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Exploring the Use of Multi-Session, Group-Based Self-Compassion Interventions for University Students: A Systematic Review

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ABSTRACT

This systematic review explores the extent to which the design, implementation and delivery of multi-session, group-based self-compassion interventions targeting university-level students reflects the emerging self-compassion literature and findings to better tailor self-compassion interventions to student experiences. This paper, undertaken to establish literature on self-compassion interventions, conducted a systematic search of four electronic databases, yielding 357 potentially relevant journal articles after duplicates were removed. Following screening of titles and abstracts, 49 studies were identified for review. Of these, eight were selected as meeting the inclusion/exclusion criteria following full-text screening. Data were extracted and synthesised narratively. Promising support is found for the use of multi-session, group-based self-compassion interventions leading to enhanced self-reported trait self-compassion in university-level students across all eight studies. Heterogeneity, however, in intervention design, implementation, and delivery obscured how future multi-session, group-based self-compassion interventions could be tailored to student experiences and individual differences. Whilst there is evidence to suggest that multi-session, group-based self-compassion interventions have benefited university-level students by helping them adapt to university life through increases in self-compassion, future research could explore the roles of other-focused compassion and group dynamics in multi-session, group-based self-compassion interventions.

KEYWORDS

Self-compassion, university, interventions, adolescence, mindfulness

Introduction

Popular interventions to improve students' wellbeing and academic abilities have targeted self-esteem (Neff, 2011). Self-esteem has been linked to narcissism (Bushman and Baumeister, 1998) and, compared to a self-compassion intervention, is less efficacious in increasing self-improvement motivation (Moffitt et al., 2018). Self-compassion has been associated with improved emotional wellbeing (Bluth et al., 2016), increased psychological and positive affective wellbeing, and reduced negative affective wellbeing (Zessin et al., 2015) without the downsides associated with self-esteem**,** including egocentric behaviour and social comparison (Neff, 2003b). Wakelin et al.'s (2021) systematic review and meta-analysis of 20 RCT studies exploring the effects of self-compassion related interventions on self-criticism shows a medium reduction in self-criticism and significant association between longer duration interventions and greater effect sizes. Wider research on the efficacy, feasibility, and acceptability of self-compassion interventions for adolescents has demonstrated that self-compassion interventions are well received, effective in enhancing various forms of wellbeing, adaptive psychological functioning, emotion regulation, and can be delivered online, in-person, or self-administered (Donovan et al., 2021; Campo et al., 2017). This research recommends researchers to be explicit about the theories and constructs their interventions are targeting to better understand mediating factors and

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the effectiveness of self-compassion interventions (Biber and Ellis, 2019). For instance, students undertaking interventions may encounter a surprising degree of resistance and unease with the principles being presented, including that individuals are fearful of receiving compassion either from others or themselves, suggesting a difficulty in dealing with self or other generated affiliative emotions (Gilbert et al., 2011). This requires further considerations and adaptations on behalf of researchers, practitioners, and leaders of self-compassion interventions to accommodate students possibly experiencing these psychological barriers.

Compassion, stemming from Eastern wisdom (Neff, 2003b), is the desire to ease the suffering of others by opening-up-to and being moved by other's suffering (Neff, 2003a)—frequently leading to prosocial behaviour, solidarity, and altruism (Bierhoff, 2005). Turned inwards, self-compassion, considered as a stable trait (Neff et al., 2007), serves as an emotional regulation strategy that; (a) extends kindness and understanding to oneself; (b) assists in acknowledging that suffering, failures, and perceived inadequacies are part of the human condition; (c) and keeps negative, painful, and intruding thoughts and emotions in balanced awareness (Neff, 2003a). Collectively, these are summarised into self-kindness, common humanity, and mindfulness, and their counterpart's self-judgement, isolation, and overidentification (Neff et al., 2021). Self-compassion is described as a "single experience composed of interacting parts" (Neff and Dahm, 2015, p.6). Measurement tools include the Self-Compassion Scale (SCS; Neff, 2003a) and SCS-Short Form (SCS-SF; Raes et al., 2011). Neff (2003a) demonstrates statistical reliability of self-compassion components, the ability to distinguish self-compassion levels in theoretically distinct groups (i.e., self-compassion correlated with years of practice meditating (Neff & Pommier, 2013), and statistical reliability in linguistic variance across cultures (Tóth-Király and Neff, 2020).

Studies implementing these interventions, however, appear to be limited by small sample sizes, gender imbalances, low diversity, short intervention duration, few follow-up measurements, and heterogeneous study design, format, and intervention content (Biber and Ellis, 2019; Bluth et al., 2016). Despite mounting evidence favouring statistical significance of self-compassion and its components (e.g., Wakelin et al., 2021; Bluth and Neff, 2018; Neff and Dahm, 2015), some challenge the reliability of measurements and foundation of self-compassion more generally (e.g., Sinclair et al., 2017). Conceptually, research has fallen short of examining and explaining the nature of self-compassion in adolescents with research showing that high self-compassion individuals tend to rely on positive cognitive restructuring. Uncertainty, however, remains regarding why high self-compassionate individuals tend to engage comparably in problem-solving and distraction as low self-compassionate individuals (Allen and Leary, 2010).

