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A cognitive dissonance body image intervention 'Free Being Me' delivered by guide leaders to adolescent girl guides in India: A pilot and acceptability trial☆

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ABSTRACT

This pilot study assessed the acceptability and pre-post intervention effects of a cognitive dissonance-based body image intervention, *Free Being Me*, delivered by Guide leaders to adolescent girls in India. Girls aged 11–14 years (*M*age = 12.6, *N* = 117), who were members of the national scouting and guiding association of India, received the intervention across five weekly 1-hour group sessions. The primary outcome (body esteem) and secondary outcomes (self-esteem, internalisation of appearance ideals, negative and positive affect, and life disengagement) were measured pre-intervention and immediately post-intervention. The intervention was acceptable. Adolescent girls reported high levels of comfort (89%), enjoyment (90%), and perceived importance (92%) with suggestions for improvement including more interactive activities. Facilitator adherence and competence delivering *Free Being Me* was rated good. Significant within-groups pre-post intervention improvements in body esteem (Cohen's $d = 0.28$) and reductions in internalisation of appearance ideals (Cohen's $d = 0.49$) were identified. No changes to self-esteem, negative or positive affect, or life disengagement were observed. This study suggests that *Free Being Me* is acceptable for community-based delivery and Guide leader format with promising pre-post intervention effects. Going forward, a randomised controlled trial is necessary to make confident interpretations on the effectiveness of *Free Being Me*.

1. Introduction

Body image concerns are an important health issue for adolescents globally (Al Sabbah et al., 2009), with girls disproportionately affected (Dion et al., 2015). Studies spanning westernised, non-westernised and high-low income countries show up to two thirds of adolescent girls can experience body image concerns (e.g., Chongwatpol & Gates, 2016; Leal et al., 2020). These concerns are associated with poor psychological and physical health outcomes (Al Sabbah et al., 2009; Bornioli et al., 2019; Brockhoff et al., 2016; Chongwatpol & Gates, 2016; Goldschmidt et al., 2016; Lewis-Smith et al., 2020a; Leal et al., 2020; McCabe et al., 2012; Wertheim & Paxton, 2011). While effective interventions to tackle body image concerns are available, they have been predominantly tested and disseminated in Western and high-income countries (Buerger et al., 2019; Diedrichs et al., 2015, 2021; Sharpe et al., 2013; Yager et al., 2013). Moreover, the implementation of these interventions is often limited due to a lack of infrastructure, available resources, and cultural barriers (e.g., social stigma) reducing their potential reach.

In 2013, the World Association of Girl Guides and Girl Scouts (WAGGGS), the largest voluntary movement dedicated to girls and

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young women in the world, formed a partnership with the Dove Self-Esteem Project (DSEP; the global education social mission initiative for the multinational brand, Dove) with the aim of increasing girls' body confidence and self-esteem by delivering evidence-based programmes at scale. *Free Being Me*, a body image intervention, was co-created by WAGGGS, DSEP, and body image researchers Drs. Eric Stice, Carolyn Becker, and Phillippa Diedrichs for use globally by WAGGGS' Member Organisations, such as Baharat Scouts and Guides (India), Girl Scouts (USA), and Girlguiding (UK). *Free Being Me* was based on a well-established evidence-based cognitive dissonance eating disorder prevention programme, *The Body Project* (see Stice et al., 2019 for a full review). In brief, the intervention is grounded in the Dual Pathway model of eating pathology (Stice, 2001) and Cognitive Dissonance theory (Festinger, 1957). The Dual Pathway model posits that women's internalisation of the appearance ideal and the sociocultural pressures to achieve the appearance ideals lead to body dissatisfaction, which in turn leads to eating disordered behaviours. Cognitive Dissonance theory states that when behaviours are inconsistent with cognitions, we experience psychological discomfort. To reduce this discomfort, people try to change their thoughts or behaviours to restore consistency. *Free Being Me* therefore targets internalisation of cultural beauty ideals, a risk factor for body dissatisfaction, by encouraging girls to speak out and challenge unrealistic appearance ideals through a range of verbal, behavioural and written activities, that induce cognitive dissonance and putatively reduce body dissatisfaction as a result. Dissonance-based eating disorder prevention programmes have been shown to improve body image and associated risk factors (see Stice et al., 2019 for a review). This may, in part, result from these underpinning principles and delivery methods enabling effective cultural adaptations that are relatable and engaging for the participant group (i.e., girls self-define the appearance ideal at the start of the programme), when compared with purely didactic, psychoeducational interventions. Indeed, dissonance-based body image programmes have been shown to be effective across cultural contexts, including Brazilian, British, and Chinese young women (Amaral et al., 2019; Halliwell & Diedrichs, 2014; Hudson et al., 2021; Luo et al., 2021). Furthermore, intervention effectiveness has been comparable across a range of ethnicities, including minority groups (Rodriguez et al., 2008; Stice et al., 2014). This suggests that such programmes have potential for wide scale dissemination globally.

Free Being Me was designed collaboratively with WAGGGS while retaining the evidence-based principles of cognitive dissonance-based body image interventions. It was designed and formatted in accordance with guiding educational programmes, for example, taking a pledge and being rewarded with a badge. Moreover, *Free Being Me* was developed to promote effective community-based delivery and a Guide leader-led format (volunteers within the organisation who lead guiding groups) in all global member organisations, therefore addressing some of the challenges faced when disseminating body image interventions. Indeed, targeting community groups rather than school settings addresses concerns regarding teacher burden and conflicting priorities within school curriculums. Furthermore, utilising Guide leaders to deliver the sessions rather than requiring expert professionals such as psychologists or researchers removes a potential barrier to widespread dissemination (for example, the availability and cost of utilising expert professionals, particularly in low- and middle-income countries) and therefore is likely to enhance scalability and reach. Indeed, previous research has shown that task-shifting the delivery of body image interventions from mental health professionals and researchers to trained providers in the community (such as teachers) is effective (Becker et al., 2017; Dhillon & Deepak, 2017; Stice et al., 2013).

