



Relationship between the dimensions of burnout and depression among medical students

Irene A. Ofili

Abstract

This study identifies the relationship between burnout and depression among workers. 100 medical students that comprises of 50 males and 50 females with a mean of 53.83 and SD of 9.04 were selected as participants with the aid of purposive sampling techniques from medical students from Enugu State University Teaching Hospital, Enugu State. The following instruments were used: The Centre for Epidemiological Studies Depression Scale (CES-DS) and Maslach Burnout Inventory. Three hypotheses were formulated and tested using appropriate statistics. Results showed that the dimension of burnout (Depersonalisation) significantly correlated depression among medical students at $r = .499$. This indicates that if the feeling like one is on autopilot and that the person's sense of individuality or selfhood has been hindered or suppressed will bring about depression among medical students. Personal accomplishment also significantly negatively correlated depression at $r = -.377$. This means the presence of feelings of competence, high self-efficacy, and sense of achievement will expel depression among medical students. Suitable recommendations were made in line with the study outcomes.

Authors' Affiliation:

Department of Biology and
Forensic Sciences
Faculty of Sciences
Admiralty University of
Nigeria.

Correspondance:

irene.okonmah@gmail.com

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INTRODUCTION

Burnout is recognized as a break between what people are and what they have to do and, it is typically experienced as emotional exhaustion or depersonalization (Olson et al., 2019; Kolomitra, Kenny, & Sheffield, 2019). Burnout occurs when an individual experiences too much stress for a prolonged period (Bruce, 2009 cited in Sutton, 2021). According to Schaufeli (2003) as cited in Haridwal (2019), burnout is a term often used to describe instances where individuals are experiencing mental exhaustion.

It is evident that the common factor in these two definitions is that of mental exhaustion. Further defined, burnout is considered to be a psychological response to chronic work stress (Halbesleben & Demerouti, 2005 as cited in Haridwal 2019); a state of mental weariness (Schaufeli & Bakker, 2004); and, most commonly, a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment (Maslach & Jackson, 1981 as cited in Haridwal 2019). Emotional exhaustion refers to the depletion or draining of emotional resources caused by interpersonal demands; depersonalisation refers to an impersonal and dehumanised perception of recipients, characterised by a callous, negative, and detached attitude; finally, reduced personal accomplishment is the tendency to evaluate one's work with recipients negatively (Carless, 2015). Here, the component of chronic work stress is used to describe burnout as was done by both Freudenberg (1974) and Schaufeli and Bakker (2004) as cited in Haridwal (2019). Maslach and her colleague, Michael Leiter (2001) as cited in Haridwal (2019), defined the antithesis of burnout as engagement. Engagement is characterised by energy, involvement and efficacy, the opposites of exhaustion, cynicism and inefficacy. Xanthopoulou (2007) as cited in Haridwal (2019) supports the description given by Maslach and Leiter. Maslach, Schaufeli and Leiter (2001) as cited in Haridwal (2019) described the 10 dimensions of exhaustion, cynicism and reduced personal efficacy: Exhaustion relates to feelings of decreased emotional resources individuals possess; cynicism refers to distrust in the workplace; while reduced professional efficacy can be described as feelings of incompetency which an individual possesses. Bakker and Demerouti (2007) and Maslach, Schaufeli and Leiter (2001) as cited in Haridwal (2019) refer to burnout as a psychological syndrome that may emerge when employees are exposed to a stressful working environment, with high job demands and low resources. Possible factors of burnout can be categorised according to an individual's personality traits, their work-related attitudes and work/organisational characteristics.

Researchers such as Louw (2014) as cited in Haridwal (2019) have deduced three personality traits that possibly contribute to burnout. These include Type A personalities who exhibit coping styles such as escape-avoidance, problem-solving and confrontation and, in addition to these, the Big Five, namely, neuroticism, extroversion, openness to experience, agreeableness and conscientiousness. Demerouti (1999) as cited in Haridwal (2019) conceptualise that burnout encompasses two dimensions construct – exhaustion and disengagement. Exhaustion can be described as occurring because of increased exposure to particular job demands and is the result of intensive physical, affective and cognitive strain (Demerouti, Bakker & Mostert, 2010 as cited in Haridwal 2019). Disengagement is when an employee tends to distance themselves from

