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## The Turnover Intention of Supply Chain Managers Because of Burnout: Reality or Abstraction?

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### **Abstract:**

**Purpose:** The article aims to identify antecedents of burnout of supply chain (SC) managers and to examine if it relates to their turnover intention. We also discuss the potential influence of burnout of SC managers on job performance.

**Design/Methodology/Approach:** First qualitative study (interviews) was conducted to identify factors which could be linked to stress and burnout of SC managers. Then a quantitative study (based on a questionnaire survey) was conducted to measure the relationship between those factors and burnout.

**Findings:** The burnout of SC managers was related to effort-reward imbalance, work-family conflict, and, to a lesser extent, stressful customer behaviour. No relationship was found between burnout and organisationally climate. The burnout of SC managers led to turnover intention. The indirect consequence of burnout was cognitive impairment, which is reflected in management problems, including problem-solving and decision-making.

**Practical implication:** Knowledge of what antecedents cause burnout in SC managers makes it possible to prevent burnout by influencing these factors by employees and the organisations that employ them.

**Originality/Value:** The study provides new knowledge about the antecedents of burnout of SC managers. It proves that it is related to turnover. It also proposes a new approach to measuring burnout in SC managers, the Burnout Assessment Tool.

**Keywords:** Supply chain manager, burnout, turnover intention, Burnout Assessment Tool (BAT), effort-reward imbalance, role conflict, stressful customer behaviour, cognitive impairment.

**JEL Codes:** M10, M12, M5, I1, I3.

**Paper type:** Research paper.

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## **1. Introduction**

"The supply chain works like a wheel, and the supply chain manager is the centre of the wheel that holds all the guidelines together" (Newaz *et al.*, 2020). If the centre of this wheel "fails", it will affect the effectiveness of supply chain management (SCM), decision-making, and deterioration of non-financial and financial achievements and the strategic success of SC (Kabus *et al.*, 2020).

Supply Chain (SC) managers have a prestigious role, which might suggest that it is specially protected and that they should not be affected by professional and psychological problems (Sharma and Cooper, 2016).

However, Hamouche and Marchand (2020) argue that managers are the "easy victims of burnout." SC managers' burnout leads to exhaustion, mental distance, and cognitive and emotional disorders (Basinska *et al.*, 2021).

Such symptoms result in an inability to effectively manage the SC, make decisions, and achieve SC targets. As a result, their performance and that of the organisation and the SC deteriorate (Kabus *et al.*, 2020).

Relationships and communication with co-workers, partners, or family become complicated. The resulting inefficiencies frustrate the managers, exacerbating burnout and ultimately leading to their dismissal or own resignation. Sirtori-Cortina (2022) indicated that between 2020 and 2021, SC managers left their jobs at the highest rate since at least 2016 (the rate of separation increased by 28% during the stated period) due to feelings of burnout.

The causes of manager burnout are many, overload with the number and variety of tasks, time and environmental pressures, role conflict, unrealistic personal and organizational expectations, excessive interpersonal interactions or excessive isolation, lack of recognition and positive feedback (organizational plane), incompetence, lack of resilience to stress, feelings of inadequacy, personal problems, personality disorders (e.g., anxious personality) (personal filed), turbulent environment with numerous disturbances (external environment filed) (Jugdev *et al.*, 2017; Zopiatis and Constanti, 2010).

Suppose the SC managers need to be adequately prepared for their managerial role. In that case, the right working and organizational conditions are not created, there are (mental and emotional) personality disorders, and the probability of burnout is significant.

SC manager must be a strong and additionally strengthened individual in the organisation, not by exploiting his role, but by providing him with a work-life balance. In this way, the SC managers will cope more effectively with the constant

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pressure they are subjected to in today's turbulent environment, including the wide range of demands and responsibilities placed on them and the problems that pile up.

The article aims to identify antecedents of burnout of supply chain (SC) managers and to examine if it relates to their turnover intention. Six hypotheses are tested based on survey data collected from 102 SC managers, including logistics managers responsible for the SCM.

This study contributes to research in various ways. First, we address the subject of SCM professions, in particular SC managers, whom van Hoek *et al.* (2009) refer to as the "critical dimension" They shape the effectiveness and success of SC to the greatest extent while being subjected to increasing pressure caused by turbulent conditions (e.g., the global COVID-19 pandemic) (Asghar *et al.*, 2021; Christopher, 2005). As a result, burnouts and quits are affected (Sirtori-Cortina, 2022).

Thus, the topic addressed is timely and indicates a contribution to burnout research, i.e., causes and consequences. Occurring publications in the field of burnout of managers most often refer to, among others, the entire group (Hamouche and Marchand, 2021) and other industries or sectors (e.g., managers in hospitals, in the police) (Loo, 2004). In contrast, there needs to be research on the burnout of managers responsible for SCM.

Moreover, research in this area is geared toward analysing management styles (Zopiatis and Constanti, 2010) or a specific cause (e.g., stress, work-family conflict) (Leung *et al.*, 2011). In our study, using the Burnout Assessment Tool (BAT), we present a holistic view of identifying the various antecedents of SC managers' burnout and the ultimately associated turnover intention but also emphasise other implications.