Since 2013, WAGGGS has disseminated *Free Being Me* to six million girls in 80 countries across the world in partnership with Dove. Findings from an initial mixed-methods evaluation of the implementation of *Free Being Me* across 50 member organisations indicated that the programme was universally well-received (Diedrichs et al., 2016). Qualitatively, suggestions were made by various stakeholders (e.g., Guides, Guide

leaders) to improve the content and roll-out of the programme, including enhancing the quality of the training provided and making minor changes to the language of *Free Being Me* across member organisations to improve cultural relevance. Nonetheless, the initial research did not examine the impact of participating in *Free Being Me* on girls' body esteem, self-esteem, and wellbeing.

The present pilot study aimed to build upon the initial evaluation of *Free Being Me* to examine the acceptability and preliminary pre-post intervention effects of taking part in *Free Being Me,* on girls' body esteem, self-esteem, and wellbeing. The study was conducted in India, a low-middle income country witnessing a surge in body image concerns among adolescents, particularly girls (Iqbal et al., 2006; Shroff & Thompson, 2004; Stigler et al., 2011; Vijayalakshmi et al., 2018), with rates varying between 38% and 78% across studies (Chugh & Puri, 2001; Ganesan et al., 2018; Mohandoss, 2018; Singh & Babu, 2018; Sihag & Joshi, 2017). Evidence suggests that weight and shape concerns among Indian adolescents are correlated with poor outcomes including unhealthy weight control behaviours and depression (Ganesan et al., 2018). Dissatisfaction with body hair (e.g., legs, arms, underarms), skin tone, and height are also prevalent among Indian adolescents (Das & Sharma, 2016; Karan, 2008; Phadke, 2017). Furthermore, skin colour dissatisfaction is associated with the use of harmful skin lightening products (Craddock et al., 2018; Das & Sharma, 2016; Karan, 2008). Given late adolescence appears to be a critical period for the development of mental health difficulties (Deb et al., 2017; Patel et al., 2007) with a third of Indian adolescents at risk of developing an eating disorder (Singh et al., 2016), early preventative intervention is therefore crucial in preventing the harmful consequences of body dissatisfaction.

Indian culture may uniquely impact body image concerns among adolescent girls. It has been suggested that societal expectations of girls and women perpetuated by frequent appearance-based judgements and media portrayals of appearance ideals make them more vulnerable to developing body dissatisfaction (Dhillion & Dhawan, 2011). For example, the use of skin lightening products is particularly common among women in India (Shroff et al., 2018), with a significant proportion reporting that they had been prompted to do so by media or advertisements which popularize and glorify fair skin. These depictions perpetuate strong historical and cultural associations between fairness and social capital through, for example, portrayals of improved marriage eligibility and career achievements (Das & Sharma, 2016; Karan, 2008). In recent years, cultural conceptualisations of beauty have also changed in line with globalisation. This is heavily influenced by the infiltration of western appearance ideals into local media, such as movies, television and advertisements (Das & Sharma, 2016). Adolescent girls in urban India are described as often seeking empowerment by conforming to international, westernised standards of beauty (Phadke, 2017). Media exposure has subsequently been linked to body dissatisfaction, reduced self-esteem and internalisation of appearance ideals (Kapadia, 2009; Ganesan et al., 2018; Nagar & Virk, 2020). This reinforces the importance of developing a culturally relevant body image intervention for girls in India.

To the best of our knowledge, only two school-based body image interventions have been evaluated in India. Most recently, Lewis-Smith and colleagues (2023) demonstrated the efficacy of a culturally adapted five-session school-based, expert-led (trained psychologists with expertise in body image) body image programme for adolescent girls and boys, *Confident Me*, in urban India. The authors found improvements in body esteem among intervention participants at post-intervention and follow-up at three months in comparison to control participants. Improvements in internalisation, life disengagement, disordered eating, self-esteem, and negative affect were also found among intervention participants at post-intervention, with most effects sustained at three-month follow-up. Similarly, Dhillon and Deepak (2017) reported improvements in adolescents' body image following a teacher-led four-module media-literacy intervention in Delhi schools. Immediate improvements in body satisfaction in the intervention group were found

in comparison to a control group. The findings from these studies suggest that *Free Being Me*, a body image programme similar in content to *Confident Me*, (i.e., both interventions target risk factors for body dissatisfaction, including body talk, media literacy, and internalisation of appearance ideals. While *Confident Me* is designed for classroom-based delivery and grounded in the evidence-based programme 'Happy Being Me', *Free Being Me* is designed for use in girl guiding community settings and based on dissonance-based intervention 'The Body Project') may be an acceptable body image intervention within an Indian context. To date, there are no published evaluations of body image interventions delivered within a community setting to adolescent girls in India.

The aims of the current pilot study were two-fold: First, to examine the acceptability of *Free Being Me* delivered by Guide leaders to Guides in a community setting in India, and secondly, to examine the preliminary pre-post intervention effects of participation in *Free Being Me* on girls' body esteem, self-esteem, internalisation of the appearance ideal, positive and negative affect, and life disengagement. Due to the onset of the COVID-19 global pandemic in March 2020, face-to-face guiding and scouting in India was immediately suspended. As a result, the study was suspended prematurely before we were able to recruit a control group as we originally intended. Nonetheless, we were able to collect pre-post data from girls who had received the intervention to allow some indication of preliminary effectiveness. It was hypothesised that *Free Being Me* would be an acceptable programme for Guides and Guide leaders and would result in within-group improvements in body esteem, self-esteem, and related factors pre-post intervention.

