ORIGINAL RESEARCH

Job Demands and Mental Health Deterioration: Investigating the Mediating Role of Resiliency

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Introduction: In the past decade, China has witnessed a significant surge in the popularity of food delivery apps, with its industry now thrice the size of the U.S, employing approximately 7 million drivers navigating urban landscapes on electric bikes and scooters. Predominantly, the market is governed by two main players: Meituan Dianping (backed by Tencent) and Ele.me (supported by Alibaba). Notably, stress and absenteeism stand out as significant challenges in this service sector, with implications for occupational health that translate into considerable costs for both healthcare systems and companies. Existing research has largely overlooked how job demands affect the mental health of food delivery workers in China, and how resilience plays a role in this process. The present study addresses this gap by examining the direct impact of Workload Volume and Pace on the mental health of these workers, and by exploring how personal resilience can mediate this relationship. Furthermore, it delves into the mediating role of Resilience, a personal strength, in this relationship.
Methods: Using a correlational design with 206 participants, multiple regression analysis suggested a notable variance in Mental Health Decline.
Results: Subsequent bootstrapping-mediated analysis confirmed resilience's mediating role, highlighting its importance in managing stress from workload.
Discussion: The results underscore the critical role of personal strengths in managing work-related stress, which can significantly impact both job performance and mental well-being.
Keywords: resiliency, job demands, mental health deterioration, food-delivery workers, China

Introduction

The exponential growth of the gig economy in recent years has unveiled new avenues of employment, especially in populous nations like China. One such avenue that has seen a meteoric rise in the past decade is the food delivery industry, driven by digitization and the ubiquity of mobile applications. As China's sprawling urban landscapes became dotted with electric bikes and scooters zipping to and from, delivering everything from gourmet meals to late-night snacks, a new class of worker emerged: the food-delivery worker. Currently, with the industry's size being threefold that of the US, it is estimated that approximately 7 million drivers are employed in this sector. Dominated by giants like Meituan Dianping and Ele.me, which are backed by behemoths Tencent and Alibaba respectively, this burgeoning industry is not without its challenges.

While the flexibility and ubiquity of these jobs are evident, they come at a cost, often hidden beneath the surface. Stress, largely stemming from increasing workload volumes and the relentless pace of deliveries, has emerged as a predominant concern. This, in turn, is manifested in rising cases of absenteeism and a significant strain on workers' mental health. Such implications not only present health challenges but also have financial repercussions on healthcare systems and the bottom line of the companies in this sector. Amid these challenges, a pertinent question arises: Is there a potential mitigating factor that can shield these workers from the detrimental effects of their job demands?.[1]

Despite the growing importance of the food delivery sector in China,[2] there is a significant gap in the existing research when it comes to understanding the mental health impacts on its workers. Most studies have focused on the

economic and logistical aspects of the gig economy,[3] with little attention given to the psychological well-being of the workers themselves. Specifically, there is a lack of detailed exploration into how job demands in this high-pressure environment affect mental health, and whether factors like personal resilience can mitigate these effects.[4] This oversight is critical given the sheer size of the workforce involved and the increasing prevalence of mental health issues.[5] The present research aims to fill this gap, drawing on data from 206 participants, by focusing on the direct relationship between job demands and mental health decline among food delivery workers, and the potential role of resilience as a protective factor.[6] This approach not only addresses an under-researched area but also offers practical insights for policy and intervention strategies to support the well-being of these workers.

Job-Demands Model and the Impact of Work Quantity and Pace on Workers' Mental Health Decline

Understanding the relationship between work-related stress and its subsequent impact on mental health is profoundly shaped by the Job Demands-Resources (JD-R) model. Introduced by Bakker & Demerouti,[7] this model presents the notion that each occupation is characterized by its distinctive set of job demands and resources, which together determine employee well-being.

Job demands encompass the physical, psychological, social, or organizational facets of a role that require continuous physical or psychological effort. These are often tied to certain physiological or psychological costs and can range from the pace of work to role ambiguity. On the other side of the spectrum, job resources are the physical, psychological, social, or organizational aspects of a job that aid in achieving work goals. They can mitigate the physiological and psychological costs of job demands or even stimulate personal growth and development. The central tenet of the JD-R model is that high job demands can lead to burnout and related health issues, particularly when resources are scarce. Conversely, when job resources are available in abundance, they can shield employees from the potential adverse effects of heightened job demands, fostering engagement and positive work outcomes.[7]

Among the myriad of Job Demands, Work Quantity and Pace stand out, especially in professions driven by productivity. Research by Schaufeli and Bakker[8] emphasized that an excessive workload and relentless pace can culminate in exhaustion, a cardinal symptom of burnout. An overload of tasks can make workers feel inundated, and a ceaseless work pace can instill a persistent sense of pressure.