Self-compassion interventions have yet to explain circumstantial, individual, and cultural factors. Studies demonstrate that exposure to unusually high stress levels like giving a speech, or solving arithmetic problems on the spot, inhibit the protective effect of self-compassion (Bluth et al., 2016; Bluth et al., 2017), but uncertainty remains about upper limits to self-compassion. Similarly, a cross-sectional study of middle and high school students investigating the effects of age and gender on the association between self-compassion and emotional wellbeing finds the expected positive results for all groups except for older females who appear to have the lowest self-compassion (Bluth et al., 2017). Similarly, self-compassion inducements were less effective for participants with high levels of eating guilt, which might come down to depleted stocks of self-control (Adams and Leary, 2007). Self-compassion possibly has a ceiling effect to its benefits especially in high stress situations, or it could be that some adolescents are more resistant to self-compassion (ibid).

The purpose of this systematic review is to explore, understand and draw conclusions from existing empirical research investigating the effects of self-compassion interventions on university-level students. As such, this systematic review determines whether and to what extent: (a) the design, implementation and conduct of multi-session, group-based self-compassion interventions are aligned with established self-compassion interventions and the emerging self-compassion literature; (b) and the content, principles and delivery of multi-session, group-based self-compassion interventions are considerate of individual differences (i.e., gender, age, parent's education level, motivation type, etc.), cultural differences, and contextual differences (i.e., intervention design, time interval, nearness to exam season, etc.) within and between studies.

Methods

The review follows the latest Preferred Reporting Items for Systematic Reviews and Meta-Analyses Guidelines (PRISMA; Page et al., 2021). The systematic review protocol was registered with the University of East London (UEL) on 4th May 2021.

Search Strategy

A systematic literature search was conducted to identify studies delivering multi-session, group-based self-compassion interventions to university-level students. The following electronic bibliographic databases were used: PsycINFO, PsychARTICLES, PubMed and Cochrane Library. Databases were searched within the "title" and "abstract" fields and search terms were combined with BOOLEAN operators. The search terms for this review were comprised of three layers, introduced incrementally to searching the specified databases. Since the parameters of this review were clear and focused specific terms were used to capture relevant studies. The search terms can be grouped into (a) checks for a self-compassion focus; (b) inclusion of university-level student sample populations; (c) and use of interventions. The following terms were used: "self-compassion" OR "self compassion" OR "self-kindness" OR "compassion" OR "university" OR "college" OR "student*" OR "adolescen*" OR "youth" OR "interven*" OR "workshop" OR "group" OR "therapy" OR "application" OR "program*" OR "training". Only results from January – 2003 onwards were considered and the final searches were conducted on 1st June 2021. Only English language, peer-reviewed journals were considered with no stipulations on geographic location.

Study Selection

The title and abstract of all identified studies were screened by one independent reviewer (first author) for potential inclusion, with exact duplicates being hand removed. Full-text articles were obtained for all studies initially passing the inclusion/exclusion criteria and assessed for further relevance by the same reviewer. All full-text articles were available and accessible. Since this was a review conducted by only one author there could no discussion around the relevance of included studies, possibly biasing the results. Finally, manual searches were conducted on the bibliography of relevant papers for additional papers.

Inclusion/Exclusion Criteria

The inclusion/exclusion criteria with rationales are detailed in Table 1.

Table 1
Details of inclusion/exclusion criteria and rationale

Inclusion criteria	Exclusion criteria	Rationale
English language and published in a peer-reviewed journal	Non-English and grey-area literature/ non-peer reviewed (dissertations, commentaries, presentations)	To avoid interpretation errors no translated papers will be considered. To maintain academic integrity only papers from reputable, standardised sources are considered.
Published after Jan – 2003	Published before Jan – 2003	Papers published before 2003 predate Neff's SCS (2003a) and SCS-SF (Raes et al., 2011), which were the first self-compassion scales developed and introduced in 2003.
Utilises a RCT study design including at least one active or passive control group	Fails to either use a RCT design or mismanages the process biasing results (lacks randomisation, passive control is compromised)	RCT are considered highly reliable in determining causality amongst relations between treatment and outcome (Sibbald and Roland, 1998).

Table 1 (Cont.)