their organisation and develops negative attitudes about their jobs together with their work tasks. Research into burnout in the workplace recognizes employee wellbeing through four dimensions (Hyett & Parker, 2015): Work satisfaction, organizational respect, employer care, work–life integration, balancing all four factors is essential to overall employee wellbeing and reduces the likelihood of long-term and ultimately overwhelming pressure. The employee is left feeling mentally, emotionally, and physically exhausted. Not only that, they are less productive at work, show reduced concern for others, and are more likely to miss work (Bruce, 2009 cited in Sutton, 2021). Indeed, burnout among physicians, which is twice that of the general public, leads to emotional and physical withdrawal from work and can negatively impact safe, high-quality healthcare for patients (Olson et al., 2019).

In increasingly busy, high-pressure working environments, employees often become the shock absorbers, taking organizational strain and working longer, more frantic hours (Kolomito et al., 2019). The long-term impact is burnout, identified by lower psychological and physical wellbeing, as well as dissatisfaction, and employee turnover (Kolomito et al., 2019). The effect of burnout is widespread. The impact of increasing workload, a perceived lack of control, and job insecurity lead to high turnover, reduced productivity, and poor mental health (Kolomito et al., 2019). Organizations with burned-out staff experience low productivity, lost working days, and lower profits, reduced talent, and even damage to their corporate reputation (Bruce, 2009 cited in Sutton, 2022). The following strategies can help find that balance and protect against burnout (Saunders, 2022; Boyes, 2021). Workload, Control, Community, Fairness, Value mismatch, Task balancing, Mental breaks, Physical breaks. Many studies have also shown that there is a positive correlation between burnout and depression (Glass & McKnight, 1996; Schaufeli & Enzmann, 1998; Bianchi et al., 2013, 2014, 2015b; Bianchi & Laurent, 2015). Bianchi et al. (2015a) mention in their systematic review, it has been found that inventories that assess burnout, and more specifically the subscale of emotional exhaustion—the core component of burnout—are positively correlated with depressive symptoms (Takai et al., 2009; Bianchi et al., 2013; Ahola et al., 2014).

Depression is a state of low mood and aversion to activity (National Institute of Mental Health NIMH 2020). Classified medically as a mental and behavioural disorder (Sartorius, Henderson, Strotzka, Lipowski, Yucun, You-xin, et al 2021), the experience of depression affects a person's thoughts, behaviour, motivation, feelings, and sense of well-being (de Zwart, Jeronimus, & de Jonge 2019). The core symptom of depression is said to be anhedonia, which refers to loss of interest or a loss of feeling of pleasure in certain activities that usually bring joy to people (Gilbert 2007). Depressed mood is a symptom of some mood disorders such as major depressive disorder or dysthymia (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5); it is a normal temporary reaction to life events, such as the loss of a loved one; and it is also a symptom of some physical diseases and a side effect of some drugs and medical treatments. It may feature sadness, difficulty in thinking and concentration and a significant increase or decrease in appetite and time spent sleeping. People experiencing depression may have feelings of dejection, hopelessness and suicidal thoughts. It can either be short term or long term. As Freudenberg (1974) mentions, people who

suffer from burnout look and act as if they were depressed. Indeed, we cannot overlook the fact that some of the burnout symptoms appear to resemble the ones of depression; as it is characterized by anhedonia, i.e., the loss of interest or pleasure, depressed mood, fatigue or loss of energy, impaired concentration, and feelings of worthlessness, decreased or increased appetite, sleep problems (hypersomnia or insomnia) and suicidal ideation (American Psychiatric Association, 2013). However, despite its severity and resemblance to depression characteristics, burnout is not mentioned in DSM-V and still no diagnostic criteria exist for identifying it (Bakusic et al., 2017). It is worth noting that in clinical practice, exhausted employees are being diagnosed with burnout and frequently, in order for the clinicians to proceed with their treatment, they turn to alternative diagnoses like the ones of depression or exhaustion (Kaschka et al., 2011). Yet, the question is still an open one, to what degree can we differentiate burnout from depression and anxiety?