A third, more indirect contribution alludes to SC managers' competencies and capabilities that translate into effective SCM and performance (Newaz *et al.*, 2020; van Hoek *et al.*, 2009). Role conflict, pressure and stress caused by new challenges to SCM (e.g., strategic management, automation, sustainability, turbulent environment) can be traced back to an inappropriate ratio of hard skills to soft skills, emotional intelligence, and resilience (Gurieva *et al.*, 2017).

Improper dimensions of soft skills and hypersensitive personalities make SC managers irresilient to disturbances, problems, and conflicts, thus affecting their burnout.

The article is structured as follows. The first section reviews the literature on effective SCM and the role of SC managers in the process through the lens of competencies and manager burnout. The second section presents the conceptual model, description of research tools and hypotheses.

The next sections relate to the presentation of the research procedure, the characteristics of the sample, and the results. The potential influence of burnout on SC managers' performance is discussed. The last section presents the discussion and conclusions.

## **2. Literature Review**

### **2.1 Managers as a "Critical Resource"**

Managers in SC simultaneously perform management functions at the operational and strategic levels, as well as business functions with a primary focus on logistics, and thus fulfil various roles in SCM, with a special role assigned to them coordinating resources and processes at different levels (e.g., intra-functional, inter-functional, inter-organizational). Effective coordination targeting SC success factors defines the effectiveness of the management process (Ballou, 2007).

Therefore, improving and maintaining effective SCM results from balancing different resources (people, processes, technology). However, Quinn pointed out that "nothing can be done without the right people" (Managan and Christopher, 2005). Thus, SC managers are key players who influence SCM through their capabilities reinforced by competencies (knowledge, skills, abilities) and achievements (Prajogo and Sohal, 2013).

SC managers in business often become former specialists or managers specialising in transportation, shipping, purchasing, finance, or logistics (Christopher, 2005). They have developed but often narrow and hard competencies. Hard competencies, however, are not sufficient to cope with today's turbulent economic and business environment (Asghar *et al.*, 2021).

It is emphasised that an SC manager should have the right qualifications, capabilities with the right attributes (functional-, management- and interpersonal skills) and behavioural intent (Kanus *et al.*, 2020).

For SCM effectiveness, interpersonal and managerial skills (behavioural: team building, communication) even count first, followed by financial, technological and logistics skills (Czainska, 2020; Christopher, 2012; Giunipero *et al.*, 2006; Gammelgaard and Larson, 2001).

Resilience and interpersonal skills, including emotional skills (emotional intelligence), build the strength of managerial capabilities, which are reflected in SC's achievements and long-term success (Newaz *et al.*, 2020; Karttunen, 2018). In addition, the dynamic capabilities of SC managers are exposed, which makes the nuisance of SCM resulting from variability and complexity somewhat lighter (Newaz *et al.*, 2020).

The new requirements in competencies and capabilities respond to previous problems in fulfilling the role of SC managers and contemporary SCM challenges (Asghar *et al.*, 2021; Ballou, 2007). Thus, their absence or inadequate reinforcement leads to difficulties in coping with multiple managerial and functional-business tasks simultaneously, which creates pressures and stress leading to burnout, poor job performance, and deterioration of SCM effectiveness and achievements (McHugh, 1993).

## 2.2 Burnout of Managers

Burnout most often affects managers, even referring to it as "the disease of managers" (Hamouche and Marchand, 2021). The World Health Organization states that burnout results from "chronic workplace stress that has not been effectively managed" (WHO, 2022). Burnout affects the bio-psycho-social-spiritual aspects of life, and those affected by burnout have a negative attitude towards work, causing interpersonal conflicts to have communication problems, which affects the effectiveness of the processes carried out and their own and the organisation's achievements (McCormack, 2014; Leung *et al.*, 2011).

Managers are subject to pressures that result from, among other things, following globalisation trends, managing limited resources, making complex and timely decisions, lacking the right competencies and capabilities, but also the new demands placed on them, and in all of this, seeking a balance between work and family. These are stressors, and stress is a major symptom of burnout, particularly in female managers (Hamouche and Marchand, 2021; Gadinge *et al.*, 2010).

Intensification of stress among managers is triggered by restructurings or high-performance management practices being implemented, which blur the boundaries between managers and employees blur, and they lose their identities (Blom *et al.*, 2016).

Jugdev *et al.* (2018) indicated that elements of work-life (control, workload, community, rewards, values, fairness), management stressors (conflict, ambiguity, workload and work demands, resource constraints), individual differences (personal demands and resources) are key sources of burnout, ultimately contributing to turnout intention or turnout.

However, before turnout intention occurs, such consequences of burnout as exhaustion, mental distance (withdrawal) and emotional and cognitive impairment can be observed. This further results in lowered mood, mental suffering and psychosomatic complaints.

