



WORK STRESS AND COPING MECHANISM AMONG FOOD DELIVERY BOYS: UNRAVELING HEALTH CONCERNS IN THE INDUSTRY

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Abstract

The food delivery industry is the fastest growing industry and its employees are mainly the delivery boys exposed to many work-related health issues, which are often ignored and the reason for a chronic or acute illness that in succession impacts their lives, finances, and personal life. The very nature of the work contributes to health risks due to musculoskeletal discomfort, psychological stress, and the pressure for delivering on time. An increasing number of injuries, accidents, and occupational-related disorders are experienced by them. A study was hence conducted among 120 food delivery boys (18 - 40 years) to study the work-related stress factors and recommend ergonomics solutions to alleviate them. A self-constructed and validated questionnaire was used to elicit demographic and work-related information, and the Quick Exposure Checklist to collect the data on their occupational health. The average age of the sample is 24.8 years. There is an urgent need for positive intervention methods to reduce occupational work stress. Ergonomics and occupational health studies can greatly benefit food delivery boys by addressing their physical and mental well-being, improving their work conditions, and reducing the risk of work-related injuries

Keywords : Ergonomics, Food delivery, Occupational Health, Work related stress and Work safety .

INTRODUCTION: Food delivery has become an integral part of our daily lives, with goods being transported globally regularly. This sector has witnessed significant evolution, particularly with the advent of smart technology and user-friendly interfaces. Food delivery services have gained immense popularity, and the industry is experiencing rapid growth (Order Meal, 2022). However, behind the convenience lies a multitude of challenges faced by food delivery boys, including manual material handling, time constraints, financial implications, and increasing work-related stressors.

Food delivery boys are responsible for delivering orders promptly while carrying heavy loads, often continuously. They face the pressure of meeting delivery deadlines and encounter risks such as falls, leading to potential financial repercussions for damaged or lost items. Alongside these physical challenges, they also encounter disrespectful or misbehaving clients, further adding to their work-related stress.

Following the COVID-19 pandemic, delivery associates working for e-commerce retailers and food delivery apps became essential frontline workers, providing vital services across the country. Despite their unwavering dedication, delivery boys often face the wrath of customers who fail to recognize the challenges they encounter. These challenges include uncertainty about their responsibilities, career prospects, and increasing work-related demands.

The health concerns of food delivery boys within the e-commerce industry have drawn the attention of researchers. Studies such as Nasreen A. et al.'s assessment of workers in the e-commerce industry (reference) have aimed to explore work-related stress and coping mechanisms among individuals in the food delivery and kitchen sectors. The findings highlight the impact of occupational stress on employees' personalities and overall health (Ahmad & Ashraf, 2017).

The human, social, and economic costs associated with poor occupational health have long been a concern at various levels, from individual workplaces to national and international contexts. Many of these health concerns are preventable, given the recognition and implementation of known and available measures and methods. Therefore, this study aims to address and reduce work-related risks among food delivery boys by examining work stress factors and identifying effective coping mechanisms.

By conducting this study, the researchers hope to shed light on the pressing health concerns faced by food delivery boys within the e-commerce industry. Furthermore, the study aims to identify strategies and interventions that can improve their well-being and promote a safer and more supportive work environment. Ultimately, the findings of this research have the potential to benefit not only the food delivery workforce but also the e-commerce industry as a whole by fostering healthier work conditions and enhancing overall job satisfaction.

I. RATIONALE: The study on work stress and coping mechanisms among food delivery boys is important and justified. The Food delivery boys face unique work-related challenges and stressors, such as long working hours, high workload, time pressure, traffic congestion, and customer demands. These factors can significantly impact their physical and mental well-being. Understanding the nature and extent of work stress experienced by food delivery boys is crucial for identifying potential health risks and designing appropriate interventions to promote their occupational health and well-being.

Work stress can have a profound impact on job performance and productivity. Food delivery boys who experience high levels of stress may face difficulties in maintaining efficiency, accuracy, and customer satisfaction. By studying work stress among food delivery boys, we can gain insights into the factors that affect their job performance and identify coping mechanisms that can enhance their ability to handle work-related stressors effectively. Work stress has been linked to various mental health issues, including anxiety and depression. Food delivery boys, who often work in high-pressure environments and face demanding schedules, may be particularly vulnerable to these mental health challenges. Investigating the impact of work stress on their mental well-being can help identify the need for mental health support and develop appropriate coping strategies to mitigate these risks.