Includes an intervention that is characterised by (a) being multi-session; (b) being group-based; (c) including self-compassion content, techniques, or principles; (d) and explicitly expecting to enhance self-compassion in participants (uses either the SCS or SCS-SF, or an adapted scale like state-level SCS)	Interventions that (a) are one-off sessions; (b) are completed individually such as guided meditations and podcasts without group interactions (*online interventions are included if they convey a sense of group dynamics occurring, breakout rooms, group discussions, etc.); (c) rely overly on related emotion regulation concepts such as mindfulness, cognitive therapy, and MBSR principles and content to develop their interventions; (d) include overlapping intentions of enhancing general mindfulness, stress reduction with a loose focus on self-compassion in participants	The heterogeneity in content, structure, and design of self-compassion interventions within the literature makes synthesis and collation of relevant findings difficult. To standardise and make explicit the focus of this review, clear guidelines are set for the types of studies and their associated interventions. A limitation of previous self-compassion intervention reviews has been identified as vague inclusion criteria for these matters (Kirby and Gilbert, 2019).
Measure either trait or state self-compassion through the SCS or SCS-SF (adjusted for state self-compassion)	No self-compassion measure	Presently there exists only one validated and reliable scale of trait self-compassion (SCS and SCS-SF, Neff, 2003a; Raes et al., 2011). The newly developed state self-compassion scale (SSCS, Neff et al., 2021) has yet to be integrated into research.
Participant groups must be completely made up of university-level students studying at bachelors, masters, or PhD level (college students in the U.S.)	Only partial or no inclusion of university-level students	This review focuses on university-level students and role of self-compassion in self-compassion interventions in improving psychological/mental health and adaptive psychological functioning.

Table 2
Weight of Evidence

Study	Methodology quality	Methodology appropriateness	Study relevance	Overall
Savari et al. (2021)	Satisfactory	Good	Good	Good
Long et al. (2021)	Excellent	Good	Satisfactory	Good
Dundas et al. (2017)	Good	Good	Excellent	Good
Haukass et al. (2018)	Good	Good	Satisfactory	Good
Falsafi et a. (2016)	Good	Good	Satisfactory	Good
Smeets et al. (2014)	Excellent	Excellent	Excellent	Excellent
Ko et al. (2018	Good	Satisfactory	Excellent	Good
Huang et al. (2021)	Good	Excellent	Excellent	Excellent

Data Extraction, Analysis and Synthesis

The extraction process included assessment of quality and collection of evidence synthesis using an adapted standardised data extraction form by the first author. Data was extracted into an excel document with the following pre-selected fields: general study characteristics (author, year, design), population (mean age, ratio of females, ethnicity, sample size, pre-existing psychological/mental requirements, attrition), intervention (type, duration, number of sessions, length of sessions, facilitator(s), theoretical construct, content, homework, session structure, course structure), control (type, if active, form of intervention), outcome measures (scales and measures), and results. Accuracy of extraction could not be checked by a second reviewer and no automation tools were used. Results from the data extraction are viewable in table format (Table 3). Given the limited study sample size and heterogeneity in individual study design, population characteristics, intervention frameworks,

Table 3 Overview of inc. studies

Study	Design and control	Population	Intervention	Outcome measure of self-compassion	General results
Savari et al. (2021)	Exploratory RCT with one wait-list control, pilot study	30 females with a confirmed diagnosis of depression, mean age 24.3 years, based in Iran	Psychoeducational CMT informed by CFT and MC, eight 90-minute sessions twice a week, facilitated by M.Sc. student in psychology with training in compassion focused therapy, attrition 0%	SCS-SF	effective in reducing depressive symptoms (even students with major depressive disorders), positive impact on anger rumination (hostility-oriented component impacted greater than cognitive), only fear of compassion for others significantly reduced (fear of compassion from others and fear of self-compassion decreased without reaching statistical significance), significant improvement on the total score of the SCS
Long et al. (2021)	Stepped-wedge design (SWD) RCT with two wait-list controls	208 individuals at least 18 years old (73% female), majority Caucasian (41%) and Asian American (34%), based in	Experiential mindfulness and promotive coping program based on CBC and emotion regulation skills, 6 structured, practice-led weekly 90-minute sessions, attrition 5%	SCS-SF	participants reported improved mindfulness, executive control, active coping, self-compassion, social connectedness, resilience, and flourishing, with most of these changes being maintained at a three-month follow-up
Dundas et al. (2017)	Multi-baseline RCT with one wait-list control	158 individuals (85% female), mean age 25 years, Norway	Experiential self-compassion training based on MSC, CMT, and MBSR, three 90-minute semi-structured, experiential/ practice-informed self-compassion training sessions over 2 weeks, attrition 27%	SCS-SF	participants reported gains in personal growth self-efficacy and healthy impulse-control and reductions in self-judgement and habitual negative self-directed thinking, and increases in self-compassion and reductions in anxiety and depression

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Table 3 (cont.)

