies and clinical placements, medical students have a higher risk of developing alexithymia. One study found that up to 49% of medical students experience this condition. It can negatively affect their self-care and patient care in the future. (3)

. Types of Alexithymia

Alexithymia is hypothesized to come in two different forms: primary (also known as trait) alexithymia and secondary (also known as state) alexithymia. The distinction between these types was initially made by Frey Berger, who said that primary alexithymia should be seen as a dispositional element and secondary alexithymia as a defense mechanism that can be manipulated during treatment. (4)

3.Prevalence of Alexithymia

Medical students often experience a higher prevalence of alexithymia compared to the general population. The rigorous demands of their studies and the need to acquire specialized knowledge and skills can contribute to this. (5)

4. Causes of Alexithymia

The exact causes of alexithymia are still uncertain and not fully understood. Trauma, such as childhood trauma, can contribute to affective disorders and hinder a person's ability to experience and express emotions appropriately. Other factors like genetics, medical conditions

(e.g., autism), and psychological disorders (e.g., depression, anxiety) can also play a role. Increased stress, hormonal imbalances, and exposure to toxins may affect a person's emotional stability and awareness. Additionally, deficits in cognitive-affective development can lead to poor emotional awareness in individuals with alexithymia. (6)

5. Sign and Symptoms of Alexithymia

Alexithymia is actually considered a symptom rather than a standalone condition, and it doesn't have specific diagnostic criteria. However, it can worsen and contribute to other mental health problems like depression, subjective distress, and burnout. (7)

The following are symptoms of alexithymia:

- 1.Difficulties recognizing feelings and emotions issues separating sentiments from the body sensations associated with those experiences.
- 2.Difficulty understanding and responding to others' emotions, especially their tone of voice and facial expressions, due to reduced ability to explain feelings to others.
- 3.The absence of creativity.
4. A rational, unbending way of thinking that ignores feelings.
5. Exhibiting less altruistic behavior than others and coming across as cold, inflexible, and humorless are all signs of poor coping mechanisms for stress. Life satisfaction is also a sign of bad coping mechanisms. (8)

6. Risk Factors of Alexithymia

Childhood trauma and negative life events are indeed considered the main risk factors for alexithymia. They can hinder the ability to identify and express emotions, leading to increased psychological distress in students. (9)

7. Associated Factors with Alexithymia

Alexithymia has been found to be associated with factors like gender, age, education level, socioeconomic status, and mental health problems including somatoform disorders, alcohol use disorder, substance use disorder, work-related

burnout, perceived stress, depression, anxiety, social phobia, and eating disorders (10).

7.1. Association with Depression

Some authors suggest that certain aspects of alexithymia may be closely related to depression. Several studies have actually found that alexithymia levels tend to decrease over time, along with a reduction in depressive symptoms. (11)

7.2. Association with Suicidality

It's been shown in several studies that alexithymia can be linked to thoughts of suicide in both the general population and various clinical groups, including those with obsessive-compulsive disorder, post-traumatic stress disorder, depression, adjustment disorder, binge eating disorder, schizophrenia, traumatic brain injury, and substance abuse. It's crucial to recognize and address the impact of alexithymia in these situations. Many studies have focused on the link between alexithymia and suicidal thoughts, finding a stronger association with ideation rather than actual behavior. The correlation coefficients for ideation range from 0.28 to 0.75. However, there are also a few studies that have found a connection between alexithymia and self-harm or suicide deaths, with correlation coefficients ranging from 0.09 to 0.22. It's important to continue exploring these relationships. There are several other personal and situational factors that can impact the

relationship between alexithymia and suicide. For example, low self-esteem has frequently been associated with both alexithymia and suicidality. Similarly, lower levels of social support have been found to be separately linked to alexithymia and suicide. Additionally, evidence suggests that attachment style is related to both alexithymia and suicide. It's important to explore and understand how these variables interact with alexithymia in the context of suicide. (11)

7.3. Association with Aggression

The relationship between alexithymia and aggression has been complicated by the different ways researchers define violence. Some studies view aggression as a consistent trait in individuals, while others see it as a temporary response. This has resulted in a variety of assessment methods being used to explore how alexithymia relates to violence. Future research should aim to clarify these definitions and methodologies for a better understanding of this connection. Other factors can definitely influence the relationship between alexithymia and aggression. For example, emotion regulation may play a role in how self-esteem relates to aggression. Low self-esteem is associated with both alexithymia and aggression. Additionally, having strong social support can protect against the development of violence, potentially mitigating the link between alexithymia and aggression. Furthermore, attachment style, particularly an anxious attachment style, can directly impact antisocial behavior. These factors contribute to the complexity of understanding the connection between alexithymia and aggression. (11)

