

Burnout and Emotional Regulation among Medical Students

Srinidhi Pulloori^{1*}, Dr. Deepthi Vijayan²

ABSTRACT

The purpose of the study was to examine the relationship between Burnout (Emotional Exhaustion, Depersonalization and Personal Accomplishment) and Emotion Regulation (Cognitive Reappraisal, Expressive Suppression) among medical students (Final years and House surgeons). The study also assessed the difference between Final year medical students and House surgeons with regard to the above-mentioned variables. A total sample of 190 medical students 80 pursuing their final year and 80 House surgeons were chosen and purposive sampling method was used. The Maslach Burnout Inventory (Maslach & Jackson, 1986) and Emotion Regulation Questionnaire (Gross & John, 2003) were used to collect the data. Correlation and Independent samples t-tests, were used to analyse the data. The results indicated that there was a significant relationship between Cognitive Reappraisal and factors like Emotional Exhaustion, Depersonalization and Personal Accomplishment. There was a relationship observed between Expressive Suppression and factors like Emotional Exhaustion, Depersonalization and Personal Accomplishment. There was no significant difference seen in final years and house surgeons with Emotional Exhaustion, Depersonalization, Personal Accomplishment, Cognitive Reappraisal and Expressive Suppression.

Keywords: *Burnout, Emotion Regulation, Medical students*

Burnout is a widely recognized occupational phenomenon characterized by persistent emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment (Maslach & Jackson, 1981). Emotional exhaustion refers to feelings of being emotionally drained and overwhelmed by work, depersonalization involves developing negative attitudes and detachment towards work and others, while reduced personal accomplishment relates to a decline in one's sense of competence and effectiveness in their professional role (Maslach, 1982).

Due to its negative consequences on people's well-being and ability to function at work, burnout, a common occupational phenomenon, has received a lot of attention recently. Consistent emotional weariness, cynicism or depersonalization, and a diminished sense of self-accomplishment are its defining traits. Burnout can have significant effects on a variety of professions, including the medical industry, where stressful work situations and high levels of stress are common. To comprehend the underlying mechanisms and elements causing burnout,

¹Student, Kristu Jayanti College, Bangalore

²Assistant Professor, Kristu Jayanti College, Bangalore

*Corresponding Author

Received: May 25, 2023; Revision Received: July 20, 2023; Accepted: July 23, 2023

Burnout and Emotional Regulation among Medical Students

theoretical frameworks and models have been created. The transactional model of stress put forward by Richard Lazarus and Susan Folkman (1984) is a noteworthy theoretical viewpoint. According to this paradigm, burnout develops when people believe there is a large disparity between the demands of their workplace and their capacity to successfully handle those obligations. It draws attention to the part played by personal appraisal processes in determining how burnout feels.

The Maslach Burnout Model, created by Christina Maslach and Susan Jackson in 1981, is another well-known burnout model. Emotional exhaustion, depersonalization, and personal accomplishment are the three main elements that this model uses to define burnout as a multidimensional term. Depersonalization entails adopting unfavorable views and becoming detached from one's work and others, whereas emotional fatigue refers to feelings of being emotionally drained and overwhelmed by work. A fall in one's sense of competence and effectiveness in their professional role is correlated with a reduction in personal accomplishment. A thorough framework for comprehending burnout in a variety of vocations has been made available via the Maslach Burnout Model. The Maslach Burnout Inventory (MBI), a popular tool for evaluating burnout, was created as a result of its significant application in clinical practice and research. In order to better understand burnout's prevalence, risk factors, and effects in various professional settings, the MBI enables measurement of burnout across the three dimensions.

Additionally, the theory of occupational demands and resources has been used to investigate burnout. The interaction between work resources, such as social support and autonomy, and workplace demands, such workload and time constraints, is highlighted by this theoretical viewpoint. Burnout can be exacerbated by an imbalance between demands and available resources. Understanding the theoretical foundations of burnout within this framework offers insights into the organizational elements and psychosocial processes that contribute to workplace burnout.