Study	Design and control	Population	Intervention	Outcome measure of self-compassion	General results
Haukass et al. (2018)	RCT with one active control (Attention Training Technique, ATT)	94 individuals with self-reported symptoms of depression, anxiety, and stress (75% female), mean age 22.9 years, based in Norway	Experiential MSC intervention based on MSC, 3 weekly structured, interactive, experiential, practice-led 45-minute sessions, delivered by four fifth-year clinical psychology students with no prior training in MSC, attrition 22%	SCS-SF	significant reductions in depressive symptoms and anxiety symptoms with medium effect sizes and no significant differences between conditions, results were maintained at follow-up, additionally interventions significantly increased mindfulness, attention flexibility, and self-compassion where changes were maintained at 6-month follow-up measurements
Falsafi et al. (2016)	Stratified-RCT (gender) with one wait-list control and one active control (yoga intervention)	90 individuals with self-reported and diagnosed symptoms of depression and/or anxiety (86% female), mean age 22.1 years, majority Caucasian (88%), based in U.S.	Mindfulness and self-compassion training based on generic mindfulness and self-compassion techniques, meditations, and practices, 8 weekly practice-oriented 75-minute sessions with self-administered exercises for homework, delivered by doctoral-level psychiatric clinical nurse specialist, board certified as an advanced holistic nurse and certified yoga teacher, attrition 30%	SCS-SF	Self-compassion only increased significantly from pre to follow-up measurements in the mindfulness intervention, depression and anxiety were reduced
Smeets et al. (2014)	RCT with active control (general time management skills)	52 females, mean age 19.96 years, based in Netherlands	Self-compassion intervention based on MSC, 3 weekly practice-oriented, semi-structured 45- to-90-minute sessions, co-led by two trainers (including first author), attrition 0%	SCS-SF	Compared to the control group the intervention led to significantly greater gains in self-compassion, as well as mindfulness, optimism, and self-efficacy, and decreases in rumination. Group differences were not significant for life satisfaction, connectedness, positive and negative affect, or worry. Gains in self-compassion significantly predicted changes in all variables apart

Table 3 (cont.)

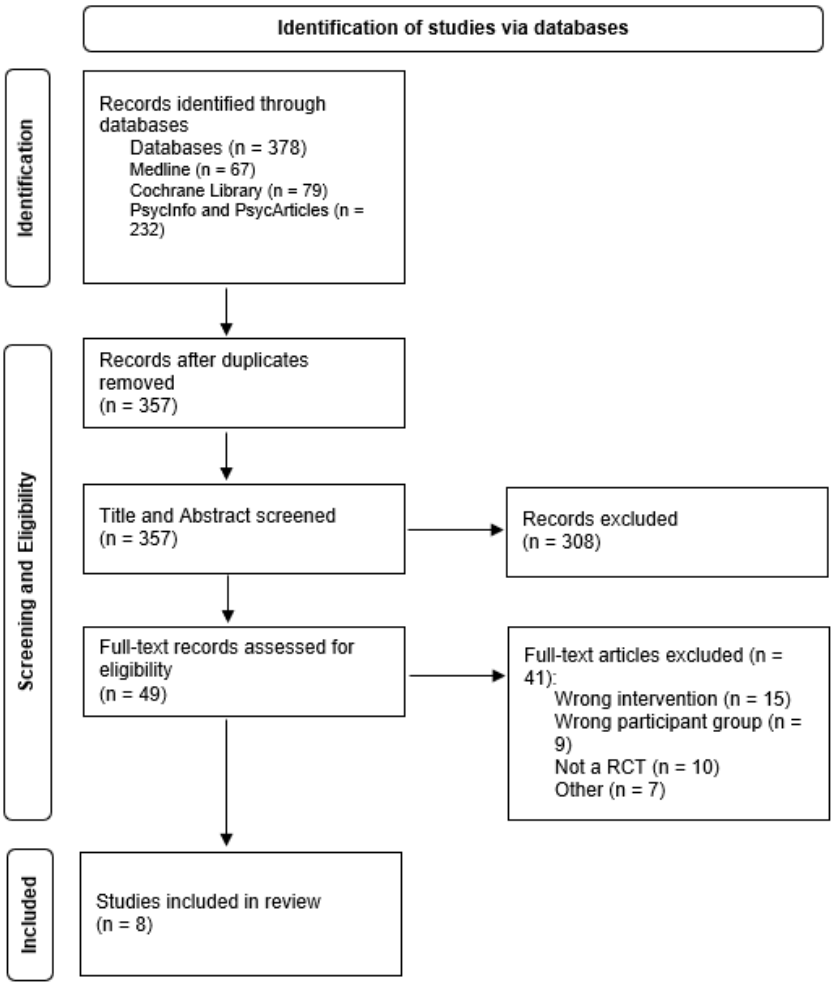
Study	Design and control	Population	Intervention	Outcome measures of self-compassion	General results
					from positive or negative affect.
Ko et al. (2018)	RCT with one wait-list control	41 individuals (66% females), mean age 19.8 years, based in U.S.	Psychoeducational compassion course based on contemplative methods from unidentified conceptual approaches, thirty 80-minute assessed, practice-informed sessions twice a week, attrition 14%	SCS	significant changes recorded between the intervention and control group from Time 1 to Time 2 in mindfulness, self-compassion, compassion, and salivary alpha-amylase (physiological stress measure), however no significant results were obtained for changes in depression, anxiety, and perceived stress
Huang et al. (2021)	RCT with one wait-list control	69 individuals (71% females), mean age 20.22 years in intervention group, mean age 20.88 years in control group, based in China	Psychoeducational program teaching self-compassion skills based on MBCT, CMT, and MSC, 4 weekly taught, practice-informed 120-minute sessions, attrition 0%	SCS	intervention group showing increased self-compassion and future-oriented coping and decreases in depression and stress compared to the control group, the enhancement of proactive coping played a mediating role in the intervention's effects on depression and stress