2. Method

2.1. Participants

2.1.1. Guide Leaders

Guide leaders based in Delhi were invited to take part in the study via an email sent out by the director of Bharat Scouts and Guides. Fifteen Guide leaders were invited to attend a two-day face-to-face *Free Being Me* training session in Delhi, delivered by two body image experts (including the first author) experienced in facilitating cognitive dissonance interventions. Of the 15 Guide leaders, 13 attended the training and 4 delivered the programme prior to the onset of the COVID-19 pandemic which halted guiding. Following the training, one Guide leader dropped out due to time commitments, two were unresponsive and one faced difficulty securing a school (out-of-school hours) to deliver the programme.

2.1.2. Guides

Participants were adolescent girls ($N = 117$) aged 11–14 years ($M_{age} = 12.6$, $SD = .92$), members of Bharat Scouts and Guides (BSG: the national scouting and guiding association of India) who had not previously taken part in *Free Being Me*. They were recruited to take part during their regularly scheduled Guide meetings via their Guide leaders (described above). Most girls were born in India (97%) and identified as Hindu (86%). They attended both government (52%) and private schools (48%), and their parent/guardians' highest education level was predominantly secondary school (61% father; 57% mother), although a minority had bachelor's (16% father; 12% mother) or postgraduate degrees (8% father; 5% mother), suggesting a spread in socioeconomic status.

2.2. Intervention

Free Being Me is a manualised, cognitive dissonance-based intervention targeting risk factors for body dissatisfaction including internalisation of appearance ideals, media literacy and body talk. It is based upon the cognitive dissonance programme, *The Body Project*, and is available to download for free in a variety of languages from www. free-being-me.com. During the intervention, girls completed a range of interactive verbal, written and behavioural activities, which invite participants to challenge current beauty ideals. These are consolidated via homework activities (see Table 1). Minor adaptations to the *Free Being Me* programme were made prior to this study to ensure cultural and regional appropriateness. A three-hour face-to-face focus group was conducted by the last author with 25 Guides (age range 11–16 years, $M_{age}=12.95$) from eight different units (i.e., guide groups) in Delhi. The focus group was conducted in English with Hindi translations provided by Guide leaders when required. The girls had no previous experience of *Free Being Me*, and active consent was collected from girls and their parents/guardians. Girls were provided with intervention materials to review and had the opportunity to run through a variety of activities to gain feedback on the appropriateness and relevance of the examples and language used. A few subtle changes to the language were made based on girls' feedback. For example, the term "text messaging" was changed to WhatsApp and the reference to Hollywood was swapped to Bollywood.

2.3. Procedure

Prior to recruitment, the ethics committee at the University of the West of England approved this study. Parents or guardians of girls provided informed consent by signing an information sheet provided by the Guide leader prior to the research commencing. Once assented, girls completed a baseline self-report paper questionnaire, including demographic questions and primary and secondary outcome measures under standardised conditions.

Free Being Me was delivered to girls across five weekly 1-hour sessions by their usual Guide leaders after school hours (Guiding usually takes place on school campuses in India, but not during lesson time). Each Guide leader was responsible for delivering *Free Being Me* to groups of approximately 30 girls in a mix of Hindi and English (i.e., Hinglish). During the sessions, Guide leaders were invited to wear a small lapel microphone. Audio recordings were collected by researchers at the data collection session immediately after the final *Free Being Me* session. Files on the audio recorders were transcribed verbatim and deleted once stored securely. The self-report questionnaires were completed again five weeks after baseline, upon finishing the *Free Being Me* programme, along with the *Free Being Me* evaluation questions, to determine intervention acceptability. Following completion of the final session, Guide leaders who had facilitated the programme were provided with feedback forms to complete. In return for their participation, each Guide was awarded with a *Free Being Me* guiding badge and a certificate for participating in a research study.

2.4. Measures

2.4.1. Guide acceptability

Acceptability was assessed post-intervention. Based on previous acceptability research (e.g., Garbett et al., 2021a), girls rated perceived enjoyment, understanding, importance, feeling good, comfort, and Guide leader competence (see Table 2) using a 5-point Likert scale (1 = *strongly disagree to* 5 = *strongly agree*). Girls also completed open-ended questions to write down their learnings, in addition to the elements of *Free Being Me* that they liked the most and the least. Finally, a single closed question asked girls to indicate their facilitator preference (i.e., "*I liked that my usual Guide leader delivered the sessions*" or "*I would have preferred somebody from outside of my group to deliver the sessions*").

2.4.2. Guide leader acceptability

After delivering all sessions, Guide leaders responded to seven statements concerning their delivery of *Free Being Me* (see Table 4). Example statement: '*How confident did you feel delivering Free Being Me*', rated on a 5-point response scale (1 = *not at all to* 5 = *very much*). Guide leaders were also asked two open-ended questions which instructed

Table 1

Free Being Me: five-session intervention content overview.

