Article

Influence of the Covid-19 pandemic on mental workload and burnout of fashion retailing workers in Spain

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Abstract: This study analyzed the levels of mental workload and the presence of burnout on a sample of fashion retailing workers from Spain and its relationship with the actual Covid-19 pandemic by exploring Covid-19 pandemic predictors of burnout and mental workload. We established a prospective cross-sectional design. Participants (n = 360) answered an online survey including questions about sociodemographic data, perception of Covid-19, CarMen-Q questionnaire (workload), and MBI (burnout syndrome). We obtained data throughout October-November 2020. The results showed that participants exhibit deep concern about the Covid-19 pandemic and its influence at the work level. Although the mental workload was near the middle point of the scale, participants showed moderate to high burnout levels, revealing that the sample is at risk of experiencing higher burnout levels over time as the pandemic and associated economic crisis continue. The multidimensional regression analysis results indicated that environmental changes, work overload, somatic symptoms, insomnia, negative job expectations, and uncertainty constituted significant mental workload predictors. Insomnia, somatic symptoms, and negative job expectations constituted significant predictors for burnout. In conclusion, the uncertainty at work derived from the Covid-19 pandemic is harming the psychological wellbeing of fashion retailing workers in Spain.

Keywords: mental workload; burnout; Covid-19; pandemic; fashion retailing sector; Spain

1. Introduction

Nowadays, the term "healthy" has spread among the vast majority of organizations, in such a way that the central focus of these is no longer solely and exclusively the clients, but also the people who constitute the organization itself, that is, the employees. Due to this new perspective, companies are varying their course by changing human resources management, which will now focus on the psychosocial health of the people who make up the workforce to obtain beneficial results. It is necessary to consider this last point since it has been possible to verify the correlation that "good health" has with the social and economic benefits that the organization can have [1].

Globalization's effects are the constant change of workplace, which has forced organizations to adapt to the changing nature of the work context, the development of information and technological communication, and demographic changes. That is why, in Europe, Corporate Social Responsibility (CSR) has developed on a large scale in the last decade. There are several definitions to understand how CSR works within organizations [2]. Some authors define it as a concept by which companies integrate social and environmental concerns in their business strategies. Other authors expand this concept with the idea that there are two dimensions: internal and external. The first dimension deals

with practices regarding the employees' concerns about their wellbeing and health. On the other hand, the external dimension refers to the company's social environment, such as suppliers.

Over the last decade, fashion retailing in Spain has significantly increased its value in the market, reflected in the intensification in job offers, approximately 132,000, and its value-added by 4.1% in the manufacturing industry [3]. In 2019 fashion retailing suffered a 20% drop in revenue compared to 2007, and experts estimate an additional 35-40% drop in 2020, according to an EY (Ernst & Young) and The Boston Consulting Group study [4]. The impact caused by the Covid-19 pandemic on fashion retailing is immediate: more than 65,000 people from fashion retailing will lose their job due to the closure of sales points and the disappearance of smaller businesses [4]. The economic difficulties of recent decades and the emergence of large international competitors, added to the recent pandemic caused by the Covid-19 virus, have led to a tightening of the working conditions of workers in this sector and, consequently, to increase the prevalence of occupational diseases such as burnout, related to mental workload [5,6]. Mental workload is a multidimensional concept that implies the difference between a job's cognitive demands and an employee's cognitive skills [7]. Mental workload is task and person-specific and involves motivation, individual capacities, and performance [8].

On the other hand, the most accepted definition of burnout describes it as a "syndrome of emotional exhaustion and cynicism that frequently occurs among individuals who do people work of some kind" [9].   Thus, several studies have analyzed the effects of stress on professional selling employees [10,11], showing that stress is inherent to this sector due to its client-oriented nature. This type of stress can lead to adverse physical and psychological effects as burnout [12].

Recent studies have estimated that the psychological impact caused by the Covid-19 pandemic is like that of a catastrophe: 1 in 5 people will manifest depressive and anxious symptoms [13]. Over the last year, numerous studies have revealed these consequences in health sector workers worldwide. However, it is vital to know this impact on workers in other sectors to implement psychological prevention measures in these groups. The current pandemic has caused workers in continuous contact with other people to display changes in their daily tasks and in their work environment to adjust to the health prevention regulations. Also, environmental changes and performing uncommon tasks are well-known stressors correlated with burnout syndrome development [14].