and use of control groups there was limited potential for any meta-analysis. Therefore, findings are presented as a narrative synthesis structured around the design, implementation, and delivery of self-compassion interventions for university-level students. No study information needed to be obtained or confirmed with study authors. Table 2 offers Gough's (2007) Weight of Evidence criteria applied to included studies to assess quality and relevance; four categories are assessed on judgement with scores ranging from 'inadequate' to 'excellent' with only studies achieving an overall of 'good' or better being selected (Bizami et al., 2023).

Results

Figure 1 details the study selection process. Search results were imported from each database into Zotero reference management software. Studies appearing to meet the exclusion criteria (e.g., Voelker et al., 2019) were excluded on the basis that self-compassion interventions that focused on university-level students in the context of athletics did not meet the agenda of this review. That is, this review is concerned with exploring the implications of self-compassion intervention's design for addressing student needs, outcomes, and experiences in the context of student life and academics, rather than athletics.

Figure 1
Prisma flow diagram outlining the study selection process



Overview of Studies

Table 1 presents an overview of the characteristics of included studies. Sample sizes ranged from 30 to 208. All samples were predominantly female based with two using all female samples (Smeets et

al., 2014; Savari et al., 2021). Three studies set pre-requisites for participants to enter, targeting students with psychological and/or mental characteristics including participants with a diagnosis of depression and/or anxiety (Falsafi, 2016; Savari et al., 2021; Haukaas et al., 2018). Of these, two utilised both self-report questionnaires (e.g., Beck Depression Inventory-2, BDI-2) and an assessment or structured clinical interview to confirm diagnosis of depression and/or anxiety (Falsafi, 2016; Savari et al., 2021). The included studies originated from several countries: U.S. (Falsafi, 2016; Ko et al., 2018; Long et al., 2021), Norway (Dundas et al., 2017; Haukaas et al., 2018), Iran (Savari et al., 2021), China (Huang et al., 2021), and Netherlands (Smeets et al., 2014). All studies were published after 2014. Out of the 8 RCT studies, 5 used only wait-list controls (Ko et al., 2018; Dundas et al., 2017; Long et al., 2021; Savari et al., 2021; Huang et al., 2021), 3 used either only an active control, or mixed active and passive controls (Falsafi, 2016; Smeets et al., 2014; Haukaas et al., 2018), and one of these was a pilot study (Savari et al., 2021).

Excluding participants not included in the final analysis, studies comprised 630 students from a relatively homogenous sample: four undergraduates only samples, mostly first- and second-year students (Falsafi, 2016; Ko et al., 2018; Smeets et al., 2014; Long et al., 2021), two mixed undergraduate and postgraduate samples (Haukaas et al., 2018; Savari et al., 2021), and two samples with undefined college student samples (Dundas et al., 2017; Huang et al., 2021). Out of these 630 students, 390 participated in a form of self-compassion intervention and 352 acted as purely control participants. The stepped-wedge design in Long et al. (2021) allowed for all 183 students to experience the intervention during one of three periods and contributes the greatest number of intervention and control participants of any single study (183 and 112 respectively). Generally, samples sizes were of medium size.

Outcome Measures

Six studies used the Self-Compassion Scale Short-Form (Falsafi, 2016; Smeets et al., 2014; Dundas et al., 2017; Long et al., 2021; Savari et al., 2021; Haukaas et al., 2018) measuring self-compassion as a total score, except for Savari et al. (2021) where they measured positive subscales (self-compassion) and negative subscales (self-coldness) as well. Two studies used the full SCS (Ko et al., 2018; Huang et al., 2021). Of these, only Huang et al (2021) reported both positive (self-compassion) and negative (self-coldness) subscales of self-compassion.

