Exploring students’ participation in universal, depression and anxiety, prevention programmes at school: a meta-aggregation

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**Abstract**

Mental health promotion in schools is a key priority for national governments. The aim of this meta-aggregation is to synthesise the findings from universal, depression and/or anxiety, Cognitive-Behavioural Therapy (CBT) and/or Interpersonal Therapy (IPT)-based, programmes implemented in schools, which are focused on reducing depression and anxiety in student populations aged 8-17 years. Electronic databases were searched for published original qualitative studies which assess students’ perceptions and experiences from participating in universal, school-based, depression and/or anxiety, prevention programmes. Extraction and synthesis of findings was assisted by NVivo qualitative data analysis software. The Joanna Briggs Institute-Qualitative Assessment and Review Instrument (JBI-QARI) Critical Appraisal Checklist for Interpretative and Critical Research was used for assessing methodological quality of the included studies. The confidence of synthesised qualitative findings (ConQual) approach was followed for assessing the confidence in the estimates of syntheses output. Five studies from Australia, Sweden, and UK met the inclusion criteria. Modification in the structure and mode of implementation of universal prevention programmes is required in order to enhance programmes’ applicability and impact. The study provides key practical recommendations to stakeholders and policy makers about the content, delivery, and implementation of school-based, universal, prevention programmes.

***Keywords:*** universal; school; depression; anxiety; qualitative; meta-aggregation

**Introduction**

Adolescence is the riskiest period for developing a mental health disorder with one in ten adolescents affected by anxiety or mood disorders (Merikangas et al., 2010). Poor mental health increases the risk of engaging in health-risk behaviours (Kessler, Avenevoli, & Merikangas, 2001). Health-risk behaviours constitute the most prominent risk factor for disability in adolescents and young people (Gore et al., 2011). Given that mental health difficulties in early adolescence increase the risk of mental health disorders in adulthood (P.B. Jones, 2013), it is imperative that national governments prioritise universal interventions to prevent mental health problems in children and adolescents (WHO, 2013).

Universal interventions target all individuals in a setting irrespective of their risk for psychopathology, eliminating stigmatization and offering the space for mental health promotion (Macklem, 2014). Most universal prevention interventions in children and adolescents have been implemented in schools. Schools offer a vital environment for targeting mental health difficulties and positive protective factors at an early stage (Weare & Nind, 2014). Most of the school-based interventions focus on preventing mental disorders from emerging, adopting a disease-focused, clinical approach to health (Enns et al., 2015). Universal, school-based, prevention programmes have targeted depression and anxiety symptoms (Merry, Brudevold-Iversen, Bir, & McDowell, 2012; Neil & Christensen, 2009). Most of the programmes consist of 8-12 weekly sessions with the age of participants ranging from 5 to 17 years (Werner-Seidler, Perry, Calear, Newby, & Christensen, 2016). The content of most of depression and anxiety, prevention programmes is based on Cognitive Behavioural Therapy (CBT) whilst a few have implemented Interpersonal Therapy (IPT) (Hetrick, Cox, & Merry, 2015).

Findings about the effectiveness of universal prevention programmes in reducing the risk of depression and treating depressive symptoms in children and adolescents are mixed. Some reduce the risk for depression at post-intervention and up-to 9 months (Stockings et al., 2016), exerting small effects on reducing depressive symptoms at post-intervention and medium-term follow up (3 to 9 months) (Ahlen, Lenhan, & Ghaderi, 2015; Merry et al., 2012; Stockings et al., 2016). However, these effects are small, weaken over time (Hetrick et al., 2015), and high heterogeneity is evident (Ahlen et al., 2015; Stockigns et al., 2016). A recent review of school-based, universal, prevention programmes failed to detect a significant effect of these programmes in reducing depressive symptoms at post-intervention (Werner-Seidler et al., 2016). A recent update of a Cochrane review (Hetrick, Cox, Witt, & Merry, 2016) reported no evidence for the effectiveness of these programmes in decreasing the risk for depression, with a small reduction of depressive symptoms at post-intervention that diminish at follow-up.

Findings regarding the effects of these programmes in reducing the risk for developing anxiety disorders are more promising, albeit these effects appear to diminish over time (Stockings et al., 2016). Universal prevention programmes have been found effective in reducing anxiety symptoms at post-intervention (Fisak, Richard, & Mann, 2011; Teubert & Pinquart, 2011; Wener-Seidler et al., 2016; Stockigns et al., 2016) with these effects being present at medium-term follow-up (Fisak et al., 2011; Hetrick et al., 2016; Stallard et al., 2014). Universal prevention programmes, which primarily target anxiety, have been found effective in exerting cross-over preventive effects by inhibiting the course of depressive symptoms (Garber et al., 2015).

