



**RESEARCH PAPER**

**Exploring the Interplay of Alexithymia, Emotional Intelligence and Burnout among Doctors**

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**ABSTRACT**

Alexithymia, a psychological condition characterized by difficulty in identifying and describing emotions, has been linked to various mental health symptoms. This study aims to elucidate the differential responses to prolonged occupational stress, particularly among medical professional, by examining the role of alexithymia and emotional intelligence in the development of burnout. A cross-sectional experimental design was employed, involving a voluntary and anonymous questionnaire survey completed by 200 medical practitioners. The survey encompassed demographic information, occupational detail and measures of emotional intelligence, burnout & Alexithymia. Results, accounting for work-related characteristics, indicate that alexithymia significantly contributed to the depersonalization and personal accomplishment dimensions of burnout, contrary to expectations, emotional intelligence did not demonstrate greater explanatory power for burnout compared alexithymia as a more critical predictor of burnout in medical professionals than emotional intelligence, suggesting the need for targeted intervention focusing on emotional processing skills within the population.

**KEYWORDS**      Alexithymia, Burnout, Emotional Intelligence, Medical Professionals

**Introduction**

Rachelle Wapano (2021) conducted that alexithymia construct a group of cognitive qualities such as having trouble recognizing emotions, having trouble explaining feelings to others, having difficulties thinking internally and having a restricted imagine.

It was conducted in recent research, a unique viewpoint on alexithymia was shown to be the most relevant in terms of its implications (Georgiou, 2019). According to Ngoc & Abh (2022) an alternative idea that hasn't had as much popularity so far is that alexithymia is a global deficiency in emotional processing that leads to defective expression and recognition of emotion. People with alexithymia demonstrate lower emotional priming when presented an initial facial expression followed by a verbal target (Shapiro, 2011).

Psychologist defines burnout as a state characterized by emotional exhaustion, a tendency toward cynicism and detachment toward care consumers and a weakened sense of personal achievement in the profession (Franco et al., 2020). Disagreements with others, a lack of reciprocity and pressure to perform several roles are all examples. Workers in geriatric care settings are more vulnerable to burnout (Helmy et al., 2023).

According to the Job Demands and Resources (JD-R) model, burnout occurs when an individual's work demands surpass his or her ability to meet those demands. Researchers have examined individual resources within the JD-R paradigm to determine their role as antecedents of job demands and resources or as mediators between job attributes and employee happiness (Hellwig et al., 2020).

The notion of alexithymia, which is a personality component that has been suggested, has been validated by the work that Taylor and his colleagues have done on the Toronto Alexithymia Scale and the TAS-20. The validation of both of these measures was accomplished by the use of a correlation study that included additional measures that evaluate inadequacies connected to alexithymia, such as emotional regulation (Elder, 2021). For the purpose of determining how well alexithymia responds to varied levels of stress, researchers have followed people throughout the course of time. The findings of these experiments provided support for Taylor's theory that alexithymia is a characteristic of personality that is consistently present. On the other hand, research conducted on clinical populations has provided evidence that alexithymia, in connection to psychopathology, is best understood as a state-dependent symptom (Husain et al., 2022). This means that it is a symptom that arises in response to stressful events but disappears once the symptoms are lessened Alexithymia.

According to Canas-Lerma et al. (2021) Alexithymia is an excellent predictor of emotional tiredness and depersonalization. However, some authors have drawn the opposite conclusion. Evidence suggests that people with alexithymia are less likely to feel successful in their work life. In particular, nurses who suffer from this disorder report lower levels of self-esteem. Burnout is particularly widespread among healthcare workers and individual characteristics like personality traits and family life might impact its development (Pellerone et al., 2020).

Studying that components of emotional intelligence (EI) may be beneficial for adult learners, particularly those who are coping with issues related to motivation and social skills (Rapozo, 2022). This is despite the fact that academics and practitioners have mostly focused on building EI in children in order to promote future success. Utilizing the Self-Report Emotional Test for the purpose of providing an accurate evaluation of the emotional intelligence of medical professionals, a questionnaire based on emotional intelligence was used (Sillup, 2021). Emotional weariness, depersonalization and a decrease in personal achievement are the three hallmarks of burnout that Maslach's model highlights.

