

# A pilot evaluation of the acceptability and feasibility of, and preliminary outcomes from, the Embrace Kids Classroom Program among Australian pre-adolescents

Philippa Granfield<sup>a,b,\*</sup>, Eva Kemps<sup>c,2</sup>, Catherine Johnson<sup>a,b,1</sup>, Veya Seekis<sup>d,3</sup>, Ivanka Prichard<sup>a,1</sup>

<sup>a</sup> Flinders University, Caring Futures Institute, Embrace Impact Lab, Adelaide, South Australia, Australia

<sup>b</sup> Flinders University, College of Nursing & Health Sciences, Health & Exercise Sciences, Adelaide, South Australia, Australia

<sup>c</sup> Flinders University, College of Education, Psychology and Social Work, Flinders Institute for Mental Health and Wellbeing, Adelaide, South Australia, Australia

<sup>d</sup> Griffith University, School of Applied Psychology, Gold Coast, Queensland, Australia

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## ABSTRACT

Universal body image interventions have the potential to reach the large groups of young people affected by body dissatisfaction. Two common limitations of these interventions are their ability to be delivered at scale, and for the task of intervention delivery to be shifted to non-professional facilitators. The *Embrace Kids Classroom Program (EKCP)* seeks to address these limitations, through its school-based, teacher-led format, and positively-focused content that seeks to boost young people's strengths. The current study evaluated the Australian primary school version of the program, intended for students in Years 5 and 6. Five schools ( $N=361$  students, 10–12 years old) participated in a pilot trial of the *EKCP*. Students completed two surveys pre-program to establish a within-subjects control period, and then completed follow-up surveys at one-week and one-month post-program. The *EKCP* was acceptable to both students and teachers. Students who participated in the program showed a small increase in self-compassion at one-week post-program, but this did not persist at one month. Girls showed stronger intentions to behave positively on social media compared to boys. Findings provide preliminary evidence that the *EKCP* is a safe and acceptable intervention. Future research directions include evaluating the program in more rigorous controlled trials.

## 1. Introduction

Just over 40 % of Australian 12- to 18-year-olds experience body dissatisfaction (Butterfly Foundation, 2022; McLean et al., 2022), and some evidence suggests this may develop from as young as 6 years old (Ricciardelli et al., 2009; Slater & Tiggemann, 2016). Body dissatisfaction is a significant predictor of negative outcomes, including depression (McLean et al., 2022), disordered eating (Bornioli et al., 2019), and academic disengagement (Atkinson & Diedrichs, 2021). The prevalence and poor outcomes of body dissatisfaction highlight a need for interventions and prevention efforts that can reach as many young people as possible.

### 1.1. Body image interventions

Universal body image interventions, which are those that target entire populations (Le et al., 2017), have gone some way to meet the need for broad-reaching body image interventions for young people. Meta-analyses and systematic reviews consistently show that effective universal interventions yield small to moderate improvements in body image among the large groups of young people they reach (Kurz et al., 2022; Kusina & Exline, 2019; Pursey et al., 2021; Stice, 2007; Stice et al., 2019; Stice & Shaw, 2004; Yager et al., 2013). These broad-reaching interventions are a valuable preventative measure alongside more targeted interventions (Kazdin, 2017), which typically yield greater

\* Corresponding authors at: Flinders University, Caring Futures Institute, Embrace Impact Lab, Adelaide, South Australia, Australia.

E-mail address: [pip.granfield@flinders.edu.au](mailto:pip.granfield@flinders.edu.au) (P. Granfield).

<sup>1</sup> College of Nursing and Health Sciences, Flinders University, Sturt Rd, Bedford Park SA 5042.

<sup>2</sup> College of Education, Psychology & Social Work, Flinders University, Sturt Rd, Bedford Park SA 5042.

<sup>3</sup> School of Applied Psychology, Griffith University, Gold Coast QLD 4215.

improvements in smaller at-risk or symptomatic populations (Stice, 2007; Stice & Shaw, 2004; Watson et al., 2016). Universal body image programs have primarily focused on adolescents (approximate age range 12–18 years), which may reflect a prevailing view that adolescence is a critical period for body image development (Voelker et al., 2015). However, a strong case can also be made for universal programs targeting pre-adolescents (approximate age range 9–11 years). A recent meta-analysis of body image change across the lifespan indicates that this critical period may occur earlier than previously thought, between the ages of 10–14 years (Lacroix et al., 2023). As young people in this age range are about to go, or may already be going, through significant life changes such as puberty and relationship formation (Markey, 2010), early preventative efforts may establish a crucial foundation for healthy body image that mitigates or prevents the development of body image concerns in young people (Smolak, 2011).

Historically, effective body image interventions have featured content relating to media literacy (Kurz et al., 2022; Kusina & Exline, 2019; Pursey et al., 2021; Yager et al., 2013), appearance diversity (Pursey et al., 2021), peer influences (e.g. teasing, appearance-related conversations; Yager et al., 2013), and self-esteem (Kusina & Exline, 2019; Yager et al., 2013). With theoretical roots in the tripartite influence model (Thompson et al., 1999), it is thought that these ‘active ingredients’ work together to reduce internalisation of, and comparison to, what are generally unrealistic and unattainable appearance ideals. While this approach focuses on reducing negative symptomatology, recent research suggests that shifting the focus towards interventions that enhance positive body image and personal strengths may offer even greater benefits (Cook-Cottone, 2015; Guest et al., 2022; Torres, 2021; Tylka, 2012; Tylka & Wood-Barcalow, 2015). From a positive psychology perspective, it is thought that interventions that aim to boost young people’s positive qualities and strengths may not only reduce negative symptomatology, but also equip them with the capacity to thrive in life (Tylka, 2012). For example, while positive body image is negatively associated with internalisation of appearance ideals (Vankerckhoven et al., 2024) and dieting (Andrew et al., 2016), it is also positively associated with self-esteem (Halliwell et al., 2017) and intuitive eating (Linardon, 2021).

Despite the success of universal school-based body image interventions to date, two limitations that have diminished their impact are scalability, and relatedly, their capacity to be task-shifted. Scalability refers to the ease with which an intervention can be efficiently delivered to large groups of people (World Health Organization, 2009). Task-shifting refers to the ease with which the task of intervention delivery can be shifted from experts to non-expert facilitators (World Health Organization, 2007). Commonly, body image interventions have been delivered by researchers or other body image experts (Kusina & Exline, 2019; Pursey et al., 2021; Yager et al., 2013). While this ensures that interventions are delivered by knowledgeable facilitators, it limits the number of people who can deliver, and subsequently, receive an intervention. Kazdin (2017) argues that task-shifting may be a way to tackle high-prevalence problems such as body dissatisfaction. Shifting the task of intervention delivery from body image experts to non-expert facilitators, such as teachers, may address the limitations of scalability that hamper many body image interventions. In support, there have been recent calls for the development of new, and the modification of existing, school-based interventions to be task-shifted to teachers and other community leaders (Kusina & Exline, 2019; Pursey et al., 2021; Torres, 2021; Yager et al., 2013).

