Are investments in urban green space worthwhile?

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Living near urban green spaces (UGS) may improve physical and mental health, as well as some educational outcomes. However, there is limited robust evidence on the effectiveness and cost-effectiveness of specific investments such as providing playgrounds or building pathways, making it difficult to determine if these are worthwhile. To address this gap, we reviewed the evidence on the impact of a range of investments in UGS on health and education outcomes.

Our research took the form of a systematic review of the literature, which identified studies published up to February 2024, drawing on a number of databases. Studies were included if they evaluated modifications to UGS - such as improved pathways, installation of play or fitness equipment, increased vegetation, or upgraded amenities - and also reported various outcomes related to health or education, including interim measures such as increased physical activity or better school attendance. The studies

were categorised based on the type of modification, and economic evaluations were reviewed when available. Our review included 28 studies, with most of them assessing the impact on physical activity, three reviewing mental health and none reporting on education outcomes.

Evidence on improving pathways was mixed, some showing benefits from investments in UGS, but others finding no effect. In poorer areas, improvements seemed to have more positive impacts, with three studies reporting benefits for physical activity. Improvements to play areas showed more consistently positive outcomes, with eight out of nine studies showing benefits for physical activity, although one found activity had decreased due to poor maintenance of facilities. There was limited evidence on the impact of increasing greenery, with only one study assessing this factor in isolation and finding a reduction in self-reported depression. Most studies reviewing improvements to amenities, such as seating, lighting or signage, combined these with other changes making it difficult to determine their independent impact.

Only three studies attempted to quantify the cost-effectiveness of interventions in UGS. They found that only small improvements in physical activity were needed for interventions in UGS to be cost-effective. However, because each of these studies evaluated a different type of intervention there is not enough evidence to determine if green space interventions in general are a cost-effective policy choice. We also found limitations in the evidence that make it challenging to use in economic evaluations - such as short-term study horizons, inconsistent outcome measures, limited consideration of multi-sectoral impacts, lack of research on educational outcomes and mental health, and an absence of attention to equity.

The results of our research can be used to inform those responsible for making decisions about investments within urban green spaces in order to improve health and education outcomes. However, gaps and limitations in the evidence base need to be addressed in order to make robust decisions about which specific investments are most cost-effective.

Read the full paper, funding sources and disclaimers in the International Journal of Environmental Research and Public Health

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