

# Demographic Clout on Job Burnout of Civil Engineers at Family Home/s Constructions

Dr.B.Ravinder<sup>1\*</sup>

<sup>1\*</sup>Nicmar -Hyderabad  
E-Mail: [bravinder@nicmar.ac.in](mailto:bravinder@nicmar.ac.in)

**Abstract**— Job burnout is an outcome of either exhaustion and or mental distance and or emotional impairment and or cognitive impairment. Voluntary or involuntary Talent turnout is observed from literature review. Short form of Maslach burnout inventory tool (General Survey) is engaged to collect primary data. A sample of site civil engineer/s from the civil engineer's universe is considered to carry this study. To collect the data snow ball technique administered. To ascertain reliability of data the Cronbach Alpha test administered and the value found more than 0.70, hence data is reliable. The correlation test/ examination has revealed that mental exhaustion is related to Age/ Qualification/ Employer/ Refreshment; energy recouping is related to Age/ Salary/ Employer/ Refreshment Age/Marriage/Refreshment; low enthusiasm towards work related to Age/ Marriage/ Refreshment might be a factor/s; strong dislike of job is related to Salary/ Accommodation/ Marriage/Employer/Refreshment; poor concertation at work is related to Salary/Vehicle/ Accommodation; not staying focused is related to Dependency/Vehicle; I'm cynical about what my work means to others is related to Loan/employer/ Refreshment; Loan might be a factor for making mistakes at job due to mind being dwelled in other things/for my unintentional over reaction/ to concede myself as I react emotionally at work. The research has been carried out Hyderabad, India.

**Keywords**— Home Construction, Real estate, Talent Turnover, Job burnout, Emotion, Cognitive, Exhaustion

**JEL classification:** J11, J44, J62

## 1. Introduction

At a projected compound annual growth rate (CAGR) of 7.51%, the residential construction market in India is expected to reach USD 272.67 billion by 2029. But growth might be impeded by high construction costs brought on by a shortage of building materials. India saw USD 3.3 billion in private equity investments in real estate in FY21–22. The amount of investments garnered by the top three cities, Bengaluru (19%), Delhi (19%), and Mumbai (39%), was about 77%. India has made great strides in its urbanization. More than 4000 lakh people are forecasted to reside in Indian cities by 2030. Rising family incomes, India's growing urban population, and ten years of cheap lending rates have all contributed to the country's increased demand for residential real estate. Hyderabad is one of the leading contributors, with 83% of the new launches occurring year over year. West Hyderabad provided the greatest number of homes out of all the zones in the city, making up 52% of all launches. North Hyderabad, which made up around third part of all the latest developments started in the city in the first quarter of 2022, came next. With a 52 percent share, East Bengaluru had the newest residential property debuts, followed by North Bengaluru. With many localized and territorial businesses and a couple of international industrialists, the Indian residential building industry is becoming more and more fragmented and competitive. Comparing the previous year to 2023, the construction industry had increases in nominal value added of 7% and nominal gross output of 6%. Nominal construction spending continued to rise as of the third quarter of 2023. A major obstacle that the industry still faces is the persistent lack of trained workers. Registrations for properties costing ₹1 crore and more surged in Hyderabad; in January 2024, the weighted average price grew by 14% year over year. Hyderabad had 5,411 registered residential properties in January 2024, a 1% year-over-year (YoY) decrease. According to statistics of Telangana Registration and Stamps Department, the total value of properties registered during the January 2024 was ₹3,279 crore, which is higher by 24% YoY and indicates a tendency towards the sale of higher value dwellings. It includes home sales that are pertinent to both the main and secondary real estate markets. Homes valued between ₹25 and 50 lakh accounted for 47% of all property registrations in Hyderabad in January 2024; homes below ₹25 lakh made for 15% of all registrations, a further decline in proportion. A Knight Frank study claims that from 8% in January 2023 to 14% in January 2024, the percentage of sales registrations for homes costing ₹1 crore and beyond has increased significantly. Approximately 71% of the properties registered in January 2024 were within the 1,000–2,000 square foot category. Pressure for tiny space (those under 1,000 sqft) moderated, with this category's registrations dropping from 19% in January 2023 to 16% in January 2024. However, demand increased for houses bigger than 2,000 square feet; in January 2024, 13% of registrations were made, up from 9% in the same month the previous year.

With a steady pace of property registrations and a discernible uptick in demand for higher quality homes in January, the Hyderabad residential market had a promising start to 2024. Porter's five forces—bidding power of customers, bargaining power of suppliers, threat of new entrants, rivalry among current rivals, and danger of product substitution—are all present in the residential building market. The real estate has witnessed demand for building constructions in a big

number in isolated, semi-gated, gated communities, which includes flats, duplex as well as triplex houses. This study is focused over a gated community development where in the height of the building is stilt plus five to nine floors only. This building construction has to be carried out in phased manner, namely substructure, super structure, finishes and external development there after handing over of the property. The builder/promoter are active with respect to the planning, design, execution, completing in all respects. The service providers are namely Architects, Structural engineers, Plumbing and drainage layout designers, firefighting specialist, concreting/ plastering/ painting/ house wiring specialists etc. The service providers selected through tendering procedure, but most of the time the promoters/builders do continue the business with existing knowns service providers only, to make the job easy. During the initial stage of construction work the number of service providers are noted to be two or three, like ground breaking, carting the earth, marking for columns, rebar fixing and pour concrete there after backfilling. The number of flat buyers observed to be low in number during ground breaking, sub structure construction and the buyer number will increase as the project progresses. The visit of number of buyer/s is small in number or nil during sub structure construction as well as frame work construction. The builder/promoters prioritize in completing the substructure and they pay attention in completing the column frame structure as early as possible, because it attracts the flat buyers. The finishing works (Main/partition wall, plastering/ plumbing/wiring/ floor tile laying/ dado in bath rooms/ door fixing/ window fixing etc.,) are dependent on each other, hence the work will go over a longer period of time.

### 1.1 Site engineers

Site engineers manage construction projects, balancing stakeholder expectations and ensuring quality, budget, and safety, while also ensuring project management and compliance with statutory requirements.

#### Couple of challenges are as follows:

- During final finishes stage the site engineers have use the staircase only (i.e. no lift car).
  - The engineer has to address the microlevel management in resolving the issues raised by the flat buyers, in this regard the site engineer has to coordinate with the workforce, their office, stores etc., It is observed this kind of coordination has developed the stress among the site engineers.
- Builders/promoters acting as a service facilitator to the flat buyers, they buy the service/s from the vendors. Once, the service providers complete agreed work, thereafter they refrain from corrective action. Site engineer/s are struggling to get done the things, hence stress level of site engineer will be very high.

### 1.2 Objectives of the Study

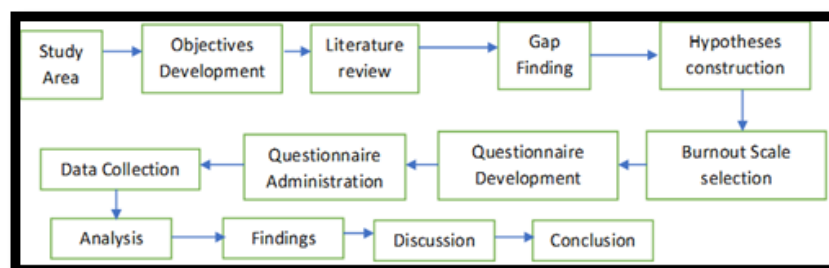
This study aims to fill a gap in literature on burnout among construction engineers, a high-risk occupational group, by addressing this intangible yet detrimental phenomenon.

The objective of study is:

- The study investigates the impact of demographics over job burnout among Hyderabad construction engineers using the Maslach Burnout Inventory (MBI), a widely used burnout scale.
- The study aims to identify job characteristics that contribute to burnout and their relative importance.