Thus, several studies in the last year have studied the impact of the Covid-19 pandemic on healthcare workers' stress levels and burnout. Khasne et al. [15] showed that more than half (52%) of their healthcare workers' sample exhibited pandemic-related burnout. Chor et al. [16] found that 53% of their sample were experiencing burnout, and Matsuo et al. [17] showed that 31.4% of a sample of healthcare workers from Japan were experiencing burnout. Denning et al. [18] showed that 67.1% of healthcare workers from a multinational cross-sectional study were positive for burnout, among others. Several studies have also analyzed the predictors on the relationship between the Covid-19 pandemic and burnout, showing that work hours, work overload, being in close contact with people, anxiety symptoms, depression symptoms, emotional exhaustion, depersonalization, and insomnia are consistent predictors [18 - 22].

In Spain, Oliver et al. [23] conducted a survey to quickly assess the Spanish citizens' situation and perception on four areas related to the Covid-19 pandemic: their social contact behavior during the confinement, their economic impact, their work situation, and their health status. They found a significant economic impact of the covid-19 pandemic in small businesses as 47.3% of respondents working in small (1-9 workers) companies reported having been financially affected, and 19.4% reported facing insolvency at their work. Fashion retailing was the third most affected in terms of occupations, only behind hospitality and construction. 9.3% of the participants who had or were in danger of losing their job/business were working in fashion retailing (only 5.3% of participants who did not think they will lose their jobs working in fashion retailing).

As mentioned above, many studies analyzed the impact of the Covid-19 on healthcare workers' occupational health; however, there is no research, at less that we know, on the pandemic's impact on the occupational health of fashion retailing workers. Therefore, the present study aims to evaluate the levels of mental workload and burnout manifested by fashion retailing workers in the

context of the Covid-19 in Spain and determine which of several aspects of the pandemic are more determinant of the increase of mental workload and burnout. We expect that fashion retailing workers show similar results as mental health workers, such as similar predictors. It is necessary to highlight that it is difficult to find empirical studies analyzing the relationship between the Covid-19 pandemic and higher levels of mental workload levels, which, in our opinion, constitutes a novel contribution to current literature. The present study also evaluates uncertainty and negative job expectations as possible predictors in the relationship of Covid-19 pandemic and burnout and mental workload.

2. Materials and Methods

A prospective cross-sectional design was established, which involved a random sample of 360 fashion retailing workers. The sample's mean age was 32.48 years old, ranging from 19 to 56 years old, 31.7% males, and 68.3% were females. Regarding civil status, 56.9% are single, 37.2% are married or have a stable partner, and 5.9% are separated, divorced, or widowed. Only 21.7% of participants have children. Concerning education level, 68.6% have university studies, 11.7% high school studies, 11.1% middle-grade studies, and 8.6% secondary school studies. It was necessary to have an antiqueness in the job of at least six months to participate in this study: 19.7% have been on their companies between 1 and 2 years, 31.1% between 2 and 5 years, 21.7% between 6 months and 1 year, and 27.5% more than 5 years. Regarding job position, 41.7% are sales assistants, 26.4% store managers, 14.7% area managers, 6.9% assistant store managers, 3.1% heads of sales, 2.2% human resources technicians, 1.9% cashiers, 0.8% delivery drivers, 0.8% visual merchandising, 0.8% key account managers and 0.6% marketing assistants. Regarding the type of contract, 78.9% have an indefinite contract, 20.8% have a fixed-term contract, and 0.3% are freelance. With respect to sick leaves, 32.8% had periods of sick leave in the last year, reasons were: Covid-19 (11.4%), stress and/or anxiety (5.8%), musculoskeletal disorders (4.2%), gastric problems (2.5%), flu (1.9%), occupational accident (1.7%), surgery (1.7%), cardiovascular disorders (0.6%), pneumonia (0.6%), pregnancy (0.6%), cancer (0.3%), pharyngitis (0.3%), brain myelitis (0.3%) and traffic accident (0.3%).

Participants answered an online survey (administered throughout October and November 2020) that consisted of the following instruments:

Socio-demographical variables: Participants had to indicate their age, gender, educational level, civil status, if they have children or not, employment position if they have had any sick leave during the last year, cause of the sick leave, job antiqueness, and type of contract.