Emotion regulation

Emotion regulation, the means through which people control and adjust their emotions, is essential for psychological health and adaptive behavior. It includes a variety of tactics and procedures intended to comprehend, keep track of, and adjust emotional experiences and manifestations. Understanding the theoretical foundation of emotion regulation is crucial to understanding its mechanisms and ramifications. The idea of emotion control is based on a number of psychological theories and viewpoints. The process model of emotion regulation put out by James J. Gross (1998), which makes a distinction between antecedent-focused and response-focused techniques, is one influential paradigm. Reaction-focused techniques change the emotional reaction after it has already happened, whereas antecedent-focused tactics change the psychological reaction prior to it completely occurs.

Cognitive reappraisal is an example of an antecedent-focused strategy that involves altering one's cognitive interpretation of a circumstance in order to affect how it affects emotions. This method seeks to reframe the significance of an event or circumstance, enabling people to control their emotional responses by taking a more positive or neutral stance. Conversely, response-focused techniques like expressive suppression entail suppressing or hiding emotional outward expression. However, evidence indicates that expressive suppression may be detrimental to both interpersonal relationships and mental health.

Burnout and Emotional Regulation among Medical Students

Cognitive, behavioral, physiological, and experiential domains are all part of the multidimensional process of emotion regulation. It affects emotions' strength, time, and manifestation as well as the biological and mental processes that go along with them. Both academics and professionals can obtain insight into the techniques and strategies by which people manage their emotions by studying the theoretical foundations of emotion regulation.

Erschens et al, 2018 studied, Behaviour-based Functional and dysfunctional Strategies of medical students to cope with Burnout. The findings suggested, High burnout rates, average 35%, were found. Compared to pupils in higher stages, students showed lower values for cynicism but higher values for emotional weariness. There was a shift towards a less effective perception of academic efficacy among students in higher education. The identified useful coping mechanisms included asking for help from friends and family, exercising to unwind, playing sports, and talking to other students. The 'using tranquilizers', 'taking stimulants', 'drinking alcohol', 'withdrawal and ruminating', and 'playing games on the PC or mobile phone' were the identified problematic coping methods. Jackson-Koku et al, 2019 presented a systematic review of Emotion regulation and burnout in doctors. The study found a correlative relationship between emotion regulation and burnout in doctors and that using self-regulatory or taught emotion regulation skills or interventions such as mindfulness can reduce burnout. Therefore, emotion regulation is an important psychological variable associated with burnout in doctors.

This investigation seeks to advance our understanding of the systems and procedures involved in emotion regulation by examining the theoretical foundations of the process. The mental health concerns among medical students have long been acknowledged, given the demanding nature of their schedules and responsibilities. Factors such as heavy study loads, rigorous course requirements, limited free time, and personal traits like perfectionism can contribute to stress and dysfunctional behaviors. This knowledge can be used to build interventions and methods that will help people become better at managing their emotions, encourage adaptive emotional functioning, and boost their psychological health in general.

METHODOLOGY

Objectives

1. To find the relationship between Emotional Exhaustion and Cognitive Reappraisal.
2. To find the relationship between Emotional Exhaustion and Expressive Suppression.
3. To find the relationship between Depersonalization and Cognitive Reappraisal.
4. To find the relationship between Depersonalization and Expressive Suppression.
5. To find the relationship between Personal Accomplishment and Cognitive Reappraisal.
6. To find the relationship between Personal Accomplishment and Expressive Suppression.
7. To find the difference in final years and house surgeons on Emotional Exhaustion.
8. To find the difference in final years and house surgeons on Depersonalization.
9. To find the difference in final years and house surgeons on Personal Accomplishment.
10. To find the difference in final years and house surgeons on Cognitive Reappraisal.
11. To find the difference in final years and house surgeons on Expressive Suppression.