### 1.3 Research methodology

The under depicted methodology (Fig.1) adopted to carry out this study.



**Fig.1: Research Methodology**

### 2.0 Literature review

The engineers working for substructure and super structure of a building are comfortable in comparison to finishing works (i.e. couple of vendors for coordination), but the same engineer is troubled during finishing works, because of coordination with all service providers, which is manageable. But, during the process of pre-handing over the property to owners/buyers, the engineer is troubled while attending more than a owner/buyer (i.e. the number of flats owner) visit on a single day and to get done things through service providers and the engineer/s is noted to be under stress, especially during week end or on public holiday/s. Addressing the observation/s of flat owners is found challenging to

site engineers. Taking the corrective of building element is costly affair as well as it demands patience, time and also coordination. Burnout occurs in staff-client interactions, where clients' problems are often complex and difficult to solve, leading to feelings of anger, embarrassment, fear, or despair, and chronic stress, which can lead to burnout. Burnout syndrome involves increased emotional exhaustion and depersonalization, causing workers to feel unable to give of themselves psychologically and develop negative attitudes towards clients.

According to a 2014 study by Zhou et al., role conflict and burnout have a positive correlation and have a negative effect on an employee's performance. According to Sovitriana et al.'s 2019 study, junior high school teachers in South Tangerang experienced burnout in direct proportion to the theoretical model. In a 2015 study, Yirik et al. discovered that 318 mid-level managers in four- and five-star hotels in Alanya, Turkey, had their organizational stress and burnout levels significantly influenced by their ages, genders, education levels, departments, and positions. However, these factors do not affect burnout levels. Talent turnout (Dr AB Saraswathi, and Bonniga, Ravinder) is due to lack of motivation.

## 2.1 Burnout Description/Definition

Engineers face role conflict when balancing professional standards with strict deadlines and financial constraints, which can lead to serious "life or death" situations and increased stress levels (Bacharach et al. 1991). The delicate balancing act that engineers must perform between meeting stringent deadlines and budgetary constraints and maintaining professional standards can put them in dangerous "life or death" situations and raise their stress levels (Lingard 2003). Compared to those in consulting firms and government agencies, construction professionals in the contracting business are more accustomed to, and thus have more experience with, managing stressful situations. This suggests that construction engineers employed by contracting firms are probably under more stress than their counterparts in consulting firms (Ng et al. 2005). Since civil contractors are primarily site-based, they are subject to different, potentially more severe stressors than consultants who work in offices (Lingard 2003). Staff members may believe that their clients are somehow deserving of their problems due to their dehumanized perception of others (Ryan 1971).

The widely held belief that work-related factors are the primary cause of burnout, followed by personality factors (Bianchi 2018; Maslach 2003, 2006; Shanafelt et al., 2017). The initial indication of burnout occurs when a worker puts in more effort and longer hours, but their output appears to be decreasing (Freudenberger 1977). Scholars have generally acknowledged that job stress, which is defined as role overload, role ambiguity and conflict, and responsibility arising from the work environment, has detrimental effects on organizations and results in low levels of organizational commitment, productivity, and effectiveness, among other things (Lee and Ashforth 1993; Cordes and Dougherty 1993).

This phenomenon has been widely attributed to burnout, which is defined as persistent emotional exhaustion (Wright and Bonett 1997; Leiter and Maslach 1988; Schaufeli and Enzmann 1998; Maslach et al. 2001). It happened gradually as a result of daily, ongoing stress exposure over an extended length of time (Westman and Eden 1997). Cynicism, diminished professional efficacy, and emotional weariness are symptoms of emotional exhaustion, characterized by low energy, negative self-evaluation, and dissatisfaction with work achievements. (Maslach et al. 1996; Maslach et al. 2001; Maslach and Leiter, 2008).

Burnout has been linked, on an individual basis, to mental and physical health issues such as psychological distress, anxiety, depression, and low self-esteem (Maslach et al. 2001), headaches, restless nights, and drug misuse (Burke and Greenglass 1986). Negative attitudes toward work, such as low levels of motivation, job satisfaction, and organizational commitment but high levels of job uncertainty, have also been consistently linked to burnout at the organizational level (Schaufeli and Enzmann 1998; Maslach et al. 2001). Counterproductive work behaviors that lower the effectiveness of the organization as a whole include absenteeism, decreased productivity, and increased staff turnover (Wright and Bonett 1997).

Contagious diseases impact individuals, coworkers, and homes, affecting not only personal health but also socioeconomic factors (Westman and Eden 1997). Burnout, a work-related stress syndrome characterized by emotional exhaustion, professional inefficacy, and cynicism, affects various professions including human service, engineering, banking, and management (Tareq Lubbadah 2020). Burnout's detrimental effects have sparked calls for intervention programs to enhance employee quality of life and prevent organizational losses (Awa et al., 2010).

Job insecurity arises from a balance between high job demands and insufficient resources, affecting physical, psychological, social, or organizational aspects that require sustained effort or skills. (e.g. emotional demands and work pressure). Job resources encompass physical, psychological, social, or organizational aspects that facilitate work goals, reduce demands, and promote personal growth, learning, and development. (e.g. role-clarity, supervisor coaching, career opportunities, and autonomy) (Schaufeli & Taris, 2014).

Motivational media, job demand, and job resources models positively impact work engagement and burnout, with job resources positively influencing psychological satisfaction (Jansen et al., 2018). The level of work, working conditions, and time constraints necessary for a job are referred to as job demand (Fernet & Sen, 2004). The job demands are cognitive and affective, requiring psychological effort in physical, mental, social, or organizational aspects (Hakanen., Bakker & Schaufeli, 2006).

Job Resources refers to the positive work environment, characterized by enthusiasm and dedication, while burnout is a response to emotional illness and interpersonal stress in the workplace (Prieto, Soria, Martínez, & Schaufeli, 2008). Burnout significantly influences conceptual work, particularly in relation to psychological aspects like work engagement and chronic exhaustion (Maslach & Leiter, 2016). The study discussed the significant impact of job pressure, burnout, and its effects on both individuals and organizations (Seyedehhava Mousavy, Nur Sakinah Thomas, & Mukundan 2012). This is a syndrome that can happen to people who work with others and is marked by depersonalization, emotional exhaustion, and decreased personal accomplishment (Maslach and Jackson, 1984).

Workplace stressors, including those related to jobs, organizations, and social dynamics, have been demonstrated to be important indicators of burnout (Leiter and Maslach 2001; Brewer and Clippard 2002; Nyssen et al. 2003). The construction sector is expected to experience significant burnout among engineers due to their daily exposure to work-related stress (Hobfoll and Freddy 1993; Westman and Eden 1997). Burnout scores are higher in individuals with an external locus of control, focusing on chance or destiny, and less prone to it in those with an internal locus of control (Rotter, 1966).

In line with the idea of work burnout, neurotic people are characterized as emotionally unstable, nervous, angry, and prone to emotional pain (Semmer, 2006; Bianchi, 2018; Swider and Zimmerman, 2010). Personality traits can either exacerbate or aid in coping with burnout, with less resilient individuals experiencing higher levels of burnout, especially in the weariness area (Ghorpade et al., 2007; Maslach and Leiter, 2016a). Workload, Control, Reward, Community, Fairness, and Values are the six essential workplace aspects that make up job factors, also known as organizational risk factors (Maslach et al. 2001). The chance of burnout may be increased if there is a mismatch or imbalance between the employee and the six areas of the work. Conversely, the greater the degree of alignment between an individual and the domains, the greater the likelihood of interaction. While there may be a greater chance of burnout due to variables related to the mismatch between the individual and the profession, some personal characteristics may also increase the likelihood of burnout. (Maslach and Leiter 2008 & 2016, Maslach et al. 2001; Maslach and Leiter, 2016b).