CarMen-Q: Mental workload questionnaire (*Cognitive Demands, Temporal Demands, Emotional Demands, Performance Demands*) [23] consists of 29 multiple choice response items. Item's response format is a Likert frequency scale of four alternatives in which 0 means never, 1 rarely, 2 often, and 3 always. The authors stated the items so that a higher score indicates a higher mental workload. CarMen-Q questionnaire contains the following subscales: The factor "cognitive demands" consists of 10 items related to the processing of complex information, difficulties in perceiving information, complex decision making, memory load, and the amount of information that needs to be taken into account to perform job tasks. The factor "temporal demands" is constituted by 7 items that ask for work rhythm, presence of annoying interruptions, or the possibility of taking breaks when the worker needs it. The factor "emotional demands" is formed by 7 items related to the job's emotional and health consequences. 5 items constitute the "performance demands" factor that asks about the performance requirements as the level of responsibility, required accuracy of responses, and error severity. In our sample, CarMen-Q had high reliability (Cronbach' α = 0.93).

MBI: Burnout Syndrome Inventory (*Emotional exhaustion, Depersonalization, Personal accomplishment*) [24,25], which consists of 22 multiple-choice response items, evaluated using a Likert scale with response options ranging from "never" (0) to "every day" (6). The questionnaire contains the following subscales: (1) *Emotional Exhaustion*, assess the experiences of being emotionally exhausted by the demands of work, (2) *Depersonalization*, evaluates the degree to which the employee shows attitudes of coldness and detachment that occur in the workplace, (3) *Personal accomplishment*, assess the feelings that the worker has of self-efficiency and fulfillment that occur in

the workplace. MBI meets enough requirements for both factor validity and internal consistency [24,25].   In our sample, MBI had good reliability (Cronbach' α = 0.82).

Perception of Covid-19: participants answered questions related to how they perceive the Covid-19 pandemic and how they think it affects or it has affected their job and their mental wellbeing. It consists of 8 multiple choice response items, with a Likert scale from "totally disagree" (0) to "totally agree" (5).   Items appear in Table 1.

This study was approved by the Ethics Committee of the authors research center obtaining a favorable report on September 2020 (Ref. 2019/20-022).

3. Results

First, we calculated descriptive statistics for all measures. To explore the influence of the perception of Covid-19 on mental workload and burnout, we computed seven multiple regression analyses, using the 8 items of the Covid-19 questionnaire as predictors and each of the dimensions of workload and burnout as dependent. We performed all statistical analysis using SPSS Statistical Package 25.0.

Table 1 shows the mean and standard deviation for all measures. The scores for the eight questions related to the influence of the actual Covid-19 pandemic denoted that participants exhibit deep concern about the Covid-19 pandemic and its influence at the work level. It has created uncertainty in their jobs and some physical and psychological changes. Scores for the four mental workload dimensions were near the middle point of the scale (range from 0 to 3). Performance demands obtained the highest mean scores. Participants exhibited moderate to high levels of burnout. It is necessary to highlight that scores that denote the presence of high burnout are 26 or more for *Emotional Exhaustion*, 9 or more for *Depersonalization*, and 34 or less for *Personal accomplishment*. Thus, we can assume that our sample is at risk of presenting high burnout levels as long as the pandemic and its effects remain present.

Table 1. Mean and standard deviation (*SD*) for all measures.

		Mean	*SD*
Covid-19	I am not worried about the Covid-19 pandemic	1.74	1.25
	The Covid-19 pandemic creates uncertainty in my job	3.99	1.35
	I have noticed physical changes (lack of sleep, muscle aches, irritability...) since the Covid-19 pandemic	3.46	1.49
	I fear that my work situation will be affected by the pandemic	4.25	1.15
	The Covid-19 pandemic has affected several aspects of my work activity	4.46	0.95
	Now I work more than before the Covid-19 pandemic	3.04	1.50
	The work environment of my work is not the same since the Covid-19 pandemic	3.74	1.35
	I think my work situation is going to get worse due to the Covid-19 pandemic	3.88	1.26
Mental workload	Cognitive demands	1.59	0.63
	Emotional demands	1.44	0.74
	Temporal demands	1.59	0.66
	Performance demands	1.94	0.61
Burnout	Emotional exhaustion	25.90	12.36
	Depersonalization	8.06	6.20
	Personal accomplishment	35.45	6.98

Table 2 shows the results of multiple regression analysis. We obtained significant results for all dependent variables (p <.01). *Cognitive Demands* were significantly associated with the items "Now I work more than before the Covid-19 pandemic" and "The work environment of my work is not the

same since the Covid-19 pandemic", showing higher workload. *Emotional Demands* were significantly associated with several items, especially with "I have noticed physical changes (lack of sleep, muscle aches, irritability...) since the Covid-19 pandemic", "I fear that my work situation will be affected by the pandemic," and "Now I work more than before the Covid-19 pandemic". *Temporal Demands* were significantly associated with the item "Now I work more than before the Covid-19 pandemic". *Performance Requirements* were significantly associated with the items "Now I work more than before the Covid-19 pandemic" and "The work environment of my work is not the same since the Covid-19 pandemic".