Due to the insufficient evidence, none of universal school-based interventions, which have been proposed for large scale roll-out, can be widely disseminated as yet (Bastounis, Callaghan, Banerjee, & Michail, 2016; Brunwasser & Garber, 2016). Given the superior effects of targeted programmes over universal ones in reducing depressive symptoms (Calear & Christensen, 2010; Stice, Shaw, Bohon, Marti, & Rohde, 2009; Hetrick et al., 2016), it has been suggested that further research on universal prevention programmes may not be warranted and focus should be tailored to the targeted applications of depression prevention programmes (Hetrick et al., 2016). It should be noted, however, that universal prevention programmes differ from the targeted applications in terms of scope, structure, and population of interest. Although universal prevention programmes have shown inconsistent effects in reducing depression, they have been found effective in improving students’ social emotional competencies and decreasing emotional distress (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; S. M. Jones, Brown, & Lawrence Aber, 2011). It is critical therefore to highlight those factors which account for the difference in the effects of universal prevention programmes and the targeted ones. A more thorough understanding of the factors, which differentiate the two applications, will lead to the development of tailored universal programmes, which in turn will better accommodate the needs of the populations in which these interventions are implemented. Given the increase in subthreshold anxiety symptoms in adolescent populations (Fink et al., 2015), it is imperative to re-visit the structure and content of universal, school-based, prevention programmes in order to drive the most effective approaches for prevention.

*Why is this meta-aggregation important?*

The inconsistent effects of universal prevention programmes can be attributed to the unexplored longitudinal relationships between protective factors and mental health (Thapar, Collishaw, Pine, & Thapar, 2012). The limited understanding of the causal pathways between protective factors and mental health has hindered the development of highly tailored, depression-prevention programmes for universal populations. CBT-based interventions have been found effective in tackling symptoms of depression in high-risk and depressed adolescents by affecting individuals’ inferential styles (Weersing, Jeffreys, Do, Schwartz, & Bolano, 2016) and behavioural patterns (Arora, Baker, Marchette, & Stark, 2017). There is a need therefore to unpack the components of the CBT and/or IPT-based interventions and highlight how these components could better work for universal school populations (Hetrick et al., 2015). The lack of evaluative research on how the structure and implementation of universal, depression-prevention, programmes impact their effectiveness and feasibility has limited our knowledge regarding the underpinnings of the most effective universal programmes. Analysis of qualitative data is an essential part of evaluating complex interventions, given that it highlights facilitators and barriers regarding their implementation, structure, and content (Moore et al., 2015). Qualitative studies can provide us with a deep insight regarding variations in effectiveness of complex interventions (Lewin, Glenton, & Oxman, 2009). Participants’ feedback can be useful in revising the content and structure of the school-based, depression-prevention, programmes (Stallard et al., 2013), elucidating the barriers which may inhibit the effectiveness of such programmes (Sandler et al., 2014). In the context of mental health prevention in schools, competing responsibilities and lack of support from teachers and administrators are considered as barriers for the effective implementation of these programmes (Langley et al., 2010). It is critical therefore to identify facilitators and barriers related to the structure, content, and implementation of universal prevention programmes in order to provide recommendations regarding the most suitable approaches for universal populations.

This meta-aggregation aims to synthesise the findings from universal, depression and/or anxiety, CBT and/or IPT-based, programmes implemented in schools which were focused on reducing depression and anxiety in student populations aged 8-17 years. Based on the philosophical foundation of Pragmatism (Lockwood, Munn, & Porritt, 2015), meta-aggregation “seeks to summarise findings from original qualitative studies in order to produce cross-study generalizations which in turn will lead to recommendations for the key stakeholders and policy makers” (Hannes & Pearson, 2012, p. 23). We therefore sought to summarize common findings among homogeneous studies, aiming to provide cross-study generalizations which will inform decision-making practice (Hannes & Pearson, 2012; Lockwood et al., 2015). This meta-aggregation sought to identify facilitators and barriers related to the content, structure, and implementation of school-based, universal, depression and anxiety, prevention programmes, by summarising participants’ perceptions and their experiences from participating in such programmes. This is the first meta-aggregation to provide a context-specific synthesis, focusing on the universal, CBT and/or IPT-based, school-based, depression and anxiety, prevention programmes.

**Methods**

A meta-aggregation was conducted to explore the question “What are the perceptions and the experiences of students participating in universal, school-based, depression and anxiety, prevention programmes which are based on CBT and/or IPT”. The presentation of findings conforms to the enhancing transparency in reporting the synthesis of qualitative research (ENTREQ) statement (Tong, Flemming, McInnes, Oliver, & Craig, 2012). The ENTREQ statement aims to promote explicit and comprehensive reporting of the synthesis of qualitative studies, providing transparency and consistency in reporting syntheses of qualitative research (Tong et al., 2012). It consists of 21 items grouped into five domains: namely, introduction, methods and methodology, literature search, selection, appraisal, and synthesis of data (Tong et al., 2012).

*Eligibility criteria*

All published qualitative evaluation studies exploring participants’ perceptions and experiences of universal, school-based, CBT and/or IPT-based, depression and anxiety, prevention programmes were eligible for inclusion. Only original qualitative studies published in English in peer-reviewed journals from January 2000 to September 2016 were assessed. This meta-aggregation draws data from students aged 8-17. The PICOS (population, phaenomena of Interest, Comparators, Outcomes, Study design) approach was used to define the inclusion and exclusion criteria.