Bianchi and Brisson (2017), for instance, examined to what extent individuals with burnout and depression attribute their feelings to their job. What the researchers found was that the number of the participants who attributed their burnout feelings to their job was proportional to the ones who attributed their depressive symptoms to their job as well, indicating that there might be an overlap between burnout and depression in relation to their antecedents. Many studies have also shown that there is a positive correlation between burnout and depression (Glass & McKnight, 1996; Schaufeli & Enzmann, 1998; Bianchi et al., 2013, 2014, 2015b; Bianchi & Laurent, 2015). Bianchi et al. (2015a) mentioned in their systematic review, that it has been found that inventories that assess burnout, and more specifically the subscale of emotional exhaustion—the core component of burnout—are positively correlated with depressive symptoms (Takai et al., 2009; Bianchi et al., 2013; Ahola et al., 2014). Several researchers have argued that because studies have found a consistent medium to high correlation between the two concepts, this might suggest an overlap and that burnout might not be a distinct psychological phenomenon but a dimension of depression (Bianchi et al., 2015b). Additionally in terms of consequences, in a recent study by Bianchi et al. (2018a) it was observed that both burnout and depression were associated not only with the increased recall of negative words, but also with the decreased recall of positive words. Kaschka et al. (2011) mentioned that correlations between burnout and depression appear frequently among relevant studies, showing that either there is an overlap between burnout and depression, or burnout probably might be a risk factor of developing depression.

Statement of the problem

Researchers have determined that occupational burnout shares similar symptomatology with depression (Bianchi et al., 2014; Bianchi et al., 2015; Bianchi & Schonfeld, 2016; Schonfeld & Bianchi, 2015). Hence the research question

Will emotional exhaustion positively correlate depression among nurses?

Will depersonalisation positively correlate depression?

Will personal accomplishment positively correlate depression?

Purpose of the study

The following purpose motivated this study:

To investigate whether emotional exhaustion will positively correlate depression among nurses

To investigate whether depersonalisation will positively correlate depression

To investigate whether personal accomplishment will positively correlate depression

Conceptual framework



Theoretical Background

Drawing upon the essential assumption of the transactional stress paradigm – that the imbalance between demands and resources causes stress, and that ill-being ensues in the individual perception of and approach to this stress (cf. Lazarus & Folkman, 1984) – the Conservation of Resources (COR) theory (Hobfoll, 1989, 1998) sets out to explain psychological mechanism that regulates how the balance (or imbalance) between demands and resource is perceived by the individual. The COR theory is claimed to be a general theory of stress (Hobfoll & Freedy, 1993), as well as a basic motivational theory (Hobfoll & Freedy, 1993). It is a theory of stress because it explains how strain ensues and proliferates, and it is motivational because it is grounded in the assumption that need satisfaction/frustration basically determines whether well-being or frustration will occur. The COR theory can be applied to broad perspectives of stress as well as more narrow issues (Hobfoll, 1998).

The groundwork of COR theory ultimately builds upon the principles of loss aversion and the endowment effect (see Rabin, 1998). The loss aversion principle states that the subjective value of something is reinforced after acquisition; that is, with the joy of acquiring something of value to us follows the fear of losing it. This disproportion is colloquially illustrated by the saying 'you don't miss the water until the well runs dry'. However, the saliency of loss to our well-being will differ depending on the value we ascribe to the item we might lose (the endowment effect). According to COR, the more salient the need that the specific resources correspond to, the more threatening or distressing the loss becomes. The COR theory proposes that we strive to accumulate resources that each correspond to certain needs. For example, we might strive to attain material resources (money, a house) to satisfy basic physical needs for food and shelter, as well as immaterial resources (social support, esteem and recognition) to satisfy the psychological needs for belonging and status. Furthermore, we might strive to attain a job, to make friends and mobilize energy to satisfy our need for love as well as higher order needs like social status and self-realization (Hobfoll, 1998). The resources function as a buffer, as well as a reinforcement and prerequisite for additional resource

attainment. Hence, a positive gain spiral will account for the acquisition of protective factors, which in turn generate even more well-being. As long as the desired resources can be accumulated, people are assumed to be reasonably happy. However, when resources (and thus also our need satisfaction) are threatened or lost, we try to maintain the status quo by launching counter-actions designed to keep the resource account in surplus. For example, when a certain resource is threatened, we invest whatever other resources are at hand in order to avoid a total net loss. However, when faced with a chronic stressor, the resource account will sooner or later be exhausted and end up on a negative balance. At this point, demands may be perceived as overwhelming and no longer possible to combat, and one might find oneself spiraling down a slide leading to strain and ill-health. The Conservation of Resources (COR) theory (Hobfoll, 1989, 1998) is adopted as theoretical framework because it explain psychological mechanism that regulates how the balance (or imbalance) between demands and resource is perceived by the individual. If demand is high and resource is low it will lead to stress which will trigger burnout, and when the employees can no longer manage the stress/burnout, he/she will starting becoming depressed. Because at point they are no longer happy with the job.