This research aims to analyze the incidence of different psychological issues among doctors at a government tertiary care institute in Faisalabad, as well as to explore the link between mental morbidity and burnout in the medical field. The purpose of this research is to better understand how often burnout among medical professionals, such as House Officer, Medical Officers, Postgraduate Trainees & Senior Registrars and what variables contribute to it. This study investigates the connection between Alexithymia and Emotional Intelligence.

## **Literature Review**

Alexithymia individuals may have difficulty distinguishing between internal and external expressions of emotional arousal. They have difficulty verbalizing their feelings and suffer from a lack of imagination. Between 7 and 10 percent of the population has been diagnosed with alexithymia (Gonçalves, 2021). One study found that 26% of 496 Chinese nurses had alexithymia-like symptoms (Adamou & Dardavessis, 2019). Lo et al.,

(2022) found that those with alexithymia features reacted less favorably to the ameliorating effects of family and social support on depressed symptoms. Similar associations between severe instances of alexithymia and a lack of social support have been shown in previous studies (Hang & Chen, 2021a).

A healthcare provider's duties include constant attention to patients, open lines of communication with family members and collaborative teamwork. There is a clear correlation between the complexity and difficulty of the work and the high prevalence of burnout among nurses, which was recently reported in a meta-analysis to be 51.98 percent. The emergency department nursing staff reported the greatest levels of burnout (Hull, 2020).

A person experiences burnout when their personal and professional resources are depleted trying to satisfy the continual demands of their work, as proposed by the work Demands and Resources (JD-R) model. Employees who experience a disruption in their normal routine may feel psychologically and physically weary, which may have negative effects on both them and their employers (Hang & Chen, 2021b). The JD-R model uses workers personal resources as a central factor in analyzing the correlation between job characteristics and job satisfaction. Alexithymia has been linked to higher rates of burnout in several studies (Franco et al., 2020) and within the nursing profession (Georgiou, 2019).

Individual Emotional Intelligence have been demonstrated to be a mediators of burnout, with positive effects on the likelihood of burnout occurring and the degree to which it occurs. Because they indicate how a person is related to their environment, alexithymia, social support and grief are all relevant here. All three of these criteria have been linked to burnout (Board, 2010). The already substantial correlation between alexithymia and burnout may be considerably stronger in occupational settings, where employees may face very high stress levels. Researchers in the past have mostly targeted future doctors or other medical professions. Alexithymia (and especially EOT) was shown to predict burnout among nurses, doctors in a research by (Hang & Chen, 2021b). Alexithymia predicted numerous characteristics of burnout in medical doctors, including stress and perceived social support according to research by (Lopes et al., 2004).

Although research with community adolescent populations is currently few, results from clinical samples suggest that alexithymia may have the same deleterious influence on welfare and health in teenagers as in adults (Mihm et al., 2003). Despite the fact that alexithymia is defined in the literature as a reasonably steady disposition, adolescence is a particularly sensitive stage for the management of emotions and is marked by a general rise in regulatory concerns. Having the capacity to monitor one's own & others feelings and emotions, to discriminate among them and to use this information to guide ones thinking and actions, emotional intelligence (EI) first appeared in the scientific literature over twenty years ago. The concept didn't become widely accepted as fundamental to achievement in both private and public spheres until much later (Lo et al., 2022). According to research by Hang & Chen, (2021a) that Social and communication abilities are built upon these foundational skills, which allow people to adjust to new situations.

The lack of spirituality and its relationship to happiness and satisfaction in life is significant for reasons related to a priests social work (Lopes et al., 2004). Evidence from a variety of studies Bru-Luna et al. (2021) shows that people, including priests, who are more religious, spiritually mature and capable of transcending themselves, enjoy greater

physical and emotional well-being, mental health and positive functioning. Overworked priests are less able to focus on their faith. Many of them feel that they have made it in life because they have become pastors and leaders in their communities. This has contributed to the public's perception that priests are not very essential, which in turn has made their labor appear futile and contributed to feelings of dissatisfaction among priest.