Hypotheses

- H₀₁: There is no significant relationship between Emotional Exhaustion and Cognitive Reappraisal among medical students
- H₀₂: There is no significant relationship between Emotional Exhaustion and expressive Suppression among medical students

Burnout and Emotional Regulation among Medical Students

- H₀₃: There is no significant relationship between depersonalisation and Cognitive Reappraisal among medical students
- H₀₄: There is no significant relationship between Depersonalization and Expressive Suppression among medical students
- H₀₅: There is no significant relationship between Personal Accomplishment and Cognitive Reappraisal among medical students
- H₀₆: There is no significant relationship between Personal Accomplishment and Expressive Suppression among medical students
- H₀₇: There is no significant difference in final years and house surgeons on Emotional Exhaustion
- H₀₈: There is no significant difference in final years and house surgeons on Depersonalization
- H₀₉: There is no significant difference in final years and house surgeons on Personal Accomplishment
- H₀₁₀: There is no significant difference in final years and house surgeons on Cognitive Reappraisal
- H₀₁₁: There is no significant difference in final years and house surgeons on Expressive Suppression

Sample

The sample consisted of 190 participants (N=190) among which 95 were final years and 95 were house surgeons. The participants fell under the category of young adults between the age range of 20-26 years. The participants were taken from the states of Karnataka, Telangana and Andhra Pradesh, India. The current study followed a non-probability purposive sampling method to select the participants.

Tools used for the study

Two measures were used in this study,

1. Maslach Burnout Inventory (MBI - HSS)

MBI - HSS was developed by Christina Maslach and Susan E. Jackson (1986). This test is used “to discover how various persons in the human services view their jobs and the people they work with.” It is a self-administered test designed to assess the three components of the burnout syndrome: Emotional Exhaustion, Depersonalization, and reduced Personal Accomplishment. There are 22 items with a 7-point anchored scale ranging from 0 – never to 6 – every day. The items are further divided into three subscales; the three components of burnout syndrome as mentioned above. Scoring is done by adding total for each dimension and then interpreted. Internal consistency was estimated by Cronbach’s coefficient alpha, Cronbach’s alpha ratings for the three components were observed to be 0.90 for Emotional Exhaustion, 0.76 Depersonalization, and 0.76 for Personal Accomplishment as reported by Schwab(1981). Time periods of a few weeks, 3 months, and 1 year were used for test-retest reliability. Scores in the few week range were the highest (.60-.82) whereas scores in the year range were the lowest (0.54-0.60). The test manual covers validity for the MPI by noting patterns that appear again in the field.

2. Emotional Regulation Questionnaire (ERQ)

ERQ was developed by Gross & John. It is used to measure the respondents’ tendency to regulate their emotions in two ways. This questionnaire consists of 10 items designed to measure the two dimensions: Cognitive Reappraisal and Expressive Suppression. Respondents’ answers are scored on a 7-point Likert-type scale ranging from 1

Burnout and Emotional Regulation among Medical Students

(Strongly disagree) to 7 (strongly agree). The scoring takes the average of all the scores in each subscale of Cognitive Reappraisal and Expressive Suppression. The higher the score, the greater the use of that emotion regulation strategy, conversely lower scores represent less frequent use. The reliability was found to be $\alpha = .89-.90$ for the Cognitive Reappraisal subscale and $\alpha = .76-.80$ for the Expressive Suppression subscale. The construct validity was found to be good.

Procedure

After selecting the suitable measures, preparations were made for collecting data online. Google forms were used to create and organize the questions. After requesting approval, the study was started. Following a brief explanation of the study's objectives and the obtaining of participants' informed consent, the questionnaire was administered to the participants. The data was collected through virtual means, a couple of medical students were contacted and they were further asked to circulate the questionnaire among their fellow House surgeons and classmates. Data was also collected in person by visiting a couple of medical colleges. QR code for the questionnaire was generated and participants were asked to scan the QR with their phones to access the google form with ease. It took about 15 minutes to finish the questionnaire on average. The responses from the participants were gathered after the survey was finished for data analysis.