Session	Session topic and content	Learning Processes
1	Understanding and challenging the appearance ideals ("The Image Myth") • Understand concept of societal and cultural appearance ideals • Recognise cost implications of following the Image Myth (time, money, wellbeing) • Identify ways to challenge the Image Myth and reject pressures to follow it Media literacy • Understand and identify the techniques used to create media images (e.g., digital retouching) • Analyse and critique media images portraying the Image Myth	• Interactive game activity to demonstrate how appearance ideals change across societies, cultures and history • Guided small-group activities to understand and define the Image Myth and its costs • Whole group discussion and written activity sheet of before and after airbrushing images of models • Interactive small-group role-play activity to reject the Image Myth • Personal challenge homework sheet to identify the Image Myth in real-life media
2	Media literacy • Practice ways to respond to and challenge media images portraying the Image Myth Body activism and advocacy • Tell others about what the Image Myth is and how it is promoted, the costs associated with following it, and what they could do to fight the pressure to look like the Image Myth • Promote body confidence and appearance diversity	• Sharing personal challenge pictures aloud in group game to challenge the Image Myth portrayed in the media • Interactive small-group role-play activity to challenge the Image Myth • Creative poster activity to promote body confidence and appearance diversity • Personal challenge homework to write a friendship note to learnings from sessions with a friend
3	Challenging the Image Myth Body activism and advocacy Positive body affirmation • Practice positive-self talk relating to body function and non-appearance-based attributes	• Small group sharing of friendship notes • Interactive and creative group activities to speak out and challenge the image Myth • Personal challenge homework – self-affirmation written activity sheet
4	Understanding Body Talk • Understand and identify where "Body Talk" (or appearance conversations, whether negative or intended as compliments) come up in everyday conversations • Understand the negative consequences of Body Talk Challenging Body Talk • Practice ways to challenge Body Talk and respond to it • Commit to not engaging in Body Talk Body activism and advocacy • Commit to sharing learnings about the Image Myth and Body Talk to stop it spreading	• Group game to share positive body affirmations • Interactive facilitator role-plays to provide examples of body talk in everyday lives • Whole group discussion about negative consequences of body talk • Whole group discussions to identify ways to challenge body talk • Interactive game to practice giving non-appearance-based complements and not engaging in body talk • Written and verbal commitments to challenge the Image Myth for self and for others
5	Body activism and advocacy • Commit to group and individual behavioural challenges to stand up against the Image Myth and stop it spreading • Plan a 'Take Action Project' to share the messages of all the sessions with local and global communities	• Written prompt sheet to record commitment to make individual behavioural changes • Small-group activity to design 'Take Action Project' • Presentations of 'Take Action Project' ideas to group • Verbal commitment to advocacy and activism with 'Take Action Project'

Table 1 (*continued*)

Session	Session topic and content	Learning Processes
Key Learning Outcomes	1. There is an Image Myth in society (and other societies worldwide, though they might have different features) 2. The Image Myth's definition is so long and specific, that it's impossible to achieve (even models are airbrushed) 3. There are lots of costs to following the Image Myth for us and our community. 4. There is an alternative to the Image Myth! We can all challenge the Image Myth wherever we go, and there are lots of different ways we can challenge both the media and our friends and family	

Table 2

Quantitative findings relating to Guide acceptability of the intervention.

Quantitative findings: Intervention acceptability	% participants (N = 92 *)			
	Agree	Neutral	Disagree	No response
I enjoyed the sessions.	90.2	1.1	6.5	2.2
The sessions helped me feel better about myself.	89.1	5.4	3.3	2.2
I understood what was being taught in the sessions.	80.4	12.0	4.3	3.3
I felt comfortable taking part in the sessions.	89.1	3.3	6.5	1.1
The sessions were taught confidently by the facilitator.	89.1	7.6	2.2	1.1
It is important for young people to take part in sessions like this.	92.4	2.2	4.3	1.1
Overall (average) acceptability rating	**88.3**	**5.2**	**4.5**	**1.8**

Note. N = All participants that completed post-intervention (T2) questionnaires.

them to provide written feedback on what they liked about *Free Being Me* and suggestions for improvements.

2.4.3. Fidelity

Audio recordings (16 sessions were recorded; 64% of all delivered) were reviewed to evaluate overall adherence to the intervention (i.e., the manual; including support prompts, activities, activity timings, and format) and facilitator competency. Two Hindi and English-speaking fidelity reviewers (authors RG, VJ) assessed the recordings using a study specific template modelled on previous studies (Garbett et al., 2021a). Both fidelity reviewers also responded to a series of statements concerning facilitator characteristics (e.g., *was prepared and organised*) using a 5-point response scale (1 = *not at all* to 5 = *very much*) following each session.

2.5. Primary outcome measure

2.5.1. Body esteem

The Appearance and Weight subscales of the Body Esteem Scale for Adolescents & Adults (BESAA; Mendelson et al., 2001) were used. A mean score using both subscales were calculated. This is a widely used measure of body image, which has been validated for use among Indian adolescent girls (Garbett et al., 2021b). Items are rated on a 5-point response scale (1 = *never* to 5 = *always*) with higher scores indicating higher body esteem. Example item: '*I look as nice as I'd like to*'. Internal consistency with the current sample was acceptable ($\alpha = .75$).

2.6. Secondary outcome measures

Internalisation of appearance ideals: The Internalisation-General Subscale of the Sociocultural Attitudes Towards Appearance Questionnaire-3 (SATAQ-3; Thompson et al., 2004) was used. This scale was chosen (in place of the SATAQ-4 or SATAQ-4R) because it has been validated among Indian adolescents (Lewis-Smith et al., 2020b), with six

of the original nine items included in the girl-specific version. Items are rated on a 5-point response scale (1 = *totally disagree* to 5 = *totally agree*), where higher scores indicate higher internalisation. Example item: '*I would like my body to look like the people who are in movies*'. Internal consistency was good (α = .89).

2.6.1. Positive and negative affect

A 10-item Positive and Negative Affect Schedule for Children was employed (PANAS-C; Ebesutani et al., 2012). This scale has been validated for use with Indian adolescents (Lewis-Smith et al., in prep). Items are rated on a 5-point response scale (1 = *not at all* to 5 = *very much*). Example item: '*How often have you felt [sad/happy etc.] over the past 7 days?*'. Internal consistencies were acceptable for both the positive (α = .83) and negative (α = .69) subscales in this sample.

2.6.2. Self-esteem:

The six-item Rosenberg Self-Esteem Scale – Short Form was used (RSES; Rosenberg, 1965), with items scored on 4-point response scale ranging from (1 = *strongly disagree* to 4 = *strongly agree*). Example item: '*I feel I have a number of good qualities*'. In line with Garbett et al. (2021a), the two subscales; positively-worded items (labelled 'self-esteem positive', three items) and negatively-worded items (labelled 'self-esteem negative', three items), were included separately. Internal consistency for the positive subscale (α = .70) was acceptable, though suboptimal for the negative subscale (α = .47).