These factors have been linked to an increased risk of burnout syndrome, a condition marked by a sense of futility and emotional exhaustion that may in extreme cases, lead to a desire to leave the priesthood completely. There is strong evidence linking burnout syndrome to serious physical and mental health problems including anxiety and depression. In the situation of priests, we find that personal realization is negatively connected with depressive symptomatology and social dysfunction and that exhaustion and depersonalization are favorably correlated with worry and insomnia (Lopes et al., 2004).

## **Material and Methods**

### **Research Design**

It is a correlational study design/Cross-sectional study.

### **Population of the study**

Its access the various Psychological problems among medical professionals who are working in a government tertiary care institute of Faisalabad. 200 populations are participating in this study in medical professional as House Officer; Medical Officers & Post graduate Trainees, Senior Registrar. Researchers allegedly used this word when they were studying a response to a question with the purpose of assessing the causal link that exists between the interventions, as stated by (Tomaszek & Muchacka-Cymerman, 2023).

### **Inclusive Criteria/ Exclusive Criteria**

Medical Professional Doctors as House Officers, Medical Officers, and Post graduate Trainees, Senior Registrars are includes in our sample. Both male and females include in it. All participants whose working in tertiary cares Hospital of Faisalabad are included in this study without being discriminated due to any physical disability & Living System. Professional Doctors whose are working in private sectors were exclusive in our sample, other specialties are also exclusive as Doctor of Physical Therapy & BDS.

### **Characteristic of Sample**

The study collected sample from Tertiary care unit of Faisalabad. There will be a total of 200 medical professionals, which will be split into four distinct groups' House Officers, Medical Officers, Postgraduate trainees & Senior Registrars. House Officers & Medical Officers are split in group one. Senior Registrars are added in group two, Post Graduate Trainees are considered in group three. There are three variables used in study which are Alexithymia, Emotional Intelligence and burnout. There are 33 question used for Emotional Intelligence and 20 used for Alexithymia & 16 used for burnout. 200 samples used for study and response are collected using Likert-scale. The participants were responsible for filling out the questionnaires and after they were finished, they were ultimately sent to the researchers. The employment of a demographic checklist

allowed for the collection of information on things like age, gender, education, living system, family system and marital status.

## **Instrument of Research**

### **Demographic Sheet**

Demographic Sheet obtained from respondent's personal information like name, age, gender, education and occupation. This information was collected as per the requirement; no extra or additional information was collected from the participants.

### **Schutte Self Report Emotional Intelligence Test (SSREIT)**

Dr. Nicola Schutte came up with this scale in 1998. Dr. Nicola is a renowned researcher in the field of emotional intelligence. It is a way to measure general emotional intelligence (EI) using four sub-scales: recognizing emotions, using emotions, managing emotions that are important to oneself, and managing emotions that are important to others. There are 33 items on the Schutte emotional intelligence scale (SEIS) that assess different aspects of emotional intelligence. It is a self-report scale with answers on a scale from 1 (strongly disagree) to 5 (strongly agree).

### **Toronto Alexithymia Scale (TAS-20)**

Toronto Alexithymia scale (TAS-20) is a 20-items, written by Dr. Natalie Engelbrecht ND RP, its most commonly used to measure the three different factors that is (Factor-1 Difficulty identifying feeling) (Factor-2 Difficulty describing feeling) (Factor-3 Externally oriented thinking). Each items is scored on a 5-point Likert-type scale (1=strongly disagree; to 5= strongly agree). The total Alexithymia score is the sum of responses to all 20 items.

### **Oldenburg Burnout Inventory**

Oldenburg burnout inventory was originally developed by Demerouti and Nechreiner in 1998. It is based on three dimensions of burnout-namely, emotional exhaustion, depersonalization and accomplishment. Each items is scored on a 4-point Likert-type scale (1=strongly disagree; to 4= strongly agree). The total burnout score is the sum of responses to all 16 items.

