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Tracking narrative change in post-intervention focus groups for teachers: an exploratory study

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ABSTRACT

Reliable and systematic qualitative methodologies to assess participants' change after group interventions are scarce. This study outlines a methodolo5gical approach to use in focus groups, allowing the elicitation and coding of participants' change talk after a group intervention. A Change Elicitation Script for Focus Groups was developed and its viability for evoking participants' discussion around change was tested. Following a self-compassion intervention for teachers, participants' dialogue was examined in three focus groups following a simplified version of Innovative Moments Coding System for groups. Results suggest that the Change Elicitation Script for Focus Groups effectively prompted participants' discussion around change. The Innovative Moments Coding System for groups allowed to reliably identify, delimit, and categorize Innovative Moments throughout these dialogues. Although preliminary, this study puts forward a mixed-method methodology, applicable to the retrospective analysis of the process of change in post-intervention focus groups, from educational to clinical settings.

KEYWORDS

Change elicitation script; focus groups; group intervention; narrative change; retrospective assessment

Need for a reliable methodology to assess change processes in group interventions

Group interventions have proliferated in the last decades, namely in educative contexts, aiming to promote teachers' or students' academic outcomes, well-being, or mental health (e.g., Kangas-Dick and O'Shaughnessy 2020; van Loon et al. 2020). Nevertheless, the evaluation of these intervention programs has mainly relied on self-report pretest/posttest-based indicators (for a review see Quinio and Lam 2021). Despite its broad use, these methodologies present some limitations

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regarding potential biases (e.g., Quinio and Lam 2021) and restricted assessment of change (e.g., beliefs; Kowalski 2023). Qualitative methodologies to assess participants' change process following the interventions are lacking, although undoubtedly recognized as needed and relevant, in order to contribute to the identification of key intervention elements (Hagger et al. 2020; Kazdin 2009). In this sense, the development of qualitative methodologies that allows to assess change departing from participants' perspectives regarding the intervention, as stakeholders in programs' evaluation, appears as an important goal to pursue. The current paper aligns with this goal in two ways: (1) by presenting A Change Elicitation Script for Focus Groups (ACES-FG), intended to guide focus groups (FGs) participants' discussion to putative changes emerging after a group intervention and (2) to explore if the Innovative Moments Coding System for Groups (IMCS-G; Esposito et al. 2022) can be a flexible yet replicable methodological tool for assessing group changes in focus groups (FGs).

Focus groups (FGs) may constitute an interesting methodology to qualitatively assess, even if retrospectively, the process of change from participants' perspective. FGs are one of the most widely used methodologies to collect qualitative data (Kidd and Parshall 2000), particularly in clinical and health research (Wilkinson 2006), allowing a deeper understanding of the process and idiosyncratic changes following an intervention. Compared to individual interviews, FGs have the advantage of permitting the assessment of multiple individuals at a time (Queirós, Faria, and Almeida 2017) and, according to Kidd and Parshall (2000, 294), 'in contrast to individual interviews, focus group participants relate their experiences and reactions among presumed peers with whom they likely share some common frame of reference'. Accordingly, it has been proposed that FGs can be a complement in the evaluation of intervention programs whose efficacy is determined solely by self-report outcome measures (Ansay, Perkins, and Nelson 2004). This may be the reason why this approach has been adopted more frequently in this context (Massey 2011).

Notwithstanding the value of FGs as an idiographic methodology to assess participants' perspectives of change following a group intervention, the multiplicity of possibilities, particularly regarding the development of the questioning script topics and the definition of the coding approach, may block its broader usage in research. Also, this intra-method variability may hinder the comparison of results from different studies, and limit drawing meta-analytic conclusions. Thus, rigor and replicability have been pointed out as important goals to pursue (Hill and Knox 2021). In addition, most qualitative methods such as content or thematic analysis or consensual qualitative research (e.g., Hill and Knox 2021; Jemal and Caliste 2022), do not take into account the expected interactions occurring between group members, such as instances of turn-taking and coconstruction of perceptions and experiences of change crucial to the understanding of group intervention processes (McVittie,

Craig, and Temple 2020). In fact, according to a meta-analysis (Cyr 2016), the majority of FGs studies are exclusively centred on one of the three possible units of analysis: individual, group, and interaction. Recently, Morgan and Hoffman (2018) developed a system for analyzing interactions in FGs, allowing for a systematic coding of transitions, that is, turn-taking and coproduction between speakers. However, this system is mainly focused on the structure of the interaction, attempting to understand how interactions are linked, intertwined, and affected by one another, in detriment of attending to the content or meaningfulness of that specific interaction, which is acknowledged as a limitation by the authors.