The theory/models are presented in a table (Table 1). Individual burnout modulators presented in Table (Table 2).

### 3.0 Gap

This kind (i.e. job burnout) of study (civil engineers with finishing works) has been not carried in civil engineers' domain in Hyderabad, Telangana, India.

**Table 1: Theory/models**

| Model/Theory                                                                  | Author/Developer                             |
|-------------------------------------------------------------------------------|----------------------------------------------|
| Transactional model of stress and coping                                      | Lazarus's (1999)                             |
| Scissor model of the interrelation between stress states and recovery demands | Kellmann (2002)                              |
| Self-determination theory                                                     | Ryan and Deci (2000)                         |
| JD-R Model                                                                    | Arnold Bakker and Evangelia Demerouti (2006) |

**Table 2. Individual burnout modulators**

| Protectors of Burnout          | Enhancers of Burnout      |
|--------------------------------|---------------------------|
| Agreeableness                  | Neuroticism               |
| Conscientiousness              | External locus of control |
| Extraversion                   | Type A Personality        |
| Openness to experience         | Alexithymia               |
| Positive psychological capital | Emotion-focused coping    |
| Problem-focused coping         |                           |

**Hypotheses:** To address the gap the under mentioned hypotheses formulated.

| Hypotheses-1                                     | Hypotheses-2                                     |
|--------------------------------------------------|--------------------------------------------------|
| H1 <sub>a0</sub> : S1 is not correlated with D1. | H2 <sub>a0</sub> : S1 is not correlated with D2. |
| H1 <sub>a1</sub> : S1 is correlated D1.          | H2 <sub>a1</sub> : S1 is correlated D2.          |
| H1 <sub>b0</sub> : S2 is not correlated with D1. | H2 <sub>b0</sub> : S2 is not correlated with D2. |
| H1 <sub>b1</sub> : S2 is correlated D1.          | H2 <sub>b1</sub> : S2 is correlated D2.          |
| H1 <sub>c0</sub> : S3 is not correlated with D1. | H2 <sub>c0</sub> : S3 is not correlated with D2. |
| H1 <sub>c1</sub> : S3 is correlated              | H2 <sub>c1</sub> : S3 is correlated              |

|                                                   |                                                   |
|---------------------------------------------------|---------------------------------------------------|
| with D1.                                          | with D2.                                          |
| H1 <sub>d0</sub> : S4 is not correlated with D1.  | H2 <sub>d0</sub> : S4 is not correlated with D2.  |
| H1 <sub>d1</sub> : S4 is correlated with D1.      | H2 <sub>d1</sub> : S4 is correlated with D2.      |
| H1 <sub>e0</sub> : S5 is not correlated with D1.  | H2 <sub>e0</sub> : S5 is not correlated with D2.  |
| H1 <sub>e1</sub> : S5 is correlated with D1.      | H2 <sub>e1</sub> : S5 is correlated with D2.      |
| H1 <sub>f0</sub> : S6 is not correlated with D1.  | H2 <sub>f0</sub> : S6 is not correlated with D2.  |
| H1 <sub>f1</sub> : S6 is correlated with D1.      | H2 <sub>f1</sub> : S6 is correlated with D2.      |
| H1 <sub>g0</sub> : S7 is not correlated with D1.  | H2 <sub>g0</sub> : S7 is not correlated with D2.  |
| H1 <sub>g1</sub> : S7 is correlated with D1.      | H2 <sub>g1</sub> : S7 is correlated with D2.      |
| H1 <sub>h0</sub> : S8 is not correlated with D1.  | H2 <sub>h0</sub> : S8 is not correlated with D2.  |
| H1 <sub>h1</sub> : S8 is correlated with D1.      | H2 <sub>h1</sub> : S8 is correlated with D2.      |
| H1 <sub>i0</sub> : S9 is not correlated with D1.  | H2 <sub>i0</sub> : S9 is not correlated with D2.  |
| H1 <sub>i1</sub> : S9 is correlated with D1.      | H2 <sub>i1</sub> : S9 is correlated with D2.      |
| H1 <sub>j0</sub> : S10 is not correlated with D1. | H2 <sub>j0</sub> : S10 is not correlated with D2. |
| H1 <sub>j1</sub> : S10 is correlated with D1.     | H2 <sub>j1</sub> : S10 is correlated with D2.     |
| H1 <sub>k0</sub> : S11 is not correlated with D1. | H2 <sub>k0</sub> : S11 is not correlated with D2. |
| H1 <sub>k1</sub> : S11 is correlated with D1.     | H2 <sub>k1</sub> : S11 is correlated with D2.     |
| H1 <sub>l0</sub> : S12 is not correlated with D1. | H2 <sub>l0</sub> : S12 is not correlated with D2. |
| H1 <sub>l1</sub> : S12 is correlated with D1.     | H2 <sub>l1</sub> : S12 is correlated with D2.     |
| Hypotheses-3                                      | Hypotheses-4                                      |
| H3 <sub>a0</sub> : S1 is not correlated with D3.  | H4 <sub>a0</sub> : S1 is not correlated with D4.  |
| H3 <sub>a1</sub> : S1 is correlated with D3.      | H4 <sub>a1</sub> : S1 is correlated with D4.      |
| H3 <sub>b0</sub> : S2 is not correlated with D3.  | H4 <sub>b0</sub> : S2 is not correlated with D4.  |
| H3 <sub>b1</sub> : S2 is correlated with D3.      | H4 <sub>b1</sub> : S2 is correlated with D4.      |
| H3 <sub>c0</sub> : S3 is not correlated with D3.  | H4 <sub>c0</sub> : S3 is not correlated with D4.  |
| H3 <sub>c1</sub> : S3 is correlated with D3.      | H4 <sub>c1</sub> : S3 is correlated with D4.      |
| H3 <sub>d0</sub> : S4 is not correlated with D3.  | H4 <sub>d0</sub> : S4 is not correlated with D4.  |
| H3 <sub>d1</sub> : S4 is correlated with D3.      | H4 <sub>d1</sub> : S4 is correlated with D4.      |
| H3 <sub>e0</sub> : S5 is not correlated with D3.  | H4 <sub>e0</sub> : S5 is not correlated with D4.  |
| H3 <sub>e1</sub> : S5 is correlated with D3.      | H4 <sub>e1</sub> : S5 is correlated with D4.      |
| H3 <sub>f0</sub> : S6 is not correlated with D3.  | H4 <sub>f0</sub> : S6 is not correlated with D4.  |
| H3 <sub>f1</sub> : S6 is correlated with D3.      | H4 <sub>f1</sub> : S6 is correlated with D4.      |
| H3 <sub>g0</sub> : S7 is not correlated with D3.  | H4 <sub>g0</sub> : S7 is not correlated with D4.  |