The repercussions of these demands on mental health can be severe. Elevated job demands, when not counterbalanced by adequate resources and recuperation periods, can lead to chronic exhaustion, cynicism, and inefficacy, as highlighted by Taris et al.[9] These symptoms are the cornerstones of burnout, which, if unaddressed, can evolve into more grave mental health conditions such as depression and anxiety. A longitudinal study spearheaded by de Lange et al[10] further echoed these findings, revealing that persistent high job demands are precursors to both immediate and prolonged mental health complications, especially when there's a dearth of job resources.

In summation, the JD-R model offers an invaluable lens to comprehend the intricate dance between job demands, such as work quantity and pace, and their potential descent into mental health deterioration. This model underscores the imperative of fostering a harmonious work environment, where demands are in equilibrium with resources. A deviation from this balance may pave the way for burnout and the consequent decline in mental well-being.

Chinese Food- Delivery Workers and the Impact of Job Demands in Their Mental Health

The rapid ascension of the gig economy, particularly in sectors like food delivery, has redefined the dynamics of urban employment in many parts of the world. China, with its bustling cities and evolving digital infrastructure, stands as a key example. Here, food-delivery workers have become a ubiquitous presence, with millions navigating congested streets on electric bikes and scooters. While this modern phenomenon has bolstered the economy and met urbanites' demands for convenience, it also carries implications for the well-being of those employed in this sector. The Job Demands-Resources (JD-R) model serves as an ideal lens through which we can explore these implications, particularly in terms of work quantity, pace, and their impact on mental health.

At the heart of the JD-R model is the balance—or imbalance—between the demands of a job and the resources provided to meet those demands. For food-delivery workers in China, the demands are manifold. Many of these workers face intense workloads, dictated by the ceaseless buzz of apps like Meituan Dianping and Ele.me. With each order comes the expectation of speed, meaning workers must navigate city landscapes with urgency, often contending with traffic, weather, and other unpredictable elements. This urgency is further exacerbated by the piece-rate payment system commonly adopted in the sector, where earnings are closely tied to the number of deliveries made. The continuous pressure to fulfill orders and meet customers' expectations characterizes the relentless pace and quantity of work that these workers face daily.

While some workers may thrive in such high-pressure environments, driven perhaps by the potential for higher earnings or the autonomy of gig work, many others could find themselves grappling with the psychological costs. According to Bakker & Demerouti,[7] high job demands, especially when unmatched by adequate resources or recovery opportunities, can spiral into burnout, exhaustion, and other indicators of deteriorating mental health. Given the nature of gig work, resources—be they monetary, social, or organizational—can often be sparse. The absence of stable contracts, potential lack of social support from peers or superiors, and the unpredictability of demand can mean that many food-delivery workers find themselves devoid of the necessary buffers against the strains of their job.

The intersection of these characteristics with the JD-R model illuminates the vulnerability of food-delivery workers in China. The sheer volume and pace of their work, juxtaposed against the potential lack of resources, positions them at a heightened risk for mental health decline. Studies, such as those by Schaufeli and Bakker,[8] have shown that relentless work pace, especially in the absence of adequate support, can lead to feelings of burnout and mental exhaustion. As such, for this demographic, the need for interventions, be they organizational or policy-driven, becomes all the more paramount.

In conclusion, the intricate dance of demands and resources within China's food delivery sector, viewed through the prism of the JD-R model, underscores the urgency to address potential mental health risks. Ensuring that these workers have access to the necessary resources to counterbalance the inherent demands of their roles becomes an imperative not just for industry leaders, but for society at large.

The Mediating Role of Personal Resilience in the Nexus of Job Demands and Mental Health Decline Among Food-Delivery Workers in China

As the global landscape of work has transformed, particularly with the emergence of the gig economy, unique challenges have arisen for those in precarious job categories. One such sector, exemplified by the food-delivery workers in China's bustling cities, embodies these challenges. Navigating congested streets, unpredictable work hours, and the incessant demands of app-driven orders, these workers often confront significant job-related stresses. Yet not all workers in similar circumstances exhibit identical mental health outcomes. This variance invites the exploration of mediating factors. One concept that has gained significant attention in this discourse is personal resilience, often seen as a buffer between job demands and deteriorating mental health.