How and why to adapt IMCS for assessing change in FGs

The IMCS is a qualitative systematic methodology that has proved to be reliable in the identification of markers of narrative transformation (for a review see Gonçalves et al. 2017). Most research has been conducted in the context of individual psychotherapy, analyzing client-therapist's discourse. However, in the last few years, some studies adapted the IMCS to the assessment of change in other domains and contexts, such as group interventions, spontaneous change, political (de)radicalization, vocational or academic counselling (see Cardoso et al. 2016; Da Silva et al. 2019; Esposito et al. 2017; Meira et al. 2018). Considering that the IMCS departs from a narrative-dialogical approach to change and transformation (see Gonçalves et al. 2018), it may also be applicable to the assessment of change in FGs. In fact, the narration of a story has a vital role in individuals' new self-narrative constructions, both at an intra and interpersonal levels (Neimeyer 2000). For this reason, FGs, particularly when guided by a change elicitation script, may provide a privileged platform for storytelling, stimulating internal and external dialogues and providing for an audience that can prompt and validate participants' perceived changes.

In its original application to psychotherapy, the methodology grounds in the narrative assumption that psychological suffering is associated with a maladaptive framework of meaning (MFM; Gonçalves et al. 2017). The MFM is usually characterized by rigidity, impeding individuals' psychological resources (e.g., thoughts, feelings, actions) to vary, adapt, and accommodate the ever-changing nature of experience. Following this assumption, every form of psychological intervention constitutes an opportunity for individuals to develop a more flexible, and thus more adaptive, framework from which to construct meaning and deal with the world. The footprints of this change process are exceptions to the initial MFM, clinically and empirically operationalized each time individuals engage in different ways of acting, thinking, or feeling. These exceptions, or novelty instances, have been termed and studied as Innovative Moments (IMs; Gonçalves et al. 2011). IMs may assume three different levels, each one with a different role in individuals' process of change (Batista et al. 2020; Fernández-

Navarro et al. 2020; Gonçalves, Ribeiro et al. 2017): level 1 IMs indicate the individuals' distancing from the MFM; level 2 IMs involve the individuals' elaboration of an alternative framework of meaning – AFM; and level 3 IMs entail the appropriation and authoring of the AFM by the individuals. More concretely, level 1 IMs correspond to events where initial steps toward change are taken (e.g., thinking or relating differently from the usual problematic functioning), whereas in level 2 IMs certain changes may have occurred or be occurring at that moment. Plus, at level 2 IMs the process underlying to those changes is accessed or an explicit contrast between a past and a new self is narrated. Level 3 IMs translate a more consolidated level of change, whereas repeated moments of "doing" different become integrated into a new self-version – the person is able to articulate not only a contrast between an old and new self-version as well as the process that allowed that transformation into a coherent self-narrative. Research conducted so far suggested that although all IMs levels are necessary in paving a new pathway of meaning making and a more adaptive self-narrative, level 2 and level 3 IMs seem to be distinctive markers of successful change processes (Alves et al. 2014; Fernández-Navarro et al. 2018; Gonçalves et al. 2012, 2016; Matos et al. 2009; Mendes et al. 2010).