Table 2. Results of multiple regression analysis of Covid-19 perceptions on each dimension of mental workload and burnout.

	Cognitive demands		Emotional demands		Temporal demands		Performance demands		Emotional exhaustion		Depersonaliza-tion		Personal accomplish-ment	
	β	p	β	p	β	p	β	p	β	p	β	p	β	p
I am not worried about the Covid-19 pandemic	0.04	0.47	-0.04	0.43	-0.03	0.50	0.01	0.91	0.03	0.46	0.08	0.13	0.02	0.74
The Covid-19 pandemic creates uncertainty in my job	0.05	0.40	0.11	0.03	0.11	0.06	0.16	0.01	0.04	0.45	-0.02	0.74	-0.05	0.47
I have noticed physical changes (lack of sleep, muscle aches, irritability...) since the Covid-19 pandemic	-0.01	0.86	0.34	0.00	0.07	0.22	-0.07	0.24	0.37	0.00	0.28	0.00	-0.14	0.02
I fear that my work situation will be affected by the pandemic	0.12	0.09	0.27	0.00	0.15	0.03	0.10	0.16	0.22	0.00	0.21	0.00	0.08	0.26
The Covid-19 pandemic has affected several aspects of my work activity	0.02	0.72	-0.01	0.92	0.02	0.74	0.04	0.49	-0.01	0.82	-0.03	0.62	0.11	0.10
Now I work more than before the Covid-19 pandemic	0.26	0.00	0.19	0.00	0.35	0.00	0.19	0.00	0.14	0.00	0.07	0.20	0.11	0.04
The work environment of my work is not the same since the Covid-19 pandemic	0.20	0.00	0.16	0.00	0.09	0.12	0.21	0.00	0.02	0.71	0.03	0.65	0.07	0.25
I think my work situation is going to get worse due to the Covid-19 pandemic	-0.05	0.44	0.16	0.01	0.07	0.31	-0.02	0.72	0.24	0.00	0.19	0.01	-0.16	0.02
R		0.36		0.56		0.43		0.33		0.50		0.35		0.22
R^2		0.13		0.31		0.19		0.11		0.25		0.12		0.05
F		6.55		19.95		10.08		5.37		14.58		6.03		2.17

The results indicate that because of Covid-19, there has been an increase in workload, which is associated with greater cognitive, emotional, temporal, and performance demands. Environmental changes, somatic symptoms, insomnia, negative job expectations, and uncertainty also constituted significant mental workload predictors. The participants' perception of the Covid-19 influence on their jobs were most associated with *Emotional Demands* (R^2 = 0.31) than to the other workload dimensions.

Emotional Exhaustion was the burnout dimension most associated with the participants' perception of the Covid-19 (R^2 = 0.25). *Emotional Exhaustion* was principally associated with the items "I have noticed physical changes (lack of sleep, muscle aches, irritability...) since the Covid-19 pandemic" and "I think my work situation is going to get worse due to the Covid-19 pandemic". *Depersonalization* was significantly associated with the items "I have noticed physical changes (lack of sleep, muscle aches, irritability...) since the Covid-19 pandemic".

According to multiple regression analysis results, insomnia and somatic symptoms constituted a strong predictor for burnout. They are associated with the two subscales *Emotional Exhaustion* and

Depersonalization, from the MBI. In general, negative job expectations constituted a significant predictor for mental workload and burnout, especially regarding emotional issues.

4. Discussion

The present study showed that the Covid-19 pandemic affects fashion retailing employees' mental workload and plays a vital role in the presence of burnout syndrome. The actual concern about the pandemic, the negative future expectations about their job, the uncertainty it causes, and how it has changed employees' daily work, physical wellbeing, and work environment leads to higher mental workload levels and correlates with the presence of burnout syndrome. Even though results showed that participants exhibit moderated mental workload levels and indicated that participants were at high risk of developing severe burnout syndrome shortly. These findings have important theoretical and practical implications as they point out that the Covid-19 pandemic is negatively affecting fashion retailing employees' mental wellbeing.