Personal Resilience can be conceptualized as the ability of an individual to effectively navigate, adapt to, and bounce back from adverse situations or stressors. Rooted in a combination of personal traits, coping strategies, and learned behaviors, resilience serves as an individual's internal defense mechanism, safeguarding them from the negative psychological implications of external challenges. Southwick et al[11] suggest that resilience is not just an innate trait, but something that can be developed and enhanced over time, influenced by both internal factors (like cognitive responses) and external ones (like social support).

In the context of food-delivery workers in China, job demands, as underscored by the JD-R model, manifest prominently in the form of work pace and quantity. The omnipresence of apps, customer expectations, and the piece-rate payment model all contribute to an environment of constant demand. Such demands can logically be associated with negative mental health outcomes, from feelings of burnout to more severe disorders like depression or anxiety. However, the JD-R model also suggests that individual resources, such as personal resilience, can play a crucial role in modulating these outcomes.[12]

The mediating role of resilience in this context is particularly compelling. It can be posited that while high job demands can exert a toll on mental health, this relationship might be attenuated or exacerbated based on an individual's resilience level. Workers with higher resilience might possess better coping strategies, more robust support systems, or a combination of intrinsic and extrinsic factors that dampen the negative implications of their job demands. Conversely, those with lower resilience may find the adverse effects of job demands more pronounced, leading to sharper declines in mental health. Studies like those by Bonanno et al[13] have indeed shown resilience as a critical mediator in various contexts, emphasizing its protective role against psychological adversities.

In sum, while the challenges faced by food-delivery workers in China within the gig economy framework are undeniable, it's equally vital to recognize the differential responses based on individual factors. Personal resilience emerges as a pivotal mediating force, potentially providing the key to unlocking more adaptive responses to job demands and, subsequently, fostering better mental health outcomes.

Based on the above reviewed literature, the following hypotheses are proposed:

Hypothesis 1: Work Quantity and Pace will have a positive and significant influence on Mental Health Decline

Hypothesis 2: Personal Resilience will have a negative and significant influence on Mental Health Decline

Hypothesis 3: The relationship between Work Quantity and Pace - Mental Health Decline will be mediated by Personal Resilience

The hypothesized model is depicted in Figure 1.

Method
Participants and Procedure
The study's sample consisted of 206 Chinese food-delivery workers contacted via social media networks, specifically WeChat or WeChat groups. Ethical approval for this study was granted by the Ethics Committee of Nanchang University. The study fully complies with the Declaration of Helsinki. Participants were informed about the voluntariness, the right to withdraw at any time, and confidentiality of the study, as well as that no any personal information (phone number or IP) will be storage by the survey. Before proceeding with data collection, informed consent was obtained from all participants, by clicking the first question of the survey. Participants completed a survey on their mobile phones and were compensated with a USD 5 grocery coupon. The average age of the participants was 27.2 years (SD = 7.6), with 58.5%
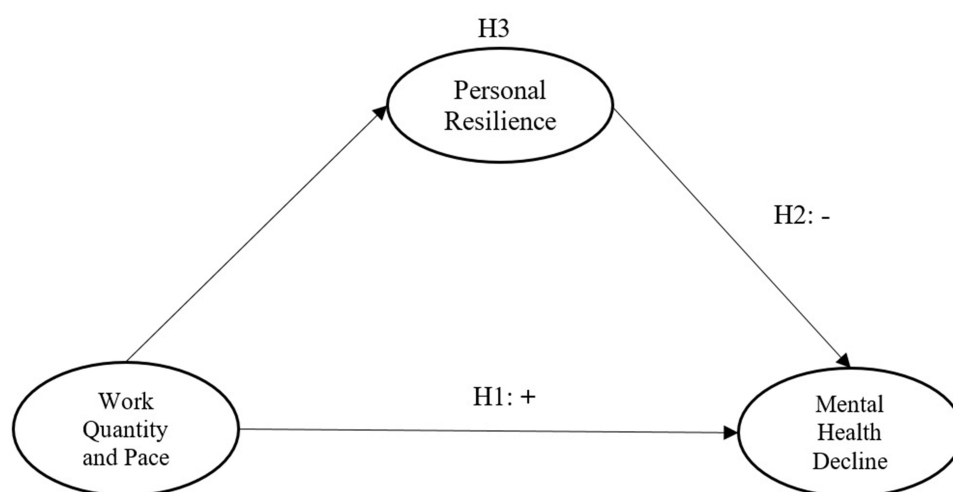
Figure 1 Theoretical model and hypotheses.

being male. A total of 87% had attained an educational level of high school graduate or lower. A majority (76%) worked full-time for the food-delivery platform.