- Population: students aged 8-17.

- phaenomena of Interest: experiences and perceptions from participating in universal, school-based, depression or anxiety prevention programmes which are based on CBT and/or IPT

- Comparators: all comparators

- Outcomes: Depression and/or anxiety

- Study design: original qualitative studies only

Most of the universal, depression-prevention programmes are based on CBT, targeting mainly depressive symptoms, whereas a few have incorporated IPT elements. Given that it is unlikely for depressive symptoms to emerge before the age of eight (Hankin et al., 1998) and the optimal time for preventing anxiety is in late childhood (9-10 years) (Farrell & Barrett, 2007), this meta-aggregation draws data from participants aged 8 to 17. Given that we aimed to draw data from a homogeneous (in terms of methodology) sample of studies, only original qualitative studies are included in this meta-aggregation.

*Search strategy*

Libraries and databases searched between 2000 and 19th September 2016 were: CINAHL (Cumulative Index to Nursing and Allied Health Literature), EMBASE, MedLine (including PubMed), PsycINFO, Scopus, Science Direct. Extensive hand-searches of public online databases and cross-references checking were conducted. Quantitative, mixed-methods studies, unpublished studies, pilot or feasibility studies, and studies which did not assess any of the outcomes of interest (depression or anxiety symptoms), were excluded. Medical, subject-specific headlines were searched in a concrete syntax strategy. Four concrete, syntax sets were used for searching Medline on our SPICE headings, with an additional 5th syntax set to be used for narrowing our searches: (1st set: school OR classroom OR multi-site OR education; 2nd set: adolescent\* OR student\* OR teacher\* OR provider\* OR personnel OR administrator\*; 3rd set: resilienc\* OR recovery OR hardiness OR resistance OR cognitive behavioral OR cognitive behavioural OR school-based OR programme\* OR program\* OR universal OR prevention OR promotion OR psychoeducation OR interpersonal OR therapy OR mindfulness OR intervention\*; 4th set: depression OR anxiety OR coping OR social OR learning OR wellness OR health behaviour\* OR health behavior\* OR emotion\* OR environment OR sustainability; 5th set: evaluation OR qualitative).

To identify studies meeting inclusion criteria, the first author (AB) and a post-graduate researcher (FL) reviewed independently the retrieved articles. When titles and abstracts were insufficient to determine inclusion criteria, full articles were retrieved. The full text was reassessed for inclusion by the two independent reviewers and included or excluded as appropriate.

*Quality assessment*

The JBI QARI Critical Appraisal Checklist for Interpretative and Critical Research was used for assessing methodological quality of the included studies (JBI Manual, 2014). The 10-item, Critical Appraisal Checklist instrument assesses congruity between the philosophical/theoretical position adopted in the study, study methodology, study methods, the research question, the representation of the data, and the interpretation of the findings of each of the selected studies (Hannes & Pearson, 2012, p. 27). The instrument also assesses the cultural or theoretical orientation of the researcher, any influence of the researcher on the study and vice versa. The instrument also assesses whether participants’ voices have been adequately represented in the study and whether the interpretation and analysis of the results are congruent with the study’s conclusions. The quality assessment determined whether a study was included. The same independent reviewers (AB & FL) assessed the quality of all the selected studies and any disagreements were resolved after discussion.

*Data extraction, levels of plausibility and data synthesis method*

The JBI QARI Data Extraction for Interpretative and Critical Research abstraction form was used to extract data from the included studies. Data extraction forms included details regarding studies’ citation, the population, the phenomena of interest, the context, the adopted methodology, the qualitative research methods used in the studies, and cultural information, allowing the extraction of the same type of data across the included studies (JBI Manual, 2014). In meta-aggregation, the units of extractions are specific findings highlighted by the authors which constitute textual conclusions and can be presented as metaphors, key themes/sub-themes, or statements. Two reviewers (AB & FL) extracted data independently and any disagreements were resolved after discussion. The findings were extracted directly from the original studies by the reviewers, referring to specific quotations which justify the generation of each finding. Our focus therefore was to extract the findings generated by the researchers of each study, without interpreting the actual data. Sub-themes (findings) of the studies were extracted. The reason for choosing to include sub-themes into our aggregation was that an overlap between studies’ themes was evident, something which could lead to the missing of important data. The extraction and synthesis of findings was assisted by QSR International's NVivo 11 qualitative data analysis Software (NVivo, 2014).

Each finding was assigned a rating which represented its level of plausibility in relation to the degree of its authenticity to the actual data (credibility). Two independent reviewers (AB & FL) assigned the rating for each finding. Any disagreement was resolved after discussion. Three levels of credibility were assigned for each finding (JBI Manual, 2014). The findings which authentically represented the actual data and are not open to challenge were assigned a rating of “unequivocal”. The findings which provided a plausible interpretation of the actual data but were open to challenge were assigned a rating of “equivocal”. The findings which were not supported by the data were assigned a rating of “unsupported” and excluded from the aggregation. This meta-aggregation conforms to JBI-QARI meta-aggregation approach for synthesising qualitative data (Lockwood et al., 2015; JBI Manual, 2014). The first reviewer (AB) was responsible for clustering similar-in meaning findings which were extracted from the included studies in discrete categories.