Taking into account the role of the manager, cognitive disorders (cognitive processes impaired, i.e., problems with memory, attention as a result of lack of energy) and other emotional disorders (emotional processes impaired, i.e., the appearance of

anger, sadness), which are the basis of burnout, may seem particularly relevant (Schaufeli *et al.*, 2020).

Which affects the deterioration of the effectiveness and efficiency of the manager's work, i.e. communication, and decision-making, which may lead to the decline of the performance of the organisation and SC. Thus, it is worth facing the new phenomenon among SCM managers called "Stressed-Out Supply Chain Managers Are Throwing in the Towel" (Sirtori-Cortina, 2022).

### **3. Antecedents, Consequent, Hypothesis Development and Research Tools**

A review of the studies showed that managers are subject to various stressors that can lead to burnout. We could only include some of them in the study for practical reasons. It was necessary to limit them to those with the greatest significance and most frequent occurrence in the work of studied SC managers. To this end, we interviewed several SC managers. These were semi-structured interviews in which we asked respondents about the most stressful aspects of their work.

The stressors in the respondents' statements included excessive workload, time pressure, high demands from superiors, insufficient support from superiors, communication problems within the organisation, difficulty balancing work and private life, and high customer demands.

From this list, we selected those factors that are adequately conceptualised and for which there are proven measurement tools. These were, work-family and family-work conflict, organisational climate, and stressful customer behaviour. The above elements are also the most analysed in past studies for job burnout and performance (Sipayunge *et al.*, 2021; Haar, 2006; Dormann and Zapf, 2004).

Furthermore, we decided to include an effort-reward imbalance in the study. Although in the interviews, contrary to our assumptions, respondents did not complain about inadequate rewards, we considered research findings indicating that the relationship between effort-reward imbalance (ERI) and burnout among managers is firmly established in the literature (Soomro *et al.*, 2022; Feld *et al.*, 2013; Oren and Littman-Ovadia, 2013; Kinnunen *et al.*, 2008).

According to Soomro *et al.* (2022), the ERI positively predicts employee burnout regarding emotional exhaustion, depersonalisation and perceived lack of personal achievement. The effort-reward imbalance is felt most acutely under excessive managerial involvement and concomitant low organisational support, which creates a sense of injustice and stress and thus leads to burnout and often turnover intention (Meisler, 2013; Oren and Littman-Ovadia, 2013; Kinnunen *et al.*, 2008).

In addition, the relationship between effort-reward imbalance and burnout is particularly high among male than female employees, and there are far more men

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among SC managers. In the study, we also included turnover intention as an effect of burnout. Turnover is a big problem for organisations, especially regarding specialised managers (and SC managers are such). Turnover intention is often studied as the effect of managers' burnout (Jugdev *et al.*, 2018).

The next step was to choose research tools for each variable. As far as burnout is concerned, many different tools (questionnaires) are used worldwide to measure it. The most popular are the Maslach Burnout Inventory (Maslach *et al.*, 1996), the Job Burnout Inventory (Ford *et al.*, 1983), Copenhagen Burnout Inventory (Kristensen *et al.*, 2005), the Oldenburg Burnout Inventory (Demerouti and Bakker, 2008), and the Link Burnout Questionnaire (Santinello, 2018).

We chose Burnout Assessment Tool (BAT) developed by Schaufeli (Schaufeli and Taris, 2005). The universality of BAT dictated our choice. It is adequate for different professions and different cultures. The BAT questionnaire contains 23 items related to the primary dimension of burnout (exhaustion, mental distance, cognitive impairment, and emotional impairment) and ten related to secondary symptoms. Respondents answer statements on a 5-point scale (from 1 meaning "never" to 5 meaning "always").

Based on the questionnaire's overall score, which is the average of the sum of the scores from all items, each respondent can be assigned to one of three groups: no risk of burnout, at risk of burnout, and very high risk of burnout (Schaufeli and Taris, 2005).

The effort-reward imbalance was measured using the Effort-Reward Imbalance (ERI) questionnaire, consisting of 17 items described on a Likert scale and covering two areas of analysis (effort and reward). The first area examines, among other things, demands, commitments, high levels of responsibility, time pressure, obstacles to task completion, and over-commitment conditioned by personality traits.

The second measures feelings about job compensation, respect, recognition, and a sense of job security. The ERI has satisfactory convergent and criterion-relevance and factor structure and is included in the list of tools for assessing psychosocial occupational risks published by the WHO (Siegrist *et al.*, 2014).

The conflict between family and work roles was assessed using the Carlson Scale. It identifies two directions of conflict: work-family conflict (when work interferes with family life) and family-work conflict (when family interferes with work).

At the same time, he distinguishes three forms of conflict: time-based, burden-based and behaviour-based. Carlson's scale contains 18 statements to which respondents must respond on a five-point scale ranging from "strongly disagree" (1 point) to "strongly agree" (5 points) (Carlson and Kacmar, 2000).

Using the Stressful Customer Behaviour Scale (SCB-scale) developed by Szczygiel and Bazinska (2013) measured stress-generating customer behaviour. They identified two classes of the most stress-generating customer behaviour: excessive and excessive demands. The SCB-scale contains twelve items measured by a five-point Likert scale.