## **Statistical Analysis**

The study was carried out with the aid of SPSS version 22 software in order to determine the nature of the relationship that exists between alexithymia, emotional intelligence and burnout. In addition, descriptive methods such as the mean and standard deviation, as well as linear regression tests, were utilized. In order to determine the significance criterion, a value that was  $P < 0.05$  used.

## **Ethical Considerations**

This study, which came with the title Exploring the Interplay of Alexithymia, Emotional Intelligence and Burnout in Experienced Medical Professionals A Multidimensional Perspective, was given the go-ahead by the Ethics Committee of Riphah International University Islamabad, which is located in Pakistan.

## Results and Discussion

To gain a better understanding of the association and discrepancy of among medical professional with Burnout, Alexithymia, & Emotional Intelligence. Various Statistical Techniques such as correlation, t-test and mediation Analysis was employed. This allowed the researchers to assess the relationship between different variables and identify any mediating factors.

**Table 1**  
**Demographic Characteristics of research participants (N=200)**

Variables	Categories	F	%
Gender	Male	87	43.3
	Female	113	56.2
Education	MBBS	145	72.1
	FCPS	37	18.4
	Post graduate Trainee	18	9.0
Family system	Joint	74	36.8
	Nuclear	124	61.7
Living System	Urban	178	88.6
	Rural	21	10.4
Marital Status	Single	105	52.2
	Married	92	45.8
	Separated	1	5

The result in table 1 describes the variables are used as gender which is 87 male & 113 females participated in this Research, which belongs to 36.8% from joint family System & 61.7% from nuclear family system. 72.1% MBBS Participants, 18.4% from FCPS & 9% from Post Graduate Trainees which belongs to 88.6% from urban living system & 10.4% from rural living system. Marital Status of my participant is about 52.2% Single, 45.8% married & 5% Separated.

**Table 2**  
**Variable's Description Statistics**

Variables	Mean	S.D
Emotion Intelligence Test	121.72	14.85
Alexithymia	62.71	11.28
Burnout	37.32	5.79

The result of table 2 is to be seems that the Mean & Standard Deviation values for three different scales which is Schutte Self-Report Emotional Intelligence Test, Toronto Alexithymia Scale & Oldenburg Burnout Inventory.

**Table 3**  
**Scales Reliability Analysis**

Scales	No. of items	Cronbach's Alpha
Schutte Self-Report Emotional Intelligence Test	33	.892
Toronto Alexithymia Scale	20	.851
Oldenburg Burnout Inventory	16	.742

Table 3 exhibits the depiction of the reliability about the Schutte Self-Report Emotional Intelligence scale, Toronto Alexithymia scale and Oldenburg Burnout Inventory scales. Cronbach's Alpha is a measure of internal consistency or reliability of a scale or test, with values closer to 1 indicating higher reliability. Hence there is a reliable internal consistency of these three scales.

**Table 4**  
**Pearson Correlations between Burnout & Alexithymia**

	OLD	TAS
OLD	1	-
TAS	.152*	1

\*\* . Correlation is significant at the 0.05 level (2-tailed).

Table 4 show that the correlation coefficient (r) value between Burnout & Alexithymia is .152\*\* which shows a weak positive correlation between Alexithymia & Burnout. The P value is 0.03 which is less than significance level is  $p < 0.05$ , suggesting that the correlation is statistical significant. Hence, Hypothesis is rejected.

**Table 5**  
**Pearson Correlations among Emotional Intelligence & Burnout (N = 200)**

	OLD	SSREIT
OLD	1	-
SSREIT	.093	1

\*. Correlation is significant at the 0.01 level (2-tailed).

Table 5 show that the correlation coefficient (r) value between Emotional Intelligence & Burnout is .093 which shows also weak correlation between Emotional Intelligence & Burnout. The P value is 0.18 which is greater than significance level is  $p > 0.05$ , suggesting that the correlation is statistical insignificant. Hence, hypothesis accepted.