Instruments

Given the characteristics of the sample, the questionnaire was shortened to ensure a broader participation and increase the likelihood of participants completing it via smartphones. The survey, originally developed in English, was translated into Chinese to aid the participants' comprehension. The author conducted a back-translation to guarantee the accuracy of the Chinese items. The author is native Chinese speaker who is also fluent in English. The revised version of the Chinese translation of the questionnaires has been approved by the author's academic tutor.

Job Demands Work Quantity and Pace: This variable was assessed using the Job Content Questionnaire (JCQ) in its condensed version, Core QUES JCQ.[14] Three items evaluated Work Quantity and Pace. The items were: *My job as a food delivery worker requires me to work very quickly, My role as a food delivery worker demands intense work*, and (reversed) *I have the necessary time to complete my deliveries properly*. Despite the brevity of the scale, its reliability was adequate (α= 0.74).

Mental Health Decline: This variable was assessed with six items adapted from the 36-Item Short Form Survey (SF-36) version 2, that was developed at RAND as part of the Medical Outcomes Study.[15] Participants were asked: "How much of the time during the past 4 weeks". with response options ranging from 6 (All the time) to 1 (None of the time). The items included: "Have you been a very nervous person?", "Have you felt so down that nothing could cheer you up?", "Have you felt downhearted and blue?", "*Did you feel worn out?*", "*Did you feel tired?*", and "*During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (eg, visiting friends, relatives*, etc.*)?*". Reliability was adequate (α= 0.88).

Personal Resilience: This variable was gauged using four items from the Connor-Davidson Resilience Scale CD-RISC10.[16] The items were: *You can deal with whatever comes, Coping with stress strengthens you, You can achieve your goals*, and *You think of yourself as a strong person*. Respondents rated their agreement on a Likert-type 5-point scale: not true at all (0), rarely true (1), sometimes true (2), often true (3), and true nearly all the time (4). Reliability was adequate (α= 0.84).

Data Analyses

We addressed the potential issue of common method variance in the data collected through the questionnaire.[17] All the items were included in an exploratory factor analysis, asking for only one single factor in the extraction, named as Harman's single factor test. The results indicate that no single factor accounts for a majority of the variance as all scores are below 50%. This suggests that the data are suitable for subsequent analysis.

Analyses began with descriptive and correlational assessments using SPSS Statistics 24. This was followed by a mediation analysis examining the direct effects between Work Quantity and Pace and Mental Health Decline (Hypothesis 1). The analysis also evaluated the relationship between Personal Resilience and Mental Health Decline (Hypothesis 2) and assessed the indirect effects of Personal Resilience on the relationship between Work Quantity and Pace and Mental Health Decline (Hypothesis 3). We employed the PROCESS macro for SPSS (Hayes, 2013) to study these indirect effects, yielding estimates, standard errors (SEs), and confidence intervals (CIs) for multiple mediators. The bootstrapping technique, a non-parametric resampling approach that does not presume normality in the distribution, was applied. This procedure was based on 5000 bootstrap re-samples and provided the estimates of the indirect effect and associated confidence intervals. When zero is not included in the 95% bias-corrected confidence interval, it may be concluded that the parameter is significantly different from zero at $p < 0.05$.

Results

Descriptive and Correlational Analyses

As presented in Table 1, food-delivery workers reported moderate levels of Work Quantity and Pace and Personal Resiliency, but lower levels of Mental Health Decline. Concurrently, there was a significant positive correlation between

Table 1 Descriptive Statistics and Pearson's Matrix Correlation (N= 206)

| Variables	Mean	S.D.	1.	2.	3.
1. Age	27.79	7.62	1		
2. Work Quantity and Pace	3.30	0.70	0.028	1	
3. Personal Resiliency	3.66	0.73	−0.067	−0.227**	1
4. Mental Health Decline	1.95	0.59	0.001	0.346**	−0.662**

Note: **p <0.01.