The categories including similar in meaning findings were clustered, forming synthesised findings. Synthesised findings can be described as an “overarching description of group of categorized findings, which aim to assist policy and practice by providing recommendations” (Hannes & Pearson, 2012, p.32). Synthesised findings are presented in an indicatory form, facilitating the interpretation of the evidence (Hannes & Pearson, 2012). The confidence in the estimation of the synthesis’ outputs is assessed in terms of the dependability and credibility of the synthesised findings, following the ConQual approach (Munn, Porritt, Lockwood, Aromataris, & Pearson, 2014). Dependability is assessed by evaluating whether the individual studies fulfil the criteria of dependability as they are defined by the first five items of the JBI-QARI Critical Appraisal Checklist (congruity between the research methodology and the research question or objectives, congruity between the research methodology and the methods used to collect data, congruity between the research methodology and the representation and analysis of data, statement locating the researcher culturally or theoretically, and influence of the researcher on the research and vice versa). Credibility of individual findings is graded by assessing the congruence between authors’ interpretation and the provided data. Downgrading of the dependability occurs when the included studies do not meet at least four out of five criteria for dependability while downgrading for credibility occurs when there is a mixture of unequivocal and/or equivocal and unsupported individual findings (Munn et al., 2014). The confidence of estimates of the synthesised findings for both dependability and credibility leads to an overall ranking for each synthesised finding, which ranges from high to very low (high, moderate, low, and very low) (Munn et al., 2014).

**Results**

The electronic searches identified 6203 records after duplicates’ removal and four records were also identified from other sources. All the identified citations were checked for inclusion or exclusion by AB. Full-texts were obtained for 115 records in total. These records were checked independently for inclusion or exclusion by A.B. and F.L. Of the remaining 115 records, only 5 studies fulfilled the eligibility criteria and were included. The kappa coefficient for interrater agreement in the identification of the eligible studies and their quality assessment was .83 and .54 respectively. The PRISMA diagram (Moher, Liberati, Tetzlaff, & Altman, 2009) outlines all the stages for the selection process for the included studies, providing reasons for exclusion (Fig.2).

-- INSERT FIGURE 1 HERE --

*Study and participants characteristics*

As shown in Table 1, five studies were included in this meta-aggregation. Two were undertaken in Sweden (Garmy et al., 2015; Kvist Lindholm & Nelson-Zetterqvist, 2015), two in the UK (Skryabina et al., 2016; Taylor et al., 2014), and one in Australia (Shochet et al., 2014). The studies collected qualitative data from 387 students who had participated in universal, depression and/or anxiety, prevention programmes while quotations were reported from 69 students. The age range of the participants fluctuated from 9-16 years. All the included studies evaluated participants’ perceptions and experiences of participating in programmes, three of which were CBT-oriented (Garmy et al., 2015; Kvist Lindholm & Nelson-Zetterqvist, 2015; Skryabina et al., 2016) and the remaining two incorporated both CBT and ITP elements (Shochet et al., 2014; Taylor et al., 2014). Four of the interventions (Garmy et al., 2015; Kvist Lindholm & Nelson-Zetterqvist, 2015; Shochet et al., 2014; Taylor et al., 2014) targeted depressive symptoms as primary outcome while one targeted anxiety symptoms (Skryabina et al., 2016). All the included studies described evaluations of the implementation of universal, school-based, interventions targeting depression and/or anxiety. Two of the studies undertook individual interviews with the students (Kvist Lindholm & Nelson-Zetterqvist, 2015; Shochet et al., 2014), two of them conducted focus groups (Garmy et al., 2015; Skryabina et al., 2015), and one of them conducted focus groups and interviews (Taylor et al., 2014). Three of the studies analysed the data thematically while the two remaining studies (Garmy et al., 2015; Kvist Lindholm & Nelson-Zetterqvist, 2015) followed content and discourse analysis respectively.

–INSERT TABLE 1 HERE-

*Study quality*

All the included studies met the eligibility criteria for reporting original qualitative data, exploring the perceptions and experiences of students participating in universal, school-based, depression and anxiety, prevention programmes. All the included studies were of high quality, adequately describing the context and the aims, albeit only one study (Kvist Lindholm & Nelson-Zetterqvist, 2014) clearly reported the theoretical and philosophical perspective in which the study was based (see Table 1). All the studies were ethically approved and their research methodology was in congruence with research objectives and methods used to analyse and interpret the data. In only one study (Taylor et al., 2014), a rich description of students’ perceptions was not evident, with only three quotes available. In all the studies, there was a congruity between the reported conclusions of the data analysis and the interpretation of these data, given that only a few extracted findings received a rating of equivocal and only one finding was graded as unsupported (Taylor et al., 2014). The unsupported finding was not included in the analysis. In addition, all the studies provided brief statements outlining the potential influence of the researcher to the research and vice versa, pointing out limitations related to the transferability of conclusions.