|                                                   |                                                   |
|---------------------------------------------------|---------------------------------------------------|
| H3 <sub>g1</sub> : S7 is correlated with D3.      | H4 <sub>g1</sub> : S7 is correlated with D4.      |
| H3 <sub>h0</sub> : S8 is not correlated with D3.  | H4 <sub>h0</sub> : S8 is not correlated with D4.  |
| H3 <sub>h1</sub> : S8 is not correlated with D3.  | H4 <sub>h1</sub> : S8 is not correlated with D4.  |
| H3 <sub>i0</sub> : S9 is not correlated with D3.  | H4 <sub>i0</sub> : S9 is not correlated with D4.  |
| H3 <sub>i1</sub> : S9 is correlated with D3.      | H4 <sub>i1</sub> : S9 is correlated with D4.      |
| H3 <sub>j0</sub> : S10 is not correlated with D3. | H4 <sub>j0</sub> : S9 is not correlated with D4.  |
| H3 <sub>j1</sub> : S10 is correlated with D3.     | H4 <sub>j1</sub> : S10 is correlated with D4.     |
| H3 <sub>k0</sub> : S11 is not correlated with D3. | H4 <sub>k0</sub> : S11 is not correlated with D4. |
| H3 <sub>k1</sub> : S11 is correlated with D3.     | H4 <sub>k1</sub> : S11 is correlated with D4.     |
| H3 <sub>l0</sub> : S12 is not correlated with D3. | H4 <sub>l0</sub> : S12 is not correlated with D4. |
| H3 <sub>l1</sub> : S12 is correlated with D3.     | H4 <sub>l1</sub> : S12 is correlated with D4.     |
| Hypotheses-5                                      | Hypotheses-6                                      |
| H5 <sub>a0</sub> : S1 is not correlated with D5.  | H6 <sub>a0</sub> : S1 is not correlated with D6.  |
| H5 <sub>a1</sub> : S1 is correlated D5.           | H6 <sub>a1</sub> : S1 is correlated D6.           |
| H5 <sub>b0</sub> : S2 is not correlated with D5.  | H6 <sub>b0</sub> : S2 is not correlated with D6.  |
| H5 <sub>b1</sub> : S2 is correlated D5.           | H6 <sub>b1</sub> : S2 is correlated D6.           |
| H5 <sub>c0</sub> : S3 is not correlated with D5.  | H6 <sub>c0</sub> : S3 is not correlated with D6.  |
| H5 <sub>c1</sub> : S3 is correlated with D5.      | H6 <sub>c1</sub> : S3 is correlated with D6.      |
| H5 <sub>d0</sub> : S4 is not correlated with D5.  | H6 <sub>d0</sub> : S4 is not correlated with D6.  |
| H5 <sub>d1</sub> : S4 is correlated with D5.      | H6 <sub>d1</sub> : S4 is correlated with D6.      |
| H5 <sub>e0</sub> : S5 is not correlated with D5.  | H6 <sub>e0</sub> : S5 is not correlated with D6.  |
| H5 <sub>e1</sub> : S5 is correlated with D5.      | H6 <sub>e1</sub> : S5 is correlated with D6.      |
| H5 <sub>f0</sub> : S6 is not correlated with D5.  | H6 <sub>f0</sub> : S6 is not correlated with D6.  |
| H5 <sub>f1</sub> : S6 is correlated with D5.      | H6 <sub>f1</sub> : S6 is correlated with D6.      |
| H5 <sub>g0</sub> : S7 is not correlated with D5.  | H6 <sub>g0</sub> : S7 is not correlated with D6.  |
| H5 <sub>g1</sub> : S7 is correlated with D5.      | H6 <sub>g1</sub> : S7 is correlated with D6.      |
| H5 <sub>h0</sub> : S8 is not correlated with D5.  | H6 <sub>h0</sub> : S8 is not correlated with D6.  |
| H5 <sub>h1</sub> : S8 is correlated with D5.      | H6 <sub>h1</sub> : S8 is correlated with D6.      |
| H5 <sub>i0</sub> : S9 is not correlated with D5.  | H6 <sub>i0</sub> : S9 is not correlated with D6.  |
| H5 <sub>i1</sub> : S9 is correlated with D5.      | H6 <sub>i1</sub> : S9 is correlated with D6.      |
| H5 <sub>j0</sub> : S10 is not correlated with D5. | H6 <sub>j0</sub> : S10 is not correlated with D6. |
| H5 <sub>j1</sub> : S10 is correlated with D5.     | H6 <sub>j1</sub> : S10 is correlated with D6.     |
| H5 <sub>k0</sub> : S11 is not                     | H6 <sub>k0</sub> : S11 is not                     |

|                                                          |                                                    |
|----------------------------------------------------------|----------------------------------------------------|
| correlated with D5.                                      | correlated with D6.                                |
| H5 <sub>k1</sub> : S11 is correlated with D5.            | H6 <sub>k1</sub> : S11 is correlated with D6.      |
| H5 <sub>l0</sub> : S12 is not correlated with D5.        | H6 <sub>l0</sub> : S12 is not correlated with D6.  |
| H5 <sub>l1</sub> : S12 is correlated with D5.            | H6 <sub>l1</sub> : S12 is correlated with D6.      |
| Hypotheses-7                                             | Hypotheses-8                                       |
| H7 <sub>a0</sub> : S1 is not correlated with D7.         | H8 <sub>a0</sub> : S1 is not correlated with D8.   |
| H7 <sub>a1</sub> : S1 is correlated D7.                  | H8 <sub>a1</sub> : S1 is correlated D8.            |
| H7 <sub>b0</sub> : S2 is not correlated with D7.         | H8 <sub>b0</sub> : S2 is not correlated with D8.   |
| H7 <sub>b1</sub> : S2 is correlated D7.                  | H8 <sub>b1</sub> : S2 is correlated D8.            |
| H7 <sub>c0</sub> : S3 is not correlated with D7.         | H8 <sub>c0</sub> : S3 is not correlated with D8.   |
| H7 <sub>c1</sub> : S3 is correlated with D7.             | H8 <sub>c1</sub> : S3 is correlated with D8.       |
| H7 <sub>d0</sub> : S4 is not correlated with D7.         | H8 <sub>d0</sub> : S4 is not correlated with D8.   |
| H7 <sub>d1</sub> : S4 is correlated with D7.             | H8 <sub>d1</sub> : S4 is correlated with D8.       |
| H7 <sub>e0</sub> : S5 is not correlated with D7.         | H8 <sub>e0</sub> : S5 is not correlated with D8.   |
| H7 <sub>e1</sub> : S5 is correlated with D7.             | H8 <sub>e1</sub> : S5 is correlated with D8.       |
| H7 <sub>f0</sub> : S6 is not correlated with D7.         | H8 <sub>f0</sub> : S6 is not correlated with D8.   |
| H7 <sub>f1</sub> : S6 is correlated with D7.             | H8 <sub>f1</sub> : S6 is correlated with D8.       |
| H7 <sub>g0</sub> : S7 is not correlated with D7.         | H8 <sub>g0</sub> : S7 is not correlated with D8.   |
| H7 <sub>g1</sub> : S7 is correlated with D7.             | H8 <sub>g1</sub> : S7 is correlated with D8.       |
| H7 <sub>h0</sub> : S8 at work is not correlated with D7. | H8 <sub>h0</sub> : S8 is not correlated with D8.   |
| H7 <sub>h1</sub> : S8 is correlated with D7.             | H8 <sub>h1</sub> : S8 is correlated with D8.       |
| H7 <sub>i0</sub> : S9 is not correlated with D7.         | H8 <sub>i0</sub> : S9 is not correlated with D8.   |
| H7 <sub>i1</sub> : S9 is correlated with D7.             | H8 <sub>i1</sub> : S9 is correlated with D8.       |
| H7 <sub>j0</sub> : S10 is not correlated with D7.        | H8 <sub>j0</sub> : S10 is not correlated with D8.  |
| H7 <sub>j1</sub> : S10 is correlated with D7.            | H8 <sub>j1</sub> : S10 is correlated with D8.      |
| H7 <sub>k0</sub> : S11 is not correlated with D7.        | H8 <sub>k0</sub> : S11 is not correlated with D8.  |
| H7 <sub>k1</sub> : S11 is correlated with D7.            | H8 <sub>k1</sub> : S11 is correlated with D8.      |
| H7 <sub>l0</sub> : S12 is not correlated with D7.        | H8 <sub>l0</sub> : S12 is not correlated with D8.  |
| H7 <sub>l1</sub> : S12 is correlated with D7.            | H8 <sub>l1</sub> : S12 is correlated with D8.      |
| Hypotheses-9                                             | Hypotheses-10                                      |
| H9 <sub>a0</sub> : S1is not correlated with D9.          | H10 <sub>a0</sub> : S1 is not correlated with D10. |
| H9 <sub>a1</sub> : S1is correlated D9.                   | H10 <sub>a1</sub> : S1 is correlated D10.          |
| H9 <sub>b0</sub> : S2is not correlated with D9.          | H10 <sub>b0</sub> : S2is not correlated with D10.  |
| H9 <sub>b1</sub> : S2 is correlated                      | H10 <sub>b1</sub> : S2 is correlated               |