Understanding the coping mechanisms employed by food delivery boys to manage work-related stress is essential. By identifying effective coping strategies, such as social support networks, time management techniques, or stress-reduction activities, we can provide recommendations and interventions to enhance their resilience and ability to cope with work stress effectively. This can have long-term benefits for their overall well-being and job satisfaction.

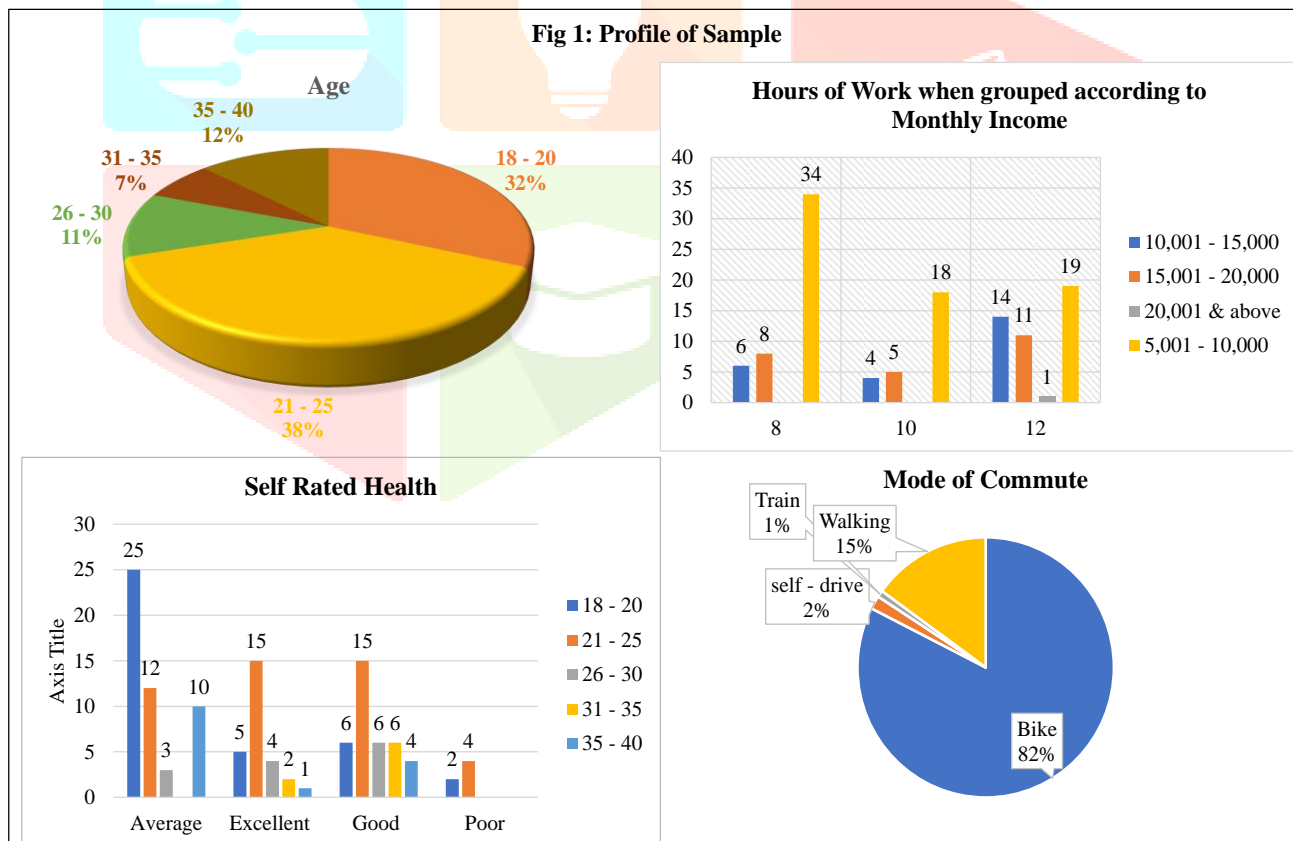
In summary, the study on work stress and coping mechanisms among food delivery boys is justified based on the significance of their occupational health and well-being, the implications for job performance and mental health, the need for effective coping strategies, the development of occupational health and safety guidelines, and the potential impact on the food delivery industry. By addressing these aspects, the research aims to contribute to the improvement of work conditions, resilience, and overall well-being of food delivery boys.