8. Assessment of Alexithymia

The TAS-20, also known as the 20-item Toronto Alexithymia Scale, is one of the earliest and most commonly used measures to evaluate alexithymia. It has been widely utilized in the field to gain insights into and study this concept. A 20-item self-report test, the TAS-20. It was initially intended to only provide a total scale score as an overall index of alexithymia, but it is now accepted practice to derive scores for each of the following subscales: DIF (Difficulty identifying feelings) (for example, "I am frequently confused about what emotion I am feeling"), DDF (Difficulty describing feelings) (for example, "It is difficult for me to find the right words for my feelings"), and EOT (Extern Two DIF items inquire about emotions with a negative emotional valence (e.g., "When I am upset, I don't know if I am sad, frightened, or angry"), and all other items (e.g., "I have feelings") do not specify

an emotional valence. The TAS-20 has been adapted and validated for different languages and cultures. It has consistently shown a stable and reliable factorial structure that aligns with the concept of alexithymia. (12)

Treatment of Alexithymia

Although there is no specific treatment for alexithymia, therapy can be beneficial in enhancing emotional awareness and expression. Cognitive-behavioral therapy (CBT) and psychodynamic therapy have shown effectiveness in addressing alexithymia. CBT focuses on modifying negative thought patterns and behaviors, while psychodynamic therapy explores the underlying emotional conflicts contributing to alexithymia. In some cases, medication may be prescribed to manage associated symptoms of depression or anxiety. Dialectal Behavior Therapy (DBT) a form of (CBT) Cognitive Behavioral Therapy, can enhance

emotional processing skills in alexithymia through mindfulness and emotion regulation. It helps individuals understand and regulate their emotions by exploring triggers, thoughts, sensations, and behaviors. DBT is effective in treating conditions associated with alexithymia, like borderline personality disorder and substance use disorders. It may also improve emotion identification and awareness in individuals with high levels of alexithymia. So, it's a helpful intervention for addressing emotional challenges. Be patient and empathetic because individuals with alexithymia may find it difficult to communicate their feelings or comprehend those of others. Even if it takes them longer to digest their feelings, it's crucial to be kind and patient with them. Encourage therapy: Therapy can help you express and understand your emotions better. Engage in active listening by being attentive. Be careful not to criticize one for having trouble expressing their emotions. Offer encouragement and validation instead. Focus on strengths: Although alexithymia can be difficult, it's crucial to pay attention to one's assets as well. (13)

10. Role of Physical Therapy in the management of Alexithymia

There is limited research on the role of physical therapy specifically in the management of alexithymia. However, physical activity and exercise in general have been shown to have positive effects on mental well-being, including improving emotional regulation and reducing symptoms of depression and anxiety. Engaging in regular physical activity may be beneficial as part of a holistic approach to managing alexithymia. (14)

CHAPTER II LITERATURE REVIEW

Sami Hamdan Alzahrani et al carried out a study in 2020 with the objective to analyze the prevalence of alexithymia and its risk factors among Saudi medical students. The result of the study revealed that 347 medical students are selected according to a study, the prevalence of alexithymia among medical students was 49% with a 95% confidence of interval. The study also found that alexithymia was significantly associated with academic year of study (lower risk of alexithymia in the clerkship (5th, 6th years); odds ratio [OR]: 0.43, 95% CI: 0.26–0.72), smoking (OR: 3.52, 95% CI: 1.60–3.34), grade point average (lowest; OR: 10.44, 95% CI: 4.24–25.77), history of childhood abuse (OR: 2, 95% CI: 1.20–8.77), and history of psychiatric illness (OR: 14.40, 95% CI: 4.76–21.06). The conclusion of the study states that almost half of the medical students suffer from alexithymia. Increasing the awareness about alexithymia among students and directing them where to seek help would facilitate the management of these problems. (1)