They refer to two areas: the harassing behaviour scale (it measures hostile attitudes and negative emotions expressed by customers during interactions with employees) and the scale of excessive demand (it refers to customer expectations that are difficult to meet, unclear or too high). It is an appropriate tool for assessing the impact of this factor on SC burnout of managers who have a great deal of contact with customers at work, where customers can be considered suppliers and customers.

The available adaptation of the Organizational Climate Questionnaire (OCQ) of Rosenstiel and Boegel (Durniat, 2018) was used to measure organisational climate. This tool measures perceptions of basic organisational climate factors, such as management style, work organisation, communication, cooperation, motivation and career development, and social support.

The tool contains 55 items (slightly shorter than the original), five general questions, nine relating to co-workers, twelve to supervisors, seven to work organisation, 10 to information and communication, five to representing employees' interests and seven to promotion and career development.

In the main part, respondents provide answers by selecting one of the categories on a five-point ordinal scale. The respondent's total score qualifies for one of ten levels. The lowest and very low levels mean immediate intervention is needed, as employees view the climate of the surveyed organisation negatively (Durniat, 2018).

The Turnover Intention Scale-6 (TIS-6) developed by Bothma and Roodta (2013) was used to measure turnover intention. The questionnaire consists of six items that together measure turnover intention (it is a unidimensional construct). The tool indicates those who remain in the organisation from those who have left, demonstrating its predictive value.

Six hypotheses were formalised based on the interviews conducted and the empirical results so far (Figure 1).

Ensuring the right balance of effort and reward for employees regardless of their role in the organization is essential to protect the health of employees, thus protecting them from burnout and helping to retain employees in the organization (Leineweber *et al.*, 2021). Previous studies have shown a strong relationship between the effort-reward imbalance and burnout and intent to quit, mainly among healthcare workers



or teachers (Loerbroks *et al.*, 2014). There is less research in this area in the context of managers.

However, Kinnunen *et al.* (2008) pointed out a strong correlation between effort-reward imbalance and burnout and the intention of managers to leave Finnish companies. Therefore, the effort-reward imbalance can also be expected to affect burnout among SC managers.

***Hypothesis 1:*** *The higher the effort-reward imbalance measured by the ERI questionnaire, the higher the level of burnout of SC managers measured by the BAT.*

The two types of conflict (work-family and family-work) are also conducive to job burnout, intentions to leave or poor job performance (Karatepe, 2013; Ahmad, 2008; Haar, 2006). Ahmad (2008) stated that work-family conflict leads to emotional exhaustion, which promotes burnout in the long term and lowers the productivity of employees.

A similar inference was presented by Karatepe (2013) about managers in the hotel industry. Employees with a heavy workload who cannot balance work (family) and family (work) roles are emotionally exhausted. As a result, such employees are less embedded in their jobs, become burned out, and exhibit low productivity in the service delivery process. It means that the same phenomenon could take place among SC managers.

***Hypothesis 2:*** *The higher the work-family conflict (WFC) score on the Carlson Scale, the higher the level of burnout of SC managers measured by the BAT.*

***Hypothesis 3:*** *The higher the family-work conflict (FWC) score on the Carlson Scale, the higher the level of burnout of SC managers measured by the BAT.*

Dormann and Zapf (2004) indicated that burnout is caused by the stressful employee-customer interactions. The main reasons stem from, among other things, disproportionate customer expectations, verbal aggression from customers, and ambiguous customer expectations. Customer contacts are a factor affecting burnout in the service area. It is because there is a high frequency of customer contact. For a particular reason, a dissatisfied customer starts to be aggressive towards the service provider, creating conflict. It, in turn, causes stress and emotional exhaustion in the other party. Frequent exposure to such situations leads to burnout or quitting (Meisler, 2013).

The sector of Transport- Shipping-Logistics is closely related to the implementation of services. SC managers must contact both customers - recipients of products and suppliers of raw materials and manufacturers. High demands on time and price or cost often cause conflict and aggression, and burnout of SC managers in a long-term perspective.

***Hypothesis 4:*** *The higher the intensity of stress-generating customer behaviour measured by the SCB-scale, the higher the level of burnout of SC managers measured by the BAT.*

Sipayung *et al.* (2021) indicated that employee burnout is low or nonexistent if the organizational climate is supportive, employee productivity is good. In organizations characterized by supportive interpersonal relationships, group decision-making and jointly developed and communicated goals, employees experienced lower levels of burnout. Organizations with little teamwork, lack of employee trust and tight control showed significantly higher burnout (Vallen, 1993).

SC managers not only manage inter-organizational relationships and enter cooperative relationships with business partners. They also must manage employees, as their results depend on the work of others. Therefore, if the right organizational climate is not developed, mistrust and lack of cooperation will develop, eventually leading to burnout.