As the majority of body image interventions have historically been delivered by trained facilitators, the literature on teacher-led interventions is relatively small. Meta-analyses comparing outcomes for researcher- versus teacher-led interventions have proven inconclusive. Some show no difference in body image outcomes (Chua et al., 2020; Kusina & Exline, 2019), while others show evidence of effective teacher-led interventions to the same degree as researcher-led interventions (Pursey et al., 2021). Recent evaluations of teacher-led

programs illustrate these mixed findings. For example, a randomised controlled trial of *Dove Confident Me* yielded a small, sustained (6-months post-intervention) improvement in body esteem among 11–13 year olds (Diedrichs et al., 2021). Other studies have yielded effects limited to girls only (Atkinson et al., 2024; Diedrichs et al., 2015; Sharpe et al., 2013), effects that have not been sustained at follow-up (Diedrichs et al., 2015), or effects sustained up to 12-months post-intervention, but only for body image avoidance behaviours, not for underlying cognitions and affect related to body image (Buerger et al., 2019). Finally, two studies (Forbes et al., 2023; Stewart et al., 2022), found no improvements in body image.

As for universal interventions more broadly, there is less evidence regarding contemporary teacher-led interventions for pre-adolescents and younger children. Damiano et al. (2018) found that *Achieving Body Confidence for Young Children (ABC-4-YC)* yielded a large improvement in body esteem among 5–8 year olds, noting the absence of a control group against which to compare outcomes. Additionally, the program *Body Image in Primary Schools*, developed and delivered by teachers, was shown to improve body image of 9- and 10-year-old girls up to 3-months post-intervention (Halliwell et al., 2016). The teachers who delivered this program had experience dealing with body image concerns, thus this did not represent a truly task-shifted intervention. However, it demonstrates what is possible when teachers are willing and equipped to deliver body image content in the classroom. Moreover, teacher-led interventions, for all ages, are consistently rated as acceptable and feasible by both students and teachers (Atkinson et al., 2024; Diedrichs et al., 2015; Diedrichs et al., 2021; Forbes et al., 2023; Mahon et al., 2023; Sharpe et al., 2013). Thus, there is value in developing and evaluating task-shifted interventions that can be safely delivered by non-expert facilitators.

## 1.2. Embrace Kids

In response to calls for universal body image interventions that address limitations around scalability and task-shifting, The Embrace Collective (<https://theembracecollective.org/>) have developed the *Embrace Kids Classroom Program (EKCP)*. The *EKCP* is a teacher-led, five-lesson program that is mapped to The Australian Curriculum (<https://www.australiancurriculum.edu.au/>). Two versions of the *EKCP* are available: one for children in Australian upper primary year levels, who are generally aged 9–11 years (pre-adolescents), and one for children in Australian lower secondary year levels, who are generally aged 12–14 years (adolescents). Each lesson features a 10–15 minute excerpt from the *Embrace Kids* film (Brumfitt, 2022), followed by interactive activities such as class discussions, worksheets, and meditations. This format aligns with evidence supporting the effectiveness of an interactive multi-session intervention format for young people (Chua et al., 2020; Guest et al., 2022; Kurz et al., 2022; Kusina & Exline, 2019; Pursey et al., 2021; Yager et al., 2013). With a theoretical grounding in positive psychology, the *EKCP* (see Table 1 for a summary of program content), seeks to boost young people’s strengths in areas such as positive body image (loving and respecting one’s body; Tylka, 2012), self-compassion (being kind to the self when experiencing suffering or pain; Neff, 2023) and wellbeing (experiencing positive feelings and meeting one’s full potential; Simons & Baldwin, 2021).

Lesson 1 of the *EKCP*, *Our Incredible Bodies*, focuses on functionality appreciation, which relates to appreciating what the body can do (Alleva & Tylka, 2021). Functionality appreciation is proposed to enhance positive body image by reducing self-objectification (Alleva & Tylka, 2021); focusing on what the body can do, rather than what it looks like. Experimental research among adult women (Alleva, Diedrichs, Halliwell, Martijn, et al., 2018; Alleva, Diedrichs, Halliwell, Peters, et al., 2018; Alleva et al., 2015), and qualitative research among adolescents and young people (Frisen & Holmqvist, 2010; Piran, 2016), shows that functionality appreciation is key to developing positive body image. Notably, Gattario and Frisén (2019) found that functionality

**Table 1**  
Embrace Kids Classroom Program – Primary Version Lesson Content.

Lesson	Learning intention	Resources	Expected processes and outcomes
1. Our Incredible Bodies	To recognise the functionality of our bodies in relation to the five senses, physical capacity, internal functions, and interaction with others	1. “Thank You Body” worksheet 2. “Write a Thank You Letter to Your Body” worksheet <sup>a</sup>	Increased functionality appreciation, leading to increased positive body image
2. Comparison to Compassion	To learn strategies and tools to manage distress associated with comparing ourselves to unrealistic images on social media and among friends	1. Self-Compassion Meditation Recording 2. Responding with Self-Compassion worksheet <sup>b</sup>	Increased self-compassion leading to increased positive body image
3. Gender Stereotypes	To become aware of and challenge gender stereotypes that hold us back from expressing, accepting, and embracing our bodies and ourselves	1. “A World Without Stereotypes” worksheet	Counter-stereotypical content to reduce prejudice; vicarious inter-group contact to increase empathy and give visibility to positive role models
4. Celebrating Diversity	To recognise our unique strengths and build compassion for others	1. “Creating Compassion” worksheet 2. A Person Like Me Recording	
5. Creating Change	To recognise the power of individuals to act as role models and create the change we want to see in the world	1. Write an Embrace TED talk	Consolidating learnings from Lessons 1–4, and promotion of positive social norms

<sup>a</sup>Adapted from the *Expand Your Horizon* program, Alleva et al. (2015)

<sup>b</sup>Adapted from Seekis et al. (2023)

appreciation helped young adults develop positive body image after experiencing body dissatisfaction as adolescents. This suggests that functionality appreciation may be an appropriate addition to interventions for young people.

Lesson 2 of the *EKCP*, *Comparison to Compassion*, pairs elements of traditional media literacy content with the affect-based strategy of self-compassion, to mitigate the effects of media on body image. Traditional approaches to media literacy have focused on developing critical thinking skills in relation to traditional media. While this approach has proven effective (Kurz et al., 2022; Kusina & Exline, 2019; Pursey et al., 2021; Yager et al., 2013), more recent research indicates that new approaches may be needed as young people’s media consumption habits change; specifically, they are engaging more frequently with social media, and less frequently with traditional media such as television and print (Chassiakos et al., 2016; Twenge et al., 2019). For example, the *SoMe* intervention, which sought to improve social media literacy using traditional media literacy principles, failed to improve body image in a mixed-gender sample of 11–15 year olds (Gordon et al., 2021). In light of this, there have been calls for a shift away from social media literacy approaches that focus solely on developing objective critical thinking skills, towards strategies that support young people to engage positively with social media (Ni Shuilleabhain et al., 2023).

