

# Psychosocial risks in food processing establishments related to burnout syndrome

## Summary

Examine psychosocial risks in the food sector of Cartagena, Colombia, focused on the processing, transformation and quality control of food, with the purpose of proposing preventive strategies to mitigate burnout syndrome. A mixed methodology will be used, integrating quantitative and qualitative approaches through the application of questionnaires and semi-structured interviews. Variables such as job demands, the degree of control over work and the manifestation of burnout symptoms will be explored. The results obtained will allow the predominant risk factors to be identified and will facilitate the design of specific interventions adapted to the particularities of the sector. The mental health and well-being of workers in the food processing, transformation and quality control sector in the city of Cartagena will be improved by these measures, while providing valuable information for future research in the field of safety and health at work. In summary, this study aims to provide a comprehensive view of the psychosocial risks present in the food sector, underlining the importance of addressing these challenges to foster a healthier, more productive and sustainable work environment in the long term.

**Keywords:** psychosocial risks, burnout syndrome, mental health, occupational well-being, food sector

Volume 15 Issue 4 - 2024

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**Received:** July 16, 2024 | **Published:** August 21, 2024

## Introduction

The need to conduct research on burnout syndrome in the food processing, transformation and quality control sector in Cartagena, Colombia, is imperative due to the little information on the issue that characterizes this study. Although burnout syndrome is an occupational disease recognized by the WHO and widely studied in sectors such as health and education,<sup>1,2</sup> there is a significant lack of research that addresses its impact on other economic sectors including food. This knowledge gap is worrying, given that the productivity and cost-effectiveness demands of the global economy affect all workers, not just those in constant contact with people.<sup>3</sup>

Identify, through documentary sources, the psychosocial risk factors present in the work environment of food processing, transformation and quality control that may generate the appearance of symptoms triggering burnout syndrome in workers in the sector in question. These factors include the physical conditions of the work environment, interpersonal relationships, salary compensation, payroll benefits, and organizational culture.<sup>4</sup>

The research will also focus on specific variables such as the physical workspace (processing plant, kitchens, laboratories and food outlets), the social dynamics between staff, workloads, and the pressure to meet quality and safety standards food.<sup>5</sup>

The magnitude of the problem is considerable, since burnout syndrome manifests itself through depersonalization, fatigue, emotional exhaustion and decreased work performance, seriously affecting the quality of life of workers and even leading to fatal consequences.<sup>6</sup> In terms of epidemiology, the prevalence of burnout in sectors not traditionally studied, such as food, is still uncertain, which underlines the need for research. Geographically, this research will focus on Cartagena, considering its sociocultural and economic particularities, which can influence the work environment and the experience of workers.<sup>7</sup>

The importance of this research lies in its potential to fill gaps in knowledge about how psychosocial risk factors in a specific work environment may contribute to the development of burnout syndrome. It will also allow us to evaluate whether current solutions and knowledge are applicable to this new context or if new strategies are needed.<sup>8</sup> We aim to generate knowledge that is useful and applicable to improve public health and occupational safety in the food sector of Cartagena by addressing these aspects. We hope that its results can be generalizable to other similar regional contexts.<sup>9</sup>

“The evaluation of Psychosocial Risks in the Processing, Transformation and Quality Control of Food in Establishments influences the appearance of the symptoms that trigger Burnout Syndrome” is based on several crucial aspects that address the importance and relevance of the topic.<sup>1</sup> Firstly, the identification of the research problem responds to the prevailing need to understand and address psychosocial risks in the specific work environment of this sector in Cartagena. This economic sector, although vital to the local economy, faces unique challenges that can impact the mental health and comprehensive well-being of workers.<sup>2</sup>

The psychosocial risk factors present in this work environment are essential to implement prevention and control strategies for burnout syndrome, thus benefiting both workers and companies in the sector.<sup>3,4</sup> This initiative seeks to contribute to the understanding and addressing of an occupational health and safety problem that affects a specific sector of the working population in Cartagena. By analyzing and evaluating psychosocial risks in food processing, transformation and quality control, practical and applicable knowledge will be generated that can serve as a basis for future research and health and safety policies in the region.<sup>5,6</sup>