Burnout and depression

Fitzpatrick, Biesma, M Conroy and McGarvey (2019) examined burnout and its impact on risk of depression in a medical student population, 269 medical school students were selected as participants, and result shows burnout has an impact on depression. Koutsimani, Montgomery and Georganta (2019) examined the relationship between burnout and depression, results showed a significant association between burnout and depression. Martignetti (2017) investigated the relationship between burnout and depression, 422 intercollegiate athletes were selected as participants, results revealed a strong, statistically significant positive correlation ($r = .600$) between total burnout and depression scores. Mousavi1, Ramezani, Salehi, Khanzadeh, and Sheikholeslami (2017) investigated relationship between burnout dimensions and psychological symptoms (depression, anxiety and stress) among nurses, 270 nurses were selected as a participants, findings showed that there is a significantly positive correlation between burnout dimensions (emotional exhaustion, depersonalization and reduced personal accomplishment) and psychological symptoms (depression, anxiety and stress) in nurses.

Hypotheses

The following hypotheses were tested:

Emotional exhaustion will positively correlate with depression

Depersonalisation will positively significantly correlate depression

Personal accomplishment will positively correlate depression

METHOD

Participants

One hundred medical students that comprises of 50 males and 50 females with a mean of 53.83 and SD of 9.04 were selected as participants with the aid of purposive sampling techniques from medical student from Enugu State University Teaching Hospital, Enugu State..

Instrument

Questionnaire comprising demographic information such as age, sex, religion affiliation, and three scales categorized into sections two sections (A, B) for easy administration and scoring were administered

The following instruments were used:

- I. The Centre for Epidemiological Studies Depression Scale (CES-DS) (Radloff (1977))
- II. Maslach and Jackson, (1981). Maslach Burnout Inventory

Maslach and Jackson, (1981) Maslach Burnout Inventory

Burnout was assessed with the Maslach Burnout Inventory (Maslach & Jackson, 1981). This is a widely used inventory assessing three essential components of burnout: emotional exhaustion (e.g. "I feel emotionally drained at work"), depersonalization (e.g. "I've become more callous toward people since I took this job"), and personal accomplishment (e.g. "I deal effectively with problems at work"). Burnout is conceptualized as increased emotional exhaustion and depersonalization, as well as decreased personal accomplishment. Item response scales range from never (0) to every day (6). Means were calculated for each of the subscales to represent overall measure of emotional exhaustion, depersonalization, and personal accomplishment. The subscales have shown good internal consistency, stability over time, and convergent validity with related constructs (Maslach, Jackson, & Leiter, 1996). For the current sample, all Cronbach alphas were over .70, which are adequate for analyses (Emotional exhaustion alpha = .92; Depersonalization alpha = .76; Personal accomplishment alpha = .73).

The Centre for Epidemiological Studies Depression Scale (CES-DS) (Radloff (1977))

This comprised 20-items developed by the American Institute of Mental Health designed to measure symptoms of depression in the general population. The scale has 20-items designed to determine the presence or absence of depressive symptoms among parents of autistic children. However, the scale was scored on a four-point scale ranging from 1-4 for example rarely = 1, sometimes = 2, often = 3, and always = 4. But items 4, 8, 12 and 16 reflect positive outcomes and are scored in the reverse order, for example, rarely = 4, sometimes = 3, often = 2 and always = 1. The remaining 16-items reflect negative outcome. The participants were instructed to report the frequency with which the 20-items were experienced within the

previous 6 months. If any participants scored above 20, that indicated the participant had experienced depression. The choice of epidemiological studies-depression scale was because the researcher was not interested in participants diagnosed as depressed. To test for reliability, the researcher carried out a pilot study with thirty participants from Central school and model secondary School in AgbaniNkanuWest local Government Area of Enugu State the the aid of purposive sampling techniques which yielded a Cronbach Alpha of .990