Self-compassion is one such strategy, and is thought to improve body image by encouraging kindness to the self in response to perceived failures to meet appearance ideals, and promoting self-worth based on personal qualities beyond physical appearance (Neff, 2023). Additionally, this approach has parallels with an aspect of positive body image

relating to self-protective engagement with media (Tylka & Wood-Barcalow, 2015). Recent classroom-based self-compassion interventions have yielded promising results, including Mahon and Hevey (2022) finding improved body image post-intervention in 15–17 year olds, and Seekis et al. (2023) finding improved self-compassion, resilience, and peer connectedness, and reduced anxiety, in 12–14 year olds. Thus, there is merit in further exploring self-compassion as an intervention strategy for young people, particularly in pre-adolescent populations.

Lesson 3 of the *EKCP*, *Gender Stereotypes*, addresses the restrictive role that gender stereotypes can have on how young people express themselves, and promotes empathy and acceptance of appearance diversity in relation to gender. This lesson incorporates counter-stereotypical content, such as a woman athlete who has been successful in a male-dominated sport, based on evidence that this can reduce stereotypes and bias against stigmatised groups (Ramasubramanian & Banjo, 2020). This lesson also includes portrayals of gender fluidity, following evidence that vicarious inter-group contact (Moyer-Gusé et al., 2019) reduces stigma towards minority groups. Lesson 3 is also proposed to promote feelings of inclusion, through its positive representations of gender-fluid young people. This represents a contemporary variation on traditional appearance-related content, following an emerging body of evidence showing that gender identity can manifest in differences in physical appearance, which may cause gender-diverse young people to be the target of appearance-related teasing (Bird et al., 2012; Burk et al., 2018; Lawrence et al., 2024).

Lesson 4 of the *EKCP*, *Celebrating Diversity*, continues a focus on appearance diversity, again providing opportunities for vicarious inter-group contact, and the portrayal of positive role models for young people from diverse groups. Lesson 4 incorporates aspects of appearance diversity that have previously proven effective in universal interventions, such as visible differences related to race and disability (Beelmann & Heinemann, 2014; McCabe et al., 2017; Pursey et al., 2021). In addition, it incorporates contemporary representations of appearance diversity such as neurodivergence, given evidence that neurodivergent young people may differ in their physical presentation compared to their neurotypical peers, putting them at risk of appearance-related teasing (Schuck & Fung, 2024).

Lesson 5 of the *EKCP*, *Creating Change*, summarises concepts learnt in Lessons 1–4, and presents young people with a call to action on body image. In this lesson, students develop and deliver a presentation based on the brief and engaging oral presentations popularised by TED Conferences (commonly known as *TED Talks*). Following recent research indicating that the establishment of positive social norms is an effective component of health behavioural change interventions (Dempsey et al., 2018), it is proposed that this sharing of learnings from earlier lessons of the *EKCP* might inspire others to think, feel and behave more positively about and towards their bodies.

### 1.3. The current study

The current study focused on the primary school program, given the need for prevention-focused programs in this younger cohort (Lacroix et al., 2023; Smolak, 2011), and a promising, but limited, evidence base supporting the effectiveness of such interventions among this pre-adolescent age group (Chua et al., 2020; Damiano et al., 2018; Halliwell et al., 2016; Pursey et al., 2021). The *EKCP* presents as a potential solution for scalable body image interventions that can be safely task-shifted, but it is yet to be formally evaluated. This pilot trial therefore provided an initial evaluation of the *EKCP*’s acceptability, feasibility, and outcomes from the program. Accordingly, it was predicted that the *EKCP* would be acceptable to both students and teachers. We also predicted that participating in the *EKCP* would increase body appreciation, functionality appreciation, self-compassion, wellbeing, and positive social media behavioural intentions, among Australian Year 5–6 students.

## 2. Method

### 2.1. Design

A within-subjects pilot trial assessed student acceptability and outcomes after participating in the *EKCP*. In addition, a mixed-methods survey was administered to teachers to obtain their views on the program's acceptability, approximately 3 months after the final lesson.

### 2.2. Intervention

Each lesson of the *EKCP* (see [Table 1](#) for an overview) features a 15-minute film clip from the *Embrace Kids* film ([Brumfitt, 2022](#)), followed by activities such as class discussion, listening to audio recordings, and completing worksheets.

### 2.3. Participants

#### 2.3.1. Students

Five schools from metropolitan Adelaide were recruited to participate in the pilot trial. To be eligible to participate, schools had to be either an independent or Catholic school, and have at least one class of Year 5 or 6 students. Government schools were excluded as ethics approval was not in place in time to contact these schools. Of the five schools that participated, three were Catholic and two were independent schools. One Catholic school was a female-only school; all other schools were co-educational.

#### 2.3.2. Teachers

Eleven teachers (8 female, 3 male) delivered the program to students. In two schools, a single teacher delivered the program to multiple classes. In the remaining three schools, teams of three teachers delivered the program to the three classes within those schools.

### 2.4. Measures

#### 2.4.1. Intervention acceptability

Student acceptability was assessed at the one-week follow-up timepoint, via three questions. One question asked students how helpful they found the program, using a 5-point rating scale ranging from 1 (*Not at all helpful*) to 5 (*Very helpful*); another asked how much they enjoyed the program, using a 3-point rating scale ranging from 1 (*Not at all*) to 3 (*A lot*); and finally, there was a qualitative open-ended 'other comments' question.

Teacher acceptability was assessed via a self-report questionnaire delivered approximately 3 months after the final program lesson, at the same time as individual school results were provided to teachers. Teachers were asked to rate their agreement with 10 statements drawn from a recent, similar program evaluation ([Forbes et al., 2023](#)) using a 5-point rating scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly agree*). Examples include "I felt confident delivering the lessons", "The program was engaging for the students", and "I would teach this program again". The full set of 10 items is provided in Appendix A. Qualitative data were also collected, via an open-ended question capturing overall thoughts on the program.

#### 2.4.2. Intervention feasibility

Data collected on intervention feasibility included school engagement with the program, parental consent rates, and student completion of outcome assessments at each timepoint. The previously-mentioned teacher acceptability questionnaire also included three items addressing intervention feasibility, namely "The manual was adequate in preparing me to teach the program", "The format of the lesson plans was easy to use", and "The program was the appropriate length".

#### 2.4.3. Intervention fidelity

Intervention fidelity was not formally assessed; however, the first author sought clarification from teachers, via informal phone and email communication, about which elements of each session were, and were not, delivered. A narrative summary of this information was developed and subsequently used to report on intervention fidelity.