II. SPECIFIC OBJECTIVES: The specific objectives of the study are to (i) understand the demographic profile of employees of Food Delivery Services; (ii) examine the job stress factors and the coping mechanism of the employees of Food Delivery Services; and (iii) suggest ergonomics interventions protect occupational health.

III. METHODOLOGY: A survey-based exploratory study was conducted among 124 randomly selected food delivery boys, from Mumbai city and its suburbs. A self-constructed validated Questionnaire was employed to collect data via a structured (one-on-one) interview. The self-constructed Questionnaire consisted of three sections, which included questions on the demographic profile, work-related information, and The Work Stress Questionnaire (WSQ - Kristina Holmgren, 2008). The 124 participants belonging to different Food delivery companies like Swiggy, Zomato, Zepto, Uber, and other restaurants were contacted for a pre-fixed interview. Once they signed the informed consent, the and informed consent was signed the data was collected.

The Work Stress Questionnaire (WSQ) has been designed specifically for the early identification of people at risk for sick leave due to work-related stress. The questionnaire is developed in the context of primary health care, and from the perspective of the sick-listed person. The WSQ consists of 21 main questions on perceived stress due to indistinct organization and conflicts, individual demands and commitment, influence at work, and work interference with leisure time (The development of the Work Stress Questionnaire (WSQ) | University of Gothenburg (gu.se)). The data so collected were coded and systematically analyzed using simple statistics such as mean and percentages.

IV. RESULTS AND DISCUSSION: The demographic profile helps the researcher to better understand the background characteristics of the participants. The demographic profile includes age group, monthly income, self-rated health status, mode of commute to work, marital status, and work experience.



The majority of the participants 84 (70%) belong to the young age group of 18 - 25 years (Fig 1). The average age of the sample is 24.8 years. 99 (82%) commuted to work by bike/two-wheeler. This also is the vehicle that they use for delivery. Many [25(20.1%)] of the young participants self-rated their health as being average. 37 (31%) rated their health as being good. Only one participant out of the 124 total reported earning more than Rs. 20,001 monthly. 48(40%) stated that their monthly income was in the range of Rs. 10,000 /- to 20, 000/- 100% reported that working overtime bring them additional bonus earnings, but only 102 (85%) stated that they were satisfied with the amount received for working overtime.

Work-Related Stress: Job and work stress factors are crucial aspects to consider when studying the occupational health of food delivery boys. These factors can significantly impact their physical and mental well-being. Some specific stress factors that were assessed in this study such as Time Pressure (Food delivery boys often face tight delivery schedules and time constraints. 100% of the participants reported that delivering on time is the most stressful aspect of the job), traffic congestion (dealing with heavy traffic can be stressful and increase the risk of accidents), customer interactions (frequently interact with customers, which can sometimes be challenging), workload management (high workloads can lead to stress and fatigue), and safety concerns. By investigating and addressing these job and work stress factors, research, and interventions can contribute to creating a healthier and more supportive work environment for food delivery boys, reducing their stress levels, and promoting their well-being.