Procedures

A letter of identification was obtained from the Head of Psychology Department to the C.M.D Enugu State University Teaching Hospital, Parklane for identification and approval to go ahead with the research in their institution. The researcher adopted purposive sampling technique to select participants whom are medical student from Enugu State University Teaching Hospital from Enugu State. The researcher employed the help of research assistants whom are the course representative in administering and collecting the instrument, the participants who are nurses were selected with the aid of purposive sampling techniques; because being a medical student qualified them to participate in the research, the researcher visited the selected hospital in the morning from the hours of nine to twelve from Tuesday to Thursday for six weeks, then the selected ones were asked to respond to the items by shading one of the boxes in front of the statements which best reflects to what degree they agree or disagree with the statement. one hundred and thirty copies of questionnaire were distributed, one hundred and fourteen copies were returned back of which eight were wrongly responded, six were incompletely filled, leaving only One hundred copies properly responded to which was used to carry out analysis; the wrongly responded once were discarded.

Design/Statistics

Correlational design was adopted based on two different variables relationship are being investigated. Thus, Pearson correlation coefficient with the aid of S.P.S.S version (23), was applied as a statistic to analyse the data in order to test the hypothesis.

RESULT

Table 1: correlational statistics

S/N	Variables	M	SD	1	2	3	4	5
1	Age	22.14	2.49	-				
2	Depression	24.23	7.58	.060	-			
3	Emotional Exhaustion	25.60	6.61	.141	.138	-		
4	Depersonalisation	11.92	3.39	.109	.499**	.278**	-	
5	Personal Accomplishment	24.20	6.95	.183	-.377**	.457**	-.133	-

** Correlation is at $p < .01$ (2 tailed)

Table 1 above shows that emotional exhaustion did not significantly correlate depression at $r = .138$. This means that chronic state of physical and emotional depletion that results from excessive job, personal demands, and/or continuous stress in the work place among medical students cannot cause the presence of depression. Depersonalisation significantly correlated depression among medical students at $r = .499$. This indicate that if the feeling like one is on autopilot and that the person's sense of individuality or selfhood has been hindered or suppressed bring about depression among medical students. Personal accomplishment significantly negatively correlated depression at $r = -.377$. This means the presence of feelings of competence, high self-efficacy, and sense of achievement will expel depression among medical students.

DISCUSSION

The first hypothesis tested which stated that 'emotional exhaustion will significantly correlate with depression' was not confirmed, hence the hypothesis was rejected. The result implies that feeling of being emotionally over-extended and exhausted by one's work cannot cause the presence of depression, which means that over labour in the work place cannot cause presence of depression. Emotional exhaustion which is a state of feeling emotionally worn-out and drained because of accumulated stress from your personal or work lives, or a combination of both is not an association of depression. Emotional exhaustion is one of the signs of burnout. People experiencing emotional exhaustion often feel like they have no power or control over what happens in life can cause depression, because they may feel stuck or trapped in a situation. Energy revitalisation, good sleep, increase in motivation and eagerness to report to duty the following might responsible for emotional exhaustion not to cause the presence of depression.

The second hypothesis tested which stated that 'depersonalisation will significantly correlate with depression' was confirmed, hence the hypothesis was accepted. This shows that the feeling of detachment within the self, regarding one's mind or body, or being a detached observer of oneself will bring about depression. This means that depersonalisation and depression go hand in hand. The feeling that one have changed and that the world has become vague, dreamlike, less real, lacking in significance or being outside reality while looking in will bring about depression among medical students.

The third hypothesis tested which stated that 'personal accomplishment will significantly and positively correlate depression' was not confirmed, hence the hypothesis was rejected. The result obtained implies that personal accomplishment will expel the depression in medical students, it means that feelings of competence, high self-efficacy, and sense of achievement and depression cannot be in one place. When one is going up the other one will be going down, the reason is that personal accomplish comes with joy, excitement and celebration with friends and family. Of all this factors will always keep depression away, because feeling of excitement, joy, high self-efficacy and depression are opposite that can never meet. The lack of one causes the presence of the other.