*Confidence in the estimation of synthesized findings: Dependability and credibility*

Using the ConQual approach (Munn et al., 2014) included studies were graded as high, moderate, low, or very low. The confidence in the estimate of the synthesised findings is defined by dependability and credibility. All the studies received a high rating for dependability as they fulfilled at least four out of five criteria for dependability while one study (Kvist Lindholm & Nelson-Zetteqvist, 2014) fulfilled all the criteria (see Table 1). There were 33 sub-themes which were extracted as findings from the accounts of the students who participated in these programmes (see Table 2).

-INSERT TABLE 2 HERE-

The reason for extracting sub-themes instead of the themes was to retain the richness of the data. The synthesis of the individual findings into categories and the summarization of these categories into synthesised findings was conducted according to the similarity in meaning of the extracted findings from the included studies (Hannes & Pearson, 2011), conforming to the JBI principles for synthesising qualitative data in meta-aggregation synthesis (JBI Manual, 2014). Most of the findings (31/33) received a rating of unequivocal while only two received a rating of equivocal (Stress Management and Balloon-Challenge-problem-solving). These two findings, which were rated as equivocal, provide an illustration of the data which is open to challenge. These findings were assigned a lower value of credibility. The synthesis of the findings led to 7 categories which in turn were merged into two synthesised findings (see Table 2). The first synthesised finding received a high-quality grading and the other received a moderate quality grading (see Table 3). The second synthesised finding received a moderate quality rating (downgraded one level) regarding the confidence of the output because it consists of a mixture of equivocal and unequivocal individual findings.

*Synthesis of findings into categories*

The meta-aggregation revealed 7 categories which were formed by summarising similar-in meaning individual findings which were extracted from the included studies (see Table 2). The first category *“Applicability of prevention interventions to universal populations*” consists of four findings. The second category “*A positive cognitive style*” consists of 2 findings. The third category “*Structure and implementation*” consists of 10 findings. The fourth category “*Empathy*” consists of three findings. The fifth category “*Personal attributes*” consists of three findings. The sixth category “*Social skills*” consists of three findings. The seventh category “*Emotion regulation strategies*” consists of 8 findings.

The first category, which consists of four findings (Who’d benefit from the program, Treatment rather than prevention, Negative thoughts as distal agents, Negative framing), reveals that the depression-oriented nature of these interventions and their focus on how to tackle negative thoughts, limits their applicability. Although, students revealed that these types of intervention assisted them with recognizing negative thoughts and their effects on their mood, they would prefer these interventions to focus more on activities which would promote positive thinking. The second category, which consists of two findings (More Helpful cognitions, Directed thinking), reveals that students found their participation in these programmes to have helped them to think more positively, rendering them more capable to tackle negative thoughts. In the third category, which consists of 10 findings (Rapport with young people, Number of sessions, Types of teaching, Workbook’s visual elements, Tutor’s role, Longer and more sessions, Hand-on activities and group work, Fun and help, Emphasis on performance, Positive activities), students reported that these types of intervention would be more applicable to them, if they consisted of hand-on and interactive activities. Students felt that the discussions in the lessons were repetitive, limiting their motivation and concentration to attend. Students reported that a rapport between the interventions’ administrators and participants as well as administrators’ confidence in delivery of such interventions are a prerequisite for the success of these interventions.

In the fourth category, which consists of three findings (Considering other more – Improved empathy, Improved relationships – recognizing feelings in others, Considering others), students revealed that their participation in such interventions helped them to cultivate their empathy, referring to specific examples on how they started to think about the thoughts and intentions of the others. Students reported that participating in these interventions taught them to tolerate others, rendering them more capable to take others’ perspective; with these skills in turn exerting positive effects on the quality of their interpersonal relationships. The fifth category consisting of three findings (Improved self-confidence, Improved self-esteem – self-confidence, Coping step plan-problem-solving) revealed that students felt that their participation in such programmes increased their self-confidence and self-esteem. Students reported that their increased self-confidence improved their coping skills, reducing their tendency for self-criticism. Findings from the sixth category (Increased use of social support, Trusting the group, Balloon challenge and problem-solving) revealed that students reported that their participation in such programmes, increased their social skills, helping them to be more reflective and establish stronger bonds with their classmates. Students also reported that participation in these interventions helped them to become connected with peers, promoting social support-seeking behaviours. The increase of their social skills and social seeking support behaviours improved the groups’ cohesion in classes which address these interventions. Finally, findings in the seventh category (Stress management, Managing difficult emotions – Keeping calm, Managing difficult emotions – Managing anger, Awareness and management of emotions, Staying calm in a conflict, Red and green thoughts, Relaxation, Talking it through) revealed that students found that that their participation in such programmes evolved their emotion regulation skills. These skills assisted them to more efficiently regulate their family and social relationships, handling anger and disputes more effectively. In addition, they reported that they benefited from participating in these interventions by effectively regulating their stress and improving their coping and negotiation strategies.