|                                                   |                                                     |
|---------------------------------------------------|-----------------------------------------------------|
| D9.                                               | D10.                                                |
| H9 <sub>c0</sub> : S3 is not correlated with D9.  | H10 <sub>c0</sub> : S3is not correlated with D10.   |
| H9 <sub>c1</sub> : S3 is correlated with D9.      | H10 <sub>c1</sub> : S3is correlated with D10.       |
| H9 <sub>d0</sub> : S4 is not correlated with D9.  | H10 <sub>d0</sub> : S4 is not correlated with D10.  |
| H9 <sub>d1</sub> : S4 is correlated with D9.      | H10 <sub>d1</sub> : S4 is correlated with D10.      |
| H9 <sub>e0</sub> : S5 is not correlated with D9.  | H10 <sub>e0</sub> : S5is not correlated with D10.   |
| H9 <sub>e1</sub> : S5 is correlated with D9.      | H10 <sub>e1</sub> : S5is correlated with D10.       |
| H9 <sub>f0</sub> : S6 is not correlated with D9.  | H10 <sub>f0</sub> : S6is not correlated with D10.   |
| H9 <sub>f1</sub> : S6 is correlated with D9.      | H10 <sub>f1</sub> : S6 is correlated with D10.      |
| H9 <sub>g0</sub> : S7 is not correlated with D9.  | H10 <sub>g0</sub> : S7 is not correlated with D10.  |
| H9 <sub>g1</sub> : S7 is correlated with D9.      | H10 <sub>g1</sub> : S7 is correlated with D10.      |
| H9 <sub>h0</sub> : S8 is not correlated with D9.  | H10 <sub>h0</sub> : S8 is not correlated with D10.  |
| H9 <sub>h1</sub> : S8 is correlated with D9.      | H10 <sub>h1</sub> : S8 is correlated with D10.      |
| H9 <sub>i0</sub> : S9 is not correlated with D9.  | H10 <sub>i0</sub> : S9is not correlated with D10.   |
| H9 <sub>i1</sub> : S9 is correlated with D9.      | H10 <sub>i1</sub> : S9is correlated with D10.       |
| H9 <sub>j0</sub> : S10 is not correlated with D9. | H10 <sub>j0</sub> : S10 is not correlated with D10. |
| H9 <sub>j1</sub> : S10 is correlated with D9.     | H10 <sub>j1</sub> : S10 is correlated with D10.     |
| H9 <sub>k0</sub> : S11 is not correlated with D9. | H10 <sub>k0</sub> : S11 is not correlated with D10. |
| H9 <sub>k1</sub> : S11 is correlated with D9.     | H10 <sub>k1</sub> : S11 is correlated with D10.     |
| H9 <sub>l0</sub> : S12 is not correlated with D9. | H10 <sub>l0</sub> : S12 is not correlated with D10. |
| H9 <sub>l1</sub> : S12 is correlated with D9.     | H10 <sub>l1</sub> : S12 is correlated with D10.     |

**Table 4: Instruments for assessing burnout (Source: Edú-Valsania, S.; Laguía, A.; Moriano, J.A. Burnout: A Review of Theory and Measurement. Int. J. Environ. Res. Public Health 2022)**

| Generic Instruments                                                  | Specific Instruments                                      |
|----------------------------------------------------------------------|-----------------------------------------------------------|
| Questionnaire for the Evaluation of Burnout Syndrome at Work (CESQT) | Maslach Burnout Inventory-Human Services Survey (MBI-HSS) |
| Maslach Burnout Inventory (MBI)                                      | Brief Burnout Questionnaire Revised for nursing staff     |
| CopenhQualificationn Burnout Inventory (CBI)                         | Brief Burnout Questionnaire Revised for nursing staff     |
| Burnout Clinical Subtypes Questionnaire (BCSQ-36/12)                 | Physician Burnout Questionnaire                           |
|                                                                      | Teacher Burnout Questionnaire                             |
| Oldenburg Burnout Inventory                                          | Psychologist's Burnout Inventory                          |
| Burnout Assessment Tool (BAT)                                        | Burnout Questionnaire for Athletes                        |
| Shirom-Melamed Burnout Questionnaire (SMBQ)                          | School Burnout Inventory                                  |
|                                                                      | Parental Burnout Inventory                                |

**Table 5: The short version of the Burnout Assessment Tool (BAT)**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Exhaustion</b></p> <p>1. At work, I feel mentally exhausted (S1)</p> <p>2. After a day at work, I find it hard to recover my energy (S2)</p> <p>3. At work, I feel physically exhausted (S3)</p> <p><b>Mental distance</b></p> <p>4. I struggle to find any enthusiasm for my work (S4)</p> <p>5. I feel a strong aversion towards my job (S5)</p> <p>6. I'm cynical about what my work means to others (S6)</p> <p><b>Emotional impairment</b></p> <p>7. At work, I feel unable to control my emotions (S7)</p> <p>8. I do not recognize myself in the way I react emotionally at work (S8)</p> <p>9. At work I may overreact unintentionally (S9)</p> <p><b>Cognitive impairment</b></p> <p>10. At work, I have trouble staying focused (S10)</p> <p>11. When I'm working, I have trouble concentrating (S11)</p> <p>12. I make mistakes in my work because I have my mind on other things (S12)</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

(Source: Citation: Schaufeli, W.B., De Witte, H. & Desart, S. (2020). Manual Burnout Assessment Tool (BAT) - Version 2.0. KU Leuven, Belgium: Unpublished internal report.)

### 3.1 Burn out scale:

Table 1 compiles both generic and specific items from the secondary survey (Table 4). A shortened version of the Maslach Burnout Inventory Tool (BAT) has been used to conduct this study (Table 5).

The demographics are considered are:

- Age (D1); Qualification (D2);
- Salary (D3); Vehicle/Status (D4);
- Residence/Accommodation (D5); Loan (D6);
- Marriage (D7); Dependents/Dependency (D8);
- Employer(D9); Welfare/ Refreshment/s (D10).

### 3.2 The Maslach Burnout Inventory MBI

The Maslach Burnout Inventory (MBI), developed in the 1980s, is a widely used tool for assessing job burnout by measuring emotional exhaustion, depersonalization, and personal accomplishment (Maslach and Jackson, 1981). The Maslach Burnout Inventory (MBI) is a scientifically validated tool used to evaluate burnout, with three versions: MBI-HSS, MBI-ES, and MBI-GS. (Table 5) (Bria et al., 2014; Maslach et al., 2001).

### 4.0 Research Study

The research study has been carried out as undermentioned

#### 4.1 Data Collection:

The data required for this study has been obtained through secondary data as well as primary data. The secondary data has been collected from the published papers as well as online e-resources. The primary data has been collected by administering the questionnaire, in the civil engineering community and this community works for real estate developers.

#### 4.2 Sample Collection:

The sample is collected from a civil engineer's universe. The sample is selected based snow ball sampling technique under non-probability sampling.

#### 4.3 Data Analysis:

The data analyzed in a scientific way through SPSS package. Demographics analysis, test for data reliability as well as correlation variable shall be carried out.

### 5.0 Findings

The analysis of demographics is as follows:

**5.1 Gender:** The data analysis reveals that only male engineers were the respondents, with no female engineers being identified.

**5.2 Age:** The qualification analysis reveals that two percentage of respondents from 18-21 age group, thirty percentage from 21-24 age group, forty-six percentage from 24-28 age group, eighteen percentage from 28-32 age group and four percentage from 32-36 age group.