Mohammed. A Aljaffer et al carried out a study in 2022 with the objective to determining the prevalence of alexithymia and the factors that contribute to it among medical students at King Saud University (KSU), Riyadh, Saudi Arabia. The result revealed that 250 students are selected and the prevalence of alexithymia was determined to be 26.9%. Alexithymia and gender were

statistically significantly associated 13%. Alexithymia was linked to a diagnosis of any psychiatric disorder 26%, a history of abuse as a child 6%, and a lack of exercise. The conclusion of the

study states that the medical students at KSU had a much greater prevalence of alexithymia than the overall population. (2)

Sagun Karki et al carried out a study in 2023 with the purpose of this to determine the prevalence of alexithymia among Nepalese medical students and to identify the contributing factors. The result revealed that 380 of the 386 participants that were there answered. The average age was 22.22 years with a male to female ratio of 1.8. Alexithymia was found to be prevalent in 22.89% of people. There was no statistically significant difference in the prevalence of alexithymia between the sexes, academic year, and residence in a dorm, participation in extracurricular activities, daily exercise/yoga/outdoor sports participation, and smoking habit. The conclusion of the study states that the prevalence of alexithymia is low among the Nepalese medical students. (4)

Chang Hong Zhang carried out a study in 2022 the study aimed at addressing alexithymia in this demographic, this study tested the potential mediating influence of psychological capital on the connection between childhood trauma and alexithymia in Chinese medical students. The result of this study revealed that the totals of 1018 responses were found to be legitimate, representing an accuracy rate of 84.83%. Men made up 38.4% of the population while women made up 61.6%. 16.5% of people had alexithymia. According to the findings of the structural equation model, childhood trauma was strongly correlated with alexithymia, with a standard path coefficient of 0.219 (C.R. = 6.644, $P < 0.001$). The partial mediating effect of psychological capital was 0.060 ($P < 0.001$), accounting for 21.51% of the overall effect of childhood stress on alexithymia. The multiple-group invariance analyses revealed that the p values of the changes in the

degrees of freedom and chi-square value were greater than 0.05, confirming the stability of the model. The results of the bootstrap method demonstrated that the multiple-group invariance analyses showed that the p values of the changes in the degrees of freedom and chi-square value were greater than 0.05, confirming the stability of the model. The results of the bootstrap method showed that the lower and upper bounds of the 95% confidence interval did not contain 0. The conclusion of this study states that among Chinese medical students, childhood trauma was a strong predictor of alexithymia, and psychological capital played a role in mediating this association. Therefore, reducing alexithymia in this population may be achieved by therapies that aim to increase psychological capital. (5)

Mohammed Ahmed Aleisa et al conducted a study in 2022 with the purpose to ascertain the prevalence of alexithymia among medical students and its associations with sociodemographic characteristics and depression. Students studying medicine at King Khalid University (KKU), in Saudi Arabia, took part in a cross-sectional survey. The result showed that the 333 students in total were involved, with 51.4% of the participants being female and over two-thirds (64.6%) coming from clinical years. Alexithymia and depression were both rather common—47.4% and 88.9%, respectively. Females had a twofold risk for alexithymia (OR = 2.09), pupils with high income status had a lower likelihood of having it (OR = 0.39), and those with chronic health issues had a doubled risk (OR = 2.04). Additionally, alexithymia and depression had a strong relationship (OR = 1.91). The conclusion of the study revealed that that among the examined samples, alexithymia and depression were both highly prevalent. This draws attention to the need for actions to lessen it in order to improve student performance and prevent psychological issues in the future. (7)

Xixin Wang et al carried out a study in 2021 with an objective to find out the prevalence of psychological, behavioral, and depressive disorders

and alexithymia among medical students is rising year over year. The results show that 150 populations were selected during the pandemic, adolescents with depression had a much greater rate of alexithymia (76.45%). Between medical students with and without alexithymia, there were appreciable differences in terms of school bullying, disease severity, ASLEC score, CTQ score, and PANSI score. Additionally, learning stress, health issues, and challenges adjusting to the pandemic may have an impact on adolescents' tendency to experience alexithymia and depression. ($P < 0.05$). The conclusion of this study revealed that a high rate of alexithymia depression during the pandemic in medical students, per the findings. To create preventive and targeted psychological interventions as soon as feasible, more assistance and consideration from families, schools, and society is required. (9)