Interventions

As per the inclusion criteria, all interventions included were in-person, multi-session, group-based, and incorporated an element of self-compassion skills, techniques, meditations, journaling, and/or thinking. Most studies included an aspect of self-administered, between-sessions self-compassion practice to be conducted at home. Popular among these were self-compassion journaling, used to record home practice and any events relating to participant's self-compassion journey (Falsafi, 2016), noticing daily suffering and responding compassionately (Smeets et al., 2014), and presumably academic and analytical reflections on self-compassion considering Ko et al.'s (2018) compassion course required written assignments, presentations and examinations. Many interventions included audio guides to mindfulness and self-compassion exercises to encourage practice of these between sessions (e.g., affectionate breathing, mindfulness of breathing, Dundas et al., 2017; loving-kindness meditation and affectionate breathing, Haukaas et al., 2018). Long et al. (2021) instead sent two weekly text messages to encourage practice. The most novel of means to encourage practice outside of sessions was Smeets et al.'s (2014) "intervention bracelet", which was given to students at the beginning of the program with the instruction to switch the wrist which they wore the bracelet on whenever they noticed themselves addressing themselves harshly. Other practices to be conducted outside of sessions included writing a letter about something participant's felt bad about from the perspective of a self-compassionate friend (Smeets et al., 2014; Savari et al., 2021), practising the use of personalised self-compassion phrases (Haukaas et al., 2018), and participating in community service by practising loving-kindness meditation with a dying person (Ko et al., 2018).

Four studies explicitly mention using formal meditations in sessions including meditation on breath

and affectionate breathing (Falsafi, 2016; Huang et al., 2021; Haukaas et al., 2018), loving-kindness meditation or *metta* (Falsafi, 2016; Ko et al., 2018; Huang et al., 2021, Haukaas et al., 2018), and on-the-go meditations like mindful walking (Falsafi, 2016; Ko et al., 2018). Informal meditations, or contemplative exercises, were used to give participants the experience of mindfulness without meditating, these included informal loving-kindness meditation (Smeets et al., 2014), body scans, breathing practices and Hatha yoga sequences (Long et al., 2021), de-shaming reflections, compassionate body posture, compassionate refocusing (Savari et al., 2021), and personalised compassionate statements, phrases, or behaviours (e.g., "may you be kind to yourself, may you be at peace", Haukaas et al., 2018; Savari et al., 2021; Smeets et al., 2014). Unique among these was Ko et al.'s (2018) where students were required to read and study the life stories of contemplative exemplars such as Ghandi, the Dalai Lama, and Nelson Mandela.

Outcomes

Results should be cautiously interpreted as limited quality assessment was conducted. As per the inclusion criteria, all included studies measured trait self-compassion. Compared to control groups, significant increases in self-compassion following interventions were reported in all eight studies, with three (Falsafi, 2016; Dundas et al., 2017; Haukaas et al., 2018) recording significant results at follow-up, and two finding large effect sizes for changes (Smeets et al., 2014; Haukaas et al., 2018). Four studies found medium to large effect sizes for gains in mindfulness compared to control groups (Falsafi, 2016; Smeets et al., 2014; Long et al., 2021; Haukaas et al., 2018). Most studies found positive results for adaptative psychological functioning measures including marginal significant, medium gains in self-efficacy (Smeets et al., 2014), personal growth self-efficacy (Dundas et al., 2017), emotion regulation and coping (Long et al., 2021), future-oriented coping (Huang et al., 2021), and attention flexibility (Haukaas et al., 2018). Many of these were maintained at follow-up (Falsafi, 2016; Dundas et al., 2017; Haukaas et al., 2018), except for healthy impulse control (Dundas et al., 2017).

With regards to impact on scales measuring negative psychological factors all studies apart from two found significant results on either depression, anxiety, or perceived stress (Ko et al., 2018; Long et al., 2021). Compared to control groups, significant reductions were reported in depression (Savari et al., 2021; Huang et al., 2021) and these changes held at follow-up measurements (Falsafi, 2016; Dundas et al., 2017). Similarly, significant reductions in anxiety were recorded and held at follow-up measurements (Falsafi, 2016; Dundas et al., 2017), including significant reductions in test anxiety (Haukaas et al., 2018). Several studies reported significant decreases in perceived stress (Falsafi, 2016; Huang et al., 2021) with one study finding reductions in physiological stress markers (sAA, Ko et al., 2018), as well as significant reductions in rumination (Smeets et al., 2014; Savari et al., 2021), fear of compassion, and negative self-compassion subscales (self-judgement, isolation, overidentification, Savari et al., 2021; Huang et al., 2021).

Qualitative and survey data on the feasibility and acceptability of self-compassion interventions revealed that many students reduced their antianxiety medication, reduced their number of therapy visits, and reported feeling less rushed and more mindful (Falsafi, 2016), as well as the use of audiotapes (Haukaas et al., 2019), attendance of sessions, and satisfaction with course facilitators (Long et al., 2021). Student's journal entries of difficult experiences included breakups with partners, cases of cancer in the family, feelings of suicide, concerns about seeking employment, exams, and assignments (Falsafi, 2016). Written feedback from participants included the inclusion of more sessions, shorter practice sessions, and a mixture of responses on the duration of discussions with other group members (Dundas et al., 2017).