*Synthesis of Categories*

Similarity in meaning between categories led to the generation of a set of synthesized findings (Hannes & Pearson, 2011). In the context of meta-aggregation, synthesised findings can be stated either as “if-then” statements or following an indicatory form (JBI Manual, 2014). The seven categories in this meta-aggregation were summarized in two synthesized findings.

The first synthesised finding can be presented as: Although a few students reported that their participation in these programmes facilitated a more positive thinking style by recognizing the deleterious effects of negative thoughts, most of the students revealed that the depression-focused orientation of these programmes limits the programmes’ applicability. They suggested that a switch from the repetitive training on negative thoughts to practicing positive skills via the use of interactive and hand-on activities delivered by experienced administrators would have maximized the programmes’ applicability, retaining their interest and motivation (Categories 1, 2, 3) The second synthesised finding can be presented as: Students reported that these types of programmes were beneficial in improving their interpersonal relationships, by boosting their self-confidence, empathy, social skills and most importantly by fostering the adoption of a more positive emotion regulation strategy and adaptive negotiation strategies, which in turn led to better relationships with peers and family and greater capacity in dealing with anger and disputes (Categories 4, 5, 6, 7).

-INSERT TABLE 3 HERE-

**Discussion**

This is the first meta-aggregation to present students’ perceptions and experiences from participating in universal, school-based, CBT and/or IPT-based programmes which target depression and anxiety. This meta-aggregation aims to evaluate the structure and content of such interventions by synthesising students’ voices. The involvement of students as partners in designing school mental health strategies emphasises consumer-driven, mental health care and facilitates the development of multi-tiered systems of promotion and support in schools (DeLoach McCutcheon et al., 2014). Students’ voices are critical in terms of reconceptualising the content, structure, and implementation of these interventions in order to be more applicable to a universal school sample. The synthesis of data provided two synthesised findings, which in turn provide useful recommendations to key stakeholders and policy-makers, regarding the facilitators and barriers of the content, structure, and implementation of universal, school-based, depression and anxiety prevention programmes.

*Facilitators and Barriers of universal, school-based, prevention programmes*

Participants revealed that the depression-focused orientation of these programmes limits the programmes’ applicability, reducing their motivation, enthusiasm, and concentration to attend these sessions, something which in turn might decrease programmes’ effectiveness. It has been found that the perceived relevance of the skills taught in school-based interventions is associated with the degree of practicing these skills (Farrell et al., 2015). Indeed, programmes which target educative and competency skills can be more applicable for delivery in universal populations (Weare & Nind, 2014). Social-Emotional learning (SEL) programmes can foster supportive relationships among the students and reward social, health, and academic behaviour, adopting an educational-oriented, mental health promotion approach (Greenberg et al., 2003). There is evidence that SEL programmes, which target academic achievement and interpersonal strategies, can decrease internalising behaviours (S. M. Jones et al., 2011). Recent evidence suggests that an integrated universal approach which combines positive behavioural and social emotional learning elements can promote mental health and decrease externalizing behaviours in a sample of elementary students (Cook et al., 2015).

Some of the students reported that a prerequisite for the successful implementation of universal programmes is for these to be delivered by experienced administrators who will have established rapport first with the students. It is more likely therefore teachers and school staff to be preferred by the students, given the daily contact and the time they spend at school which renders them more capable for building a stronger rapport. Health professionals, however, have been found more effective in delivering universal, school-based, prevention programmes compared to school teachers (Stallard et al., 2014). Taking into account the financial constraints and the inconsistent effects of universal, school-based programmes, it is suggested that less complex interventions which include competency enhancement activities, could be smoothly absorbed and more easily delivered by school teachers. In addition, students’ accounts revealed that the incorporation of hand-on activities into these programmes could maximize their applicability, increasing their motivation to attend and bolstering the class cohesion in school.

The second synthesised finding highlights the importance of interpersonal relationships on mental well-being. The participants revealed that they benefited from participating in such programmes in terms of increasing their self-confidence, empathy, and social skills. These personal attributes are considered by parents and students as essential targets of school-based, emotional, well-being interventions (Coverdale & Long, 2014). Interpersonal techniques focused on adolescents (IPT-A), albeit presuppose the diagnosis of depression, could enrich the content of the universal depression programmes. IPT-A techniques target negotiation interpersonal strategies in relation to adolescents’ developmental needs, taking into account the structural changes which occur within the family (Mufson et al., 2004). Most of the students indicated that these programmes were effective in increasing their emotion regulation in terms of dealing with anger and disputes with peers and family, resulting in turn in better interpersonal relationships which are critical for their mental well-being. Positive emotion regulation strategies as well as improved stress management skills were highlighted as the most beneficial outcome from participating in these types of programme. Adaptive emotion regulation strategies can inhibit the course of externalizing behaviours (Zhao & Zhao, 2015) while negative emotion regulation strategies have been found to mediate the relationship between the perception of stressful events and depressive symptoms in adolescents (Luecken & Rubinov, 2012). Recent evidence suggests that training in emotion regulation can be smoothly incorporated into school-based, SEL programmes (Modecki, Zimmer-Gembeck, & Guerra, 2017). SEL interventions can train children and adolescents to increase their interpersonal and self-management skills through academic and literacy practice, adopting a pedagogical approach for increasing students’ social-emotional competencies (S. M. Jones et al., 2011). A pedagogical-oriented, resilience-focused approach in developing social and emotional skills in children and adolescents through academic curricula renders itself a more feasible approach for school-based, universal prevention. It is suggested therefore that future universal interventions delivered at schools should continue focusing on emotion regulation strategies as a way of improving interpersonal relationships, targeting social emotional competencies through literacy and academic practices.