***Hypothesis 5:*** *The lower the level of organizational climate measured by the OCQ, the higher the level of burnout of SC managers measured by the BAT.*

Job burnout is positively correlated with leaving. Two dimensions of occupational burnout, namely emotional exhaustion, and depersonalization, positively influence turnover intention (Meisler, 2013). Lin *et al.* (2014) showed that the surveyed executives in Sino-Japanese companies were characterized by high job burnout caused by various factors (stress, emotional exhaustion) and had a high prevalence of turnover intention.

Considering the dynamism of the Transport-Shipping-Logistics sector and its strong competitiveness in it, in addition to the uncertainty caused by the pandemic situation, broken supply chains, and lack of human resources, it can be expected that SC managers are often affected by burnout, which leads to turnover intentions.

***Hypothesis 6:*** *The higher the level of burnout measured by the BAT, the higher the turnover intention measured on the TIS-6 scale.*

#### **4. Research Method and Sample**

The empirical study was conducted in 2021 (the period of the global COVID-19 pandemic) among manufacturing and service (logistics) companies operating in one of Europe's rapidly developing countries. The survey was divided into two stages. In the first stage (pilot study), one of the researchers conducted two free interviews with managers responsible for SCM. It aimed to learn about the specifics of the SC manager's work and its challenges and problems. The collected research material was analysed and discussed.

It became, together with the results of other studies on burnout, the basis for selecting the antecedents and intention turnover mentioned in Section 2 and the measurement tools indicated above (BAT, ERI, Carlson Scale, SCB-scale, OCQ and TIS-6). The second stage was an online survey. The survey was mailed through the Association of Supply Chain, Logistics and Purchasing Managers database. Respondents in the survey were SC managers and logistics managers responsible for SCM.

The survey was sent to 670 respondents, and 102 completed questionnaires were received. Data from those questionnaires were subjected to statistical analysis (descriptive statistics and Spearman's rank correlation) using Microsoft Excel and Statistica v.13.3.

Among the 102 respondents, 37 were women, and 65 were men (36% and 64%, respectively). The vast majority performed their job in headquarters – as many as 78 people (76%), and only 24 (24%) worked in divisions.

Regarding age, there were 24 persons between 26 and 35 years, 44 persons between 36 and 45 years, 29 between 46 and 55, and finally, 5 persons at age over 56 years. In terms of length of service as an SC manager, the largest number of respondents had been working for 6 to 10 years (42 people), followed by 11 to 15 years (26 people), 2 to 5 years (21 people) and 16 to 20 years (7 people). Only two respondents had less than a year of service, and 4 had more than 25 years of service.

More than half (58 SC managers) were married or in a relationship with a child or children under their care, 29 SC managers were in a relationship but childless, 10 people described themselves as single, and five were raising a child or children alone.

## **5. Findings**

### **5.1 The Level of Burnout**

The average BAT score in the core dimension in the studied group was 2.29. It can be described as good since it is still within the green range according to the standards set by the BAT authors (meaning no risk of burnout). This average score was almost the same for both genders: women 2.32 and men 2.28. The coefficient of variation for the standard deviation from the mean value was 0.29. The maximum (worst) and minimum (best) values were 1.30.

The dispersion of results was, therefore, large. We applied the cut-off point method to classify all outcomes, which has a more specific interpretation. It turned out that the BAT score in the core dimension for only 11,8% of the respondents (12 out of 102 people) indicated a very high risk of burnout (by the standards specified by the BAT authors). The result concerning the subsequent 19,6% of the respondents (20

out of 102 people) indicated a risk of burnout (orange level). 68,6% of the respondents (70 out of 102) had a score indicating no risk of burnout (green level).

### **5.2 Effort-Reward Imbalance and its Relationship with Burnout (H1)**

Most respondents, as many as 90 (88%), had a score below 1 in the ERI questionnaire, indicating an imbalance between effort and reward (this generally good situation is confirmed by the average score of all questionnaires, which was 0.59). 5 respondents (5%) had a score indicating an imbalance between effort and reward ( $ER > 1$ ). 7 people (7%) experienced a large imbalance ( $ER > 1.5$ ). The difference between women and men wasn't noticeable. The men's mean ER was 0.6, and the women's 0.56.

The hypothesis (H1) was tested using Spearman's rank correlation coefficient. It was 0.71, which indicates a positive relationship of medium strength, and the hypothesis (H1) has been confirmed: the higher the effort and reward imbalance ratio measured by the ERI questionnaire, the higher the level of burnout measured by the BAT questionnaire.

### **5.3 Work-Family and Family-Work Conflicts and their Relationship with Burnout (H2 and H3)**

Unlike in the BAT and ERI, on the Carlson Scale, no cut-off points determine the ranges of scores with a specific interpretation. It is only known that the higher the score, the worse it is (i.e., the greater the intensity of the conflict), with the minimum possible score for each of the two types of conflict being 9 and the maximum is 45. In the studied group, the score for the WFC was 23.07 and 21.48 for the FWC. If the theoretical average value of 27 for each conflict means a neutral level, it could be concluded that in the studied group, the intensity of conflicts is not great (especially for the FWC).