Chang Hong Zhang et al carried out a study in 2022 with the objective to identify potential targets for future therapies to address learning burnout among Chinese medical students by analyzing the link between alexithymia and learning burnout as well as the mediating role of mobile phone addiction. The result revealed that the total sample size was 1062, and 88.5% of the responses were legitimate. Among Chinese medical students, learning burnout was present 39.6% of the time. Results of hierarchical regression showed that alexithymia ($R^2=0.198$, $P<0.01$) and mobile phone addiction ($R^2=0.021$, $P<0.01$) were separate causes of learning burnout; the SEM showed that the mediating role of mobile phone addiction between alexithymia and learning burnout accounted for 25.16% of the total effect of alexithymia on learning burnout. The conclusion of the study is that 39.6% of the medical students suffered burnout from their studies. The association between alexithymia and learning burnout is partially mediated by addiction to mobile phones. (15)

Heba I Essawy et al conducted a study in 2021 with an aim to analyze the connection between eating disorders and alexithymia. The result of the study

of 400 participants were selected that's showed the disorder in eating occurs in 12.3% of the study group, while 24.4% of those with alexithymia showed a substantial fluctuation in their eating disorder scores. The conclusion of the study revealed that according to the concept that eating disorders have problems with emotional regulation, study found a favorable link between alexithymia and eating disorders. (16)

Hossein Aryan et al carried out a study in 2023 with the purpose to look at the prevalence of alexithymia and generalized anxiety disorder (GAD) as in medical students. As factors of psychological well-being, we looked at the prevalence of generalized anxiety disorder (GAD) and alexithymia. Also looked at possible coping methods for medical students to deal with stress and worry. The result of the study revealed that the level of anxiety was moderate to severe in 87 (37.5%) persons overall. In 49 (21% of the subjects), alexithymia was found. Participants were more likely to use mature (56.5%) protection mechanisms than immature (23.3%) defense mechanisms. It was shown that GAD and alexithymia had a strong positive association. A positive correlation between GAD and immature and neurotic defense systems was also found ($P < 0.05$). Mature defensive systems and GAD showed a negative connection ($P < 0.001$). Negative predictors of GAD included suppression and humor (mature mechanisms). The positive predictors of GAD were reaction formation, somatization, autistic imagination, splitting, passive aggression, displacement, and pseudo-altruism (a young and neurotic mechanism). The conclusion of this study shows that the prevalence of alexithymia and generalized anxiety disorder (GAD) as in medical students. The statistically strong links between GAD, alexithymia, and defensive mechanisms imply that a thorough comprehension of these disorders and mechanisms can help medical students feel less anxious and have better psychological health. (17)

Eman S. Soliman et al conducted a study in 2021 with the objective to investigate this possibility by

assessing the incidence and connections between alexithymia and internet addiction among university students in the Kingdom of Saudi Arabia (KSA). The result of the study shows that 212 participants were selected that shows the Alexithymia affected 30.2% of the individuals, of which mild IA affected 65.2%. Alexithymia and internet addiction had a strong connection ($p = 0.001$). Age, daily internet usage, and reported psychiatric illness all had an impact on the prevalence of alexithymia ($p = 0.032$, $p = 0.001$). IA significantly correlated with daily internet use ($p = 0.001$), stated psychiatric condition ($p = 0.027$), and study hours ($p = 0.029$). The conclusion of the study revealed that there is a serious problem that needs to be solved regarding the high frequency of alexithymia among university students in KSA and its favorable association with internet addiction. It is thought essential to employ preventive intervention measures. (18)

Merve AKTAŞ TERZİOĞLU et al carried out a study in 2023 with the purpose of this study was to assess the level of alexithymia among medical faculty students as well as their social media addiction, dissociation, and social anxiety. The result of the 100 populations was selected for the that study shows the SAS-SMU's shared content and self-assessment anxiety subscale points as well as the VODES points all had an impact on social media addiction. Social media addiction was found to be positively and significantly predicted by shared content anxiety ($\beta = 0.264$, $t(320) = 3.16$, $p = 0.002$) 30.2%. Self-assessment anxiety was found to be a positive and significant predictor of social media addiction ($\beta = 0.169$, $t(320) = 2.23$, $p = 0.026$) 65.2%. Online dissociative experiences were found to substantially and positively predict social media addiction ($\beta = 0.217$, $t(320) = 4.15$, $p < 0.001$) 64.4%. The conclusion of the study revealed that it has been demonstrated that young individuals who are prone to dissociation, struggle in social situations, and experience social anxiety are at an increased risk of developing a social media addiction, although alexithymia does not predict this risk. Additional experimental and

long-term investigations are required to determine the potential causal relationship between social anxiety, detachment, and social media addiction. (19)