#### 2.4.4. Demographics and sample characteristics

During the first survey, students were asked to provide their age, gender, cultural background, and Aboriginal/Torres Strait Islander status. They were also asked if they had previously seen the *Embrace Kids* film, with a view to controlling for this in analyses.

#### 2.4.5. Body Appreciation

To measure body appreciation, we used Halliwell et al.'s (2017) Body Appreciation Scale for Children (BAS-2C). This 10-item measure uses a 5-point scale ranging from 1 (*Never*) to 5 (*Always*). An overall mean score was calculated, with higher scores indicating greater body appreciation. Among a sample of 9–11 year olds, [Halliwell et al. \(2017\)](#) found the BAS-2C to have strong internal consistency among both boys ( $\alpha = .89$ ), and girls ( $\alpha = .90$ ). In the current study, this was similarly high at all four time points (for boys  $\alpha = .89 - .95$ , and for girls  $\alpha = .92 - .95$ ).

#### 2.4.6. Functionality Appreciation

To measure functionality appreciation, we used [Alleva et al.'s \(2017\)](#) Functionality Appreciation Scale (FAS). This 7-item measure uses a 5-point scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). An overall mean score was calculated, with higher scores indicating greater functionality appreciation. Validation studies of the FAS, particularly among young people, are limited. However, two studies found evidence of high internal consistency and good convergent validity among children as young as 12 years of age ([He et al., 2023](#); [Sahlan et al., 2022](#)). In the current study, internal consistency was high at all four time points (for boys  $\alpha = .84 - .91$ , and for girls  $\alpha = .90 - .94$ ).

#### 2.4.7. Self-Compassion

To measure self-compassion, we used the positive self-compassion subscale of Sutton et al.'s (2018) Self-Compassion Scale for Children (SCS-C). This 6-item subscale uses a 5-point scale ranging from 1 (*Never*) to 5 (*Always*). An overall mean score was calculated, with higher scores indicating higher self-compassion. [Sutton et al. \(2018\)](#) found the SCS-C to have high internal consistency ( $\alpha = .81$ ). In the current study, this was similarly high at all four time points (for boys  $\alpha = .82 - .91$ , and for girls  $\alpha = .82 - .91$ ).

#### 2.4.8. Social Media Behavioural Intentions

To assess the impact of the *EKCP* on students' social media behaviour, we developed two questions asking students how strongly they agreed or disagreed that, on social media, they would aim to: (1) spread kindness, and (2) accept themselves as they are. Responses were made on a 5-point scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*).

#### 2.4.9. Wellbeing

To measure wellbeing, we used the Positive Emotional State and Positive Outlook subscales of the Stirling Wellbeing Scale ([Liddle & Carter, 2015](#)). These 6-item subscales use a 5-point scale ranging from 1 (*Never*) to 5 (*All of the time*). An overall mean score was calculated, with higher scores indicating greater wellbeing. [Liddle and Carter \(2015\)](#) found the Stirling Wellbeing Scale to have high internal consistency among 8- to 15-year-olds ( $\alpha = .82$ ), and good construct validity. In the current study, this was very high at all four time points (for boys  $\alpha = .90 - .93$ , and for girls  $\alpha = .93 - .95$ ).

#### 2.4.10. Program reach

As an indication of program reach, participants were asked to indicate whether they had spoken to their families about the program 'a lot',

a little', or 'not at all'. For students who indicated they had spoken to their families about the program, we asked for an additional qualitative description of the nature of those conversations.

### 2.5. Procedure

Ethical approval was received from the University's Human Research Ethics Committee and Catholic Education South Australia (CESA). Schools were invited to take part in the research via email and phone communication, with the lead author introducing the program and outlining what was involved in the research process. At schools expressing interest to participate in the research, formal opt-in consent was first obtained from school principals and teachers, followed by opt-in consent from students' parents and guardians. Students were also asked to assent to participating in each survey session. Students without parental consent or assent to participate in the survey sessions were directed to another activity outside the classroom.

Data were collected between July and October 2023. Students completed four surveys in total, all of which were supervised by their teacher and, at most timepoints, a representative from the University. As there was no control group, to provide within-subjects control data, students completed two surveys prior to program delivery. These two baseline surveys were completed 5 weeks (T1) and one-week (T2) prior to program delivery, and allowed for comparison between student outcomes during lessons as usual and student outcomes post-program. Teachers then delivered the *EKCP*. Three schools delivered all five program lessons, and two schools omitted Lesson 3: Gender Stereotypes from their curriculum due to anticipated parent concerns about the gender identity content of this lesson. All students completed the first post-program follow-up survey one-week after Lesson 5 (T3), and the second post-program follow-up survey one month after Lesson 5 (T4). Due to scheduling conflicts, only four of the five schools completed T4.

Survey data were collected via paper surveys each of which had a unique number. During the first survey session, teachers noted the number on the survey given to each student, and maintained a list comprising student's names and survey numbers throughout the project. They then ensured that students completed a survey with that same number on it at all four timepoints. Researchers only ever had access to the numbered surveys completed by students, not their names. Surveys were matched by number at each timepoint. All four surveys included the outcome measures specified in Section 2.4, with the addition of program acceptability questions in the one-week follow-up survey (T3). On completion of the research, schools were given a thank you gift for participating, and provided with a summary of results for their school.

### 2.6. Statistical analyses

All analyses were performed using IBM Statistical Package for the Social Sciences, Version 29 (IBM SPSS). Logistic regression analyses were performed to identify demographic and baseline predictors of missing data at each timepoint. Student outcome analyses were conducted using Linear Mixed Modelling (LMM), with a Bonferroni correction for multiple comparisons. LMM analyses are robust in handling missing data and unbalanced designs in repeated-measures research (Nich & Carroll, 1997), offering the benefits of estimation maximisation (EM), which provides joint linear modelling for each individual for observed and missing data based on maximising likelihood for population parameters as a function of observed data (Norusis, 2008). Thus, all participants (regardless of missing data at follow-up) are included in analyses and linear estimates are obtained, as opposed to missing cases being omitted, as is the case with traditional Analyses of Variance (ANOVA) techniques (Gueorguieva & Krystal, 2004). Student gender, and number of lessons delivered by a school, were investigated as moderators of outcomes, again using LMM. Cohen's  $d$  was used as a measure of effect size, with interpretation as small ( $d = 0.2$ ), medium ( $d = 0.5$ ), and large ( $d = 0.8$ ; Cohen, 1992).

## 3. Results

### 3.1. Recruitment and attrition

Fig. 1 outlines participant recruitment and retention. Fifty-two schools were invited to participate, and 5 schools accepted this invitation and participated in the research. Of the 47 schools who did not participate, a reason for non-participation was not established for 38 schools (i.e. after initial interest in the research from a school, the school did not respond to subsequent email or phone communication from the research team), 8 schools indicated they did not have space in their curriculum for the program, and one school declined to participate due to anticipated parental concerns about the *EKCP*'s coverage of diverse gender identities, despite teaching and leadership staff identifying a need for the program at their school.