Hypothesis (H2) and hypothesis (H3) were tested using Spearman's rank correlation coefficients, which amounted to 0.49 for the WFC and 0.40 for the FWC. In both cases, this indicates a positive relationship of medium strength. It means that the hypothesis of the relationship between the WFC and occupational burnout has been confirmed: the higher the level of work-family conflict on the Carlson Scale, the higher the level of burnout measured by the BAT questionnaire and the higher the level of family-work conflict on the Carlson Scale, the higher the level of burnout measured by the BAT questionnaire.

### **5.4 Stress-Generating Customer Behaviours and the Relationship to Burnout (H4)**

The interpretation of the SCB-scale is analogous to the Carlson Scale. The higher the score, the more (more often) the respondents encounter stress-generating behaviours

of their customers. In the studied group of SC managers, the average score from all questionnaires was 36.85, i.e., it was almost equal to the neutral level of 36 points. Neutrality, in this case, means that the question about the occurrence of a certain stress-generating customers behaviour was, on average, met with the answer 'difficult to say (while alternative answers are: 'definitely not true', 'rather not true', 'rather true' and 'definitely true').

Individual respondents, however, experienced stress-generating behaviours of their customers to a very different degree. The best score (the lowest intensity of stress-generating customer behaviour) was only 12, while the worst (the highest intensity of stress-generating customer behaviour) was 59. The hypothesis (H<sub>4</sub>) was tested using Spearman's rank correlation coefficient. It was 0.34, which indicates a positive relationship of medium strength, and the hypothesis (H<sub>4</sub>) has been confirmed, the higher the stress-generating customer behaviour index measured by the SCB-scale questionnaire, the higher the level of occupational burnout measured by the BAT questionnaire.

### **5.5 Organizational Climate and its Relationship with Burnout (H5)**

The mean OCQ score was 151.18, a lower average level indicating that SC managers perceive and evaluate the organizational climate negatively. It is recommended that an in-depth analysis of the problem be conducted to take appropriate corrective and intervention measures.

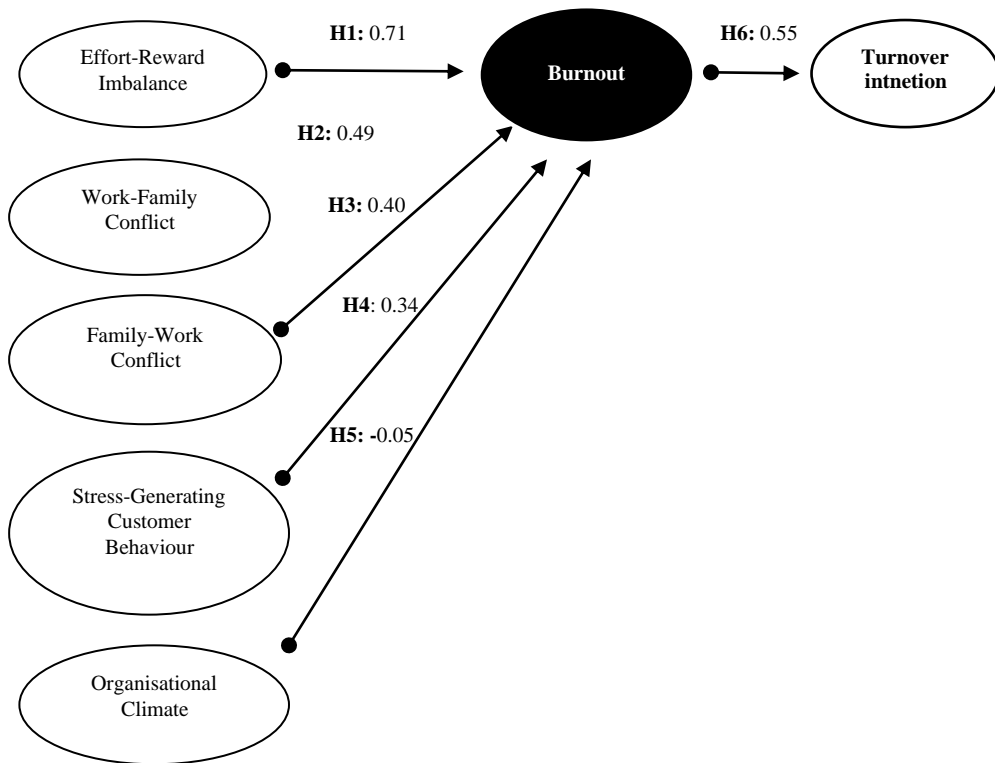
Hypothesis (H<sub>5</sub>) was tested using Spearman's rank correlation coefficient. It was -0.05, which indicates almost no relationship. It means the hypothesis (H<sub>5</sub>) has yet to be confirmed, there is no relationship between organizational climate measured by OCQ and burnout measured by the BAT questionnaire.

### **5.6 Turnover Intention because of Burnout (H6)**

The average score in the TIS-6 was 15.36 in the studied group, i.e., it was below the mid-range of possible results (ranging from 6 to 30 inclusive; the more, the worse). It was very similar for both sexes (15.32 for women and 15.38 for men). In the TIS-6 (as in the Carlson and SCB-scale), there are no cut-off values based on which the scores would be given a specific qualitative interpretation (as in the BAT and ERI).