*Strengths and limitations*

This is the first synthesis of qualitative data which explores students’ perceptions and experiences from participating in universal, school-based, depression and anxiety prevention programmes which are based on CBT and/or ITP. In the light of conflicting findings regarding the effectiveness of such interventions which has led their utility to be questioned, this meta-aggregation offers insights regarding the most beneficial components of such interventions, highlighting barriers which limit the programmes’ effectiveness. The synthesised findings of this meta-aggregation highlight effective approaches regarding the structure, content, and implementation of universal prevention programmes. These approaches provide practical guidance regarding the more efficient design and implementation of school-based, universal programmes.

This meta-aggregation has inevitably some limitations. First, the small number of studies may decrease the transferability of the findings. Second, this meta-aggregation did not summarize the views and perceptions of key stakeholders (e.g. teachers) from participating in such programmes. Third, in the context of meta-aggregation we cannot synthesise actual data drawn from participants, relying on authors’ own interpretations of the data. Fourth, the transferability of findings is limited for the school-based, universal programmes which target anxiety, given that only one of the included studies targeted anxiety as its primary outcome.

*Implication for practice*

Based on the students’ accounts, we advocate that the implementation of SEL programmes, which will target emotion regulation strategies, key personal attributes, and competencies in relation to the interpersonal relationships, will be more applicable for universal populations. Sub-threshold anxiety symptoms in adolescence confers great risk for depression and adverse mental health events to emerge in early adulthood (Woodward & Fergusson, 2001), rendering itself a more appropriate target for interventions which are implemented in universal populations. Given the shared developmental patterns of anxiety and depression (McLaughlin & King, 2016), SEL programmes which will target specific stressors related to the school context, putting an emphasis on the link between these stressors and interpersonal relationships could be more effective in exerting cascading effects on the course of anxiety and depressive symptoms. Given that the depression-oriented nature of the universal, prevention, school-based programmes limits their applicability, it is suggested that the content and structure of these programmes should be modified. It is suggested that the implementation of universal programmes will benefited from focusing on students’ social competency skills in relation to the quality of interpersonal relationships, taking a more individualised perspective according to the needs of the population in which these programmes are implemented each time.

**Compliance with Ethical Standards**

Funding: No applicable

Authors identifying information is on the title page and separate from the manuscript (main text)

Conflict of Interest: The authors declare that they have no conflict of interest

Ethical approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent: Informed consent was obtained from all individual participants included in the study.

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\*References marked with an asterisk indicate studies included in the meta-aggregation.

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TABLES & FIGURES



**Table 2**

*Overview of the extracted findings, credibility ratings, and citations*

|  |  |  |
| --- | --- | --- |
| **Findings** | **Credibility rating** | **Citations** |
| Who’d benefit from the program | Unequivocal | Kvist Lindholm & Zetterqvist Nelson, 2015 |
| Treatment rather than prevention | Unequivocal | Kvist Lindholm & Zetterqvist Nelson, 2015 |
| Negative thoughts as distal agents | Unequivocal | Kvist Lindholm & Zetterqvist Nelson, 2015 |
| Negative framing | Unequivocal | Garmy et al., 2015 |
| More Helpful cognitions | Unequivocal | Shochet et al., 2014 |
| Directed thinking | Unequivocal | Garmy et al., 2015 |
| Rapport with young people | Unequivocal | Taylor et al., 2014 |
| Number of sessions | Unequivocal | Taylor et al., 2014 |
| Types of teaching | Unequivocal | Taylor et al., 2014 |
| Workbook’s visual elements | Unequivocal | Skryabina et al., 2016 |
| Tutor’s role | Unequivocal | Skryabina et al., 2016 |
| Longer and more sessions | Unequivocal | Skryabina et al., 2016 |
| Hand-on activities and group work | Unequivocal | Skryabina et al., 2016 |
| Fun and help | Unequivocal | Skryabina et al., 2016 |
| Emphasis on performance | Unequivocal | Garmy et al., 2015 |
| Positive activities | Unequivocal | Garmy et al., 2015 |
| Considering others | Unequivocal | Garmy et al., 2015 |
| Considering other more – Improved empathy | Unequivocal | Shochet et al., 2014 |
| Improved relationships – recognizing feelings in others | Unequivocal | Skryabina et al., 2016 |
| Improved self-confidence | Unequivocal | Garmy et al., 2015 |
| Improved self-esteem – self-confidence | Unequivocal | Shochet et al., 2014 |
| Coping step plan (problem-solving) | Unequivocal | Skryabina et al., 2016 |
| Increased use of social support | Unequivocal | Shochet et al., 2014 |
| Trusting the group | Unequivocal | Garmy et al., 2015 |
| Balloon challenge (problem-solving) | Equivocal | Skryabina et al., 2016 |
| Stress management | Equivocal | Garmy et al., 2015 |
| Managing difficult emotions – Keeping calm | Unequivocal | Shochet et al., 2014 |
| Managing difficult emotions – Managing anger | Unequivocal | Shochet et al., 2014 |
| Awareness and management of emotions | Unequivocal | Skryabina et al., 2016 |
| Staying calm in a conflict | Unequivocal | Shochet et al., 2014 |
| Red and green thoughts | Unequivocal | Skryabina et al., 2016 |
| Relaxation | Unequivocal | Skryabina et al., 2016 |
| Talking it through | Unequivocal | Shochet et al., 2014 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table 3.**  *ConQual summary of findings table* | | | | |
| Synthesised findings | Type of research | Dependability | Credibility | ConQual score |
|  |  |  |  |  |
| Synthesised finding 1 | Qualitative - evaluative | High | No change | High |
|  |  |  |  |  |
| Synthesised finding 2 | Qualitative - evaluative | High | Downgrade 1 level | Moderate |