At the 5 schools who participated in the research, 16 parents (4.1 % of eligible students) actively requested that their child not be involved in the study, and a consent form was not returned for a further 9 students (2.3 % of eligible students).

Student retention, measured as the proportion of students with parental consent present at each survey timepoint, was high at T2 (88.9 %) and T3 (85.6 %). One school was unable to complete their T4 survey due to scheduling conflicts, which caused a drop in retention; when this school was excluded from calculations, retention remained high at T4 (90.3 %).

### 3.2. Participants

The 342 students who completed the first survey had a mean age of 10.78 years ( $SD = 0.68$ ), with an age range of 10–12 years old. Half (50.4 %) of all students were female, 42.1 % were male, 1.1 % identified as non-binary or another gender, and 6.4 % did not specify their gender. The majority of students identified as White Australian (92.1 %), and non-Indigenous (89.8 %). About one in ten (10.2 %) students had seen the *Embrace Kids* film before participating in the program.

The Index of Community Socio-Educational Advantage (ICSEA; Australian Curriculum, Assessment and Reporting Authority, 2020) was used to determine the socioeconomic status of participating schools. An ICSEA value of 1000 represents the mean, with a standard deviation of 100. ICSEA values for participating schools ranged from 1011 to 1119, with a mean index of 1076 ( $SD = 41.14$ ). Three schools were categorised as medium SES (within one SD above the mean), and the remaining 2 schools were categorised as high SES (greater than one SD above the mean).

A post hoc power analysis following the protocol outlined by Hedeker et al. (1999) indicated that our final sample size of 249 students completing measures at all four timepoints was sufficient to detect a small effect of  $d = 0.2$ , with power of .80 and  $\alpha = .05$ .

### 3.3. Intervention fidelity

Although not formally measured, intervention fidelity data were obtained via informal phone and email communication throughout the project for three of the five schools who participated; the remaining two schools did not respond to queries about which elements of each session were delivered. At the three schools that provided intervention fidelity data, two schools (one with a team of three teachers delivering lessons to their own classes, one with a single teacher delivering lessons to three classes) did not deliver Lesson 3 – Gender Stereotypes, but delivered all elements of the remaining four lessons. At the third school, a single teacher delivered all five lessons to three classes. This teacher did not play the audio recordings from Lessons 2 and 4, instead prioritising the positive class discussions that arose during these lessons. This teacher also gave the colouring page from Lesson 4 as an optional homework exercise, and thus completion of this activity was not monitored.

At all schools that provided fidelity data, there was some variability

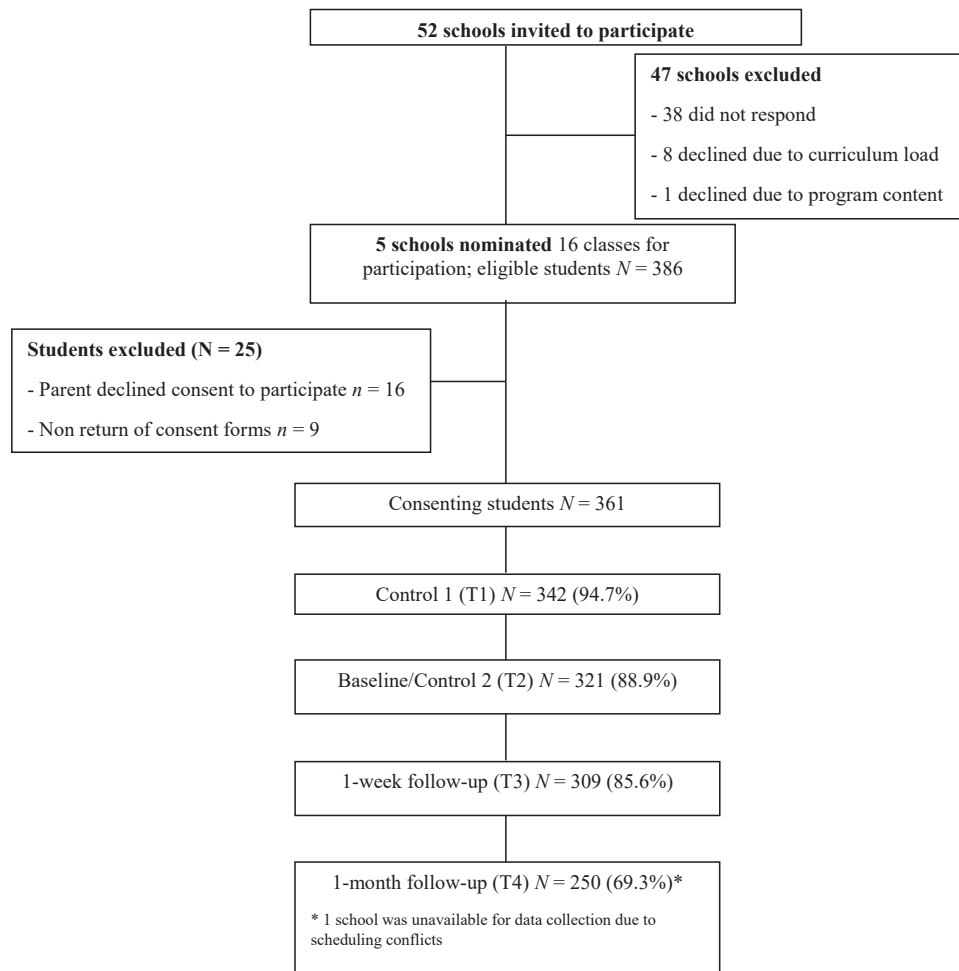


Fig. 1. Flow of participants through study.

in how students developed and delivered their TED talks during Lesson 5 – Creating Change. One school adhered to the lesson plan of having students write their own TED talk and present this to younger year levels at their school; another had students write TED talks in small groups and then present to younger year levels; the remaining school had students develop their own TED talk, present this to their classmates, and also contribute to a class “Embrace Wall”, which was a visual depiction of the concepts learnt during the *EKCP*.

### 3.4. Intervention acceptability – students

Overall, students gave the *EKCP* a mean rating of 3.5 out of 5 ( $SD = 1.0$ ; possible range of scores 1–5) for helpfulness, with girls ( $M = 3.7$ ,  $SD = 0.95$ ) rating it more helpful than boys, ( $M = 3.3$ ,  $SD = 1.10$ ),  $p = .004$ ,  $d = 1.02$ . Overall, 28.0 % enjoyed taking part in the program ‘a lot’, 59.8 % ‘a little’, and 12.2 % did not enjoy taking part in the program ‘at all’. Girls were more likely than boys to report enjoying the program ‘a lot’ (35.5 % vs 21.2 % of boys); conversely, boys were more likely than girls to report not enjoying the program ‘at all’ (16.9 % vs 5.8 % of girls),  $\chi^2(2) = 12.62$ ,  $p = .002$ , Cramer’s  $V = 0.22$ .