**5.3 Qualification:** The qualification analysis revealed that twenty eight percent of respondents holding a diploma degree, while seventy-two percentage holding a bachelor's degree.

**5.4 Salary:** The salary analysis shows that twenty-four percentage of respondents receive salary in the range of eighteen thousand to twenty-one thousand, thirty-six percentage in the range of twenty-one thousand to twenty-four thousand, twenty-four percentage in the range of twenty-four thousand to twenty-seven thousand, and sixteen percentage in the range of twenty-seven thousand to thirty thousand.

**5.5 Vehicle:** The survey revealed that twenty-six percentage of respondents do not own a vehicle, sixty-eight percentage own a two-wheeler, and six percentage own a four-wheeler.

**5.6 Accommodation:** According to the accommodation study data, fourteen percentage of respondents live in individual homes, seventy-four percentage live in rent homes, and twelve percentage live on the land of their ancestors.

**5.7 Loan:** Ten percentage of respondents have a loan responsibility for their car, four percentage have a loan liability for their residence, and eighty-six percentage of respondents do not have a loan obligation, according to the loan analysis data.

**5.8 Marriage:** The marriage analysis data reveals that twenty-two percentage of respondents are married, while seventy-eight percentage are unmarried.

**5.9 Dependency:** The dependents/dependency analysis shows seventy percentage of respondents serve none, ten percentage serve their parents, sixteen percentage serve spouse and children, and four percentage serve parents, spouse, and children.

**5.10 Employer:** The employer analysis reveals that sixty percentage of respondents work with builders, twenty-eight percentage with contractors/s, and twelve percentage with Pvt.Ltd. companies.

**5.11 Refreshment:** The analysis of refreshment facilities reveals that eighty percentage of respondents facilitated with a cup of tea, while twenty percentage facilitated with tea and lunch.

**5.12 Reliability:** By using the SPSS pack to administrate the data, the reliability test was completed. There are fifty responders, and 0.714 is the Cronbach alpha. The Cronbach alpha value is being more than 0.7, hence, the data is reliable, hence there is correlation among all statements.

**5.13 Correlation:** To understand the relationship between Demographics vs Statements, the correlation examination/test has been carried by administering the data over the SPSS package.

**Hypotheses-1:** We are failed to accept null hypotheses hence, the alternate hypotheses ( $H1_{a1}$ ,  $H1_{b1}$ ,  $H1_{d1}$ ) have been accepted.

**S1, S2, S4** are related to D1.

**Hypotheses-2:** We are failed to accept null hypotheses hence, the alternate hypotheses ( $H2_{a1}$ ) has been accepted.  
**S1** is related to D2.

**Hypotheses-3:** We are failed to accept null hypotheses hence, the alternate hypotheses ( $H3_{b1}$ ,  $H3_{e1}$ ,  $H3_{k0}$ ) have been accepted.  
**S2, S5, S11** are related to D3.

**Hypotheses-4:** We are failed to accept null hypotheses hence, the alternate hypotheses ( $H4_{j1}$ ,  $H4_{k1}$ ) have been accepted.  
**S10, S11** are related to D4.

**Hypotheses-5:** We are failed to accept null hypotheses hence, the alternate hypotheses ( $H5_{e1}$ ,  $H5_{k1}$ ) have been accepted.  
**S5, S11** are related to D5.

**Hypotheses-6:** We are failed to accept null hypotheses hence, the alternate hypotheses ( $H6_{f1}$ ,  $H6_{h1}$ ,  $H6_{i1}$ ,  $H6_{l1}$ ) have been accepted.

**S12, S9, S8, S6** are related to D6.

**Hypotheses-7:** We are failed to accept null hypotheses hence, the alternate hypotheses ( $H7_{d1}$ ,  $H7_{e1}$ ) have been accepted.

S4, S5 are related to D7.

**Hypotheses-8:** We are failed to accept null hypotheses hence, the alternate hypotheses (H8j1) has been accepted.  
S10 is related to D8.

**Hypotheses-9:** We are failed to accept null hypotheses hence, the alternate hypotheses (H9<sub>a1</sub>, H9<sub>b1</sub>, H9<sub>c1</sub>, H9<sub>e1</sub>, H9<sub>f1</sub>) have been accepted.

S1, S2, S3, S5, S6 are related to D9.

**Hypotheses-10:** We are failed to accept null hypotheses hence, the alternate hypotheses (H10<sub>a1</sub>, H10<sub>b1</sub>, H10<sub>c1</sub>, H10<sub>d1</sub>, H10<sub>e1</sub>, H10<sub>f1</sub>) has been accepted.

S1, S2, S3, S4, S5, S6 are related to D10.

## 6.0 Conclusion

The summary of analysis is as follows:

**6.1 Gender:** All responders are male category; however, women can also work as supervisors/engineers on construction sites.

**6.2 Age:** As the age is adding, employees might have opted for better opportunities in the employment market/s, hence they are not seen with small players of the society.

**6.3 Qualification:** The diploma degree holders might have taken up higher education or else in the employment market high number of bachelor degree holder might be available, hence employer might be recruiting the bachelor degree holder/s.

**6.4 Salary:** The employers paying better salary to employees either because of employees age with the high responsibility at home and office or the employee's performance might have been observed excellent.

**6.5 Vehicle:** Most of the employee's parents might have earned the vehicles for their children and couple of employees might owned two or four-wheeler vehicles for their/family comfort level either by raising loan. A small percentage of employees using public transport for commuting purpose, probably they might have commitment at home.

**6.6 Residence/Accommodation:** Localities are residing in their ancestor's property. Migrated on taking the shelter in rented spaces.

**6.7 Loan:** A small percentage of respondents have loan liability, either it is towards vehicle/home property.

**6.8 Marriage:** The majority of respondents are being relatively young at age or due to commitment at home they have not committed to marriage.

**6.9 Dependency/Dependent:** The majority of respondents, including early-qualified engineers and family members, have no dependents, indicating that they are self-dependent and require no assistance.

**6.10 Employer:** Easy employment with less pay perks is being available with builders, most of the respondents at early age have joined with builders. It means opportunities are available with builders than that of contractor or Pvt. Ltd., companies

**6.11 Refreshment/Welfare:** The builders/contractors might be facilitating refreshment based upon working site location. It is a common practice to provide a cup of tea for refreshment, but if working site location is far away from habitation, the contractor might be facilitating the lunch in addition to tea. Contractor might be interested to have better and enhanced productivity at site.

**6.12 Reliability:** The Cronbach alpha value is being more than 0.7 hence, the data is considered as reliable.

**6.13 Hypotheses:** This study has laid path for following conclusion/s:

- a) Age /Qualification/Employer/Refreshment might be a factor/s for mental exhaustion.
- b) Age/Salary/Employer/Refreshment might be a factor/s for energy recouping.
- c) Age/Marriage/Refreshment might be a factor/s for low enthusiasm towards work.
- d) Salary/Accommodation/Marriage/Employer/Refreshment might be a factor/s for strong dislike of job.

- e) Salary/Vehicle/ Accommodation might be a factor/s for poor concentration at work.
- f) Dependency/Vehicle might be a factor/s for not staying focused.
- g) Loan might be a factor for making mistakes at job due to mind being dwelled in other things/for my unintentional over reaction/ to concede myself as I react emotionally at work.
- h) Loan/employer/Refreshment might be a factor/s for I'm cynical about what my work means to others.
- i) Refreshment/welfare might be a factor for physical exhaustion.

## 7.0 Benefits of this study to the construction industry

By improving knowledge of burnout among construction workers and their companies, this research hopes to lay the groundwork for creating successful treatments, such as competitive payments, refreshments, accommodation, transport to mitigate burnout Control or preventing burnout.

