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Occupational injuries and health risks among food delivery riders in China: research progress and prevention strategies

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Background: Platform-based on-demand food delivery has expanded rapidly in China, reshaping delivery work through strict deadlines, piece-rate pay, algorithmic management, long working hours, and intensive road exposure. These conditions may increase occupational injuries and broader health risks among food delivery riders.
Objectives: This narrative review synthesizes evidence on occupational injuries and health risks among food delivery riders in China and identifies potential mechanisms and prevention strategies.
Methods: We searched PubMed, Web of Science Core Collection, and CNKI for Chinese- and English-language literature published from January 1, 2015 to March 31, 2026. Search concepts included food delivery riders, platform work, occupational injuries, road traffic injuries, musculoskeletal disorders, fatigue, sleep, mental health, algorithmic management, and occupational health protection. Titles, abstracts, and full texts were screened for relevance, and 47 eligible sources were included.
Results: Existing evidence indicates that riders face interrelated risks, including road traffic injuries, work-related musculoskeletal disorders, fatigue, sleep disturbance, occupational stress, anxiety and depressive symptoms, and chronic risks related to irregular eating and limited health management. Risky riding should be understood not only as an individual behavior, but also as a response to delivery deadlines, income pressure, algorithmic control, fatigue, road conditions, and inadequate protection. Key gaps include the predominance of cross-sectional studies, limited longitudinal and intervention evidence, insufficient subgroup analyses of full-time, crowdsourced, and part-time riders, and heavy reliance on self-reported exposure measures.
Discussion: Occupational injuries and health risks among food delivery riders should be viewed as occupational and public health issues embedded in platform-based work organization. Prevention should move beyond individual safety

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