Rachmawati Kusuma Wardani et al conducted a study in 2022 with an aim to find out the risk factor for developing social media addiction appears to be people's incapacity to perceive and express their feelings (alexithymia), with the level of alexithymia increasing with the level of social media addiction. The purpose of this study is to ascertain the incidence of alexithymia among Padjadjaran University nursing students who are addicted to social media. The result of the study shows that the high level of alexithymia was reported by 94 (43.5%) of the respondents, according to the study's findings. The average scores for the alexithymia subscales were 20, 68 + 7.90 for DIF, DDF 16 + 5.54, and EOT 22, 52 + 8.32. The conclusion of the study revealed that the people who suffered moderate or severe social media addiction scored higher on the alexithymia scale. For nursing students who don't or have alexithymia, preventative and promotional measures are therefore required. (20)

Michalina Janiec et al carried out a study in 2019 with the objective to investigate the prevalence of alexithymia among Polish students and its associations with particular university majors, sociodemographic factors, and family issues. The result of the study show that the bulk of our sample (56%, $n = 635$) had high scores. It had a positive correlation with drinking (25% $p = .02$) and domestic abuse in the family of origin ($p = .03$). The relationships between alexithymia, gender, and certain university majors were not statistically significant (56.2% $p > .05$). The conclusion of the research indicates that alexithymia is common among Polish pupils. (21)

Kashaf Nadeem et al conducted a study in 2022 with the aim to analyze the incidence of alexithymia among university students in Islamabad and its associations with smart phone addiction and physical activity. The result of the study shows that the 60 university students were

selected that shows that students had alexithymia prevalence of 29.7%, and it was favorably correlated with smart phone addiction but not significantly with physical activity. While EOT was not substantially connected with smart phone addiction, the two components on the alexithymia DIF and DDF subscales were. Additionally, the sociodemographic factors of age, gender, life happiness, and residential status all demonstrated a favorable correlation with alexithymia. The conclusion of the revealed that more than one-fourth of college students experience alexithymia, and the severity of the disorder rises with smart phone addiction. (22)

Catarina proenca lopes et al carried out a study in 2022 with the purpose to examine the prevalence of alexithymia among a sample of college students and its correlation with particular sports practice elements (competition and training). The result of the study revealed that 253 university students from France participated in the study and answered questions about their level of alexithymia (TAS-20) and regular sports participation. We discovered 92 patients (36.4%) who were potentially alexithymic and 76 subjects (30%) who had verified alexithymia. The amount of training practice performed each week and alexithymia were found to be significantly positively correlated. It is important to note that adolescents who exercise more than 5 hours per week are more likely to have borderline or alexithymic disorders (19.6 and 19.7%, respectively, against 7.1% for non-alexithymics; $p = 0.03$). The conclusion of the study revealed that Alexithymia is 30% more common in this setting than it is in the overall population. Additionally, borderline and severe alexithymia are most positively correlated with higher levels of physical exercise (more than 5 hours per week).(23)

Objective of the Study

The objective of the study was to determine the prevalence of alexithymia and its associated factors in Doctor of Physical Therapy (DPT) students at Isra University Hyderabad, Pakistan.

Significance of the study

Alexithymia is a mental condition in which a person is unable to recognize or categorize emotions. The inability of the person to discriminate between emotions, bodily symptoms, and difficulty sharing feelings with others. (1) Alexithymia, marked by struggles in forming attachments and engaging in interpersonal connections, is often observed in medical students due to the demanding academic program and the emotional stress it entails. This can impede their capacity to recognize and express emotions effectively and this also emphasis on maintaining clinical objectivity and detachment within medical training may also contribute to the development of alexithymia in this population. High levels of alexithymia may have an impact on a person's mental state, capacity to communicate with healthcare professionals, and stress tolerance.(4) Hence, The insights gained from this study are highly significant in comprehending how alexithymia influences healthcare professionals. They strongly emphasize the imperative for medical programs to adapt to the diverse emotional needs of their students. Early detection of alexithymia can pave the way for specialized interventions, effectively boosting an individual's emotional intelligence and overall achievement within their professional healthcare journey.(1)