### 3.5. Intervention acceptability - teachers

Two of the 11 teachers who delivered the program responded to the teacher feedback survey, representing a response rate of 18.2 % (or 40.0 % of schools). Both teachers who responded indicated that they strongly agreed with the 10 statements regarding the program’s acceptability (Appendix A).

### 3.6. Preliminary outcomes analyses

Data for body appreciation, functionality appreciation, wellbeing, and social media intentions were negatively skewed. Self-compassion was normally distributed. Following logarithmic transformations to body appreciation and social media intentions, inverse transformation to functionality appreciation, and square root transformation to wellbeing,  $Z$  scores for these variables improved to acceptable parameters for normality ( $Z$  scores within  $\pm 2.575$ ). While all analyses were conducted on transformed variables, results showed a similar pattern for non-transformed data; see Appendix B for further description of transformed versus non-transformed results.

Logistic regression analyses were conducted to investigate whether demographic and baseline levels of body image, self-compassion, wellbeing and social media intentions were predictors of missing data at each follow-up point. These analyses showed that stronger intentions to spread kindness on social media predicted presence at T3, and that male gender, and medium SES, predicted presence at T4 (See Appendix C).

### 3.7. Repeated measures outcomes analyses

Descriptive statistics (means and standard deviations) for each of the four survey timepoints are presented in Table 2. For ease of interpretability these show untransformed data (Appendix B provides transformed descriptive statistics). Table 3 presents effect sizes (Cohen’s  $d$ ) and 95 % confidence intervals (CI) from the mixed model analyses. Main effects of time were observed for functionality appreciation  $F(3, 300) = 5.07$ ,  $p = .002$ , and self-compassion,  $F(3, 285) = 4.54$ ,  $p = .004$ .

**Table 2**  
Means (Standard Deviations) for Body Appreciation, Functionality Appreciation, Self-Compassion, Wellbeing, and Social Media Intentions, by Time.

	T1	T2	T3	T4
Body Appreciation	4.06 (0.71)	3.99 (0.72)	4.03 (0.73)	4.06 (0.83)
Functionality Appreciation	4.29 (0.71)	4.18 (0.68)	4.19 (0.69)	4.17 (0.79)
Self-Compassion	3.37 (0.82)	3.37 (0.87)	3.48 (0.85)	3.50 (0.95)
Wellbeing	3.85 (0.69)	3.83 (0.72)	3.90 (0.75)	3.92 (0.81)
Social Media – Spreading kindness	4.19 (0.77)	4.24 (0.74)	4.27 (0.79)	4.23 (0.85)
Social Media – Accepting self	4.19 (0.81)	4.18 (0.76)	4.20 (0.77)	4.19 (0.82)

Note. Untransformed data presented here for ease of interpretability; see Appendix B for transformed data. All measures had a possible range from 1 to 5.

**Table 3**  
Mixed model analyses with within-group effect sizes and 95 % confidence intervals.

	T1 vs T2	T2 vs T3	T2 vs T4
Body appreciation	-0.09 (-0.20, 0.03)	0.06 (-0.06, 0.18)	0.18 (-0.05, 0.31)
Functionality appreciation	<b>-0.23 (-0.11, -0.35)</b>	0.02 (-0.10, 0.14)	-0.03 (-0.16, 0.10)
Self-compassion	0.06 (-0.06, 0.18)	<b>0.20 (0.08, 0.32)</b>	0.10 (-0.03, 0.23)
Wellbeing	-0.03 (-0.15, 0.09)	0.16 (-0.04, 0.28)	0.16 (-0.2, 0.29)
Social media – spreading kindness	0.07 (-0.05, 0.19)	0.05 (-0.12, 0.13)	-0.03 (-0.17, 0.10)
Social media – accepting myself	-0.02 (-0.10, 0.14)	0.04 (-0.09, 0.16)	0.01 (-0.13, 0.15)

Note. Effect size = Cohen’s *d*; positive valence indicates improvement; significant effects ( $p < .05$ ) appear in bold; T1 vs T2 provides pre-program within-subjects control data (comparing one-month pre-program to one-week pre-program).

Specifically, for functionality appreciation, there was a small decrease between T1 and T2 (i.e., the pre-program control period),  $d = 0.23$ . For self-compassion, there was a small increase from T2 to T3 (pre- to one-week post-program),  $d = 0.20$ . No other differences were observed for any other outcome measures, and within-group effect sizes were small at all time points, ranging from 0.01 to 0.23.

### 3.8. Results by gender

LMM was also used to investigate gender as a moderator of program outcomes. Due to insufficient sample size for non-binary and other-gendered students, this analysis was restricted to participants who identified as girls or boys. Main effects of gender showed that girls, compared to boys, had significantly lower levels of body appreciation,  $F(1, 330) = 14.86, p < .001, d = .43$ , functionality appreciation,  $F(1, 334) = 8.38, p = .004, d = .31$ , self-compassion,  $F(1, 328) = 9.32, p = .002, d = .31$ , and wellbeing,  $F(1, 328) = 24.14, p < .001, d = .53$ . However, girls, compared to boys, reported significantly stronger intentions to spread kindness on social media,  $F(1, 332) = 25.37, p < .001, d = .53$ . Both genders reported comparable levels of aiming to accept themselves on social media,  $F(1, 328) = 0.04, p = .95, d = .03$ .

In addition, a significant interaction between time and gender for the behavioural intention of spreading kindness on social media,  $F(3, 262) = 2.74, p = .04$ , indicated that changes in social media behaviour intentions over time varied by gender. Girls showed increased positive behavioural intentions over time,  $F(3, 261) = 2.80, p = .04, d$  for change from T1 to T4 = 0.30, compared to boys, who showed no change in behavioural intentions over time,  $F(3, 277) = 1.11, p = .35, d$  for change from T1 to T4 = 0.14.

### 3.9. Results by number of lessons

Two schools delivered 4 lessons, rather than the full 5-lesson program. Non-significant interactions between time and number of lessons indicated that outcomes were comparable between schools that delivered 4, compared to 5, lessons. Specifically, for body appreciation,  $F(3, 299) = .51, p = .68$ , functionality appreciation,  $F(3, 297) = 0.50, p = .69$ , self-compassion,  $F(3, 283) = 1.70, p = .17$ , wellbeing,  $F(3, 283) = 1.36, p = .26$ , spreading kindness on social media,  $F(3, 279) = .51, p = .68$ , and accepting oneself on social media,  $F(3, 290) = .22, p = .88$ .

### 3.10. Program reach

Almost two-thirds (62.5 %) of students did not talk to their family at all about the program, while 31.7 % talked about it a little, and 5.8 % talked about it a lot, and this pattern of results was no different for boys or girls,  $\chi^2(2) = 2.83, p = .24$ , Cramer’s  $V = 0.10$ .