## 8.0 Conflicting Interests

Here with I declare that, there is no conflict of interests.

## References

1. AdewaAyodeji Kehinde, Akinlolu Agboola, (2020), "Effects of Job Burnout on Employees Satisfaction in Selected Health Service Sector in Southwestern Nigeria", *Journal of Applied Sciences*, 10(12):877-890. DOI: 10.4236/ojapps.2020.1012062
2. Ahola K, Honkonen T, Isometsa E, et al.. (2006), "Burnout in the general population. Results from the Finnish Health 2000 Study. *Soc Psychiatry*", *Psychiatr Epidemiol*, 41:11–17.
3. Ahola, K., Salminen, S., Toppinen-Tanner, S., Koskinen, A, (2013), "Occupational burnout and severe injuries: An eight-year prospective cohort study among finnish forest industry workers", *Occupational Health*, 55(6), 450-457.
4. Ahola, K., Väänänen, A., Koskinen, A., Kouvonen, A., Shirom, A, (2010), "Burnout as a predictor of all-cause mortality among industrial employees : A 10-year prospective register-linkQualification study", *Psychosomatic Research*, 69(1), 51-57.
5. Appels, A., Schouten, E, 1(991), "Burnout as a risk factor for coronary heart", *Behavioral Medicine*, 17(2), 53-259.
6. Armon, G, (2009), "Do burnout and insomnia predict each other' s levels of change over time independently of the job demand control-support (JDC-S) model ?", *Stress and Health*, 25(4), 333-342.
7. Armon, G., Shirom, A., Shapira, I., Melamed, S, (2008), "On the nature of burnout-insomnia relationships: A prospective study of employed adults", *Psychosomatic Research*, 65(1), 5-13.
8. Awa WL, Plaumann M, Walter U, (2009) "Burnout prevention: a review of intervention programs", *Patient Educ Couns*. 2010, Feb;78(2):184-90. doi: 10.1016/j.pec.2009.04.008. Epub 2009 May 20. PMID: 19467822.
9. Bacharach, S. B., Bamberger, P., and Conley, S, (1991), "Work-home conflict among nurses and engineers: Mediating the impact of role stress on burnout and satisfaction at work", *J. Organiz. Behav.*, 13, 39–53.
10. Bakker & Albrecht, S, (2018), "Work engagement: Current trends", *Career Development International*, 23(1), 4–11.
11. Bakker, A. B., Demerouti, E., & Schaufeli, W. B, (2002), "Validation of the Maslach Burnout Inventory - general survey : an Internet study", *Anxiety, Stress and Coping*, 15(3), 245-260.
12. Bakker, A.B., Demerouti, E., De Boer, E., Schaufeli, W.B, (2003), "Job demands and job resources as predictors of absence duration and frequency", *Vocational Behavior*, 62(2), 341-356.
13. Bakker, A.B., Demerouti, E., Verbeke, W, (2004), "Using the job demands resources model to predict burnout and performance", *Human Resource Management*, 43(1), 83-104.
14. Balaji R, Soumya Simon, (2023), "Job Burnout, Job Insecurity and Job Role Ambiguity among IT Employees", *The International Journal of Indian Psychology*, 11(3), 3868-3879.
15. Bianchi, R, (2018). "Burnout is more strongly linked to neuroticism than to work-contextualized factors", *Psychiatry Research*, 270, 901-905.
16. Bilge, F, (2006), "Examining the burnout of academics in relation to job satisfaction and other factors", *Social Behavior and Personality: An International*, 34(9), 1151-1160.
17. Brewer, E. W., and Clippard, L. F, (2002), "Burnout and job satisfaction among student support services personnel", *Hum. Resour. Dev. Q.*, 13(2), 169–186.
18. Burke, R. J., and Greenglass, E. R, (1986), "Work and family conflict", *International review of industrial and organizational psychology*, C. L. Cooper and I. Robertson, eds., Wiley, New York.
19. Cheng Y, Chen IS, Chen CJ, Burr H, Hasselhorn HM, (2013), "The influence of age on the distribution of self-rated health, burnout and their associations with psychosocial work conditions", *J Psychosom Res*, 74:213–220.
20. Christina Maslach, Susan E. Jackson, Michael Leiter, (1997), "The Maslach Burnout Inventory Manual". <https://www.researchgate.net/publication/277816643>

21. Clingan, P. D, (2023), "12 Causes of Job Burnout, Ways to Reduce Stress, and Possible Treatment Approaches: A Brief Statistical Analysis", *International Journal of Indian Psychology*, 11(1), 001-005. DIP:18.01.001.20231101, DOI:10.25215/1101.001
22. Cook, J. D., Hepworth, S. J., Wall, T. D., and Warr, P. B, (1981), "The experience of work: A compendium and review of 249 measures and their use", Academic, London.
23. Cook, Sara, (2015), "Job Burnout of Information Technology Workers", *International Journal of Business, Humanities and Technology*, 5(3),1-12.
24. Cordes, C. L., and Dougherty, T. W, (1993), "A review and an integration of research on job burnout", *Acad. Man Qualification. Rev.*, 18, 621–656.
25. Demerouti, E., Bakker, A.B., Schaufeli, W.B, (2001), "The job demands resources model of burnout", *Applied Psychology*, 86(3), 499-513.
26. Dr AB Saraswathi, and Bonniga, Ravinder, (2020), "Talent Turn Out with Special Reference to Civil Engineers Perspective-Reliability of the Instrument Using Principal Component Analysis Cronbach's Alpha and Omega", *European Journal of Molecular & Clinical Medicine*, 7.4 (2020).
27. Dr AB Saraswathi, and Bonniga, Ravinder, (2020), "Literature Review of Cronbach alpha coefficient And Mcdonald's Omega Coefficient" *European Journal of Molecular & Clinical Medicine*, 7.06 (2020).
28. Dr AB Saraswathi, and Ravinder. Er B., (2020), "Talent turn out with special reference to civil engineers' perspective-A literature review", *International Journal of Management*, 11.5 (2020).
29. Fernet, C., & Sen, C, (2004), "Adjusting to job demands: The role of work self-determination and job control in predicting burnout", *Journal of Vocational Behavior*, 65, 39–56.
30. Freud, Sigmund, (1949), "An Outline of Psychoanalysis". London: The Hogarth Press.
31. Freudenberger, H.J, (1974). "Staff burn out", *Social Issues*, 30(1), 159-165.
32. Freudenberger, H.J, (1977), "Speaking from experience", *Training and Development Journal*, 31(7), 26-28.
33. Ghorpade, J., Lackritz, J., Singh, G, (2007), "Burnout and personality: Evidence from academia", *Career Assessment*, 15(2), 240-256.
34. González-Morales, M.G., Peiró, J.M., Rodríguez, I., Bliese, P.D, (2013), "Anxiety, stress coping: An perceived collective burnout: A multilevel explanation of burnout", *Anxiety Stress and Coping*, 25(1), 43-61.
35. Grossi, G., Thomtén, J., Fandiño-Losada, A., Soares, J.J.F., Sundin, Ö, (2009), "Does burnout predict changes in pain experiences among women living in Sweden? A longitudinal study", *Stress and Health Stress*, 25(4), 297-311.
36. Hakanen, J. J., Bakker, & Schaufeli, W. B, (2006), "Burnout and work engagement among teachers", *Journal of School Psychology*, 43, 495–513.
37. Hobfoll, S. E., and Freedy, J, (1993), "Conservation of resources: A general stress theory applied to burnout", *Professional burnout: Recent developments in theory and research*, In W. B. Schaufeli, C. Maslach, and T. Marek, eds., Taylor and Francis, Washington, D.C.
38. Jansen, J., Wal, D., Beemt, A. Van Den, Martens, R. L., Perry, J., & Brok, D, (2018), "Studies in Continuing Education The relationship between job demands, job resources and teachers' professional learning : is it explained by self-determination theory ?", *Studies in Continuing Education*, 0(0), 1–23.
39. Jayakaran Mukundan &, & Koroush Khandehroo, (2016), "Burnout Among English Language Teachers In Malaysia", *Contemporary Issues In Education Research*, 3(1).
40. Lazarus, R, (1999), "Stress and Emotion: A New Synthesis", New York City, NY: Springer.
41. Leiter, M., and Maslach, C, (2001), "Burnout and quality in a sped-up world", *The Journal or Quality and Participation*, 24(2), 48–52.
42. Li, X.;Wang, R.; Zhao, Y.; Yang, F.;Wang, X, (2022), "An Interwoven Psychological Syndrome of Job Burnout and Work Eng Qualificationment in Construction Project Management Professionals Due to Work–Family Imbalance", *Int. J. Environ. Res. Public Health*, 2022, 19, 14111. <https://doi.org/10.3390/ijerph192114111>
43. Lindblom KM, Linton SJ, Fedeli C, Bryngelsson IL, (2006), "Burnout in the working population: relations to psychosocial work factors", *Int J Behav Med*; 13:51–59.
44. Lingard, H, (2003), "The impact of individual and job characteristics of 'burnout' among civil engineers in Australia and the implications for employee turnover", *Constr. Manage. Econom.*, 21, 69–80.
45. March-Amengual, J.-M.; Cambra Badii, I.et.al., (2022), "Psychological Distress, Burnout, and Academic Performance in First Year College Students", *Int. J. Environ. Res. Public Health* 2022, 19, 3356. <https://doi.org/10.3390/ijerph19063356>
46. Maslach, C., & Leiter, M. P, (2016), "Burnout", In *Stress: Concepts, Cognition, Emotion, and Behavior*, Academic press, pp. 351–357.
47. Maslach, C., Jackson, S, (1984), "Burnout in organization settings", *Applied Social Psychology Annual*, 5(1), 133-153.
48. Maslach, C., Jackson, S. E., and Leiter, M. P, (1996), "Maslach burnout inventory manual", Consulting Psychologists Press, Calif.

