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# Intervention in Schools promoting mental health and well-being: a systematic review

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**Keywords:** Pupils; Mental health; Health Promotion; Whole School approach; Teachers; Social competence

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| | | | | | | | | | | outcomes: total SDQ, internalising problems, and prosocial behaviour. A small statistically significant difference in favour of the control group was found for externalising problems. Findings highlight the continued difficulties in developing effective, school-based prevention programs for mental health problems in adolescents. |
| Yang, J., Cervera, R., Tye, S., Ekker, S., & Pierret, C. (2018) | Quasi-experimental pre-post study | Quantitative | Survey | Mental health promotion | Students | Second and third cycle | 3 weeks | Positive outcome | United States | Curricular-based efforts focused on mental illness in an alternative school setting are feasible and integrated well into general curricula. Preliminary data suggest the existence of unique help-seeking barriers in at-risk youth. Increased focus upon |

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| | | | | | | | | | | community-based programming has potential to bridge gaps in translation, bringing this critical population to clinical care in pursuit of improved mental health for all. |
| Garmy, P., Berg, A., & Clausson, E. (2015) | Qualitative | Qualitative | Focus group | Mental health promotion | Students | Secondary education | 10 weeks | Positive outcome | Sweden | The school-based mental health program was perceived as beneficial and meaningful on both individual and group levels, but students expressed a desire for a more health-promoting approach. |
| Gigantesco, A., Del Re, D., Cascavilla, I., Palumbo, G., De Mei, B., Cattanco, C., et al. (2015) | Quasi-experimental pre-post study | Quantitative | Survey | Mental health promotion | Student | --- | 2 months | Positive outcome | Italy | The results showed an improvement in self-efficacy in regulating negative affect, overall psychological well-being, and satisfaction with life. These results demonstrate that the programme produced significant positive effects on the |

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| | | | | | | | | | | mental health status of participating students. |
| Shinde, S., Pereira, B., Khandeparkar, P., Sharma, A., Patton, G., Ross, D., et al. (2017) | RCT | Quantitative | Survey | Mental health promotion | Students | Secondary education | 24 months | Positive outcome | India | The study demonstrated generally good acceptability and feasibility of the intervention, though the coverage of intervention activities was lower in the teacher delivery schools due to competing teaching commitments, the participation of male students was lower than that of females, and one school dropped out because of concerns regarding the reproductive and sexual health content of the intervention. This approach provides a framework for adolescent health promotion in secondary schools |

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| Kiviruusu, O., Björklund, K., Koskinen, H., Liski, A., Lindblom, J., Kuoppamäki, H. (2016) | RCT | Quantitative | Survey | Mental health promotion | Whole school | Primary education | 6 months | No positive effects | Finland | These first, short-term results did not show any main effects on children's socio-emotional skills or psychological problems. This lack of effects may be due to the relatively short follow-up period given the universal, whole school-based approach of the program. The results suggest that the grade level where the intervention is started might be a factor in the program's effectiveness. Moreover, the results also suggest that for this type of intervention program to be effective, it needs to be delivered with a high enough dosage. |

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| Hawe, P., Bond, L., Ghali, L., Perry, R., Davison, C., Casey, D., et al. (2015) | Quasi-experimental pre-post study | Quantitative | Survey | Risk behaviors reduction | Whole school | Secondary education | 24 months | Positive outcome | Canada | A non-specific, risk protective intervention in the social environment of the school had a significant impact on a cluster of risk behaviours for girls. Results were remarkably like reports from similar school environment interventions elsewhere, albeit with different behaviours being affected. It may be that this type of intervention activates change processes that interact highly with context, impacting different risks differently, according to the prevalence, salience and distribution of the risk and the interconnectivity of relationships between staff and students. |

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| Morris, J., Lummis, G., Lock, G., Ferguson, C., Hill, S. & Nykiel, A. (2019) | Quasi-experimental pre-post study | Mixed | Survey, focus group | School culture promotion | Whole school and community | --- | 24 months | Positive outcome | Australia | After a range of interventions, findings from both post-test surveys and qualitative data suggested a change in leadership style was a key factor of school cultural change across all factors. The study highlights a number of visible strategies that were employed to increase morale and improve staff wellbeing. |

Notes: --- means that this information is missing

The age range of students participating in the interventions also differs among analyzed studies: primary education (n=4), second and/or third cycles (grades 5 to 9) (n=7), secondary education (n=5), all school years (n=3).

As for the interventions, the themes they addressed were: mental health promotion (n=14), classroom management (n=2), reduction of risk behaviors (n=1), promotion of school culture (n=1) and promotion of social and emotional skills (n=1); the types of interventions were training and implementation of mental health promotion programs (which included seminars, workshops, information sessions, among other strategies directed at participants) (n=19).