## 4. Discussion

This pilot trial evaluated acceptability, feasibility, and preliminary outcomes from the *Embrace Kids Classroom Program (EKCP)*, in a cohort of Australian Year 5 and 6 students. Both students and teachers found the program acceptable, and task-shifting the delivery of the program to teachers was generally considered feasible. Completing the program led to a small improvement in self-compassion one-week post-program. Students had high levels of positive body image and wellbeing prior to participating in the *EKCP*, and these were maintained throughout the program. These findings establish an evidence base for the *EKCP*, and provide direction for a future, more rigorous evaluation of the *EKCP*.

The *EKCP* was considered acceptable to students; they rated it as helpful, and mostly enjoyed taking part in the program. These findings compare favourably to recent evaluations of comparable programs using similar student acceptability measures (Diedrichs et al., 2021; Forbes et al., 2023). Girls, compared to boys, were more likely to find the *EKCP* helpful, and to enjoy taking part in the program. Given that girls commonly report poorer body image than boys (Lacroix et al., 2023), it may be that the *EKCP*’s messages resonated more strongly with girls than boys. However, given the critical role of peers in the development of body image concerns, developing body image content that resonates with boys is crucial. Even if boys themselves are not dissatisfied with their bodies, it is important that they are aware that the things they say and do may contribute to body image concerns in others. Thus, an important avenue for future research is exploring which elements of the *EKCP* resonate most with different gender identities, and identifying ways to engage boys in body image education.

Despite a low response rate to the teacher feedback survey ( $n = 2, 18.2\%$  of teachers), the two teachers who did respond strongly endorsed the *EKCP*’s acceptability. They both strongly agreed that the *EKCP* program content and format was adequate in preparing them to confidently deliver the program, and that it was appropriate and effective for their students. Teachers who did not respond to the formal feedback survey provided informal feedback throughout the research, via phone and email communication with the first author. None of these teachers indicated any negative opinions towards the program or the research. The low response rate to the feedback survey is likely attributable to it being distributed towards the end of the school term. This is a busy time in schools, where lower priorities, such as completing surveys, may get overlooked. For example, teachers at two schools indicated that they intended to complete the survey, but their responses were never received. To address this, a qualitative component capturing in-depth teacher feedback via semi-structured interview is planned for future trials of the *EKCP*. More generally, future research seeking teacher feedback may benefit from reinforcing with teachers the importance of teacher feedback, and scheduling requests for feedback during quieter times during the school year.

The *EKCP* was generally considered feasible to deliver as a task-shifted, teacher-led intervention. Teachers indicated, either formally through the teacher feedback survey, or informally through communication with the lead author, that they liked the program manual as a ‘one stop shop’ resource comprising lesson plans, video clips, worksheets and other activities, as well as additional information to support them to deliver body image content to students. At schools that did provide intervention fidelity data, most delivered all elements of each session, and the only element where considerable variation in delivery and student input was reported was the Lesson 5 TED Talk activity. However, the various ways in which students completed their TED Talks all met the learning objective of reflecting on the program’s themes and communicating this to others.

One element of the program that slightly diminished the *EKCP*’s feasibility was its coverage of gender identity. Lesson 3 - Gender Stereotypes features brief video footage of a young gender-fluid person talking about their experience of gender, and Lesson 4: Celebrating Diversity, while not focused on gender identity, features an Australian musician who was born male, but dresses in feminine clothing. During recruitment, one school declined to participate in the research due to anticipated negative reactions among their school community, despite strong endorsement of the program by leadership and teaching staff. The school indicated that some school parents adhered to a view that gender is a binary (male/female) concept. Relatedly, two schools delivered the program but omitted Lesson 3 as they anticipated similar concerns from their school community. Additionally, one parent at another school, which did present this lesson, indicated disappointment that the lesson included coverage of diverse gender identity. However, among schools who did present this lesson, teachers specifically commented on its value. For example, the lesson prompted positive change at one school after students questioned why captains of sports teams were always boys and led to a group decision that girls and boys would take turns at being captain. A convincing body of evidence shows that education about, and exposure to, a range of gender identities is an effective way to minimise stigma towards, and provide positive role models for, gender-diverse young people (Biegel, 2018; Bird et al., 2012; Burk et al., 2018; Eisenberg et al., 2022). The small number of students self-reporting as non-binary in the current study ( $n = 4$  students) precluded analysis of outcomes for this subgroup of students. However, results for all students indicate that outcomes did not differ between schools that delivered, and did not deliver, Lesson 3. Thus, delivering, or not delivering, this lesson did no harm.

The differing viewpoints among school communities regarding gender identity in the current study reflects the diverse attitudes towards this topic in the broader community (Biegel, 2018). While it is disappointing that this prejudice exists, continued attention must be given to balancing these attitudes, in both research and education settings. For example, schools need to consider ways of informing their communities about gender identity content in school curricula in ways that actively minimise stigma and support gender-diverse individuals. One approach, for example, may be whole-school screenings of the *Embrace Kids* film prior to delivery of the *EKCP*. A recent study (Granfield et al., 2024) found that watching this film improved body image and self-compassion for both adults and children, thus it may be an effective resource to introduce the concepts of the *EKCP* to the broader school community.

Regarding post-program outcomes, improvements were modest, but promising. Students who participated in the *EKCP* reported improved self-compassion after participating in the program. This outcome is on par with that from other universal interventions, with both the effect size of improvement ( $d = 0.20$ ), and time period for which the effect persisted (one-week post-program) comparable to that of universal interventions delivered by expert facilitators (Guest et al., 2022; Kurz et al., 2022; Kusina & Exline, 2019; Pursey et al., 2021; Watson et al., 2016; Yager et al., 2013). This is an encouraging finding given the strong positive associations between self-compassion and body image

(Linardon et al., 2022; Turk & Waller, 2020), and physical (Phillips & Hine, 2021) and mental (Ferrari et al., 2019) health outcomes. Despite this promising improvement in self-compassion, the current study found no evidence that the *EKCP* directly improved body image. Body appreciation remained unchanged, and relatively high throughout the study (Mean = 4.0 out of a possible 5.0 at all timepoints). Functionality appreciation, which was also relatively high (Mean ranged from 4.2 to 4.3 out of a possible 5.0), showed a small ( $d = 0.23$ ) decrease during the pre-program control period, but was stable for the remainder of the study. Although the absence of a control group prevents us from concluding that the *EKCP* halted this decline, this outcome did not worsen once students took part in the program. Regarding outcomes by gender, the only effect over time was that girls’ intentions to spread kindness on social media increased post-program ( $d = 0.30$ ), whereas boys’ intentions remained unchanged. As discussed earlier, girls rated the *EKCP* as more acceptable than boys, and their increased intentions to engage in positive behavioural change may reflect this increased acceptance. Additionally, echoing previous research, main effects of gender in our study showed that, on average, girls, compared to boys, had lower levels of body appreciation (Halliwell et al., 2017), functionality appreciation (Sahlan et al., 2022), and self-compassion (Finlay-Jones et al., 2023). Finally, we note that, in the current study, girls had lower levels of wellbeing compared to boys. Despite an absence of studies, to the authors’ knowledge, specifically relating to gender differences on the Stirling Children’s Wellbeing Scale, our findings align with those of others showing a general decline in wellbeing for girls from adolescence onwards (Esteban-Gonzalo et al., 2020; Krause et al., 2018).