49. Maslach, C., Leiter, M.P. (2008), "Early predictors of job burnout and engagement". *Applied Psychology*, 93(3), 498-513.
50. McCormack HM, MacIntyre TE, et.al., (2018), "The Prevalence and Cause(s) of Burnout Among Applied Psychologists: A Systematic Review", *Front. Psychol.* 9:1897. doi: 10.3389/fpsyg.2018.01897
51. Melamed, S., Shirom, A., Toker, S., Shapira, I, (2006), "Burnout and risk of Type 2 diabetes: A prospective study of apparently", *Psychosomatic Medicine*, 68(6), 863-869.
52. Mukundan, J., & Ahour, T, (2011), "Burnout Among Female Teachers in Malaysia", *Journal of International Education Research*, 7(3).
53. Ng, S., Skitmore, R., and Leung, T, (2005), "Manageability of stress among construction project participants", *Eng., Constr., Archit. Manage.*, 13, (3), 264-282.
54. Nyssen, A. S., Hansez, I., Baele, P., Lamy, M., and De Keyser, V, (2003), "Occupational stress and burnout in anesthesia", *Br. J. Anaesth.*, 90(3), 333-337.
55. Ozturk, I., Ay, U, (2018), "İşgörenin görev bağımlılığı, politik davranışları, rol çatışması ve belirsizliğinin tükenmişlik üzerindeki etkisi: Sağlık kurumlarında bir inceleme. In: Polat, B., Güler, M., Derin, H., editors. *Sosyal Bilimler Üzerine Araştırmalar*", Turkey: İksad Publishing House, pp 68-101.
56. Pavan Kumar Tiwari, (2023), "Job Burnout: A Theoretical Framework To Broaden Horizon", *International Journal of Novel Research and Development* ([www.ijnrd.org](http://www.ijnrd.org)), ISSN:2456-4184, Vol.8, Issue 7, pp.a819-a822.
57. Peterson, U., Demerouti, E., et.al., (2008), "Burnout and physical and mental health among Swedish healthcare workers", *Advanced Nursing*, 62(1), 84-95.
58. Prieto, L. L., Soria, M. S., et.al., (2008), "Extensión of the Job Demands-Resources model in the prediction of burnout and engagement among teachers over time", *Psicothema*, 20(August).
59. Rotter, J.B, (1966), "Generalized expectancies for internal versus external control of reinforcement", *Psychological Monographs: General and Applied*, 80(1), 1-28.
60. Salina Mohamed, Azlina wati Nikmat, et.al., (2020), "Burnout and its Relationship to Psychological Distress and Job Satisfaction Among Academician and Non-Academician in Malaysia", *The International Journal of Higher Education* 10 (2020): 85.
61. Schaufeli, W.B., Leiter, M.P., Maslach, C, (2009), "Burnout: Cordes 35 years of research and practice", *Career Development International*, 14(3), 204-220.
62. Semmer, N.K, (2006), "Personality, stress, and coping", In: Vollrath, M.E. *Handbook of Personality and Health*. New Jersey: Wiley & Sons Ltd. p73-113.
63. Seyedehhava Mousavy, Nur Sakinah Thomas & Mukundan, J, (2013), "Burnout among Low and High Experienced Teachers", *International Journal of Applied Linguistics & English Literature*, 1(4), 24-29.
64. Sovitriana, R., Santosa, A.D., Hendrayani, F, (2019), "Teacher burnout and self-esteem in tangerang's junior high school teachers", *International Review of Management and Marketing*, 9(2), 26-30.
65. Subon, Frankie and Macdonald Methodius Sigie, (2016), "Burnout among Primary and Secondary School Teachers in Samarahan District", *IOSR Journal of Humanities and Social Science*, 21 (2016): 28-41.
66. Swider, B.W., Zimmerman, R.D, (2010), "Born to burnout: A metanalytic path model of personality, job burnout, and work outcomes", *Vocational Behavior*, 76(3), 487-506.
67. Tamer M. Alkadash, Shi Jun Bo, et.al., (2020), "Conceptual Framework on Job Burnout of the Employees and its Correlative Factors in China During Coivd-19", *International Journal of Management*, 11(10), 2020, pp.200-215.<http://iaeme.com/Home/issue/IJM?Volume=11&Issue=10>
68. Tareq Lubbadah, (2020), "Job Burnout: A General Literature Review", *International Review of Management and Marketing*, 10(3), 7-15.
69. Valcour, M, (2016), "Beating burnout", *Harvard Business Review*, 94(11), 98-102.
70. Verdonk P, Hoofman WE, et.al., (2010), "Work-related fatigue: the specific case of highly educated women in the Netherlands", *Int Arch Occup Environ Health*; 83:309-321.
71. Westman, M., and Eden, D, (1997), "Effects of respite formwork on burnout: Vacation relief and fadeout", *J. Appl. Psychol.*, 82, 516-527.
72. Wright, T. A., and Bonett, D. G, (1997), "The contribution of burnout to work performance", *J. Organiz. Behav.*, 18(5), 491-499.
73. Wright, T.A., Cropanzano, R, (1998), "Emotional exhaustion as a predictor of job performance and voluntary turnover", *Applied Psychology*, 83(3), 486-493.
74. Yirik, S., Ören, D., Ekici, R, (2015), "Determination of organizational stress and organizational burnout levels of mid-level managers working in four- and five-star hotel businesses", *International Review of Management and Marketing*, 5(2), 52-60.
75. Zhou, L., Yong, L., Danling, L, (2014), "The mediating role of job burnout in the relationship between role conflict and job performance: An empirical research of hotel frontline service employees in China", *International Journal of Psychological Studies*, 6(3), 88-95.