As previously stated, the IMCS seems to track change processes in different contexts reliably, not only in psychotherapy. In these cases (e.g., Da Silva et al. 2019), considering the nonclinical domain of such studies, some adaptations were implemented. Instead of considering an initial MFM from which to identify IMs, coders defined a departing framework of meaning (or self-narrative A) and an arriving framework of meaning (or self-narrative B) taking into account the topic of interest. IMs were defined as any narrative exception to self-narrative A, emerging throughout the coding materials (e.g., interviews). Moreover, recent studies suggested the possibility of adapting the traditional coding of IMCS, to a group-oriented setting (Esposito et al. 2017, 2022, 2024, 2024; Garcia-Martinez et al. 2021). Table 1 summarizes the adaptations and terminology used for coding groups with the IMCS. These studies (Esposito et al. 2017, 2022; Esposito, Cutolo, Passeggia, Freda 2024; Esposito, Cutolo, Passeggia, Oliveira 2024; Garcia-Martinez et al. 2021) illustrated the applicability of the IMCS for the assessment of groups while keeping a good reliability. Moreover, this research underlined the relevance of group communication and interaction when one is attempting to grasp transformation processes in group settings. The current model of IMCS for groups (IMCS-G) describes seven types of group IMs (see Table 1) to identify and categorize the dynamics within and between participants. For the purpose of the present study, we propose a simple differentiation between individual IMs (elaborated by a single participant) and coconstructed IMs, in which change was co-elaborated by a minimum of two participants (see Table 1).

In sum, this brief revision indicates that although requiring modifications to the original coding procedure, the IMCS is a flexible, reliable, and replicable approach for detecting narrative change retrospectively (e.g., as in Da Silva

Table 1. IMCS adaptations for coding groups.

Coding system	IMCS (Gonçalves et al. 2011, 2017)	IMCS "directed to" (Esposito et al. 2017)	IMCS "group interaction" (García-Martínez et al. 2021)	IMCS-G (Esposito et al. 2022; Esposito, Cutolo, Passeggia, Freda 2024; Esposito, Cutolo, Passeggia, Oliveira 2024)	IMCS-G Simplified
IMs (akin to **individual intervention**)	Seven categories organized in 3 levels	***Self-directed*** (from A to A)	***Individual***	***Self-directed*** (from A to A) ***Explicit mirroring*** (from A to A but reflected or inspired in B)	***Individual***
IMs between two people (**interpersonal interaction**)		***Other-directed*** (from A to B)	***Interaction validating others*** (A to B, B accepts) ***Interaction validating the self*** (A, B elaborates to A, A accepts)	***Other-directed*** (from A to B, no interaction from B) ***Prompting change*** = Interaction validating others (A to B, B accepts) ***Reinforcing change*** = Interaction validating the self (A, B elaborates to A, A accepts)	***Coconstructed***
IMs several people (**group interaction**)		***Group-directed*** (from A to the collective, e.g., "we, us")	***Collective*** (A, B, C . . . elaborate and share 'I' and 'we' changes)	***Collective*** (A + B + C . . . chain of individual 'I' changes) ***Voice of group*** (from A, B, C . . . chain of group 'we, us' changes)	

et al. 2019) and after a group intervention (Esposito et al. 2017, 2022; Esposito, Cutolo, Passeggia, Freda 2024; Esposito, Cutolo, Passeggia, Oliveira 2024; Garcia-Martinez et al. 2021).

The present study

The present qualitative study constitutes a pilot examination of a new methodological approach to use in FGs targeting the assessment of participants' change after a group intervention. Based on the IMCS narrative-dialogical approach and empirical model of change, that considers the repeated emergence of three levels of innovative moments as determinant for an alternative and more adaptive framework of meaning to emerge, a Change Elicitation Script for Focus Groups (ACES-FG) was developed. Subsequently, its viability in evoking participants' change talk after a group intervention was tested in three FGs following a compassionate mind group intervention for teachers. Afterward, participants' dialogue prompted by ACES-FG was examined according to a simplified version of IMCS-G methodology to ascertain if individual and coconstructed narrative change emerged and could be tracked in a retrospective FG evaluation.

Materials and methods

Participants

This study worked with a convenience sample of 16 teachers of different scientific domains that voluntarily accepted to discuss in FGs their participation in a Compassionate Mind Training program tailored for Teachers (CMT-T) and evaluated in an RCT (see Figure 1; for a full description see Matos et al. 2022). The majority of the participants were women ($n = 13$; 81.3%), with ages ranging from 46 to 62 ($M = 53.19$, $SD = 5.7$) and a mean of 28.6 years of professional experience (ranging from 21 to 38, $SD = 4.98$). Participants integrated three FGs: Group 1, $n = 5$; Group 2, $n = 6$; Group 3, $n = 5$.