Rationale of the study

Alexithymia is a psychological construct that refers to a personality trait characterized by difficulties in recognizing, understanding, and expressing one's own emotions. (1) People with alexithymia often have trouble identifying and describing their feelings and may struggle to differentiate between physical sensations and emotional experiences. It has been observed that students often contend with high levels of stress and demanding coursework, making it imperative to understand the prevalence of alexithymia among them to identify those at risk of emotional difficulties This happens because medical school is very

demanding and stressful, and students often have to deal with emotionally challenging situations.(5) They are also taught to think analytically and be objective, which can make it even harder for them to talk about their feelings. On top of that, the competitive environment and the need to appear composed in front of patients and peers can make it difficult for students to ask for help or talk about their emotional problems.(2) It's important to address this issue because this study can guide curriculum enhancements and support programs tailored to the unique emotional needs of medical students, fostering their overall well-being and preparing them to be more empathetic and effective healthcare providers and it can affect the well-being of medical students and their ability to show empathy to their future patients.(1)

CHAPTER III

MATERIAL AND METHODS

1. Study Design

Study conducted was a cross-sectional study design with an aim to determine the prevalence of alexithymia among Doctor of Physical Therapy (DPT) students at Isra University Hyderabad, Pakistan.

2. Participant Recruitment

The participants were from the Doctor of Physical Therapy Department of Isra University Hyderabad, Pakistan.

3. Duration of Study

Duration of study was around 5 months after acceptance of proposal.

4. Sampling Technique

Convenient sampling technique was used.

5. Sample Size

234 participants were included. The sample of 234 was calculated by keeping confidence interval 95% and 5% margin of error.

6. Sample Selection

6.1. Inclusion Criteria

- Students from 1 year to final year were selected.

- Both females and males were selected.

6.2. Exclusion Criteria

- Participants who were not willing to participate were excluded.

7. Data Collection Method

The data was collected by distributing Questionnaire to Doctor of Physical Therapy student.

8. Data Collection Tool

The data collection tool was "The Toronto Alexithymia Scale (TAS-20)" which is a 20-item, self-administered questionnaire that measures difficulty in identifying and describing emotions, in medical students. Questionnaire ranges from 0-51 no alexithymia, 52-60 possible alexithymia, 61-100 present alexithymia.

9. Data Analysis Procedures

For evaluation of data SPSS version 23 was used. The age of participants was calculated in mean whereas all other demographic data and variables were analyzed by descriptive method in terms of frequency and percentages.

10. Ethical Consideration

Questionnaire was given to participants after the review of department ethical committee of Isra Institute of Rehabilitation Sciences, participation were be totally voluntary and participants data will remain confidential. Data was be used for research purpose only.

11. Budget

The amount of budget for this study will around 10,000 to 15,000.

CHAPTER IV

RESULT

A total of 234 students participated in the study and returned completely filled questionnaire. The results of the study were divided into 2 parts: demographic and scoring for the prevalence of Alexithymia. All demographics were analyzed in percentages and frequencies except age which was analyzed in mean 21.40 and SD 1.63. Gender of

the participants 161(68.8%) were female students and 73(31.2%) were male students. Year of study of the participants 59(25.2%) students were from 1st year, 36(15.4%) students were from 2nd year, 65(25.2%) students were from 3rd year, 45(19.2%) students were from 4th year, 29(12.4%) were from

5th year as shown in Table IV-1 and Figure IV-1,2. More over the scoring was been interpreted as those who scored 1-51 had no alexithymia 38(16.2%), 52-60 possible alexithymia 63(26.9%), 61-100 alexithymia present 133(56.8%) as shown in Table IV- 2 and Figure IV-3.

TableIV-1: Demographics of Participants

Age of participant	Mean	21.40
	Standard Deviation	1.63
Gender	Male	73(31.2%)
	Female	161(68.8%)
Year of study	1 st year	59(25.2%)
	2 nd year	36(15.4%)
	3 rd year	65(27.8%)
	4 th year	45(19.2%)
	5 th year	29(12.4%)