They can only be described so that in the examined group, the turnover intention is (on average) slightly smaller than the average theoretical score resulting from the construction of TIS-6 (which can be understood as neither large nor small). The hypothesis (H<sub>6</sub>) was tested using Spearman's rank correlation coefficient. It was 0.55, which indicates a positive relationship of medium strength and means that the hypothesis (H<sub>6</sub>) has been confirmed: the higher the level of occupational burnout measured by the BAT, the higher the turnover intention measured on the TIS-6 scale.

Figure 1. Antecedents and consequences of burnout among studied SC managers



Source: Own collaboration.

### 5.7 Negative Influence of Burnout on Managers' and Performance

Regarding the influence of burnout of SC managers on job performance, we can deduct it from the results of BAT. As was said earlier, according to BAT model, there are four core dimensions of burnout, exhaustion, mental distance, cognitive impairment, and emotional impairment. Cognitive and emotional impairment is the most important because of its direct influence on the effectiveness of SCM and performance. Problems with concentration, comprehension, memory, problem-solving or decision-making express cognitive impairment). This type of disorder can be either weak or severe.

However, regardless of the degree, it is a serious problem if it affects the SC manager. It is especially true when the SC manager's role transforms due to new business and economic trends. The SC manager needs to focus more on, among other things, planning, risk management, smooth information flow, managerial and partner relationships, creative behaviour, or team decision-making, thus more on strategic management than operational management (Prajogo and Sohal, 2013).

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According to Giunipero *et al.* (2006), SC managers today must implement strategic supplier relationship management and strategic cost reduction, including taking into account the total cost perspective in supplier selection, as well as demonstrating a strategic or tactical approach to purchasing and support systems and collaboration in an integrated way.

Thus, the tasks and responsibilities faced by an SC manager in a turbulent environment require great resilience, mental strength, and knowledge and skills. Suppose he is affected by burnout, which will lead to cognitive impairment. In that case, the SC manager will be unable to SCM effectively or make decisions efficiently, which may lead to conflicts and lower achievements, including additional costs.

Decisions made under conditions of cognitive impairment that manifest as burnout are often wrong or delayed. In addition, this phenomenon is accompanied by such things as forgetfulness (e.g., a manager may forget to prepare reports, business meetings), difficulty in keeping up with conversations (e.g., a manager during a meeting may mentally disengage from the important activity being discussed), difficulty in finding oneself in familiar places (a manager may withdraw from relationships, communication), as well as loss of thought threads and loss of judgment (a manager is unable to resolve problems with business partners, employees effectively).

In such a situation, the SC manager cannot effectively carry out simple operational tasks, making numerous mistakes. Consequently, increasing strategic tasks can be a significant "challenge" for such a manager. Sometimes even a single mistake can expose the entire business and SC to serious losses, not only financially but also in terms of reputation, which may involve the loss of suppliers, customers, and colleagues.

Table 1 presents the results of the part survey dedicated to cognitive impairment. They indicate that only one in four SC managers admitted to making mistakes at work occasionally (the frequency of other symptoms of cognitive impairment is quite similar). The level of cognitive impairment in the surveyed sample is low (as well as the total burnout score), but we should remember that the more burned out manager is, the more mistakes at work she or he makes, and the more time it takes to her or him to do the job.

The effectiveness and efficiency of a manager burned out are also worsened by emotional impairment, which consists of the inability to control emotions, unintentional overreacting, getting upset, and being irritable and sad (Schaufeli *et al.*, 2020; Meisler, 2013). Management or decisions made under conditions of emotional impairment are generally not optimal, and irritation and anger worsen relationships with colleagues, superiors, subordinates, or business partners (customers and suppliers).

**Table 1.** Prevalence of cognitive impairment symptoms among SC managers surveyed

Specification	Trouble staying focused at work	Struggle to think clearly at work	Being forgetful and distracted at work	Trouble concentrating at work	Making mistakes in work because having mind on other things
<b>Never</b>	20%	25%	25%	21%	26%
<b>Rarely</b>	49%	49%	39%	47%	47%
<b>Sometimes</b>	<b>25%</b>	<b>22%</b>	<b>31%</b>	<b>29%</b>	<b>25%</b>
<b>Often</b>	6%	4%	5%	3%	2%
<b>Always</b>	0%	0%	0%	0%	0%
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>

*Source: Own collaboration.*

Burnout accompanied by employee turnover has an indirect negative impact on performance. A meta-analysis by Park and Shaw (2013) showed that turnover rates and organisational performance are negatively related. From the human capital point of view, turnover leads to loss of organizational memory and employees' knowledge, skills and abilities (Theriou *et al.*, 2020).

Moreover, turnover harms social ties and trust among people in organisation (Wynen *et al.*, 2018) and the morale of employees who decide to stay in it (Felps *et al.*, 2009). Although managers are highly specialized professionals, if they are affected by burnout caused by contemporary challenges in SCM, it can be reflected in performance.