2.6.3. Life disengagement

The Body Image Life Disengagement Questionnaire (BILD-Q; Atkinson & Diedrichs, 2021) was used to assess the psychosocial outcome of avoiding life activities due to appearance concerns. This scale has been validated with Indian adolescents (Hasan et al., manuscript under review), including nine of the original ten items. The items are scored on a 4-point response scale (1 = *hasn't stopped me at all* to 4 = *stopped me all the time*). Example item: '*How much have worries or feeling bad about the way you looked stopped you from participating in a physical activity or sport in the last 7 days?*' Internal reliability was acceptable in this sample (α = .77).

2.7. Data analyses

2.7.1. Acceptability analyses

Scores from girls were collapsed from a 5-point Likert scale into three categories: 1. Agree ('agree' and 'strongly agree' responses combined), 2. Neutral ('neutral' response), and 3. Disagree ('disagree' and 'strongly disagree' responses combined) and reported as frequencies. Qualitative feedback from girls was analysed using inductive content analysis (White & Marsh, 2006). Data were coded independently by the first and second authors. Codes were generated during the analysis (i.e., not using a pre-determined coding book). The coders familiarised themselves with the data set, re-read responses and identified key words and phrases, which they highlighted in different colours. Authors were blind to participant identities. Discrepancies in coding were discussed and addressed by the two coders. Quantitative acceptability feedback from Guide Leaders were reported as frequencies, whilst qualitative feedback to two opened-ended questions were coded and analysed using inductive content analysis (the same process described above).

2.7.2. Intervention effects

Statistical analyses were conducted using SPSS version 26. Paired-sample t tests were conducted separately for each primary and secondary outcome measure to examine changes from pre- to post-intervention. Significance was set at $p < .05\%$, and 95% confidence intervals were calculated. Standardised effect sizes were reported as Cohen's d (small effect $d = .20$, medium effect $d = .50$, large effect $d = .80$). The proportion of participants that improved, worsened, or remained the same across outcomes following participation in *Free Being Me* is also given.

3. Results

3.1. Data preparation

The data were screened for normality, outliers, and missing data. Missing data ranged from 17% to 22% across outcomes at baseline and from 31% to 36% across follow-up. Attrition from pre to post intervention was due, in part, to student absence from sessions or involvement with other activities, rather than girls opting-out of the intervention. In terms of missing data, there was no significant difference on body esteem at T2 when comparing those with missing data on body esteem at T1 to those without missing data at T1 (p = .340). The same is true for internalisation (p = .906), life disengagement (p = .919), negative affect (p = .758), positive affect (p = .440), positive self-esteem (p = .206) and negative self-esteem (p = .304). Likewise, there was no significant difference on body esteem at T1 when comparing those with missing data on body esteem at T2 to those without missing data at T2 (p = .472). The same is true for internalisation (p = .574), life disengagement (p = .241), negative affect (p = .579), positive affect (p = .954), positive self-esteem (p = .741) and negative self-esteem (p = .470). Overall, there was no evidence of a systematic bias due to missing data at either T1 or T2. To handle missing data, multiple imputation using the fully conditional specification method was employed with 100 imputations (Schafer, 1999) using SPSS version 26. All variables included in the analyses were used for the imputation of missing data.

3.2. Intervention acceptability

3.2.1. Guide acceptability

Quantitative findings are presented in Table 2. The results show that the intervention was highly acceptable to girls. Most girls (89.1%; n = 82) agreed that the intervention was taught confidently by their Guide leader, however, when asked who they would have liked to deliver *Free Being Me*, 48% stated that they would have preferred somebody from outside the group rather than their usual Guide leader. With regard to the qualitative findings, 88 girls (96%) reported what they liked most about *Free Being Me*. Popular responses were on the topics of: learning about the "image myth" (24% of those that responded; n = 21; the image myth is defined during the programme as the current dominant standard for female beauty), improving self-confidence (23%; n = 20), learning not to use body talk (17%; n = 15), positive message to be yourself/unique (14%; n = 12), and playing games/activities (13%; n = 11). When asked what they liked the least about *Free Being Me*, 83 (90%) girls provided responses. The majority reported that there was nothing that they did not like (59%; n = 49), while others mentioned particular activities (18%; n = 15), such as beauty bubbles (6%; n = 5; an activity where they practice responding to body talk) and airbrushing (4%; n = 3; an activity where they practice media literacy). All themes are listed in Table 3, along with illustrative quotes. When asked to list what they have learnt from taking part in *Free Being Me*, 88 girls provided responses. Of these girls, the vast majority (95%; n = 84) referred to at least one learning objective, for example learning about the image myth.

3.2.2. Guide leader acceptability

Feedback was received from two out of the four Guide leaders. The quantitative feedback (presented in Table 4) indicated high acceptability. In response to the open-ended question asking Guide leaders what went well, findings from the content analysis showed that they found the girls to be enthusiastic (n = 2) and engaged (n = 2), particularly in the interactive sessions, and the desire for *Free Being Me* to be available to girls of all ages outside of Guides (n = 1). In terms of responding to the question about challenges, one Guide leader mentioned the difficulty of conducting the sessions within the school facilities (outside of school hours) with lack of support from the school principal, which impacted their ability to conduct the session efficiently.

Table 3

Qualitative findings relating to Guide acceptability of the intervention.

