Community-based mental health and behavioral programs for low-income urban youth: a meta-analytic review

CRD summary
The authors concluded that community-based mental health and behavioural programmes were modestly effective for low-income urban young people. This conclusion reflects the evidence presented, but the possibility of missed studies, due to a limited search, and the uncertainty around the quality and synthesis of studies, mean that the reliability of this conclusion is unclear.

Authors' objectives
To evaluate the effects of community-based mental health and behavioural programmes for low-income urban young people.

Searching
PsycINFO was searched for studies published in English between 1975 and 2010. Search terms were reported. The reference lists of retrieved articles and previous reviews were scanned.

Study selection
Eligible for inclusion were controlled studies of community-based mental health and behavioural programmes, for school-aged urban or low income people, in the USA. Randomised studies were included if the outcomes were reported for before and after the intervention, or only after it. Non-randomised studies were included if the outcomes were reported for before and after the intervention. Studies had to report mental health or behavioural outcomes, or both. Control groups could receive no intervention, placebo, intervention as usual, or be on a waiting list. School-based interventions were included if they included activities outside the school setting, or were mainly delivered outside normal school hours.

The interventions, in the included studies, varied in their content and focus; many were delivered by researchers. Where reported, the average age of participants ranged from six to 17 years, and studies included males and females. Outcomes were categorised as psychological, such as depression; school-related, such as truancy, achievement, and school connectedness; antisocial behaviour; interpersonal skills; community or prosocial (benefiting society) activity; or physical health (including pregnancy).

Three reviewers independently selected the studies for inclusion. Disagreements were resolved by consensus.

Assessment of study quality
Study quality was assessed for design (before-and-after intervention with control, or after intervention only with control); type of assignment (randomised or non-randomised); type of control (waiting list, placebo, no intervention, or intervention as usual); and unit of assignment (individual or clustered).

Three reviewers independently assessed quality. Disagreements were resolved by consensus.

Data extraction
The data were extracted for mean effect sizes (Cohen's d or Hedges' g) after intervention, follow-up or both, along with 95% confidence intervals.

Three reviewers independently extracted the data. Disagreements were resolved by consensus.

Methods of synthesis
Where possible, effect sizes were combined in a meta-analysis (method not reported). Statistical heterogeneity was assessed using $I^2$. Moderator analyses were conducted to explore the influences of age, gender, ethnicity, target problem, risk factors, intervention level (universal or selected), intervention content (including number of components,
length, and frequency), description of intervention (for example, use of manuals and supervision), and how the intervention was delivered.

Results of the review
Thirty-three studies (41 evaluations) were included in the review (sample size range: 17 to 3,623 participants). All studies were classed as before-and-after design; 25 studies were randomised and eight were non-randomised. Nineteen interventions were compared with no intervention, six were compared with intervention as usual, five were compared with placebo, and three were compared with a waiting list; the unit of assignment was individual in 21 studies and clustered in 12 studies. The average follow-up (where reported) was seven months.

After intervention, the overall aggregated effect size across all studies was statistically significant at 0.25 (95% CI 0.14 to 0.36; 40 evaluations); the result at follow-up was not statistically significant (seven evaluations). Statistically significant effects after intervention were reported by outcome category for psychological (0.29, 95% CI 0.09 to 0.11; 16 evaluations); school-related (0.25, 95% CI 0.08 to 0.43; 16 evaluations); antisocial behaviour (0.15, 95% CI 0.00 to 0.31; 25 evaluations); interpersonal skills (0.21, 95% CI 0.01 to 0.41; 18 evaluations); and physical health (0.34, 95% CI 0.04 to 0.63; seven evaluations) categories. The result for the community or prosocial activity category was not statistically significant (six evaluations). There was substantial heterogeneity (I²=79.3%) across the studies.

Ethnicity and type of intervention were significantly related to programme effectiveness, with larger effects reported in studies targeting African American young people (0.41, 95% CI 0.30 to 0.53; 20 evaluations), and where interventions added an environmental component to the person-centred approach (0.27, 95% CI 0.16 to 0.37; 27 evaluations) or focused on the environment alone (0.38, 95% CI 0.15 to 0.60; seven evaluations). Person-targeted interventions were not significantly related to programme effectiveness (nine evaluations). Further results were reported.

Authors’ conclusions
Community-based mental health and behavioural programmes were modestly effective for low-income urban young people.

CRD commentary
The review question was clear and the inclusion criteria were adequately specified. Reliance on published studies in English, from one major data source, means that relevant studies might have been missed. Publication and language bias cannot be ruled out. The review process was conducted with attempts to avoid errors and bias. The included studies were assessed for methodological quality, but there was no interpretation of the results and how they might affect the findings. Substantial study details were provided. Statistical heterogeneity was found, and clinical heterogeneity was evident from the study tables, making it unclear whether statistical pooling was appropriate, but steps were taken to explore the effects of various sample and intervention characteristics.

The authors’ conclusion reflected the evidence presented, but the possibility of missed studies, and uncertainty around the quality and synthesis of studies, mean that the reliability of this conclusion is unclear.

Implications of the review for practice and research
Practice: The authors stated that it was essential to target the environment when implementing mental health and behavioral interventions for low-income urban young people.

Research: The authors stated that further research should examine why, and under what circumstances, specific interventions were effective. More studies were required on low-income urban young people of Latin American origin.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.