From the point of view of academic training, this project offers an invaluable opportunity to reflect on the possibility of identifying the symptomatology that triggers burnout syndrome in workers who do not have direct contact with people. This is crucial, given that there is

abundant state of the art related to burnout syndrome in professions such as teaching, health services personnel, and direct client care.<sup>7,8</sup> Strengthens the importance of the intersection between mental health and the work environment, enriching the understanding of master's students in occupational safety and health about the complexity of occupational risks. Their impact on the quality of life of workers in the sector Cartagena food.<sup>9,10</sup>

The food processing, transformation and quality control workers in the city of Cartagena, who will be able to benefit from preventive measures designed to mitigate the effects of burnout on their overall health and well-being. Likewise, employers and public policymakers will have access to detailed, evidence-based information that allows them to make informed decisions to improve working conditions and promote a healthy work environment.<sup>11,12</sup>

The proposal lies in providing specific investigative information in the field of food processing, transformation and quality control and in occupational health and safety in the city of Cartagena. By providing data and analysis on psychosocial risks in this setting, new knowledge will be generated that can significantly contribute to the advancement of the discipline and serve as a reference for future studies in similar areas.<sup>13,14</sup> In summary, this project is justified by its relevance and pertinence to address a problem of safety and health at work in a specific sector of the working population of Cartagena, as well as by its potential to benefit workers, employers, and science in general through the generation of knowledge and the implementation of practical measures to prevent burnout in the food industry.

## Related studies

Burnout syndrome has been considered in many professions, the most relevant being those that directly care for people. In the case of workers in the health sector, Juárez-García et al.,<sup>15</sup> conducted a study in 2014 on burnout syndrome in health personnel in Mexico, using a sample of 500 health professionals through random sampling. The methodology used was quantitative, through structured surveys. The results showed that 52% of the participants presented high levels of burnout, concluding that work overload and lack of organizational support were determining factors for the development of this syndrome.

In the study titled "Organizational Climate and Burnout Syndrome in Social Workers of a Service Company Lima 2023",<sup>16</sup> Díaz and Paredes evidenced significant stress among social workers, making it difficult to carry out their functions within a work environment. Inappropriate this research, which used a sample of 20 social workers through non-probabilistic sampling, used a quantitative methodology with structured surveys to evaluate the organizational climate and levels of burnout. The results showed a low, inverse correlation between the variables, suggesting that an optimal work environment can significantly reduce burnout indices.

Another relevant study is "Burnout Syndrome and Work Performance in Police Officers of the Homicide Area of the DIVINER, Chiclayo 2023".<sup>17</sup> López and Hernández focused on determining the relationship between burnout syndrome and job performance in police officers. With a sample of 40 personnel obtained by simple random sampling, the research applied a quantitative methodology with surveys and statistical analysis.

The results showed a direct and significant correlation between burnout syndrome and variables such as sex and family burden, and an inverse correlation with age and length of service. A high level

of burnout was found in the male population (82.5%), negatively affecting their work performance.

In the study titled "Intervening Labor Variables, Burnout Syndrome, Social Support and Self-Esteem in Grocery Store Workers in the Municipality of Zapopan, Jalisco, Mexico",<sup>18</sup> Ramos surveyed 209 workers using stratified random sampling. The methodology used was quantitative, with surveys and multivariate analysis. The prevalence of burnout syndrome was 38.8% for emotional exhaustion, 46.4% for low achievement and 16.7% for depersonalization, with a total prevalence of 68.4%. The study concluded that social support and self-esteem are protective factors against burnout. In a different context, the study titled "Factors Contributing to Burnout in Healthcare Professionals: A Comparative Study in Spain and Portugal",<sup>19</sup> González et al. investigated the prevalence of burnout syndrome in 500 health professionals from both countries through random sampling. Using a quantitative methodology with surveys and factor analysis, the study found that the factors Risk factors include work overload and lack of organizational support. The results indicated that 45% of respondents in Spain and 42% in Portugal showed high levels of burnout.

