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Title	Assessing the cost-effectiveness of mental health interventions for night-time economy workers
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Publication date	2025-05-30
Original Citation	Bourke, J., Leonardi-Bee, J. and Blake, H. (2025) 'Assessing the cost-effectiveness of mental health interventions for night-time economy workers', Perspectives in Public Health, p.17579139251336658. https://doi.org/10.1177/17579139251336658
Type of publication	Article (peer-reviewed);journal-article
Link to publisher's version	10.1177/17579139251336658
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Download date	2026-11-01 18:00:05
Item downloaded from	https://hdl.handle.net/10468/17690

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FEATURE ARTICLE

Assessing the Cost-Effectiveness of Mental Health Interventions for Night-Time Economy Workers

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The global night-time economy (NTE) generates billions of dollars annually and creates millions of jobs, according to the World Economic Forum.[1] Defined as economic activity occurring between 6pm and 6am, the NTE spans industries such as hospitality, entertainment, transport, and healthcare.[2] Recognising its significance, more than sixty cities worldwide have appointed officials to oversee nightlife governance.[1] The NTE relies heavily on young and migrant workers, who are more likely to be low earners relative to the average workforce.[3] Additionally, NTE workers often face challenging working conditions, including exposure to behaviours such as alcohol fuelled violent crime, sexual offences, domestic violence, criminal damage, theft, and anti-social behaviour. The NTE economy can have major impacts on the health and wellbeing of individuals[4] but standard health services are typically available from 9am to 5pm and therefore often inaccessible to NTE workers.

The workplace plays a crucial role in promoting mental health, as highlighted by the UK National Institute for Health and Care Excellence (NICE) guidelines and international standards[5, 6] and a considerable body of academic research.[7] Employers are increasingly aware of the costs associated with poor employee mental health, including organisational disruption and lost productivity.[8] However, before investing in workplace mental health initiatives, employers often seek evidence that such interventions effectively improve employee well-being and productivity.[9] This underscores the importance of economic evaluations in demonstrating the cost-effectiveness and return on investment (ROI) of these programmes, as well as their broader societal and economic benefits.[10]

Existing evaluations of workplace mental health interventions tend to focus on specific sectors (e.g., healthcare, construction, ICT: information and communication technology) or organisation types (e.g., large/ multinational enterprises).[7] However, while there are many studies assessing the effectiveness of workplace mental health interventions and/or barriers and facilitators to their implementation, they rarely include an economic evaluation component, despite calls from the World Health Organization for more research on cost-effectiveness.[10] One reason for this gap is the tendency to prioritise immediate individual-level mental health and well-being outcomes over financial ROI or cost-benefit calculations. Additionally, conducting a robust economic evaluation requires extensive data collection, which is both complex and resource intensive. Many organisations do not systematically track long-term mental health outcomes or related productivity metrics[11] (such as absenteeism, presenteeism, and turnover), making it difficult to quantify the full economic impact of workplace mental health interventions.

Despite the significant economic contribution of the NTE, mental health interventions targeting NTE workers are largely overlooked in economic evaluations. The unique challenges faced by the

NTEs' workforce, such as irregular schedules, precarious employment, high turnover, and sector-specific stressors, combined with the difficulties in collecting comprehensive employee- and organisation-level data, indicate that traditional economic evaluation methods may not be suitable for assessing mental health interventions in the NTE. NTEs are typically confined to specific cities, and mental health interventions for NTE workers are often funded and delivered by local authorities rather than the employer (e.g., 'Thrive at Night', Bristol, UK). As such, we suggest that from an economic perspective, these interventions are best defined as population health interventions (PHIs) rather than workplace-focused initiatives. Economic evaluations that incorporate city-specific factors—such as local nightlife regulations, transport infrastructure, and other contextual influences on mental health—and take a societal perspective are likely to yield more robust findings. Additionally, natural experiments (NEs), which are increasingly used for PHI evaluations due to their real-world relevance, may offer a more appropriate and realistic alternative to randomised controlled trials (RCTs). NEs are defined as "naturally occurring situations where subsets of a population experience varying levels of exposure to a potential causal factor, mimicking an experimental setup where groups are not randomly assigned." [12] We recommend that economic evaluations of mental health interventions for NTE workers adopt Deidda and colleagues' framework[13] for conducting economic evaluations alongside natural experiments, to ensure more accurate and contextually relevant assessments.

While there are many challenges to implementing this framework[13] (e.g. separating the effects from other concurrent, interacting policy interventions; identifying appropriate outcome measures and statistical analysis which captures the source of variation in the exposure to the intervention), the standard practice for data collection is likely to be the use of multiple, sometimes linked, observational data sources, such as surveys, registries, administrative records or census data. The use of secondary data sources typically allows the assessment of effectiveness and cost-effectiveness of the PHI over larger sample sizes (e.g. a city population) than would be available in an RCT, although available data sources might also restrict the choice of target population.[14]

In summary, mental-ill health at work is a significant public health concern. The NTE is a unique sector with challenging working conditions and a high prevalence of mental ill-health. Emerging workplace mental health initiatives are often led by local authorities requiring evidence to support their investment decisions for PHIs. The traditional RCT approach to gathering effectiveness and cost-effectiveness data is not always seen to be viable or even appropriate in 'real-world' contexts. A societal perspective is recommended as best practice for economic evaluations of PHIs given the inter-sectoral costs often associated with PHIs.[15] Unlike RCTs, where the length of time horizon is often constrained,[16] NE designs may facilitate a longer time horizon for data collection, capturing the long term impact of mental health interventions, as well as facilitating equity concerns in addition to efficiency considerations. This approach would provide cities with a robust ROI from mental health promotion initiatives targeted at NTE workers, ensuring greater transparency and effectiveness of resource allocation.

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