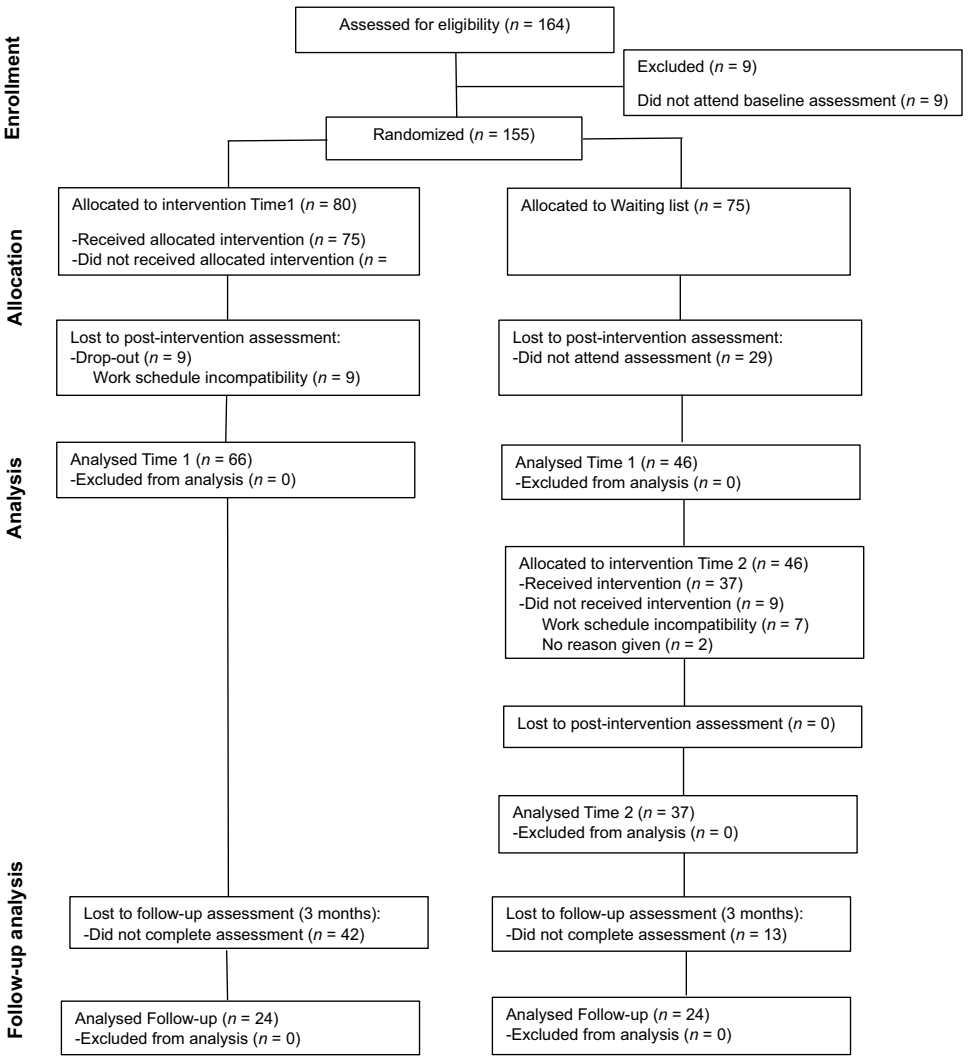


Figure 1. Flowchart of the compassionate mind intervention RCT.

Instruments

The innovative moments coding system (IMCS; Gonçalves et al. 2011)

The IMCS (Gonçalves et al. 2011) is a qualitative methodology that allows the identification of narrative change markers (organized into three developmental levels) in individuals' discourse or therapeutic dialogue by two independent coders. The system has two main outputs: (a) proportion of IMs (i.e., the proportion of time or words involved in each IM relative to the total amount of time or words of the session) and (b) level of IMs (see Table 2). The coding process implies: (1) independent identification of IM's beginning and end limits; (2) independent identification of IMs level (1, 2 or 3); (3) calculating coding agreements and reliability. IMs' agreement represents how well coders are identifying IMs phenomenon and considers the overlapping proportion identified by both coders divided by the total proportion identified by each coder. A good intercoder agreement should be equal or greater than 80% (Gonçalves et al. 2011; Gonçalves, Ribeiro et al. 2017). Coders' reliability on IMs' level identification (calculated through weighted Cohen's kappa) considers the degree to which coders coincide in attributing a level to each IM. Strong reliability is achieved when Cohen's kappa is equal or above 0.75 (Hill and Lambert 2004). In the current study, proportion was computed for each level and the total of IMs. In addition, proportion was calculated for the adapted coding dimensions explored in the current study (see IMCS adaptations section ahead). Adequate values of intercoder agreement (IMs'

Table 2. Innovative moments divided in three levels.