Discussion

This review attempts to explore the extent to which the design, implementation and delivery of multi-session, group-based self-compassion interventions targeting university-level students reflects the emerging self-compassion literature to better tailor self-compassion interventions to student experiences including

individual, circumstantial, and cultural factors. Despite few studies fulfilling the inclusion criteria, promising results were obtained by these studies. All studies show that self-compassion interventions are effective in enhancing self-compassion, with many finding additional positive results on depression, anxiety, perceived stress, coping, emotion regulation, self-efficacy, and mindfulness. These results should be interpreted with caution as limited methodological quality checks were conducted. To the best of the authors knowledge, to date, no systematic review has been conducted on the design, implementation and delivery of multi-session, group-based self-compassion interventions for university-level students.

No included study followed the exact structure of the prescribed MSC group that ought to comprise 12-25 participants meeting in-person for 8 two and three-quarter hour-long sessions, and being led, or co-led, by 1-2 teachers including a mental health professional either assisting or co-leading (Germer and Neff, 2019). This is not surprising considering constraints in research and methodology, difficulties in accommodating for student requirements (timing, duration, room availability, etc.), availability of participants, attrition rates, and changing group dynamics. Biber and Ellis (2019), however, note that the effectiveness of self-compassion interventions could be better determined if interventions were not paired with other forms of treatment. Combining interventions and forms of treatment could have unintended consequences, diluting and misdirecting results on the components of self-compassion – self-kindness, common humanity, and mindfulness. The relative absence of these may significantly hinder participant's abilities fostering self-compassion, but this is not empirically verified (Barnard and Curry, 2011).

Potentially this played a role in included studies, since few collected qualitative data from students, and many switched between mindfulness and self-compassion elements. Interventions combining principles of mindfulness and self-compassion may be doing participants a disservice by training both. Whilst self-compassion exercises make use of meditations, interventions do not need to include formal meditations to help individuals benefit from mindfulness and associated abilities like non-judgemental acceptance and mindful observation of thoughts and feelings. Smeets et al. (2014) observed that mindfulness significantly increased for participants post-intervention compared to the control group despite the absence of formal meditations. Instead, using informal exercises including a self-compassion bracelet, practicing mindfully shifting one's attention when negative thoughts and experiences present themselves — helping bring self-kindness and a compassionate voice to one's internal dialogue. Self-compassion practices alone, however, may be hampered by negative beliefs that self-compassion leads to complacency, indulgence, and irresponsibility (Chwyl et al., 2020). As a result, long-term sustainability of self-compassion amongst university-level students, and frequent experiencers of burnout, may ride on creating individualised self-care plans including exercises for the body, mind, and spirit (e.g., Coaston, 2017). Hence, distinguishing more clearly between mindfulness and self-compassion practices in interventions could prove beneficial.

Recommendations may include for self-compassion interventions to, not only distinguish themselves from general mindfulness interventions, but also take a multilevel perspective to student experiences, by addressing chronic stressors whilst encouraging self-compassion and social connection in the presence of challenges and experiences university-level students are likely to face (Kroshus et al., 2021). For instance, following evidence that self-compassion is related to mastery goals and a lesser fear of failure in university-level students (Neff et al., 2005), and that receiving underwhelming grades is commonplace at university for many, it could be worth explicitly addressing overcoming unexpected, disappointing grades in self-compassion interventions, where strategies and experiences are considered on emotional recovery and psychological functioning. A multi-level perspective could also consider the differences in individual experiences of self-compassion and the possibility that for some, discovering the viciousness and harshness of their inner critic can be a source of worry – extending to intense restlessness and rumination (Binder et al., 2019).

Attrition rates for self-compassion interventions varied dramatically across studies with no reported differences between those who stayed in the intervention and those who exited the study. Whilst some students will reasonably exit interventions given their tight schedules, building academic pressures, and unpredictable career paths, it is possible for alternative factors to be at play. Perhaps more fine-tuned, transparent self-compassion interventions could encourage these at-risk students to attend interventions. As such, a self-

compassion intervention should be expected to include a combination of talks, exercises, meditations, informal practices, discussions, poetry, and videos aiming to inform, develop and deepen mindful self-compassion in participants (Germer and Neff, 2019). It can be expected for this to include home practice and teaching the principles of self-compassion to help participants become autonomous users of self-compassion tools and principles. Whilst no included study conducted their intervention online, the feasibility and acceptability of MSC videoconference interventions have been demonstrated for young adult cancer survivors, showing 84% of participants attending 6 out of 8 weekly sessions (Campo et al., 2017), and self-referred individuals suffering from harsh self-criticism benefiting from a 7-week internet-based, adapted Mindfulness-Based Compassionate Living (MBCL) program (Krieger et al., 2016).

Only one included study adapted their self-compassion intervention to individual differences possibly stemming from cultural norms (Huang et al., 2021). Although several adapted measures to suit language barriers, it appeared cultural and religious differences did not impede or alter the effects of the intervention or the interpretation of self-compassion. This agrees with previous findings that self-compassion levels, and its components, remain the same across eastern and western cultures, suggesting a universal nature to self-compassion (Neff et al., 2008). From a systems perspective, it remains important to consider how the influence of philosophical ideals and belief systems in a region may impact family dynamics and self-concept in young adolescents and lead to the formation of a particular interpretation of self-compassion (e.g., interdependent, or independent, Neff et al., 2008).