In a cross-national study titled "Burnout among educators: A Cross-National Study in the United States and Canada",<sup>20</sup> Smith and Brown investigated the prevalence of burnout in 600 educators from both countries, using stratified random sampling. The quantitative methodology included surveys and multiple regression analysis. The results showed that 50% of educators in The United States and 48% in Canada presented symptoms of burnout. The main conclusions pointed out the need for educational policies that promote the well-being and mental health of educators.<sup>21</sup>

## Aspects of burnout syndrome

Burnout syndrome, also known as "burnout syndrome" or "job burnout", constitutes a set of physical, emotional and mental symptoms that result from prolonged exposure to chronic stress in the workplace.<sup>22</sup> This syndrome was initially described by psychologist Herbert Freudenberger in the 1970s and has been the subject of study in various fields, especially in work and health psychology.<sup>23</sup>

This condition consists of a chronic adaptive disorder, associated with inadequate coping with the psychological demands of work, which alters people's quality of life.<sup>24</sup> P. Gil-Monte defines it as: "a response to chronic work stress made up of negative attitudes and feelings towards the people with whom one works and towards one's own professional role, as well as the experience of being exhausted." Concepts such as fatigue, failure, demotivation, interpersonal relationships in work environments, physical, mental and emotional discomfort associated with workers serve as references to determine Burnout Syndrome, the symptoms of this condition and employees in economic sectors with greater vulnerability to suffer from the syndrome.<sup>25</sup>

The symptoms of the syndrome include lack of concentration, mental, physical and emotional exhaustion, irritability, and demotivation. The effects of the syndrome produce low work performance in the worker, inadequate interpersonal relationships in work environments, pessimism, and difficulties in working as a team.<sup>26</sup>

It has been shown that burnout syndrome has a greater incidence in workers who respond to the care of people or those who work for third parties.<sup>27</sup>

## Burnout syndrome is characterized by three main components

**Emotional exhaustion:** Refers to a feeling of extreme tiredness and emotional exhaustion that affects both physically and psychologically. Individuals experience chronic fatigue, difficulty concentrating, irritability, and a decreased ability to cope with the demands of work and other responsibilities.<sup>28</sup>

**Depersonalization:** This component manifests as a cynical, distant, and depersonalized attitude toward work, coworkers, customers, or service users. Individuals may adopt a negative attitude, indifference, or contempt towards the people with whom they interact in the work context, which can affect the quality of interpersonal relationships.<sup>29</sup>

**Decreased personal accomplishment:** Refers to a negative perception of oneself in relation to work, as well as a decrease in the sense of achievement and job satisfaction. Individuals experience a sense of ineffectiveness, low self-esteem, and a loss of interest in work tasks, which affects their motivation and commitment to work.<sup>30</sup>

It is essential to highlight that burnout syndrome should not be confused with common work stress. While job stress can be a temporary response to stressful situations at work, burnout is a more chronic and prolonged state that can have serious consequences for the physical, emotional and mental health of the affected individuals.<sup>31</sup>

Recognizing the symptoms of burnout and addressing them appropriately is essential to prevent its adverse effects on workers and promote a healthy and productive work environment.

## Symptoms and manifestations of burnout

Burnout syndrome, a condition that affects individuals exposed to chronic work stress, manifests itself through a series of symptoms and manifestations that impact the physical, emotional and mental health of those affected.<sup>32</sup>

Below are the common symptoms of burnout syndrome from four levels:

### Psychosocial level

1. Deterioration of interpersonal relationships
2. Depression
3. Cynicism
4. Anxiety
5. Irritability
6. Difficulty concentrating
7. Interpersonal distancing

The aforementioned behaviors lead to high-risk behaviors such as gambling, the consumption of psychoactive substances and behaviors leading to suicide, among others.<sup>33</sup>