Work Quantity and Pace and Mental Health Decline, and a negative one with Personal Resiliency. As anticipated, Personal Resiliency demonstrated a significant negative association with Mental Health Decline.

Mediation Analysis

The total effect model accounted for 12% of the variance in Mental Health Decline (F = 27.741, p < 0.001). Figure 1 displays a significant total effect of Work Quantity and Pace on Mental Health Decline (b = 0.2918, SE = 0.0554, p < 0.001, 95% CI [0.18, 0.40]); Beta=0.3460. The direct effect remained significant (b = 0.1740, SE = 0.0439, p < 0.001, 95% CI [0.08, 0.26]), Beta=0.2063. The direct effect of Work Quantity and Pace on Personal Resilience was also statistically significant (b = −0.2391, SE = 0.0718, p < 0.001, 95% CI [−.38, −0.09]) Beta=−.2272. Moreover, Personal Resilience's direct effect on Mental Health Decline was significant and negative as predicted (b = −0.4925, SE = 0.0417, p < 0.001, 95% CI [−.57, −0.41]); Beta=−.6148. Within the comprehensive model analysis, the indirect effect of Work Quantity and Pace on Mental Health Decline, mediated by Personal Resiliency, was statistically noteworthy (b = 0.1178, SE = 0.0401, p < 0.05, 95% CI [0.0432, 0.2014]), Beta= 0.1397. Sobel test outcomes confirmed the significance of Personal Resilience's effect (b = 0.1178, SE = 0.0368, z = 3.19, p = 0.0014). Collectively, the findings offer full support for the postulated hypotheses, as can be seen in Figure 2.

Discussion

The primary objective of this research was to investigate the buffering role of Personal Resilience—a vital individual strength—as a mediator between Job Demands and Mental Health Decline among food-delivery workers in China. The relevance of this study is underscored by its focus on a rapidly growing yet under-explored segment of the workforce within the gig economy. By examining the specific challenges faced by food-delivery workers, a group often overlooked in occupational health research, this research provides critical insights into the complex interplay between job demands, individual resilience, and mental health outcomes. Using data from 206 participants, our findings suggest that both Work
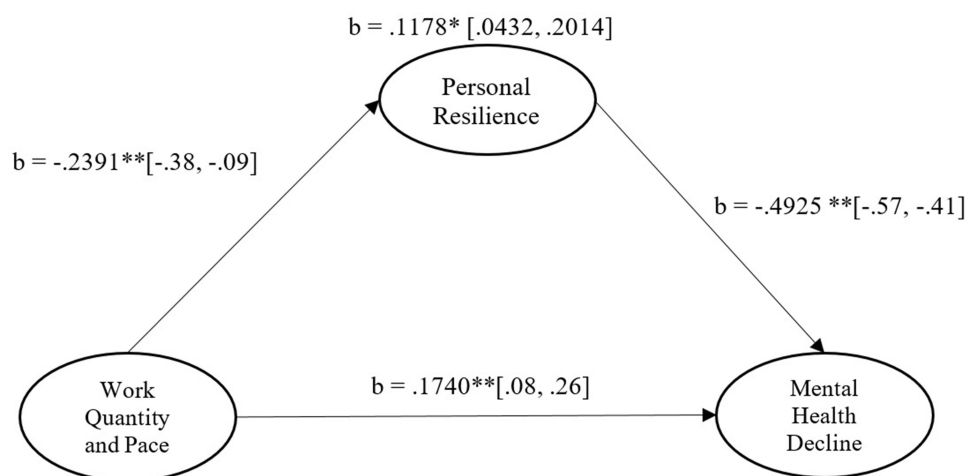
Figure 2 Unstandardized effects among the variables.
Note: *p < 0.05, **p < 0.01.

Quantity and Pace have a significant influence on the Decline of Mental Health. More prominently, Personal Resilience plays a crucial role in mitigating this deterioration, emphasizing the protective role resilience has on food-delivery workers' well-being. This is particularly relevant given the expanding scale of the gig economy and its implications for worker health, both in China and globally. By highlighting the role of resilience in such a high-stress environment, this study not only contributes to our understanding of mental health in the gig economy but also provides practical implications for interventions aimed at enhancing worker well-being.