Implications of the Findings

The result obtained agreed with The Conservation of Resources (COR) theory (Hobfoll, 1989, 1998) which is adopted as theoretical framework because it explain psychological mechanism that regulates how the balance (or imbalance) between demands and resource is perceived by the individual. If demand is high and resource is low it will lead to stress which will trigger burnout, and when the employees can no longer manage the stress/burnout, he/she will starting depress. Because at point they are no longer happy with the job. This shows that resource is one major factor that can keep depression away from medical students.

The result obtained is in congruity with the work of Fitzpatrick, Biesma, M Conroy and McGarvey (2019) and Koutsimani, Montgomery and Georganta (2019) that postulated that burnout and depression are associated. In addition, this research has added to existing literatures that can be reference to in the future by other researchers. The result obtained shows that emotional exhaustion is not a good associate of depression, depersonalisation and depression go hand in hand, and personal accomplishment depression cannot be in one place together. So, It will be advisable that medical school management should consider providing resource so as to cause the absence of depression among medical students.

Limitation of the study

Many factors worked against this research work, and the major one is the indiscriminate call for sit at home in the south east which reduces the numbers of working days. The researcher would have selected more participants assuming there was no continues unnecessary call for sit at home.

Insecurity was another factor, the issue of unknown gunmen increases fear among the populace whom were sceptical about the researcher's intention even after much enlightenment. More participants would have be selected assuming there was no insecurity that induce fear of the unknown. Sudden increase of inflation which leads to sharp increase of goods and services also affected this work, because it affected the researcher budget.

Suggestions for further study

The future researcher should try to sample participants from other geo-political region where there are no indiscriminate call for sit at home, so as to give room for more participants.

The use of third party to get reach to the participants should be looked at by the future researcher. So as to give confidence of secrecy and safety to the participants, this will increase the numbers that will participate. Few locations should be considered also by the future researcher so as to accommodate the budget should in case there is inflation.

Summary and conclusion

The study investigated burnout as a correlate of depression among nurses, the result obtained shows that emotional exhaustion did not correlate depression, depersonalisation positively correlated with depression, while personal accomplishment negatively correlated with depression. It therefore recommended that

hospital management should consider providing resource so as to cause the absence of depression among medical students.

REFERENCES

- Ahola K., Hakanen J., Perhoniemi R., & Mutanen P. (2014). Relationship between burnout and depressive symptoms: a study using the person-centred approach. *Burnout Res.* 1, 29–37. 10.1016/j.burn.2014.03.003
- American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders (DSM-5®)*. Washington, DC: American Psychiatric Pub.
- Bakusic J., Schaufeli W., Claes S., & Godderis L. (2017). Stress, burnout and depression: A systematic review on DNA methylation mechanisms. *J. Psychosom. Res.* 92, 34–44. 10.1016/j.jpsychores.2016.11.005
- Bianchi R., & Brisson R. (2017). Burnout and depression: causal attributions and construct overlap. *J. Health Psychol.* 10.1177/1359105317740415.
- Bianchi R., Boffy C., Hingray C., Truchot D., & Laurent E. (2013). Comparative symptomatology of burnout and depression. *J. Health Psychol.* 18, 782–787. 10.1177/1359105313481079
- Bianchi R., & Laurent E. (2015). Emotional information processing in depression and burnout: an eye-tracking study. *Eur. Arch. Psychiatry Clin. Neurosci.* 265, 27–34. 10.1007/s00406-014-0549-x
- Bianchi R., Laurent E., Schonfeld I. S., Bietti L. M., & Mayor E. (2018a). Memory bias toward emotional information in burnout and depression. *J. Health Psychol.* 10.1177/1359105318765621.
- Bianchi R., Schonfeld I. S., & Laurent E. (2014). Is burnout a depressive disorder? A re-examination with special focus on atypical depression. *Int. J. Stress Manage.* 21:307 10.1037/a0037906
- Bianchi R., Schonfeld I. S., & Laurent E. (2015a). Burnout–depression overlap: a review. *Clin. Psychol. Rev.* 36, 28–41. 10.1016/j.cpr.2015.01.004
- Bianchi R., Schonfeld I. S., & Laurent E. (2015b). Is burnout separable from depression in cluster analysis? A longitudinal study. *Soc. Psychiatry Psychiatr. Epidemiol.* 50, 1005–1011. 10.1007/s00127-014-0996-8
- Boyes, A. (2021). How to get through an extremely busy time at work. In *HBR guide to beating burnout* (pp. 29–34). Harvard Business Review Press.
- deZwart P. L., Jeronimus B. F., & de Jonge P (2019). "Empirical evidence for definitions of episode, remission, recovery, relapse and recurrence in depression: a systematic review". *Epidemiology and Psychiatric Sciences.* 28 (5): 544–562. doi:10.1017/S2045796018000227. PMC 7032752. PMID 29769159.
- Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*. American Psychiatric Association. 2013
- Fitzpatrick, O., Biesma, R., Conroy, R. M., & McGarvey, A. (2019). Prevalence and Relationship between Burnout and Depression in Our Future Doctors: A Cross-Sectional Study in a Cohort of Preclinical and Clinical Medical Students in Ireland. *BMJ Open*, 9, e023297. <https://doi.org/10.1136/bmjopen-2018-023297>
- Glass D., & McKnight J. (1996). Perceived control, depressive symptomatology, and professional burnout: a review of the evidence. *Psychol. Health* 11, 23–48. 10.1080/08870449608401975