Levels	Contents
Level 1 Allow the detachment from the problematic experience	– New behavioural strategies to overcome the problem(s) – Active exploration of solutions – Searching for information about the problem(s) – Reconsidering problem(s)' causes – Awareness of the problem(s)' effects – New problem(s) formulations – Adaptive self-instructions and thoughts – Intention to fight problem(s)' demands – General references of self-worth and/or feelings of well-being – Rejecting or objecting the problem(s) – Position of critique towards others who support it – Position of critique towards problematic facets of oneself
Level 2 New aims, experiences, activities, or projects, anticipated or in action, as consequence of change (not directly related with the problematic experience)	–Investment in new projects or relationships as a result of the process of change –New skills unrelated to the problem –Problematic experience as a resource for new situations –What is changing –Meaning making on how/why changes are occurring –References of self-worth and/or feelings of well-being (as consequences of change) –Centring on the self –Affirming right and needs
Level 3 Integration of new meanings in a articulated way	Contrasting self (what changed/is changing?) AND Change process (how/why change occurred/is occurring?)

Adapted from Batista et al. (2020), with permission from the authors.

proportion) – 89.9% to 90% – and Cohen's κ (IMs levels) – from .91 to .94 – have been presented across studies (e.g., Gonçalves et al. 2016; Gonçalves, Ribeiro et al. 2017). An extensive review on the IMCS or its coding procedures can be found at Batista et al. (2020).

Procedure

The present study was conducted in the scope of a broader two-arm randomized controlled trial (RCT; see Figure 1) with one intervention group (CMT-T) and one waitlist control group (WLC), Approved by the Ethics Committee of the Faculty of Psychology and Educational Sciences of the University of Coimbra (CEDI22.03.2018) see (Matos et al. 2022) for a detailed description of the full procedures. The CMT-T is a training intervention designed for teaching staff and delivered in a group format across six modules addressed during eight sessions of approximately 2.5 h each. Based on compassion focused therapy (e.g., Gilbert 2009), this intervention targets the development of participants' compassion, both regarding themselves (self-compassion), and others (compassion to others), which has been positively associated with positive outcomes on well-being and mental-health (Seppälä et al. 2017).

The CMT-T has been found feasible and effective showing promising results in promoting well-being and reducing psychological distress such as anxiety and depression (Maratos et al. 2019; Matos et al. 2022, 2022) and high implementation effectiveness in Portugal and the UK (Maratos et al. 2020). A detailed overview of the CMT-T intervention can be found at Matos et al. (2022).

Participants were recruited amongst teaching staff in public schools in the central region of Portugal. Prior to entry the study, all participants provided their informed consent, that clarified the voluntary, confidential, and anonymous nature of the study and data protection rights. The study was implemented between October 2018 and August 2019.

Teachers who completed the first two groups of CMT-T ($n = 61$) were invited to participate in a FG via email, one month after the intervention ended and 21 agreed to take part of this assessment. Four dates were scheduled and participants registered for one of these dates according to their availability. For each date, a maximum of six participants were allowed. Of the 21 participants who registered, only 19 showed up at the scheduled date and in one of the groups, only three participants were present. Although this FG was developed as planned, this group was discarded from the current study due to its reduced number of participants, considering that the narrative dialogue produced in this group could be qualitatively different from the others, with five or more members. Participants who took part in the FGs expressed their consent prior to the focus group session.