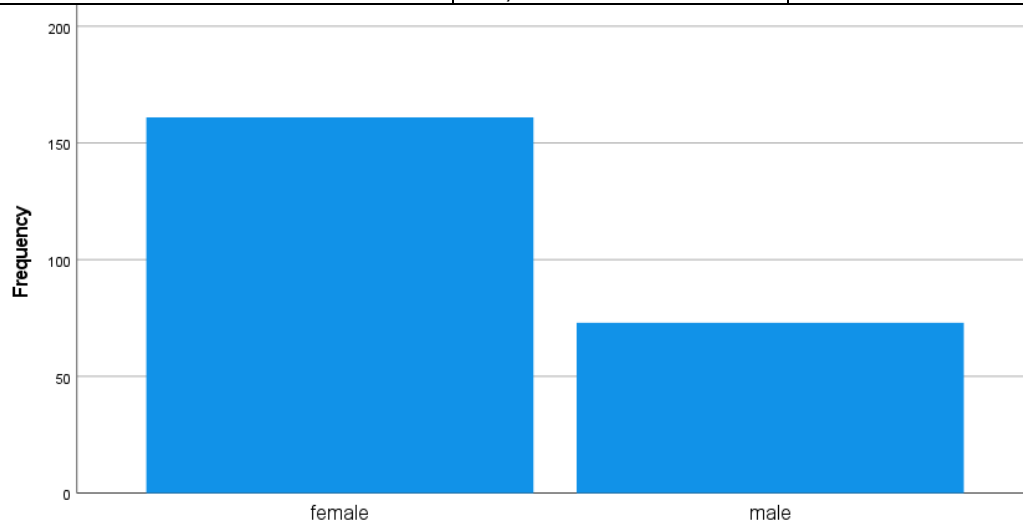


Figure IV-1: Gender of participants

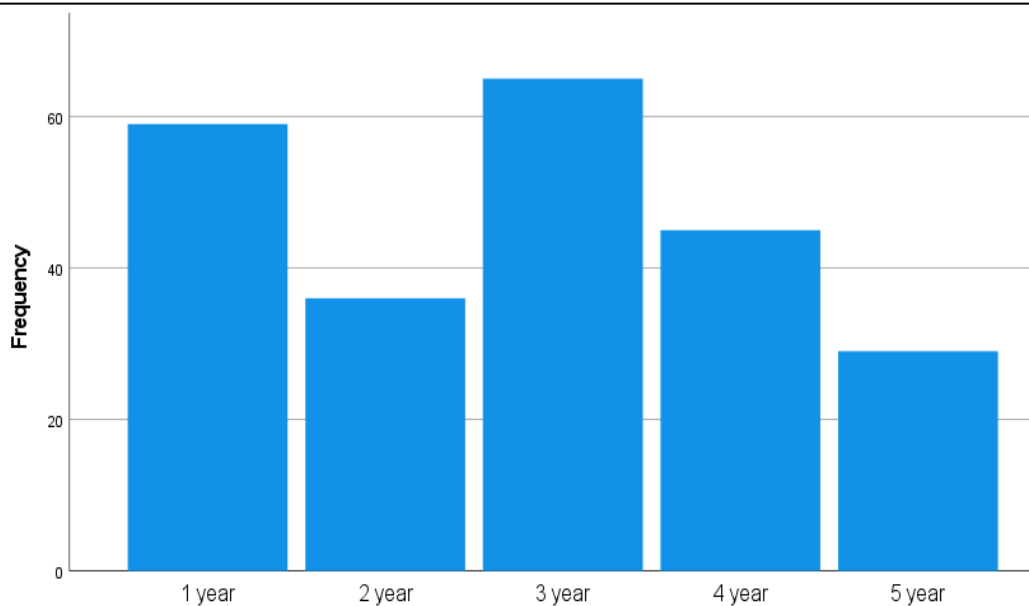


Figure IV-2: Year of study of participants

TableIV-2: Interpretation of prevalence of alexithymia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no alexithymia	38	16.2	16.2	16.2
	possible alexithymia	63	26.9	26.9	43.2
		133	56.8	56.8	100.0
	Total	234	100.0	100.0	