Considering the research characteristics among studies, case study/prospective (n=2), RCT (n=6) and quasi-experimental pre-post study (n=11) were observed regarding study design As for the data collection procedure, it was verified that some studies use more than one data collection procedure, e.g., focus group (n=4), interviews (n=2) and survey (n=17). Most interventions last less than 12 months (n=15) and are carried out in several countries: Canada (n=2), Portugal (n=3), United States (n=2), United Kingdom (n=1), Norway (n=1), Japan (n=1), Australia (n=3), England (n=3), Sweden (n=1), Italy (n=1), India (n=1) and Finland (n=1) (see table 3)

Table 3
*Research characteristics among studies*

| Research characteristics | N |
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| **Study design** | |
| Case study/Prospective | 2 |
| RCT | 6 |
| Quasi-experimental pre-post study | 11 |
| **Methods** | |
| Mixed | 3 |
| Qualitative | 3 |
| Quantitative | 13 |
| **Data type** | |
| Focus group | 4 |
| Interviews | 2 |
| Survey | 17 |
| **Duration of the intervention** | |
| ≤ 12 months | 15 |
| 12 months – 24 months | 3 |
| 24 months – 36 months | 1 |
| **Sample characteristics** | |
| Country | |
| Canada | 2 |
| Portugal | 2 |
| United States | 2 |
| United Kingdom | 1 |
| Norway | 1 |
| Japan | 1 |
| Australia | 3 |
| England | 3 |
| Sweden | 1 |
| Italy | 1 |
| India | 1 |
| Finland | 1 |

*Included sample characteristics*

Papers selected for this review focused on young people aged up to 18 years old who attend school and had been the target for mental health and wellbeing promotion interventions. The interventions must have been carried out in a school context.

*Main findings*

According to the presented results, it can be seen that most of the analyzed articles intend to promote mental health in a school context and the great majority (84%; n=16) reported positive outcomes. Most of the studies (75%) involved either the whole school or whole school and community (n = 7) or focused only on students (n = 7).

The majority (37%) of the studies (n=7) refer to grades 5 to 9, have a quasi-experimental pre-post study design (58%; n=11), used a quantitative methodology (68%; n=13), and last less than 12 months of intervention (79%; n=15). Moreover, they were implemented in European countries (53%; n=10).

These results show the importance of the involvement, not only of students and teachers, but of the whole school, in order to promote mental health and wellbeing in schools. They also highlight that after years

of "stigma", mental health is a main concern in school aged population.

## Discussion

School-based approaches seem to be more effective when they include the entire school, when they use a social skills promotion model, when they include peer education, when they favour student participation and initiative, when they use interactive and participated methodologies, and when they last several years and become a part of school culture (Person et al, 2012; Jané.Llopis, 2007; Matos et al, 2012).

It is also referred in literature that new programs should be integrated into previously existing ones, and partnerships and networking with structures within the community are encouraged. Higher levels of participation are also advised, such as the 'entire school' and 'entire community' approach is associated with a public health perspective,based on positive psychology that privileges the development of positive traits (positive emotions, resilience and optimism) (Lhopis-Jané, 2005; Matos et al, 2012).

Interventions that increase protection through protective legislation (price increase in specific products such as tobacco and alcohol) may be dissuasive for a while, but they only allow permanent positive changes within a "whole school, positive, global, participative framework, allowing for a comprehensive and concerted action.(Corrieri et al, 2013).

Some authors argue that interventions must be systematically evaluated so that they may be presented as evidence based, and even when results point out that school and municipal intervention programs have no or little effect (which is already a progress compared with having no assessment), the implementation conditions must be checked, in particular the technician's profile and experience, duration of the program, its supervision and how it was evaluated ( Corrieri et al, 2013; Stallard, 2013; Matos, 2019).

Overall, programs applied in the area of mental health seem to have positive effects (but small). Anxiety seems to respond better than depression. Programs appear to function better when there is a medium level of depression, and boys and girls respond differently to these interventions (Stallard, 2013). Investigations on psycho-education are understudied, and despite the fact that the school setting is 'practical', it is not yet clear if these interventions fit their setting. One of the reasons is the potential harmful effect of "stigma related to poor academic performance" that may put away students that do not like school (Matos et al, 2016), or the fact that teachers may be themselves a source of problems in need for urgent action (Tomé, Matos, Camacho & Gomes, 2019).

In the period included in the present systematic review, the situation is similar: schools seem to be a relevant context to implement programs in the area of mental health and well-being promotion, and it is commonly accepted that whole -school programs are the most effective.

Literature reviews on the effectiveness of intervention programs is undermined or at least biased by the fact that most of the non-effective programs tend not to be published. Most of the interventions focused on students even if the recommendation was a whole school approach, which is a much more ambitious intervention design that most teams can't afford. Most of the programs lasted one year or less, when the previous recommendation was more than one year to allow for a change in the school culture.

It is strongly recommended to implement school-based intervention programs in the mental health area, with a long-term follow-up, an effective monitoring of the quality of its implementation (and adequate training of the intervention team). An effective multi-source evaluation of the intervention should be included, along with family sessions.

In the last five years, as a follow-up to less recent literature reviews, several authors (Pearson et al, 2012; Corrieri et al, 2013) pointed out the urge and relevance of interventions in the area of mental health promotion in schools. It is also quite plausible that most of the promotional programs are neither published nor adequately evaluated. This delays substantially the knowledge in these areas, even if it is generally agreed that it is difficult to fit the urges of the professionals in the field (a lot of work, low support and close to zero funding), and the requests for a quality scientific publication.

Two messages for the public policies: one is about cheering initiatives to design and implement mental health programs in school arenas and the other is about favouring the connection between professionals that undergo field interventions and researchers that can provide an adequate design, supervision, evaluation, data analysis and adequate dissemination.

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