Key themes		% sample (n)	Illustrative quotes (age of the participant)
Likes (n = 88)			
	Learning about the image myth	24 (21)	*"I liked that we were taught about the concept of image myth"(11 years)*
	Helped improve my confidence	23 (20)	*"The sessions made me confident and made me feel better about myself" (13 years)*
	Learning not to use body talk	17 (15)	*"We liked the most that we should not talk ill or think ill of each other or engage in body talk" (11 years)*
	Positive messages about individuality	14 (12)	*"I learnt I am unique and I am glad I got an opportunity to think about all of these topics" (13 years)*
	Playing games/ activities	13 (11)	*"I love that there was lots of activity" (13 years)*
	The teachers	9 (8)	*"The way with which the teachers teach us about these sessions" (13 years)*
	Learning new things	6 (5)	*"I loved that I explore new things" (13 years)*
	Everything	3 (3)	*"I cannot name one thing, I liked everything and learnt a lot from these sessions" (12 years)*
	Learning about celebrities airbrushing/ surgery	3 (3)	*"We also got to know whatever we see on tv is done through the computer. It is not perfect"(14 years)*
	Take-Action Project	1 (1)	*"I liked the fifth section the most in Free Being Me" (13 years)*
	Miscellaneous	2 (2)	-
Dislikes (n = 83)			
	Nothing	59 (49)	*"Nothing. I liked everything done in the sessions" (12 years)*
	Particular activities	18 (15)	*"I like the least about speech bubble" (11 years)*
	Would like more activities/ sessions	4 (3)	*"I think the least favourite sessions were with less activity. More activity makes the sessions better" (14 years)*
	Would like to include boys	2 (2)	*"Boys also need to learn about image myth and also body confidence" (13 years)*
	Timing of intervention	2 (2)	*"It happened between periods"(12 years)*
	Unclear instructions	2 (2)	*"I don't understood what was being thought in the session" (13 years)*
	Too personal	1 (1)	*"In Free Being Me I did not like that I don't like being tall"(13 years)*
	Miscellaneous	7 (6)	-

Note. n = All participants that completed post-intervention (T2) questionnaire.

Table 4

Quantitative findings relating to facilitator acceptability of the intervention.

Facilitator (Guide leader) Feedback	Mean score (SD) N = 2 (1 = not at all to 5 = very much)
Did you enjoy delivering *Free Being Me*?	*4.0 (0.00)*
Did girls appear to enjoy *Free Being Me*?	*4.5 (0.71)*
How confident did you feel in delivering *Free Being Me*?	*4.5 (0.71)*
Did girls understand the key messages of *Free Being Me*?	*5.0 (0.00)*
Did girls appear engaged in the topic and activities?	*4.5 (0.71)*
Do you feel you achieved the learning objectives of *Free Being Me*?	*4.0 (0.00)*
How useful did you find the resources for *Free Being Me*?	*4.5 (0.71)*

Table 5

Mean change in score (and standard deviation) from baseline to T2 for each outcome measure, paired sample *t*-test significance value, and associated standardised Cohen's *d* effect sizes (n = 62).

Outcome Measure	M (SD)	P value	d [95% CI]
BESAA (Body Esteem)	-.177 (.660)	.038*	-0.282 [− .345, − .001]
RSES (Negative self-esteem)	.000 (.879)	1.00	0.000 [− .223,.223]
RSES (Positive self-esteem)	-.005 (.618)	.945	0.010 [− .153,.164]
SATAQ-3 (Internalisation)	.543 (.962)	.000 * **	0.491 [.296,.788]
PANAS-C (Negative affect)	-.036 (.949)	.768	0.039 [− .207,.279]
PANAS-C (Positive affect)	-.133 (.817)	.204	-0.152 [− .340,.074]
BILD-Q (Life disengagement)	-.188 (.769)	.061	-0.398 [− .385,.009]

* *p < 0.05 **p < 0.01 ***p < 0.001*

3.3. Intervention outcomes

Table 5 shows the mean change from baseline to post-intervention, along with the standardised effect sizes. Statistically significant improvements were seen in body esteem at post-intervention ($d = .28$). There was also a significant improvement in internalisation post-intervention ($d = 0.49$). There were no significant intervention effects for self-esteem, positive or negative affect, or life disengagement, although life disengagement gave a result with a non-significant moderate effect size ($p = 0.061$; $d = 0.40$). These results were retained when the analyses were conducted with and without imputation. The intervention was delivered via guide leaders, we therefore checked for clustering effects due to who ran the program. We found that modelling the data using Linear Mixed Models with cluster as a random effect did not affect the statistical conclusions drawn (i.e., the same conclusions were found irrespective of whether cluster was in the model or not).

Table 6 displays the proportion of participants that improved, worsened, or remained the same across outcomes following participation in *Free Being Me*. A greater proportion of participants improved in body esteem, internalisation of appearance ideals, positive self-esteem, positive and negative affect scores following the intervention. A similar proportion of participants reported both worsened and improved scores across life disengagement and negative self-esteem.

3.4. Intervention fidelity

Global ratings of facilitator competence ($M = 7.0$; $SD = 1.97$) and adherence ($M = 6.5$; $SD = 1.82$) were good, and intra-class correlations across the assessors were acceptable (.913 and.813, respectively). Guide leaders were perceived by fidelity reviewers as having addressed the

Table 6

The proportion of participants that worsened, improved, or remained the same following participation in *Free Being Me*.

Outcome Measure	N	Worsening (%)	Improvement (%)	No change (%)
BESAA (Body Esteem)	62	20 (32.26)	38 (61.29)	4 (6.45)
RSES (Negative self-esteem)	62	24 (38.71)	23 (37.10)	15 (24.19)
RSES (Positive self-esteem)	61	20 (32.79)	25 (40.98)	16 (26.23)
SATAQ-3 (Internalisation)	61	14 (22.95)	40 (65.57)	7 (11.48)
PANAS-C (Negative affect)	61	23 (37.71)	29 (47.52)	9 (14.75)
PANAS-C (Positive affect)	62	18 (29.03)	28 (45.16)	16 (25.81)
BILD-Q (Life disengagement)	61	28 (45.90)	27 (44.26)	6 (9.84)

Table 7
Mean intervention fidelity scoring across Guide groups.