**Table 1**

*Overview of characteristics of included studies*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Studies citations** | **Population (age range or mean age)** | **Context** | **Intervention & content** | **Administrators of the programme** | **Phaenomena of interest** | **Data collection methods** | **Method of analysis** | **Country of origin** | **Quality Assessment**  **Itemsa,b**  **1 2 3 4 5 6 7 8 9 10** | |  |  |  |  |  |  |  |  |  |  | | Garmy et al., 2015 | 89 adolescents, 13-15 years | Schools in urban and rural areas of southern Sweden | DISA  CBT | MHP & school staff | To explore adolescents’ experiences with a CBT-based, depression prevention programme | Focus groups interviews | Content analysis | Sweden | U Y Y Y Y Y Y Y Y Y | | Kvist Lindholm & Zetterqvist Nelson, 2015 | 32 school girls, 12-14 years | School in a small municipality in Sweden | DISA  CBT | MHP & school staff | To explore participants understanding about the programme | Semi-structured group interviews | Discourse analysis | Sweden | Y Y Y Y Y Y Y Y Y Y | | Shochet et al., 2014 | 109 students, mean age 13.98 years | Catholic secondary schools, Western Sydney, Australia | RAP-A  CBT & IPT | MHP & school staff | To explore the lived experiences of programme’s participants perceived mechanisms of change that underlie programme’s impact as well as a wider range of outcomes | Individual, short-structured interviews | Thematic analysis | Australia | U Y Y Y Y Y Y Y Y Y | | Skryabina et al., 2016 | 115 children,  9-10 years | Schools in the South West of England | FRIENDS  CBT | MHP & school staff | To explore children’s views from participating in the programme | Focus groups of 2-9 children | Thematic analysis | UK | U Y Y Y Y Y Y Y Y Y | | Taylor et al., 2014 | 42 students, 12-16 years | South West and East Midlands regions of England | RAP  CBT & IPT | MHP | To investigate the perceptions of children and facilitators/teachers of the process of the implemented programme | Interviews and focus groups | Thematic analysis | UK | U Y Y Y Y Y Y N Y Y | |

*Note:* CBT = Cognitive Behavioural Therapy, DISA = Din Inre Styrka Aktiveras (Activate your inner strength), FRIENDS = FRIENDS for Life, IPT = Interpersonal Therapy, MHP = Mental Health Professionals, RAP = Resourceful Adolescent Programme, RAP-A = Resourceful Adolescent Programme

a The methodological quality of the included studies was assessed by the ten componentsof the JBI QARI Critical Appraisal Checklist for Interpretative and Critical Research and each letter denotes the ratings for the included studies in each category. N = No, U = Unclear, Y = Yes.

b JBI QARI Critical Appraisal Checklist’s components

1. Item 1 assesses the congruity between the stated philosophical perspective and the research methodology
2. Item 2 assesses the congruity between the research methodology and the research question or objectives
3. Item 3 assesses the congruity between the research methodology and the methods used to collect data
4. Item 4 assesses the congruity between the research methodology and the representation and analysis of data
5. Item 5 assesses the congruity between the research methodology and the interpretation of results
6. Item 6 assesses whether there is a statement locating the researcher culturally or theoretically
7. Item 7 assesses whether the influence of the researcher on the research, and vice- versa, is addressed
8. Item 8 assesses whether the participants, and their voices, are adequately represented
9. Item 9 assesses whether the research is ethical according to current criteria or, for recent studies, and there is evidence of ethical approval by an appropriate body
10. Item 10 assesses whether the conclusions drawn in the research report flow from the analysis, or interpretation, of the data