Several concerns are noted about the structure of these studies. Firstly, since one study found that self-compassion interventions had no significant impact on worry and academic stress measures (Ko et al., 2018) it is worth considering timing of interventions as a possible moderator of their impact. Indeed, students on average experience moderate increases in depression and anxiety from the summer before entering university through the spring, with wide variability in magnitude across students and no significant patterns by demographic groups (Kroshus et al., 2021). Designing MSC programmes for adolescents may be effective in improving psychological wellbeing if care is taken in designing the specifics of the programme and time intervals around academic demands. Secondly, measurement tools used, SCS and SCS-SF, may not be capturing these events entirely. Neff's conceptualisation of self-compassion – as being comprised of self-kindness, mindfulness, and common humanity – could be being inaccurately measured and the scale may neglect other conceptions of self-compassion not informed by Buddhist psychology. Thirdly, few studies make attempts to measure state-level self-compassion, instead relying on the trait-level SCS and so observing dispositional self-compassion, as opposed to how self-compassion is utilised moment-to-moment in times of negative thinking and experiences. After all, self-compassion is most effective as an emotion regulation tool for addressing oneself during negative, stressful experiences (Neff et al., 2007). More recently, Neff et al. (2021) has developed and validated a state SCS in long and short form (SSCS) and specialised scale for measuring self-compassion in youth (Neff et al., 2020). Further advances are necessary in our understanding of self-compassion, before the design and use of measures of self-compassion can be changed (Barnard and Curry, 2011).

These needs for additional self-compassion conceptions and scales may be underlined by a cross-sectional study that gathered self-report measures on self-compassion and various psychopathologies from 271 nonclinical undergraduates with the aim of exploring the mediating effects of rumination and worry on the relation between self-compassion and depression and anxiety (Raes, 2010). The investigation provided first-hand evidence of the mediating role of negative repetitive thinking in this relationship, and more specifically, the mediative role of rumination in depression, and worry in anxiety. Taking together, it appears self-compassion acts as a common antidote to unproductive repetitive thinking, like depressive rumination and anxious worrying. Since self-compassion mediates the relationship between mindfulness and emotional wellbeing (Bluth and Blanton, 2014), adolescents aware of their thoughts, and the likely negative self-talk, ruminative elements of their inner dialogue, are potentially more likely to take steps to exercise greater self-kindness. This provides support for the bidirectionality theory between awareness of negative experiences and self-support (Binder et al., 2019).

Future research

The group-based, therapeutic nature of self-compassion interventions leaves several questions unanswered around the impact of others' self-compassion on self, or more specifically, the role and impact of receiving compassion from others, and being exposed to other's voiced self-compassionate dialogue towards themselves. Research finds that self-kindness is an indication of kindness towards a romantic partner, and that an individual's self-compassion is significantly associated with their partners (Neff & Beretvas, 2013). Assuming away the possibility of selection bias, this suggests that self-compassion levels are impacted by that of their partner's. In the context of this review, the group-based setting, and experiential, interactive nature of sessions, equips these interventions to facilitate discussions, reflections and dialogue that is established between participants and group leaders. Future research could investigate the impact that this group-based setting has on the overall outcomes of interventions, including self-compassion levels, to better understand the role of group members and leaders in facilitating the growth of each other's self-compassion (e.g., Quaglia et al., 2020; Chio et al., 2021).

Additionally, no psychosocial or social measures of positive effects following self-compassion interventions were explored in the included studies. Following evidence that high self-compassionate undergraduates tend to have healthier interpersonal relations than undergraduates with self-reported low self-compassion levels (Yarnell and Neff, 2013), future research may want to explore these dimensions and their mediative role in interventions. Self-compassion has been associated with greater emotional intelligence (Heffernan et al., 2010), and reduced loneliness (Akin, 2010), for which the effects on interpersonal relations following self-compassion interventions should be present. Complementary research finds a similar negative relationship between self-compassion and submissive behaviour (Akin, 2009), suggesting that psychological and social dimensions of self-compassion interact and overlap with each other.

Limitations

This review has several limitations. Firstly, because of the heterogeneity in study design, interventions, control conditions, outcome measures, data measurement points, and statistical analysis no meta-analysis could be feasibly conducted. Instead, a narrative approach was used, which may be prone to subjective biases. Within the selection process, because only English language peer-reviewed journals were considered there may be biases in the selection of studies, since English language journals are more likely to publish studies with positive results (Sterne et al., 2011). Furthermore, no grey-area literature, dissertations, or non-peer reviewed papers were explored, which might have offered additional insights. Finally, methodological rigour could have been further scrutinised with previous systematic reviews on mindfulness and self-compassion finding weak results following quality assessment (Westerman et al., 2020).

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