**Table 6**  
**Regression Analysis of Mediation on Burnout through Alexithymia.**

Variables	B	Std.E	B	95%CI		R <sup>2</sup>	$\Delta R^2$
				LL	UL		
Model 1							
Constant	32.439	2.29		27.910	36.969	0.023	0.023***
TAS	.078***	0.36	.152***	0.07	.149		
Model2							
Constant	29.862	3.71		22.536	37.187	0.027	0.04***
TAS	.071***	.037	.138***	-0.002	1.44		
SSERIT	.025***	.028	.064	-0.31	.080		

Note: CL= Confidence Interval, \*\*\* $P < 0.05$

Table 6 shows the impact of Alexithymia & Emotional Intelligence. In model 1, the R<sup>2</sup> value of 0.023 revealed that the Alexithymia explained 23% variance in Burnout with  $F(1, 198) = 4.661$ ,  $p < 0.03$ . The findings revealed the Alexithymia positively predicted Burnout ( $\beta = .15$ ,  $p < 0.05$ ). In model 2, the R<sup>2</sup> value of 0.027 revealed that Alexithymia revealed 27% variance on Burnout with  $F(1, 197) = 2.71$ ,  $p > 0.05$  which insignificant than we call perfect mediation on burnout Emotional Intelligence positively predict on Burnout ( $\beta = .064$ ,  $p < 0.05$ ).

The  $\Delta R^2$  value of 0.04 revealed 4% change in the variation of model one & model 2 with  $\Delta F(1, 197) = .780$ ,  $p > 0.37$ . The regression weight for Alexithymia subsequently reduced from model 1 to model 2 from .15 to .13, but remain significant, which indicate the partial mediation. Most Specifically, Alexithymia has direct as well as indirect effect on Burnout.

**Table 7**  
**Linear Regression Analysis Predict on Burnout through Alexithymia (N=200)**

	B	SE	B
Constant	32.439	2.297	-
TAS	.078	0.36	.152*
R <sup>2</sup>	.152		

Table 7 showed that the impact of Toronto Alexithymia on Burnout among medical professional doctors of R2 values of .15 revealed that predictor variable explained 15% variation in the outcome variable with  $F(32.439) = 2.297$ ,  $P > .05$ , indicating the statistically insignificant. Finding show positively Predict Alexithymia on Burnout. Hence, Hypothesis is accepted.

**Table 8**  
**Independent t-test**

	Gender	N	Mean	Std. Deviation	Std. Error Mean
OLB	Male	87	37.3333	5.22665	.56036
	Female	113	37.3097	6.21645	.58479

**Table 9**  
**Independent sample T Test**

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	T	Df	Sig.(2-tailed)	Mean Differences	Std.Error Differences	Lower	Upper
	OLB Equal variances assumed	.872	.352	.028	198	.977	.02360	.82830	-1.60983
Equal variances not assumed	-	-	.29	196.429	.977	.02360	.80993	-1.57367	1.62087

Table 8 showed independent t-test was conducted to test the hypothesis that whether the level of Burnout between Medical male & female differ significantly or not. The statistical description of table above that slight difference of mean value for male is ( $M=37.3097$ ,  $S.D= 5.22$ ) while for female, mean value ( $M=37.3097$ ,  $S.D=6.21$ ).

The Levene's test of quality of variance indicate that F statistics 0.872 with a p-value of 0.352, which is greater than the significant value 0.05, indicating insignificant difference between burnout male & female medical profession. Hence we will take value of "equal variance assumed". As it is evident from table that the two tailed significant value is 0.977, which is quite higher than 0.05, indicating insignificant differences in bean between the two group (male & female).  $t(0.028)$ , the confidence interval ( $CI= -1.65703, 1.65703$ ) and ( $-1.57367, 1.62087$ ) respectively, then the mean difference between two groups indicate the statistically insignificant, Hence we accept the hypothesis that female medical professional tend to exhibit higher burnout as compared to male medical Professional.



## Discussion

As a result of the inter correlations between burnout subscales and alexithymia, it was found that there was a positive connection between burnout and higher levels of alexithymia. A greater degree of emotional clarity and sensitivity is associated with better results on the personal success subscale of the emotional intelligence test. Furthermore, a greater self-perceived power to heal mood is associated with a lower overall level of emotional exhaustion as well as a better level of personal accomplishment at work. The findings of the inter correlations between alexithymia and emotional intelligence traits led to the conclusion that a lower level of alexithymia was associated with higher levels of perceived clarity to emotions and mood healing.