RESULTS AND DISCUSSION

Table No. 1 Correlations between three subscales of Burnout (Emotional exhaustion, Depersonalization & Personal Accomplishment) and Emotion Regulation (Cognitive Reappraisal & Expressive Suppression)

VARIABLES	n	M	SD	1	2	3	4	5
Emotional Exhaustion	190	28.46	11.523	-	-	-	.152*	.065
Depersonalization	190	12.18	6.457	-	-	-	.235**	.026
Personal Accomplishment	190	28.98	8.602	-	-	-	.320**	.014
Cognitive Reappraisal	190	28.58	7.465	.152*	.235**	.320**	-	-
Expressive Suppression	190	17.49	5.413	.065	-.026	.014	-	-

* $p < 0.05$. ** $p < 0.01$.

The Pearson's correlation coefficient between Emotional Exhaustion and Cognitive Reappraisal is, $r = 0.152^*$, with $p \leq 0.05$ level. This indicates a weak positive correlation between these factors. The p-value being less than or equal to 0.05 suggests that the correlation is statistically significant. Therefore, H_{01} , which states that there is no significant relationship between Emotional Exhaustion and Cognitive Reappraisal among medical students, is rejected. Previous research has identified a correlative relationship between emotion regulation and burnout in healthcare professionals, found that using self-regulatory or taught emotion regulation skills or interventions such as mindfulness can reduce burnout (Jackson-Koku et al,2019). These findings suggest that strategies to improve emotion regulation skills may be effective in reducing burnout among medical students and other healthcare professionals.

Similarly, the Correlational coefficient between Depersonalization and Cognitive Reappraisal is reported as $r = -0.235^{**}$, with $p \leq 0.01$ level. This displays a weak negative correlation between the two factors. The p value being lesser than 0.01, determines that it has a higher level of statistical significance. Hence, H_{03} , which states that there is no significant relationship between Depersonalization and Cognitive Reappraisal among medical students, is rejected. Depersonalization among oncology doctors was linked to lower emotional regulation and

Burnout and Emotional Regulation among Medical Students

emotional intelligence (Shanafelt et al. (2015). It was also observed that emotional intelligence and emotion regulation were predictors of depersonalization in a sample of paediatric intensive care nurses (West et al. (2016).

Furthermore, the Pearson's correlation coefficient between Personal Accomplishment and Cognitive Reappraisal is noted to be, $r = 0.320^{**}$, with $p \leq 0.01$ level. This correlation is positively moderate and also is seen to be statistically very significant. Therefore, H_{05} , which suggests that there is no significant relationship between Personal Accomplishment and Cognitive Reappraisal among medical students, is rejected. The finding that emotion regulation strategies such as suppression can moderate the impact of stress on burnout (Ardenghi et al, 2021) suggests that adaptive emotion regulation strategies like Cognitive Reappraisal can have a protective effect against burnout. This may explain why higher levels of Cognitive Reappraisal are associated with greater Personal Accomplishment in medical students, as individuals who use this strategy may be more resilient to stress and less likely to experience burnout.

The correlation coefficient between Emotional Exhaustion and Expressive Suppression is observed to be $r = 0.065$, with $p \leq 0.05$ level. This correlation is weakly positive. The statistical significance (p -value) indicates that the likelihood of observing the correlation by random chance alone is low. Thus, H_{02} , which claimed no significant relationship between Emotional Exhaustion and Expressive Suppression among medical students, is rejected.