- Gilbert P (2007). *Psychotherapy and counselling for depression* (3rd ed.). Los Angeles: Sage. ISBN 978-1849203494. OCLC 436076587
- Haridwal, V. (2019). *Burnout, work engagement and work-related outcomes in the retail sector*. Dissertation submitted to the school of psychology in fulfilment of the requirements of the degree of master of social science.
- Hyett, M. P., & Parker, G. B. (2015). Further examination of the properties of the Workplace Well-Being Questionnaire (WWQ). *Social Indicators Research*, 124(2), 683–692
- Kaschka W. P Korczak D. & Broich K. (2011). Burnout: a fashionable diagnosis. *Deutsches Ärzteblatt Int.* 108:781. 10.3238/arztebl.2011.0781
- Kolomitro, K., Kenny, N., & Sheffield, S. L. M. (2019). A call to action: Exploring and responding to educational developers' workplace burnout and well-being in higher education. *International Journal for Academic Development*, 1–14.
- Koutsimani, P., Montgomery, A., & Georganta, K. (2019). The Relationship Between Burnout, Depression, and Anxiety: A Systematic Review and Meta-Analysis. *Frontiers in psychology*, 10, 284. <https://doi.org/10.3389/fpsyg.2019.00284>
- Martignetti, A. (2017). "An Exploration of the Relationship Between Burnout and Depression in Intercollegiate Athletes". *WWU Graduate School Collection*. 562.
- Mousavi S. V., Ramezani M., Salehi I., Khanzadeh A. A. H., Sheikholeslami F. (2017). The relationship between burnout dimensions and psychological symptoms (depression, anxiety and stress) among nurses. *Journal of Holistic Nursing and Midwifery* . 2017;27(2):37–43. doi: 10.18869/acadpub.hnmj.27.2.37.
- "NIMH » Depression Basics". www.nimh.nih.gov. 2016. Retrieved 22 October 2020
- Olson, K., Sinsky, C., Rinne, S. T., Long, T., Vender, R., Mukherjee, S., ... Linzer, M. (2019). Cross-sectional survey of workplace stressors associated with physician burnout measured by the Mini-Z and the Maslach Burnout Inventory. *Stress and Health*, 35(2), 157–175.
- Sartorius N, Henderson AS, Strotzka H, Lipowski Z, Yu-cun S, You-xin X, et al. (2021). "The ICD-10 Classification of Mental and Behavioural Disorders Clinical descriptions and diagnostic guidelines" (PDF). www.who.int World Health Organization. 30-1. Retrieved 23 June 2021.
- Schaufeli W., & Enzmann D. (1998). *The Burnout Companion to Study and Practice: A Critical Analysis*. Philadelphia, PA: CRC press.
- Sutton, J. (2021). How to prevent burnout in the workplace: 20 strategies: Stress & Burnout Prevention. *Positive Psychology*
- Takai M., Takahashi M., Iwamitsu Y., Ando N., Okazaki S., Nakajima K., et al. . (2009). The experience of burnout among home caregivers of patients with dementia: relations to depression and quality of life. *Arch. Gerontol. Geriatr.* 49, e1–e5. 10.1016/j.archger.2008.07.002