Based on the evidence presented, it is evident that emotional intelligence cannot be attributed to either alexithymia or the traits of emotional intelligence. Nevertheless, according to the results, alexithymia was able to account for a significant portion of the variance that was seen in the depersonalization component. This relationship was also found to be statistically significant. On the other hand none of the traits of emotional intelligence provided any further support for depersonalization despite its prevalence. There was not a single category of emotional intelligence that helped to enhance the explanation of individual accomplishment when compared to alexithymia. The results of this study provide compelling evidence in support of the hypothesis.

More precisely, alexithymia has been shown to be strongly associated to emotional exhaustion in a few studies. Researchers have proven that there is a connection between the two variables in the majority of studies that include health experts. Nevertheless, when regression analysis is utilized to establish alexithymia's explanatory power over emotional exhaustion, its impact is diluted, which is in accordance with our findings (Di Tella et al., 2020). This is a finding that is in agreement with our findings. The results of this study indicate that emotional exhaustion may be attributed to a variety of reasons other than alexithymia, including but not limited to depression, workload and coping techniques. It's possible that the features of alexithymia might shed some insight on these findings. As a result of their tendency to concentrate on the outside world, those who are affected could erroneously assume that they are physically exhausted rather than emotionally exhausted.

According to the evidence, alexithymia is strongly associated with depersonalization in burnout. Alexithymia has been found to be a possible explanation for this component of burnout, even after taking into consideration coping methods, depression and social support (Sundquist & Lubart, 2022). This is the conclusion reached by a number of researchers. It has been suggested by (Martínez et al., 2023) that one of the potential reasons for depersonalization among nurses is that they may not have appropriate coping strategies in place. There is also the possibility that individuals who are alexithymia prefer to pay more attention to what is going on around them rather than to how it makes them feel. There is a possibility that emotional intelligence plays a part in this occurrence (Noble et al., 2022). This is due to the fact that inefficient emotion regulation decreases resistance to work-related pressures and increases the chance of burnout. In spite of this, the results of our hierarchical regression analysis reject this assumption, at least among medical professional of Allied hospital. Our findings show that emotional intelligence is not incrementally more valid than alexithymia when it comes to explaining burnout.

## **Conclusion**

The results show a strong positive correlation between Alexithymia & Emotional Intelligence suggesting that the two variables rise in tandem with burnout. According to the positive correlation, Burnout tends to rise along with Alexithymia. Furthermore, there are statistically significant variances in the mean scores of emotional intelligence, suggesting that it is an important element. In order to promote a happy and encouraging learning environment, the study suggests treatments to deal with Alexithymia as well as additional research on emotional intelligence. In conclusion, the findings point to the importance of burnout in predicting Alexithymia and emotional intelligence in medical professional doctors, offering important new information on how these variables interact in a learning environment.

## **Recommendations**

Research was cross-sectional; we are unable to make any conclusions on the causes and effects of the subject matter. We only use the aggregate score; the second problem is that we are unable to get a comprehensive understanding of the connections that exist between the different characteristics of burnout and alexithymia. The third point is that the results acquired from the depersonalization subscale have to be viewed with caution due to the fact that it has a low level of internal consistency.

In order to get a deeper understanding of the capacity of each aspect of alexithymia to explain the phenomenon, it is now required to conduct a more in-depth investigation into the connection between burnout in emotional intelligence. Furthermore, longitudinal research have the potential to offer light on two questions 1) if alexithymia is a stronger explanatory variable of burnout among emotional intelligence, or 2) whether emotional intelligence better predicts work stress before burnout sets in. Both fields of research have the potential to contribute to the advancement of education and clinical practice. Furthermore, it is possible that large samples will demonstrate the existence of statistically significant relationships between gender, age and symptoms of burnout. In order for Pakistan to ensure that patients get treatment that is both safe and of good quality, the country must also ensure that there is sufficient hospital staff and that approved techniques are used to assess and monitor the workload of medical students.

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