The correlation coefficient between Depersonalization and Expressive Suppression is reported as $r = -0.026$, with $p \leq 0.05$ level. This correlation is weakly negative. The statistical significance suggests that there is a low likelihood of this correlation occurring by chance. Therefore, H_{04} , which claimed no significant relationship between Depersonalization and Expressive Suppression among medical students, is rejected. This can be backed up by a finding which suggests that adaptive emotion regulation strategies, such as positive reappraisal, were associated with lower levels of Emotional Exhaustion and higher levels of Personal Accomplishment among healthcare professionals (Potard et al. (2021). Another possibility is that those who hide their emotions may be less prone to depersonalization and emotional weariness since they are less likely to express their unpleasant feelings.

The correlation coefficient between Personal Accomplishment and Expressive Suppression is reported as $r = 0.014$, with $p \leq 0.05$ level. This correlation is weak/negligible. The statistical significance suggests that the correlation is unlikely to have occurred by chance. However, the weak correlation coefficient implies that any relationship between Personal Accomplishment and Expressive Suppression is minimal. Thus, H_{06} , which claimed no significant relationship between Personal Accomplishment and Cognitive Reappraisal among medical students, is rejected.

For Emotional Exhaustion, the mean was 28.46 and standard deviation was 11.523. In the case of Depersonalization, the mean and standard deviation were 12.18 and 6.457 respectively. For Personal Accomplishment, the mean was 28.98 and the standard deviation was 8.602. The mean and standard deviation for Cognitive Reappraisal were 28.58 and 7.465 respectively. For Expressive Suppression, the mean was 17.49 and standard deviation was 5.413.

Burnout and Emotional Regulation among Medical Students

Table No. 2 Difference among Final years and House surgeons on Emotional Exhaustion, Depersonalization, Personal Accomplishment, Cognitive Reappraisal and Expressive Suppression

VARIABLES	Final years		House surgeons		t	Sig(p)
	M	SD	M	SD		
Emotional Exhaustion	27.21	12.68	29.64	10.24	-1.461	.146
Depersonalization	11.16	6.21	12.67	6.66	-1.078	.282
Personal Accomplishment	28.32	8.879	29.60	8.332	-1.031	.304
Cognitive Reappraisal	28.85	7.686	28.34	7.282	0.471	.638
Expressive Suppression	17.47	5.476	17.52	5.381	-0.067	.946

The comparison of Emotional Exhaustion between final year medical students and house surgeons indicates that there is no statistically significant difference in the levels of Emotional Exhaustion between the two groups. The obtained significance value (p-value) is greater than the predetermined threshold ($p > 0.05$), leading to the acceptance of the null hypothesis. There was no significant difference in the use of emotion regulation strategies across genders, study years, or age, according to a study by Ukait et al. (2019), which may explain why there was no significant difference in the level of emotional exhaustion between house surgeons and final-year medical students in this study. Both groups of medical professionals might employ comparable coping mechanisms to deal with their stress and emotions, which could result in comparable degrees of emotional exhaustion.

The results obtained from comparing the levels of Depersonalization between final year medical students and house surgeons indicate a lack of significant difference between the two groups. The obtained significance value, which is greater than the predetermined threshold of 0.05, provides support for accepting the null hypothesis. Depersonalization was linked to less empathy in doctors, which could have detrimental effects on patient care (Shanafelt et al, 2015). To guarantee that medical students and doctors can give their patients the care they need, it is crucial to manage burnout among both groups. Burnout was prevalent among medical students, particularly during the clinical years, which may explain why both groups in our study had similar levels of depersonalization (Ishak et al, 2013).