## 6. Discussion and Conclusions

Of the 102 studied SC managers (including logistics managers responsible for SCM), only 12 were qualified to be considered at a high risk of burnout (based on BAT). 20 were fit to be considered at risk of burnout. The majority (almost 70%) could be regarded as at no risk of burnout. Thus, our study presents a somewhat different picture of manager burnout than many previous studies (Hamouche and Marchand, 2021; Wong and Laschinger, 2015; McCormack, 2014).

It may be a result of, among other things, the predominance the dominance of men, who are indicated to be more resistant to burnout, as well as the fairly young age of respondents and their seniority in this type of position (greater energy and motivation, including earning, the desire to face challenges and prove themselves personally) (Hamouche and Marchand, 2021; Gadinge *et al.*, 2010). The identified low risk of burnout among the SC managers surveyed is also interesting because of the study period.



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The global COVID-19 pandemic was occurring at the time, and opinions can be found that the pandemic caused additional pressure and increased stress among SC managers, leading in many cases to burnout and quitting (Sirtori-Cortina, 2022).

However, the analysis of the study material did not show such a trend among the SC managers surveyed. It may result from the abovementioned aspects (male dominance, young age and short tenure) and from ensuring good work organisation during such a turbulent period.

In our sample, effort-reward imbalance appeared to be the most important antecedent of burnout. Work-family and family-work conflict and stressful customer behaviour were also related to burnout (but less than effort-reward imbalance). In contrast, we found no relationship between the organisational climate level and the burnout level of SC managers. Lubrańska (2011) showed that, as a rule, the corporate environment influences job burnout.

At the same time, according to the researcher, there are significant differences in the level of burnout vs different organisational climate types. On the other hand, Zahn *et al.* (2013) showed that organisational climate can affect burnout but has no significant impact on reducing personal achievement. Therefore, it can be concluded that the respondents were, in principle, satiated from the work environment.

According to our study, burnout of SC managers is related to turnover intention. It is consistent with the results of other studies among managers (Wong and Laschinger, 2015; Meisler, 2013; Kinnunen *et al.*, 2008).

While admittedly, our survey did not identify a significant number of SC managers with a high risk of burnout, this does not mean that the problem does not exist. Indeed, indications are that more than 50% of companies are experiencing the COVID-19 pandemic, and supply chain disruptions expect to continue. Many supply chain professionals, including managers, will leave their jobs. It poses a huge risk and challenge to modern business (Sirtori-Cortina, 2022).

The increasingly turbulent environment and the challenges posed to SC managers in keeping up with trends (sustainability, technology, strategic approaches) (Asghar *et al.*, 2021), who must perform multiple roles simultaneously, plus pressure from various stakeholders, generate significant strain, particularly psychological, and lead to burnout. It, in turn, affects SCM ineffectiveness and achievements and ultimately quits.

Thus, as Wong *et al.* (2015) point out, companies "should monitor and address managers' workload by making sure that managers' requirements for their roles are reasonable and that they have the necessary discretion to balance the demands." It is a challenge for human resource management.

Advanced technology can also solve this problem. Then standard and operational processes can be carried out by technology, and the manager can focus on the strategic dimension of management.

In addition, it is worth paying attention to the proper preparation of future SC managerial candidates and retraining, to a greater extent, those already performing this function in soft skills and emotional intelligence. In this way, their resilience, primarily mental, can be developed or strengthened among SC managers. It will improve performance in a turbulent environment, ensure effectiveness in dealing with difficulties and conflicts, and reduce burnout and quits.

The results of our study expand the knowledge of the antecedents and consequences of SC managers' burnout (contribution to research in the field of SC professionals, managers' burnout). It is one of the first studies in the world on SC managers' burnout to use BAT (contribution to research methodology).

In addition, the study guides practitioners in preparing SC managers to perform their function effectively in a dynamic and, in fact, different environment than in the past through developing and strengthening soft skills. Perhaps the statement that SC managers "can't solve problems as easily as they used to" will be a long way off (Sirtori-Cortina, 2022; McHugh, 1993).

Thus, supporting the functions and role of the manager in SCM is worthwhile because a burned-out manager is neither a good decision-maker nor a leader nor a "liaison."

The survey has sampling limitations. It is not random and representative of the studied country's entire population of SC managers. There is no empirically verified effect of burnout on reducing SCM effectiveness and achievements. In general, such a tendency is shown by the results of previous studies in the subject area.

Thus, this could be a direction for future research. In addition, our study indicates the impact of ascendancies holistically, mainly on turnover intention.

On the other hand, it would be worthwhile to deepen the research in this area by conducting interviews. It would then be possible to identify the specific problems and challenges that SC managers face or will face in the context of individual ascendents.

In the study, we have indirectly emphasized the relationship of competencies or capabilities to SCM effectiveness and their potential impact on reducing burnout. However, deepening the study in this area would be worthwhile, i.e., to indicate the relationship between them and a predisposition to burnout and quitting.

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