Overall facilitator characteristics	Ratings (Mean (*SD*)) (1 = *not at all* to 5 = *very much*)
Created a pleasant friendly learning environment	4.0 (0.81)
Demonstrated enthusiasm for the material	3.2 (1.33)
Appeared confident with delivering content	3.7 (0.98)
Gave clear explanations and examples	3.6 (1.25)
Actively encouraged participation from the students	3.6 (1.17)
Gave adequate time to process information and respond to questions	2.9 (1.22)
Ideas expressed clearly	3.3 (1.21)
Was prepared and organised	2.9 (1.26)
Kept students on topic	3.5 (1.18)
Tried to include all students in activities and discussions	3.5 (0.91)
Listened to students and reflected understanding	3.5 (1.06)
Respectful	3.8 (1.06)
Handled problems skilfully	3.2 (1.28)
Global Ratings	Rating (Mean (*SD*)) (0 = *no adherence/competence* - 10 = *perfect/superior*)
Global rating of adherence	6.5 (1.82)
Global rating of competence	7.0 (1.97)
Learning outcomes addressed	Rating (Mean (*SD*)) (0 = *not at all* −10 = *very much so*)
Learning outcome 1: There is an image myth in society (and other societies worldwide, though they might have different features).	7.7 (1.89)
Learning outcome 2: The image myth's definition is so long and specific, that it is impossible to achieve.	7.1 (1.68)
Learning outcome 3: There are lots of costs to following the image myth, for us and our community.	7.6 (1.13)
Learning outcome 4: There is an alternative to the image myth. We can challenge the it wherever we go (the media, friends, and family).	8.7 (1.21)

learning outcomes to a suitable degree (*ICC* =.823). Ratings on facilitator characteristics can be found in Table 7. While most of the facilitator characteristics were rated moderately, girls identified some areas for growth, such as better organisation and giving girls more time to process information and respond to questions.

4. Discussion

This pilot study assessed the acceptability and preliminary pre-post intervention effects of a cognitive dissonance-based body image intervention, *Free Being Me*, delivered by Guide leaders to adolescent girls in India. As expected, results indicate that *Free Being Me* was acceptable within an Indian context. Most girls rated the intervention as enjoyable, important, understandable, and felt comfortable taking part. Almost 90% of girls believed the sessions helped them to feel better. Girls liked learning about the image myth (i.e., the cultural appearance ideal) and body talk, and noted that participating in the programme helped improve their confidence. In terms of dislikes, whilst the most common response was 'nothing', girls suggested including boys in the sessions and adding more interactive activities. These interactive, participant-led elements may facilitate engagement and cultural relevance (Stice et al., 2019). Given that *Free Being Me* is now 10 years old, this feedback provides useful insight for informing future updates, which aim to keep the programme relevant, exciting, and engaging.

In regard to intervention delivery, the vast majority of girls reported that the sessions were taught confidently, which is supported by the fidelity assessments in which Guide leader adherence and competence to the session plan were rated good. Girls' responses to the question on learnings highlighted that the key messages were understood. Similarly,

Guide leaders felt that the girls understood the key messages and achieved the learning objectives. Going forward, ways to improve adherence to and competency delivering the programme should be considered. For example, face-to-face training could benefit from supplementary video resources available for self-directed training. This is particularly important when time elapses between in-person training and delivery of the sessions. Further, fidelity reviewers' scores provide insight into areas requiring extra focus in future training, such as highlighting the importance of adequate preparation and organisation in terms of programme delivery and allowing girls time to process information and respond to questions. Barriers to adherence may also be mitigated by increasing the number of facilitators delivering the sessions. In the present trial, the sessions were delivered by one facilitator, which may have contributed to challenges noted by both fidelity assessors and facilitators relating to the management of group dynamics while also adhering to manualised guidance (e.g., prompting desired responses to Socratic questions). In their meta-analytic review, Stice et al. (2019) suggest that intervention delivery by two to three facilitators produces optimal effects, most likely by easing these challenges. However, practical and financial constraints on resources play a major role, particularly across diverse geographical regions and economic environments, and as such, the ratings of intervention delivery seen here are promising with regards to feasibility and scalability.

In line with our hypothesis, a significant improvement in body esteem, our primary outcome, was identified. This finding adds to a well-established evidence base demonstrating the effectiveness of cognitive dissonance-based body image interventions on adolescents' body image (Halliwell & Diedrichs, 2014; Rohde et al., 2014; Stice et al., 2006; Stice et al., 2008). The small effect size is also comparable with other body image interventions that utilise community providers (i.e., teachers rather than mental health specialists/research facilitators) and universal non-clinical samples (Becker & Stice, 2017; Diedrichs et al., 2015; 2021; Yager et al., 2013). The promising preliminary results contribute to the emerging field of body image programmes delivered to adolescents in India (Dhillon & Deepak, 2017; Lewis-Smith et al., 2023). Going forward, however, a randomised controlled trial is necessary to make confident interpretations on the impact of *Free Being Me* on girls' body esteem.

Regarding the secondary outcomes, as hypothesised, a significant pre-post intervention reduction of medium effect size in internalisation of appearance ideals was observed. This finding is consistent with numerous studies examining the impact of cognitive dissonance-based body image programmes (Becker et al., 2006; 2010; Halliwell & Diedrichs, 2014; Kilpela et al., 2014; Perez et al., 2010; Stice et al., 2008; Van Diest & Perez, 2013). Interestingly, the effects for internalisation of appearance ideals were stronger than for body esteem, a pattern noted in Stice and colleagues' (2019) meta-analytic review of dissonance-based prevention programmes. Indeed, one of the key objectives of the activities within *Free Being Me* is to challenge and resist the cultural appearance ideal (i.e., the image myth) by speaking out against it through behavioural, verbal, and written exercises. This is theorised to induce dissonance and hence facilitate attitude change. As such, the reduction in internalisation of appearance ideals seen here could provide additional support for the key mechanism of change in cognitive dissonance-based prevention programmes (Festinger, 1957; Stice et al., 2019; Stice et al., 2008).