Upon comparing the levels of Personal Accomplishment between final year medical students and house surgeons, the findings indicate a lack of significant difference between the two groups. The obtained significance value, surpassing the predetermined threshold, supports the acceptance of the null hypothesis, suggesting no substantial divergence in Personal Accomplishment levels between the two groups. Growing older is associated with higher levels of Personal Accomplishment among healthcare providers. This could suggest that as medical professionals gain more experience and maturity, they may develop a greater sense of accomplishment in their work. However, it was also found that growing older is associated with higher levels of Depersonalization, indicating that older medical professionals may also become more detached and cynical towards their patients (Lee et al. (2018)

The comparison of Cognitive Reappraisal between final year medical students and house surgeons shows no significant difference in the levels of Cognitive Reappraisal between the two groups. The obtained significance value is greater than 0.05, leading to the acceptance of

Burnout and Emotional Regulation among Medical Students

the null hypothesis. The findings of Blanchard-Fields and Coats' (2008) showed that older people, particularly those in the medical field, tend to utilise more passive and less proactive emotion management approaches than younger people, lend credence to this. This may imply that persons in the medical field, including both house surgeons and final year medical students, develop comparable techniques for controlling their emotions over time, irrespective of their level of education or expertise. The specific emotion- regulation procedures employed by medical practitioners might be further investigated, as well as how these techniques may change over time.

The comparison of Expressive Suppression between final year medical students and house surgeons demonstrates no significant difference in the levels of Expressive Suppression between the two groups. The obtained significance value is greater than the predetermined threshold, supporting the acceptance of the null hypothesis. This result is congruent with a 2014 study by Cutuli, who discovered that students typically choose to conceal their emotions as a regulation method because it allowed them to continue to be productive in their duties despite the presence of emotions.

SUMMARY

The present study aims to understand the Burnout and Emotion Regulation among medical students. Also, to understand if there is a difference between final year medical students and house surgeons on Burnout and Emotion Regulation. A total of 190 samples (N=190) were collected for the study which consisting of both males and females. Among 190 samples, 95 were pursuing their final year medicine and 95 were house surgeons from Telangana, Andhra Pradesh and Bengaluru. The data was collected and scored according to the manuals of both the scales. Statistical package for the social sciences (SPSS) software was then used for data analysis. After performing a normality test, it was identified that the present data was normal, leading to the use of parametric tests. The parametric tests were utilized to do the study. Pearson's correlation was used and additionally independent sample t-test was also used. The results indicated that there was a significant relationship between Cognitive Reappraisal and factors like Emotional Exhaustion, Depersonalization and Personal Accomplishment. There was a relationship observed between Expressive Suppression and factors like Emotional Exhaustion, Depersonalization and Personal Accomplishment. There was no significant difference seen in final years and house surgeons with Emotional Exhaustion, Depersonalization, Personal Accomplishment, Cognitive Reappraisal and Expressive Suppression.

CONCLUSION

Major findings of the study were there was a significant negative relationship between Depersonalization and Cognitive Reappraisal. Interestingly, no significant differences were observed between final year medical students and house surgeons. The results indicated a significant relationship between Cognitive Reappraisal and factors such as Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Similarly, a relationship was observed between Expressive Suppression and factors including Emotional Exhaustion, Depersonalization, and Personal Accomplishment. However, no significant differences were found between final year medical students and house surgeons regarding Emotional Exhaustion, Depersonalization, Personal Accomplishment, Cognitive Reappraisal, and Expressive Suppression.

Limitations

This study has a number of limitations that should be taken into consideration. Only self-report evaluations of the study variables were employed, and response bias may have an impact. Self-report studies usually have the drawback of not knowing how properly the participants are describing their behaviour. It is impossible to determine how committed the participants were on actually completing the questionnaire accurately because half of the study was also set up online. Primarily medical students from Telangana, Andhra Pradesh and Karnataka, India, were the participants of research. In the future, data should be gathered from a number of additional Indian states to strengthen the generalizability of the study's conclusions. The participants' backgrounds and diversity were very homogenous. Because of this, it is challenging to extend these findings to larger groups. Therefore, it is appropriate to interpret our study as an attempt to explore the applicability of and relationships between these factors.