### Emotional level<sup>34</sup>

1. Fatigue
2. Impaired feelings of self-actualization

### Physical level<sup>35</sup>

1. Insomnia
2. Cardiovascular impairment

3. Ulcers
4. Weightless
5. Migraines
6. Muscle pains
7. Gastrointestinal disorders
8. Allergies
9. Asthma
10. Chronic fatigue
11. Problems with menstrual cycles (female gender)
12. Brain damage

### Job level<sup>36</sup>

1. Decreased productivity
2. Decreased quality of work
3. Deterioration of interpersonal relationships
4. Constant labor conflicts
5. Absenteeism
6. Low threshold to withstand pressure
7. This part was taken from Integral

## Below are the manifestations of the most relevant symptoms of burnout syndrome:

One of the most prominent symptoms of burnout is physical and emotional exhaustion. Affected individuals experience a constant feeling of tiredness and fatigue, even after adequate periods of rest. This exhaustion is reflected in a lack of energy, difficulty concentrating and completing tasks, as well as a decrease in motivation and enthusiasm for work. Mood changes: Burnout can cause significant mood changes, such as irritability, frustration, anxiety, sadness, and hopelessness. These changes can interfere with the ability to relate effectively to others and handle stressful situations.<sup>37</sup>

**Depersonalization:** Another characteristic manifestation of burnout is depersonalization, which refers to the adoption of a cynical, distant and dehumanized attitude towards work and work relationships. Affected individuals may become indifferent or negative toward others, negatively affecting interpersonal relationships at work and outside of it.<sup>38</sup>

**Decreased personal accomplishment:** Burnout leads to a decrease in satisfaction and sense of accomplishment at work. Those impacted may experience feelings of ineffectiveness, low self-esteem and a sense of stagnation in their professional career, resulting in a loss of interest in work tasks and a lack of motivation to advance, along with physical health problems, as burnout It can manifest physically with symptoms such as headaches, gastrointestinal problems, muscle tension, sleep disorders, and increased susceptibility to illnesses such as colds and flu.<sup>39</sup>

**Difficulties in interpersonal relationships:** The negative mood and attitude associated with burnout can interfere with both work and personal interpersonal relationships. Individuals may become more confrontational, isolated, or less willing to collaborate with others. Related to this, poor work performance highlights how decreased energy, lack of concentration and loss of motivation can lead to

poor work performance.<sup>40</sup> Affected individuals may have difficulty fulfilling their responsibilities and achieving their professional goals, which in turn may lead to more stress and exacerbate burnout symptoms. Several crucial aspects that address the importance and relevance of the evaluation of psychosocial risks in food processing related to burnout syndrome<sup>41</sup>

Burnout syndrome, a phenomenon associated with chronic stress in the workplace, has emerged as a major concern in various industries around the world. This condition is characterized by physical, emotional, and mental exhaustion that results from prolonged exposure to stressful and demanding work situations. Although burnout can impact workers in different sectors, its impact is especially relevant in highly demanding areas such as food processing, transformation and quality control, where the pressure to comply with quality standards, production deadlines and regulations health problems is constant, accompanied by low salaries and exhausting work hours.<sup>42</sup>

## Conclusions and recommendations

Distancing, irritability, cynicism, fatigue, boredom, progressive loss of idealism that make the individual emotionally exhausted with feelings of frustration, incompetence, guilt and negative self-esteem are the first signs of this condition that, even in incipient phases, begin to appear in routine of the operator.

The company is the one that must organize the work and control its development. It is responsible for training the employee, defining and making the organizational chart very clear so that conflicts do not arise, specifying schedules, vacation shifts. In addition to this, to achieve the percentage of personal fulfillment in the area's operators, it is recommended to encourage employees. Workers through activities that improve the work environment provide quality material for the performance of their duties and propose achievable objectives to workers.

Company managers of these types of companies should be instructed to consider how to interact and work with their subordinates and ensure a healthy work environment, where workers have access to necessary resources and organizational support. Policymakers must take into account that there is an urgent need to establish safety and prevention strategies, as well as to promote appropriate educational programs that can reduce psychosocial conditions such as burnout and other associated disorders.

## Acknowledgments

None.

## Funding

None.

## Conflicts of interest

The authors declare that there is no conflict of interest.

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