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Commentary

Understanding the effects of a suicide prevention strategy at a jumping site

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Suicide is a major public health issue, with more than 800,000 deaths globally each year, and rates of suicide attempt being up to 30 times higher. Predicting who will attempt suicide is difficult, due to the complexity of the behaviour, therefore broader population-based prevention approaches are necessary as part of prevention efforts. One of the strongest evidenced approaches in suicide prevention is limiting access to lethal methods ('means restriction') [1], particularly when they are implemented at high-risk areas known as 'hotspots'. Hotspots are specific and easily accessible geographic sites that provide an opportunity for suicide, and therefore experience suicides at a higher rate than other locations [2]. Due to the accessibility of these sites, deaths may be highly visible or reported in the media, thus the potential for contagion effects is significant.

Ross et al. report trends in suicide deaths at a hotspot site (Gap Park, Sydney, Australia), where a multilevel means restriction strategy (The Gap Park Self-Harm Minimisation Masterplan) has been implemented [3]. A novel mixed-methods approach was used to evaluate the effectiveness of the Masterplan in the years following its implementation in 2010. An earlier, preliminary evaluation by Lockley et al. found a non-significant trend in suicide deaths over the period 2001–2011 [4], and therefore the current study contributes a valuable longer-term evaluation following the Masterplan implementation. Analysis of coronial data for the region covered by the Masterplan found a non-significant upwards trend over the period from 2000 to 2016. These findings may be impacted by small count sizes each year, in a purely statistical sense, with an average of five incidents per year. Small year-to-year variations in the number of deaths or how data are coded can therefore have a large impact on apparent trends. These results are also relevant in the in the context of increasing numbers of reported suicides in the broader postcode region, and indeed at the state and national level in Australia for the same period [5]. The true local impact of the Masterplan on deterring suicidal behaviour, relative to these underlying trends, therefore remains unknown.

When the data were analysed by gender, a similar non-significant trend was observed for men, however there was a significant upwards trend in female suicide deaths prior to the Masterplan implementation (2000–2010) followed by a significant downward trend during and following implementation (2010–2016). This apparent post-implementation response may be due to greater effectiveness for means restriction interventions in women [6] who tend to use less lethal means (e.g., self-poisoning) relative to men [7], and may be more easily deterred from engaging in high lethality behaviours, or the pre-implementation increase may be attributable to contagion effects from a well-publicised incident in this period.

Ross et al. also report findings from qualitative interviews with police officers who respond to individuals in crisis at the site. Officers described behaviours of suicidal individuals at the site – some of whom jump immediately, prior to any intervention being possible, whereas some individuals remain there for many hours. This is similar to findings from the railway setting, where Mackenzie et al. reported individuals being identifiable on CCTV footage, from entry to a station to the time of death, for between 2 min and 12 h [8]. For those individuals who spend some time at these locations, similar behaviours appear to be present across settings – for example pacing and agitation/fidgeting, and disposal of personal possessions [9]. Promisingly, police interviews suggested that the longer someone is in this contemplative stage, the greater the chance of successful intervention, suggesting that earlier detection of individuals in distress may help save lives.

Whilst there is evidence indicating that means restriction activities at specific sites do not lead to displacement to other locations [10], the interviews highlighted negative experiences (such as involuntary admission to hospital) and possible changes in future behaviours (for example, jumping immediately rather than waiting) which could impact the potential to help individuals who return to the site in crisis. These are important considerations, and our understanding of these perspectives could be further developed with information directly gathered from individuals who have this personal lived experience. For example, there is much value in understanding why people are drawn to these locations, what they hope to find there, and what their responses to preventative measures have been (in the immediate crisis and longer term). Understanding these lived

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experience perspectives, in an ethical, respectful, and safe way, can help develop and refine effective suicide prevention strategies.

Declaration of Competing Interest

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