Table 1: Work Stress Parameters

Work Stress Questions @ WSQ	Yes		No		Partly	
	f	%	f	%	f	%
Time is given to finish the assignments	70	56.5	50	40.3	4	3.2
Can decide on the work pace	75	60.5	49	39.5	0	0.0
Involved in conflicts at the workplace	28	22.6	74	59.7	22	17.7
High demands on self at work	63	50.8	61	49.2	0	0.0
High-stress demands at work are stressful	49	39.5	40	32.3	35	28.2
Do you think about work after your working day?	66	53.2	58	46.8	0	0.0
Worrying about work after work hours is stressful	35	28.2	40	32.3	49	39.5
Have a second job to increase income	35	28.2	40	32.3	49	39.5
Working after work hours is stressful	35	28.2	40	32.3	49	39.5
Difficulty in sleeping (mind occupied with work matters)	62	50.0	30	24.2	32	25.8
Hard to find time to be with family	35	28.2	59	47.6	30	24.2
Hard to find time to mingle with friends	19	15.3	77	62.1	28	22.6
Hard to find time for leisure and recreational activities	36	29.0	45	36.3	43	34.7

Table 1 reports 75,8% finding it difficult to sleep due to work and work-related matters always playing on their mind. The yellow bands in Table 1 indicate that more than 50% of the participants stated the reasons for work-related stress. Work and work-related stress have a significant impact on the well-being of food delivery boys in Mumbai. The nature of their job, combined with various stressors, can lead to adverse effects on their physical, mental, and emotional health.

Food delivery boys often work long hours, continuously being on their feet and engaging in physically demanding tasks. They may experience fatigue, muscular strains, and injuries due to repetitive motions, heavy lifting, and extended periods of standing or walking. Physical exertion, coupled with inadequate rest and recovery time, can increase the risk of musculoskeletal disorders and other health issues.

The high-pressure nature of the job, strict time constraints, and the need to meet customer expectations can contribute to increased stress levels among food delivery boys affecting their mental and emotional well-being. They may face challenges in managing their workload effectively, dealing with traffic congestion, and delivering orders within the designated time frames. This constant pressure can lead to heightened anxiety, frustration, and emotional exhaustion, potentially impacting their mental health.

Food delivery boys often work during non-standard hours, including evenings, nights, and weekends, to cater to the demands of customers. This irregular work schedule disrupts their circadian rhythm, making it challenging to maintain a consistent sleep pattern. Sleep deprivation or poor-quality sleep can have detrimental effects on their cognitive function, mood regulation, and overall well-being.

Food delivery boys are often paid based on the number of deliveries they make or through a commission-based system. This pay structure, coupled with fluctuations in customer demand and potential penalties for damaged or lost items, can create financial insecurity and stress. They may experience pressure to meet income targets, leading to longer work hours and an increased risk of burnout. Hence 67.8% of participants have a second job to make up for the financial constraints they face.

Food delivery boys may face social challenges due to their work schedule and time commitments. The irregular working hours can limit their opportunities for social interactions and participation in personal activities, leading to feelings of isolation and strain on personal relationships. These factors can further contribute to stress and a sense of imbalance in their personal and professional lives.

It is essential to recognize and address these challenges to support the well-being of food delivery boys in Mumbai. Implementing strategies such as providing adequate rest breaks, promoting ergonomic practices, offering mental health support, and fostering a supportive work environment can help mitigate the negative impact of work and work-related stress on food delivery boys. Additionally, creating awareness among employers, policymakers, and the general public about the importance of occupational health and the well-being of food delivery workers can lead to positive changes and improved working conditions in the industry.

V. RECOMMENDATION BASED ON THE RESULTS: The major causes of work-related stress are long hours of work, tight deadlines (pace of work), job insecurity, and heavy workload. The benefits of preventing stress in the workplace are plenty. The major being reduced injury rate, reduced sick leave and absenteeism, increased productivity, increased employee/ work engagement, and reduced cost to the organization to state a few benefits. Reducing stressors and controlling exposures to such hazards in the workplace requires a multi-level approach. The hierarchy of controls presents levels of action to reduce or eliminate the risk. Using the can help cope with or prevent the onset of work-related stress and promote better health and well-being among food delivery boys:

- **Engineering Controls:**
 - Providing safe vehicles or bicycles
 - Exploring the use of electric bicycles or scooters to reduce physical exertion and fatigue during deliveries.
 - Using a better-designed bag or a divided bag (carried on shoulders or vehicle carrier) not only keeps the food warm but is also lightweight and comfortable to use.
 - Providing proper safety equipment such as helmets, reflective vests, and gloves to ensure the delivery boys' safety while on the road.
 - Implementing technology solutions such as GPS navigation systems or route optimization apps to help reduce travel time, optimize routes, and minimize the stress associated with finding addresses or getting lost.
 - Regular maintenance and safety checks of vehicles or bicycles to ensure their proper functioning and minimize the risk of accidents.
- **Administrative Controls**
 - Identifying strategies to manage time effectively, optimize routes, and reduce the pressure of meeting strict deadlines. This can help alleviate stress and promote a safer and more relaxed work environment.
 - Intense training on customer service techniques, conflict resolution strategies, and communication skills training to help delivery boys manage customer interactions effectively and minimize stress.
 - Informing delivery boys methods to prevent workplace violence.
 - Conducting workshops on safe lifting techniques of food and material handling.
 - Creating awareness about risks associated with stress such as number of deliveries per shift, distance to be traveled, total weight of the packets to be delivered, etc.
 - Implementing flexible scheduling options to allow for adequate rest breaks and work-life balance.
 - Establishing a system for reporting and addressing customer complaints or conflicts promptly, ensuring delivery boys feel supported and valued.
 - Providing access to counseling services or employee assistance programs to help address mental health concerns and develop effective coping strategies.
 - Promoting a positive and supportive work culture through regular communication, feedback sessions, and team-building activities.
 - Encouraging a healthy work-life balance by setting realistic delivery targets and avoiding excessive workloads.
 - Implementing a buddy system or peer support network where delivery boys can share their experiences, exchange tips, and provide emotional support to one another.

- **Personal Control**

- Being aware and informed about various hazards at work.
- Being prepared for extreme weather conditions – heat, cold, sunlight, etc.
- Identifying the best routes considering traffic flow one way, parking, constructions, etc
- Attending and implementing the knowledge gained about strategies on stress management techniques, mindfulness, and relaxation exercises to help delivery boys build resilience and cope with work-related pressures.
- Encouraging regular physical exercise and providing information on maintaining a healthy lifestyle, including proper nutrition and hydration.
- Promoting self-care practices such as getting enough sleep, taking regular breaks, and engaging in hobbies or activities that help reduce stress.
- Maintaining good posture and practicing ergonomics while lifting and carrying heavy loads.
- Encouraging open communication and feedback channels between delivery boys and management, allowing them to express their concerns, suggestions, or ideas for improving work conditions.

It is crucial to implement a comprehensive approach that combines engineering, administrative, and personal control methods to effectively address work-related stress and promote the health and well-being of food delivery boys. Regular evaluation and adjustments to these control measures based on feedback from delivery boys can help ensure their effectiveness in creating a safer and more supportive work environment.

VI. SCOPE OF STUDY: The results of this study can be used to increase awareness among policymakers and supervisory staff to ensure effective and efficient work scheduling, planning training sessions on various aspects such as biomechanics, stress management, soft skills, etc., to reduce anxiety and improve Quality of Work Life (QoWL).

The study can contribute to the development of occupational health and safety guidelines specifically tailored to the needs of food delivery boys. By examining the work stress factors they encounter and the coping mechanisms employed, the findings can inform policy-makers, employers, and relevant stakeholders in formulating guidelines and practices that prioritize the health and safety of food delivery workers.

The study's outcomes can have broader implications for the food delivery industry. By shedding light on work stress and coping mechanisms among food delivery boys, the research can stimulate discussions on improving work conditions, promoting employee well-being, and fostering healthier work environments within the industry. This can ultimately lead to increased job satisfaction, reduced turnover rates, and improved service quality for customers.

Due to multiple constraints, many related aspects could not be included in this study. Further studies could be conducted in the areas such as Psychological health, Posture assessment and correction, and the development of vibration absorption/reduction gloves.

VII. AUTHOR'S STATEMENTS

- **Acknowledgment:** The authors express their sincere gratitude to the food delivery boys for their invaluable contributions to this research study.
- **Informed Consent:** Before their participation, all 120 participants provided written informed consent, demonstrating their understanding of the study's objectives, procedures, and potential risks.
- **Conflict of Interest:** The authors disclose that they have no conflicting interests that could potentially influence the objectivity or integrity of the research conducted.
- **Funding:** This study did not receive any financial grants or support from either governmental or non-governmental funding agencies

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