This aligns with a long-standing body of empirical research highlighting the detrimental impact of excessive Job Demands on mental health.[18] Simultaneously, the beneficial buffering effects of personal resources, such as resilience, on this relationship are supported.[19] Though there's a vast array of evidence,[20] more contemporary studies offer renewed perspectives, following scholarly recommendations.[1,12] For instance, Babapour, Gahassab-Mozaffari and Fathnezhad-Kazemi[21] found that job stress not only adversely affected mental health but also diminished nurses' care for their patients. Workers, especially those in people-oriented roles during events like the COVID-19 pandemic, are significantly affected, emphasizing the role contextual factors play in exacerbating the harmful effects of Job Demands.[22,23]

The empirical foundation on the buffering role of Personal Resilience is substantial.[24] It's evident across various populations and specific groups, such as children, adolescents,[25,26] the elderly, and professionals like athletes[27] and nurses.[28] Studies on Chinese food-delivery workers may be limited, but research has delved into resilience among Chinese workers—this focus intensified during the COVID-19 pandemic. From the creation of Chinese-adapted resilience assessment tools, such as the Connor Davidson Resilience Scale for the general populace[29] and newly employed workers,[30] to its application in high-stress jobs like nursing[31] and banking,[32] the findings from Chinese studies reaffirm the global understanding of resilience as a buffer against stress and well-being degradation.

The present research contributes novel insights to the field by specifically investigating the role of Personal Resilience in the context of China's rapidly evolving food delivery sector—a domain that has not been extensively explored before. Unlike previous studies that have broadly examined the impact of job demands and resilience across various sectors, our study narrows its focus to the unique challenges faced by food-delivery workers in China. This specificity is crucial, considering the distinctive nature of gig economy jobs and the unprecedented growth of this sector in China. Furthermore, our findings shed light on the dynamic interplay between Work Quantity, Pace, and Mental Health, offering a nuanced understanding of how these factors interact in a high-pressure, fast-paced work environment. By quantitatively demonstrating the mediating role of Personal Resilience, our study not only corroborates existing theories on resilience as a stress buffer but also extends them to a specific, under-researched workforce within the Chinese context. This adds a new dimension to the literature, especially considering the unique socio-economic and cultural factors that influence the gig economy in China. Additionally, our study paves the way for future research on intervention strategies tailored to the needs of this specific workforce, potentially influencing policy and workplace practices in gig economy sectors world-wide. Such insights are invaluable in a time where the gig economy is becoming a dominant employment model, not just in China, but globally.

The study ventured into the lesser-explored domain of food-delivery workers. The evolving nature of this sector, both in China and globally, suggests that certain worker attributes may shift over time. For instance, Sun et al[33] noted that the development of food-delivery platforms in China has impacted employment structures, with more full-time positions and fewer part-time roles. Given that job-related attitudes differ between full-time and part-time workers,[34] the implications of this shift warrant further investigation.

Limitations of the Present Study and Suggestions for Future Research

Several limitations in the current study need acknowledgment. First, the sample size of 206 participants is relatively small compared to the massive population of food-delivery workers in China, potentially failing to capture the diverse experiences and backgrounds of all food-delivery workers in an industry that employs approximately 7 million drivers. The use of a correlational design means that causation cannot be inferred from the findings. Thus, while relationships between Job Demands, Resilience, and Mental Health Decline have been identified, it is not possible to definitively state that Job Demands cause a decline in mental health or that Resilience directly reduces this impact. The study provided detailed information about the scales used to measure Job Demands, Resilience, or Mental Health Decline, but the data

use of a convenience sampling might introduce a bias, as individuals who use social media may differ from those who do not. Future research could use validated versions of the scales, as the Job Content Questionnaire (JCQ-22) fully adapted to the Chinese respondents.[35] Moreover, there could be external factors or variables not accounted for in the study which might influence the deterioration of mental health among Chinese food-delivery workers, such as personal life stressors or existing mental health conditions. The study's findings, localized to China and specifically within the context of food delivery workers, might not be generalizable to other countries or different occupational sectors.[36] Additionally, by specifically looking at Workload Volume and Pace as job demands, the study may overlook other significant demands or stressors in this line of work. Lastly, the reliance on self-reported measures introduces potential biases, and objective measures or third-party evaluations might offer different insights. Future research in this area could benefit from addressing these limitations to provide a more comprehensive understanding. Lastly, a limitation to consider is that our study focused solely on Chinese food-delivery workers, offering a homogeneous view but excluding potential work-related influences observed in other countries, like the riders' mobilizations in Italy, Germany, Ireland, and more.[37]