Several studies along this year have studied the impact of the Covid-19 pandemic on healthcare workers' mental health [26]. This study shows that the current pandemic directly impacts cognitive, emotional, performance, and temporal demands and in the presence of burnout syndrome in workers who carry out their work in close contact with people. Thus, the case of customer-facing staff from fashion retailing is consistent with similar studies on healthcare workers [15 – 18]. According to current literature, somatic symptoms and insomnia constituted predictors of burnout [18 - 22]. However, environmental changes, work overload, uncertainty, and negative job expectations also constitute predictors for mental workload. These findings have a significant theoretical implication. This study points out that the uncertainty and negative future expectations about their job caused by the Covid-19 pandemic can also predict burnout and mental workload.

It is also necessary to highlight that this study points out that the emotional dimension was the most affected by the participants' perception of the Covid-19: emotional exhaustion and emotional demands are associated with insomnia and somatic symptoms, negative job expectations, uncertainty, and work overload. According to several studies, negative and passive emotions and emotional exhaustion predict lower in-role and extra-role performance [27], productivity loss [28,29], and lower work attitudes [30]. They are also associated with depression, anxiety, and impaired emotional functioning [18, 31 – 34].

The present study has practical implications, as well. One important recommendation for fashion retailing companies is to monitor the levels of mental workload and burnout in their employees and implement psychological prevention measures to avoid severe burnout syndrome or the increase to alarming levels of mental workload: (1) control of work organization, and the main elements that generate discomfort in the workforce, (2) involve employees in decision-making, (3) promote motivation and a positive work environment, (4) promote social support among the workforce, (5) avoid the perception of urgency and pressure on employees, (6) properly organize tasks, (7) provide some autonomy to workers, (8) avoid excesses or errors in the information transmitted to workers, (9) vary the levels of complexity in the tasks and (10) schedule enriching tasks. Also, another necessary recommendation for fashion retailing companies is to efficiently manage the negative job expectations of their workforce by (1) renegotiating their contracts in case of temporary closure, (2) ensure their permanence for a minimum period of 6 months after the completion of the Record of Temporary Employment Regulation (RTER), and (3) to ensure the viability of a second RTER based on how sales evolve in the reopening phase. More efficient management of the psychological, physical, and environmental changes caused by the pandemic is essential since the exposure to these stressors has been remarkable throughout these months. Thus, another recommendation for companies is to improve the fit between the organization and the employees to better adapt to the work environment: (1) make existing tasks and new demands more flexible among the entire workforce, (2) make opening hours more flexible and (3) make working hours more flexible. Last, fashion retailing companies should implement emotional protection measures: (1) encourage the management of emotions through training in relaxation techniques and

handling stressful situations, (2) facilitate common spaces for communication, (3) promote motivation and a positive work environment, and (4) promote social support among the workforce.

This study has limitations. Since we did not assess the baseline level of burnout before the pandemic, we could not compare prevalence changes. Further studies focusing on both identification and interventions workers from other sectors other than healthcare to prevent and reduce the risk of burnout are needed.

5. Conclusions

Multiple studies have analyzed the effects of Covid-19 on the occupational health of healthcare personnel, however, until now these effects have not been analyzed in other professional groups which, although in a less direct way than healthcare workers, have also been seen affected by the pandemic. Because it is a very important sector in the Spanish economy and because its work is also carried out in direct contact with people, in this study we analyzed the levels of mental workload and burnout on fashion retailing workers from Spain in the actual context caused by Covid-19 pandemic. In general, we found mean scores of mental workload near the middle point of the scale and moderate to high burnout levels, revealing that the sample is at risk of experiencing higher burnout levels over time as the pandemic and associated economic crisis continue. In this sense, it is convenient to gather more data in the following months to monitor the occupational health of these workers.

Insomnia, somatic symptoms, job uncertainty and negative job expectations constituted significant predictors for burnout and mental workload, and very especially in relation to the emotional dimensions of both constructs (emotional exhaustion of burnout and emotional demands of the mental workload). As the main conclusion, the uncertainty at work derived from the Covid-19 pandemic is harming the psychological wellbeing of fashion retailing workers in Spain, like with healthcare personnel. So, fashion retail companies must monitor the mental workload and burnout levels of their employees and implement prevention strategies to avoid severe burnout syndrome or the increase in mental workload to alarming levels.

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