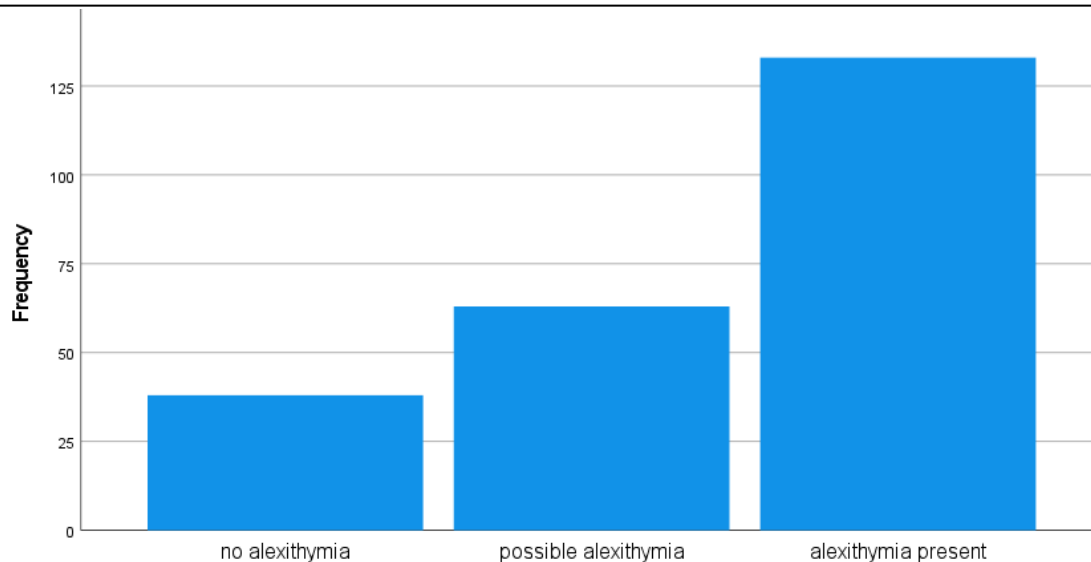


Figure IV-3: Interpretation of prevalence of alexithymia

CHAPTER V DISCUSSION

As alexithymia is a sub-clinical experience of a lack of emotional awareness, or more specifically, difficulty in identifying and describing feelings and distinguishing feelings from the bodily sensations of emotional arousal. (1) This study was conducted to determine the prevalence of alexithymia among the doctor of physical therapy students. A total number of 234 participants were selected in this study. 16.2% participants had no alexithymia, 26.9% participants had possibility of developing alexithymia, 56.8% participants had present alexithymia. However a similar study was conducted by Sami Hamdan Alzahrani et al in 2020 at King Abdulaziz university among the medical students in which 347 participated. The overall prevalence of alexithymia was 49%. furthermore, the prevalence among men was 51% and in women was 49%. Those participants who suffer from alexithymia were likely to feel negatively about their surroundings and studies, which had an impact on their academic performance. (1). A study was conducted by Abdullah Meshal Alharthi et al in 2022 at Umm Al Qura University among the medical students in which the overall prevalence of alexithymia was

56.5%. Alexithymia puts a person at risk for a variety of illnesses associated with poor affect control, including anxiety and mood disorders and distress, which included a variety of negative feelings and mood disorders.(2) Another study by Ahmed Rady et al in 2021 in Egypt among medical students reported alexithymia in 49.5%, 22.9% participants had no alexithymia, and 27.6% participants had borderline/intermediate alexithymia due to demanding and stressful nature of their training.(6) .In contrast, a study conducted by Mohammed Ahmed Aleisa et al in 2022 conducted a study among the medical students of King Khalid university in this a total of 333 participants had reported a lower prevalence of alexithymia 40.5%.Because not all medical students have difficulty in expressing emotions(alexithymia) some students handle stress well and have good support and might be naturally more in touch with their feelings.(7) In another study by Mohammed A. Aljaffer et al in 2022 among medical students of Saudi Arabia found that alexithymia prevalence among medical students was around 26.9%, and 24.3% participants had borderline alexithymia. Because some students have good strategies to maintained

stress and challenges during their medical education. (23)

CHAPTER VI CONCLUSION

It was concluded that there was a high prevalence of alexithymia among the Doctor of Physical Therapy (DPT) students.

CHAPTER VII RECOMMENDATION

It is recommended to reduce the high prevalence of alexithymia among medical students, it is imperative to implement targeted interventions to address this concerning trend. A proactive approach involves integrating structured emotional intelligence training into the curriculum, equipping students with skills to recognize and express their emotions effectively. Additionally, establishing regular mental health screening programs can identify individuals at risk early on, facilitating timely intervention. Accessible counselling services, both individual and group, should be readily available to provide crucial support. Creating peer support networks or mentoring programs fosters a culture of open communication, diminishing the stigma associated with alexithymia. Stress management workshops tailored to the unique challenges of medical education can further contribute to the student's emotional well-being. Faculty awareness and training are essential; ensuring educators can recognize signs of emotional stress and provide effective support. Given importance of robust findings, ensuring a sufficiently large and diverse sample size in research or intervention program is crucial for the generalizability and reliability of results. Regular follow up and evolution, considering the unique challenges faced by medical students, will refine these interventions, establishing a sustainable and effective support system.

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