Given the findings and limitations of the current study on the mediation role of resilience between job demands and mental health decline among food-delivery workers in China, several avenues for future research emerge. A larger and more diverse sample size could better represent the vast population of food-delivery workers, encompassing various regions and company affiliations. Longitudinal designs would offer deeper insights into causation and the long-term impact of job demands on mental well-being. Additionally, it would be valuable to explore other potential mediators or moderators in this relationship, such as organizational support, coping mechanisms, or social networks. Beyond Workload Volume and Pace, a broader spectrum of job demands could be investigated, like customer interactions, payment dynamics, or physical risks associated with traffic. Recent studies provided empirical evidence on the stressful impact of customers' incivility,[6,38] occupational stigma,[39] and lower educational levels[40] among other factors that could negative influence food delivers work-related quality of life. Comparing the experiences of food-delivery workers in China with those in other countries could provide a cross-cultural perspective on the challenges and protective factors in this rapidly growing industry. Lastly, future studies could delve deeper into intervention strategies, aiming to enhance resilience and provide tailored support for these workers, ensuring their well-being and optimal job performance.

Suggestions for Interventions

Addressing the challenges faced by food-delivery workers in China, especially in the realm of mental well-being, necessitates multifaceted interventions. At the organizational level, companies like Meituan Dianping and Ele.me could consider implementing structured resilience-building programs that equip workers with coping strategies tailored to their unique job demands. Regular workshops focusing on stress management, mindfulness, and emotional intelligence could empower these workers to handle daily pressures more effectively. Additionally, such programs could include practical components like time management training, conflict resolution skills, and techniques for maintaining a healthy work-life balance. Incorporating digital tools, such as mobile applications offering guided relaxation exercises or forums for peer support, can further augment these efforts. It's also essential for companies to create a supportive work environment that acknowledges and addresses mental health issues. This could involve establishing accessible mental health resources, such as counseling services or employee assistance programs. Moreover, fostering a company culture that values and encourages open dialogue about mental health challenges can significantly reduce stigma and promote a more supportive and resilient workforce. In a related vein, some authors have proposed the emergency of Proactive vitality Management as an individual, goal-oriented behavior focused on managing energy, both mental and physical in order to achieve an excellent functioning at work.[41] Since the Proactive Vitality Management has been showed related to in-role work performance, interventions aimed to orient workers to develop their Proactive Vitality Management could help them to increase their own job performance.[42] Moreover, introducing flexible scheduling or workload balancing might alleviate some of the strain associated with high-volume and fast-paced deliveries. It could also be beneficial to create peer support groups, fostering a community where workers can share experiences, provide mutual assistance, and reduce feelings of isolation. Given the digital nature of their work, a dedicated mental well-being app with resources, real-time counseling options, and relaxation exercises might be a fitting addition. On a broader scale, partnerships with mental health organizations could facilitate periodic psychological check-ups, ensuring timely interventions for those displaying

signs of significant mental health decline. By integrating these initiatives, the food delivery industry can create a more supportive environment, promoting both the mental well-being and optimal performance of its workers.

Conclusion

The findings of this study highlight a significant correlation between Job Demands, particularly in terms of Work Quantity and Pace, and the deterioration of mental health among food-delivery workers in China. Crucially, this research provides empirical evidence that Personal Resilience serves as an effective buffer in mitigating these negative impacts. The demonstration of resilience as a mitigating factor against the stressful effects of high workload and rapid job pace contributes a new perspective to the understanding of psychological challenges within the gig economy. Despite that longitudinal studies and further interventions are needed, this insight is particularly pertinent to the evolving dynamics of China's food-delivery sector, characterized by intense and continuous demands on its workforce.

Moreover, the implications of these findings suggest that in high-pressure work environments, especially in sectors akin to Chinese food delivery, strategies aimed at enhancing personal resilience could be instrumental in protecting the mental health of workers. This revelation is of considerable significance for policy makers, organizational strategies, and mental health practitioners, underscoring the necessity of incorporating resilience-building interventions into employee well-being programs. In summary, this study accentuates the critical importance of addressing psychological factors such as resilience in managing the mental health of workers in demanding professions, a principle that holds relevance on a global scale.

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Disclosure

The author declares that there are no competing interests for this work.

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