Implications

The current body of research deepens our comprehension on the context of Burnout and Emotion regulation strategies. The study's results also confirm the significant the need for medical schools to recognize the prevalence of burnout among medical students and provide resources for emotion regulation. The findings highlight the importance of cognitive reappraisal as a coping mechanism for emotional exhaustion and depersonalization. It is essential to note the limitations of the study, such as the self-reported data and limited sample size, which may affect the generalizability of the findings. Future research could explore burnout and emotion regulation in larger and more diverse populations to strengthen the study's conclusions. Overall, the study provides insight into the mental health of medical students and the need for support in managing burnout and regulating emotions.

REFERENCES

- Ardenghi, S., Russo, S., Bani, M., Rampoldi, G., & Strepparava, M. G. (2021). The role of difficulties in emotion regulation in predicting empathy and patient-centeredness in pre-clinical medical students: a cross-sectional study. *Psychology, Health & Medicine*, 1-15.
- Blanchard-Fields, F., & Coats, A. H. (2008). The experience of anger and sadness in everyday problems impacts age differences in emotion regulation. *Developmental Psychology*, 44(6), 1547-1556.
- Cutuli, D. (2014). Cognitive Reappraisal and Expressive Suppression strategies role in the emotion regulation: an overview on their modulatory effects and neural correlates. *Frontiers in systems neuroscience*, 175.
- Erschens, R., Herrmann-Werner, A., Keifenheim, K. E., Loda, T., Schwille-Kiuntke, J., Bugaj, T. J., Nikendei, C., & Zipfel, S. (2018). Behaviour-based functional and dysfunctional strategies of medical students to cope with burnout. *Medical Education Online*, 23(1), 1535738. doi: 10.1080/10872981.2018.1535738
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85(2), 348-362.
- Ishak, W. W., Lederer, S., Mandili, C., Nikraves, R., Seligman, L., Vasa, M., & Ogunyemi, D. (2013). Burnout during residency training: A literature review. *Journal of Graduate Medical Education*, 5(2), 236-242.
- Jackson-Koku, G., & Grime, P. (2019). Emotion regulation and burnout in doctors: a systematic review. *Occupational Medicine*, 69(1), 9-21.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer Publishing Company.

Burnout and Emotional Regulation among Medical Students

- Lee, R. T., Lovell, B. L., & Brotheridge, C. M. (2018). Burnout and its association with age: A meta-analysis. *Journal of Organizational Behavior*, 39(2), 181-196.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2(2), 99-113.
- Maslach, C., & Jackson, S. E. (1986). *Maslach Burnout Inventory: Human Services Survey (MBI-HSS)*. Consulting Psychologists Press.
- Potard, C., & Landais, C. (2021). Relationships between frustration intolerance beliefs, cognitive emotion regulation strategies and burnout among geriatric nurses and care assistants. *Geriatric Nursing*, 42(3), 700-707.
- Shanafelt, T. D., West, C. P., Zhao, X., Novotny, P. J., Kolars, J. C., Habermann, T. M., & Sloan, J. A. (2015). Relationship between increased personal well-being and enhanced empathy among internal medicine residents. *Journal of General Internal Medicine*, 30(8), 1141-1147.
- Ukai, S., Bhutani, J., Chaudhury, S., & Chaudhury, S. (2019). Emotional exhaustion and emotion regulation strategies among medical students and house surgeons. *Industrial Psychiatry Journal*, 28(2), 297-302.
- West, C. P., Dyrbye, L. N., & Shanafelt, T. D. (2016). Emotional intelligence and burnout among physicians. *Journal of the American Medical Association*, 315(19), 2081-2082.

Acknowledgement

The author is deeply grateful to the research guide for their steadfast guidance, expertise, and invaluable support throughout the research journey. The author extends heartfelt gratitude to all the participants who generously dedicated their time and effort to take part in this study. Their valuable contributions were essential in gathering the necessary data and insights.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Pulloori, S. & Vijayan, D. (2023). Burnout and Emotional Regulation among Medical Students. *International Journal of Indian Psychology*, 11(3), 1033-1042. DIP:18.01.098.20231103, DOI:10.25215/1103.098