As discussed earlier, outcomes from teacher-led interventions have been mixed. Our findings concur with studies showing no improvement in body image (Forbes et al., 2023; Stewart et al., 2022), rather than those reporting some improvement in body image outcomes. To briefly recap, these include mixed-gender improvements reported by Damiano et al. (2018) and Diedrichs et al. (2021), and improvements for girls only reported by Atkinson et al. (2024), Diedrichs et al. (2015) and Sharpe et al. (2013). Importantly, the *EKCP* did not lead to worsening body image, nor have most of the previously-cited teacher-led interventions here. The exception to this is Forbes et al. (2023), who attributed increases in social comparison and perceived sociocultural pressure to increased awareness, rather than distress. It is important to establish that teacher-led interventions do not cause harm to students, given that teachers are unlikely to possess the same knowledge and skillset as the body image experts who have traditionally delivered most interventions. Encouragingly then, although some teacher-led interventions are not yet achieving the consistent improvements in body image seen in expert-delivered universal interventions, the delivery of interventions by teachers is, at the very least, not harmful to the students who participate in them.

While the current study achieved a crucial first step in establishing an evidence base for the newly-developed program, we acknowledge the following limitations. First, the absence of a parallel control group limits our ability to directly attribute any changes in outcomes to the *EKCP* itself. For example, we know that a pre-program decline in functionality appreciation did not worsen once students had completed the program; however, the absence of a control group prevents us from concluding that the program itself halted this decline. Thus, an important direction for future research is evaluating the *EKCP* alongside a control condition. Second, teacher feedback regarding intervention feasibility and fidelity was limited; we did not capture session attendance for each student, and the response rate to the feedback survey was lower than anticipated. These two limitations could be addressed in future research by (a) emphasising the importance of teacher feedback and simplifying the process (for instance, completion of a simple self-report fidelity checklist), and (b) seeking feedback from teachers during quieter times in the school calendar. Relatedly, a worthwhile use of more detailed fidelity data would be to examine the effects of each session individually, to identify the most crucial ‘active ingredients’ of the program. Finally,



participating schools came from medium to high SES backgrounds, thus, our findings may not generalise to students from lower SES schools. Future research could address this via recruitment of schools from a wider range of sectors and backgrounds.

Overall, this pilot evaluation of the *EKCP* provides promising initial evidence of the program’s acceptability, feasibility, and effectiveness. The *EKCP* was acceptable to both students and teachers. The small improvement in self-compassion one week following the program, alongside no change in other outcome measures, indicates that the program does not cause harm and may bestow a small benefit to young people’s overall wellbeing. Thus, there is value in pursuing further research evaluating the *EKCP* in more rigorous, controlled conditions.

**CRedit authorship contribution statement**

**Philippa Jane Granfield:** Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Eva Kemps:** Writing – review & editing, Supervision, Conceptualization. **Catherine**

**Johnson:** Writing – review & editing, Supervision, Formal analysis. **Veya Seekis:** Writing – review & editing, Supervision, Methodology, Conceptualization. **Ivanka Prichard:** Writing – review & editing, Supervision, Methodology, Funding acquisition, Conceptualization.

**Declaration of Competing Interest**

Ivanka Prichard is a board member of The Embrace Collective. Remaining authors declare no conflict of interest.

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**Appendix A. Teacher acceptability items**

- The manual was adequate in preparing me to teach the program
- I felt confident delivering the lessons
- The format of the lesson plans was easy to use
- The material was developmentally appropriate for my class
- The program was engaging for the students
- The program was effective in enhancing students’ body image and wellbeing
- The program was the appropriate length
- I think my school should implement the program again
- I would teach this program again
- I would recommend this program

Measured on a 1 (*Strongly disagree*) to 5 (*Strongly agree*) scale.

**Appendix B. Approach to non-normally distributed data**

Transformed data was used in analyses for all variables except self-compassion, which was normally distributed. Results were almost identical to analyses run with non-transformed data. Raw data is provided in Main Table 2; we provide transformed scores here for interested readers.

**Table 1**  
Transformed Means (Standard Deviations) for Body Appreciation, Functionality Appreciation, Wellbeing, and Social Media Intentions, by Time

	T1	T2	T3	T4
Body Appreciation	0.26 (0.15)	0.28 (0.16)	0.26 (0.16)	0.25 (0.18)
Functionality Appreciation	0.67 (0.22)	0.63 (0.22)	0.63 (0.22)	0.64 (0.24)
Wellbeing	1.45 (0.23)	1.45 (0.24)	1.43 (0.25)	1.42 (0.28)
Social Media – Spreading kindness	0.22 (0.18)	0.21 (0.18)	0.20 (0.19)	0.20 (0.20)
Social Media – Accepting self	0.22 (0.19)	0.22 (0.18)	0.22 (0.18)	0.22 (0.19)

**Appendix C. Logistic Regression Analyses**

**Table 1**  
Logistic Regression Analyses: Demographic and Baseline Variables as Predictors of Missingness at Each Timepoint

Demographic and Baseline Variables	T2Odds Ratio (95 % CI) p	T3Odds Ratio (95 % CI) p	T4 Odds Ratio (95 % CI) p
Gender	1.32 (0.66, 2.63) .43	0.60 (0.33, 1.12) .60	0.58 (0.36, 0.93) .02
SES	1.05 (0.54, 2.02) .90	1.15 (0.64, 2.06) .65	6.01 (3.59, 10.05) <.001
Body Appreciation	0.88 (0.53, 1.46) .62	1.08 (0.70, 1.66) .73	1.19 (0.86, 1.65) .29
Functionality Appreciation	1.04 (0.63, 1.71) .89	1.12 (0.73, 1.72) .59	0.99 (0.70, 1.38) .99
Self-Compassion	0.84 (0.54, 1.32) .45	1.04 (0.71, 1.52) .84	1.21 (0.91, 1.62) .20
Wellbeing	0.94 (0.55, 1.61) .83	1.36 (0.89, 2.09) .16	1.20 (0.85, 1.68) .30
Social media – Spreading Kindness	1.15 (0.73, 1.81) .56	1.79 (1.23, 2.61) .003	1.27 (0.93, 1.73) .13
Social media – Accepting the self	1.00 (0.64, 1.57) .99	1.03 (0.70, 1.50) .89	0.97 (0.72, 1.30) .82

Note. CI = Confidence Interval.

## Data availability

The authors do not have permission to share data.

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