Counter to our hypothesis, no pre-post intervention changes for self-esteem, negative and positive affect, or life disengagement were found. These findings are somewhat in line with previous dissonance-based body image interventions (e.g., Rohde et al., 2014), as well as other body image programmes (e.g., Sharpe et al., 2013). For example, in the initial pilot of *Confident Me*, a body image intervention delivered to adolescent girls in India, there were no improvements in negative affect, self-esteem, or life engagement (Garbett et al., 2021a). Similarly, Diedrichs et al. (2021), found no significant improvements in negative affect and life engagement in their evaluation of a five-session body

image intervention delivered by teachers to young adolescent girls and boys in the UK. The absence of effects may be because these outcomes were only examined at immediate post-intervention (due to the trial halting because of the COVID-19 pandemic), rather than at a follow-up time point. Previous trials evaluating body image interventions among adolescent girls have found improvements on outcomes at follow-up (e. g., Garbett et al., 2023; Matheson et al., 2023). It is speculated that this is due to the consolidation of key messages over time. This might be particularly relevant for *Free Being Me*, as the 'Take Action Project' after the final session encourages participants to put their learnings into action within their own lives and communities. A further explanation is that this study focused on the assessment of wider psychosocial outcomes rather than alternative risk factors for poor body image. Given that *Free Being Me* specifically targets body talk and media literacy, it would be interesting to assess the impact of this intervention on these factors in future trials. Alternatively, effects may have been seen for outcomes relating to positive body image concepts, such as body appreciation, which are more modifiable and have shown evidence of improvement through cognitive dissonance interventions (e.g., Amaral et al., 2019, Halliwell et al., 2015; Jankowski et al., 2017,). Finally, there was a trend for improvements in life disengagement, with a moderate effect size in the desired direction. Going forward, it would be interesting to investigate these findings in a fully powered trial.

A key strength of this study is that it addresses some of the practical limitations that compromise the scalability and reach of many body image interventions noted previously. These include a lack of infrastructure, resources (e.g., there is limited mental health education in India), and cultural barriers such as social stigma, which can hinder help-seeking behaviours (Kudva et al., 2020). *Free Being Me* had promising effectiveness and delivery by Guide leaders was acceptable in the present study. This suggests that it could provide a low-cost alternative to expert-delivered interventions, which could enhance dissemination potential within low- and middle-income countries.

The present pilot study has several limitations. First, while the pre-post intervention effects are promising, the methodological restrictions of this study (i.e., a small sample size, lack of control group, and the exploration of immediate post-intervention effects only due to interruptions to the trial caused by the COVID-19 pandemic and lockdowns in India) limit the interpretations that can be drawn without further testing. To make confident interpretations on the effectiveness of *Free Being Me*, a fully powered randomised controlled trial would be a useful next step. Second, despite using validated measures where possible, the scale reliability of the negative self-esteem scale in this study was sub-optimal. Given that very little research on body image interventions have been conducted with adolescent girls in India, we retained the data in the analyses and believe that the results should be interpreted with caution. Future research should include a more reliable measure of self-esteem. Third, there was a large proportion of missing data. Unfortunately, the researchers were not provided with detailed information describing the reasons why participants were absent on data collection days (e.g., sickness) or provided with a breakdown on session attendance. Fourth, if we had adjusted for multiple comparisons in our analyses, the effect on body esteem would have disappeared. Caution is therefore warranted when interpreting this finding. Finally, assessments of intervention fidelity were hindered by practical constraints (e.g., Guide leaders' incomplete recordings of *Free Being Me* sessions). Consequently, examination of the time spent on specific elements of the intervention and the overall duration was not possible. Nonetheless, this study provides promising preliminary results to suggest that further testing of the intervention would be worthwhile.

5. Conclusions

This pilot study assessed a community-based body image intervention co-created by WAGGGS, DSEP, and body image researchers delivered by Guide leaders in India. The intervention was acceptable, with

girls reporting high levels of comfort, enjoyment, and importance. The pre-post intervention effects for the primary outcome of body image and secondary outcome of internalisation of appearance ideals are encouraging although a fully powered randomised controlled trial (with an appropriate control group) is necessary to make confident interpretations on the effectiveness of *Free Being Me*. Overall, this study provides preliminary support for the community-based delivery and Guide leader facilitated format of *Free Being Me*. Going forward, it will be valuable to examine the impact of participation in *Free Being Me* on adolescent girls' body image, self-esteem, and related factors across diverse geographical regions and cultures. Additionally, it is timely to adapt and test *Free Being Me* with mixed gender groups, as pointed out by girls in the intervention group.

CRediT authorship contribution statement

Nicole Paraskeva: Conceptualization, Methodology, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualisation. **Georgina Pegram**: Resources, Investigation, Project administration, Data curation, Formal analysis, Writing – review & editing. **Radhika Goel**: Investigation, Project administration, Writing – review & editing. **Manika Mandhaani**: Investigation, Project administration, Writing – review & editing. **Vanya Suneja**: Investigation, Project administration, Writing – review & editing. **Paul White**: Formal analysis, Writing – review & editing. **Phillippa C. Diedrichs**: Conceptualization, Methodology, Writing – review & editing, Supervision, Funding acquisition.

Declaration of Competing Interest

Phillippa Diedrichs is an independent consultant to the Dove Self-Esteem Project. The authors declare no other conflicts of interest in relation to this work.

Data Availability

Data will be made available on request.

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