The ACES-FG (see Appendix A) was made available for each participant one week before the implementation of the FG. This script was built based on the IMs

theoretical model of narrative change. In this sense, ACES-FG initial question was centred on the difficulties felt by the group elements before the intervention started (”Before the intervention, what were the difficulties or problems felt by you (individually or as a group?”) in order to assess participants' pre-intervention narratives, considering that IMs will be identified as exceptions to this initial framework of meaning. The following script questions attempted to promote the discussion around change, targeting the emergence of level 1, 2, and 3 IMs. Group discussions around ”what changed?” and ”how has change occurred?” were prompted by questions such as: ”Throughout the intervention have you developed a new understanding of these difficulties?”, ”Do you consider that there was any change in your functioning between the pre and post-intervention?”; ”if so, what do you think allowed or facilitated these changes to occur?”. A PhD clinical psychologist who had never met the participants before and who did not take part at the compassionate schools group intervention moderated all the groups.

All FG sessions were audiotaped and coded with the IMCS using The Video Annotation Research Tool (ANVIL; Kipp 2017). The coding team comprised four coders that worked in pairs for the independent coding of each FG. All coders were trained and experienced in the IMCS original methodology (for a detailed description of the training procedures see Batista et al. 2020; Gonçalves et al. 2011). All four coders shared a similar background in Psychology and narrative research, three had a PhD in Clinical Psychology and the other was a PhD student in a Clinical Psychology doctoral program.

IMCS coding adaptations

Adaptations of the original coding procedure of the IMCS were adopted to accommodate the format of narratives to be examined in the current study, namely the group format and the retrospective recalling of changes. In this study, all the original steps from the coding procedure were implemented, with the following modifications:

Step 1: Consensual Identification of pre-intervention difficulties. Coders independently listened to the FG audio and listed the difficulties identified by the participants of each group as being present before the intervention. In a posterior meeting the final list of participants' difficulties for each FG was defined by the respective coding dyad through consensus. The first question from the ACES-FG (see Appendix 1), “Before the intervention, what were the difficulties or problems felt by you (individually or as a group)?” constituted the main source of information for this step. In the current study, although the aim was not to identify teachers' MFM, considering the nonclinical nature of the sample, this step fulfills the same purpose: to determine the ground problematic pattern or pre-intervention difficulties identified by the participants, based on which IMs would be subsequently identified.

Step 2: Identifying and Coding IMs. The proposals of IMCS-G (see Table 1) tested so far are adapted to the group format but comprise many specifications that over-complexify the coding process and, depending on the focus of the study, may not be needed as it happens herein. Thus, in the current study, considering the format of the coded material, a simplification of the already existent IMCS-G is presented. Coders had to decide the modality of each IM between: individual or coconstructed (see Table 2). Coconstructed IMs (see Table 3) are based on interpersonal and group IMs in the sense that they reflect change experiences shared or amplified by different members of the group. Interpersonal IMs are coconstructions between only two participants in which change is prompted or reinforced from one participant to another. Group IMs are coconstructions based on the sharing of similar experiences by different participants as a chain of individual changes or as shared "we, us" changes agreed by multiple participants. Individual IMs are exclusively elaborated by a single individual, not fulfilling any of the previously described coconstructed criteria, thus similar to the IMs originally coded by the IMCS.

Furthermore, each IM category was thematically contextualized and each coder should specify the context of the IM's content, in four main categories – personal, professional, both, or nondetermined. This category collected information regarding the scope and range of the interventions' effect in the participant's life. The coder selected the personal or professional option if the content of IM is, respectively, exclusively focused on the participants' personal or professional life (see Table 3). The option 'both' should be selected if both spheres of the participant's life are addressed in the IM. The option "nondetermined" was reserved for instances in which it is not possible to specify the focus of the IM. For instance, the participant may talk about changes, (e.g., "I feel more empowered"), without detailing when or where do these changes are manifested (e.g., the empowerment is felt at work, at home or both?).

Table 3. Examples of IMCS adaptations in the current study.

IM category		Vignette	IM context
Coconstructed IMs	**Interpersonal interaction**	P1: I am trying to explain this [the process involved in change] . . . P2: At the bottom end, it comes to gaining increased awareness, isn't it? P1: Yes, that's right, it's exactly that!	Nondetermined
	Group interaction	P1: I had a positive feeling in that task . . . P2: Yes, I also felt that but I think it had a lot to do with the intervention moderators! OR P1: I think that we have evolved a lot, as a group . . . P2: We could see that as the sessions went by . . .	Nondetermined
Individual IM	When a student misbehaves in the classroom, I am more able to be aware of my emotions and don't let them dictate my actions, which helps me deal with the situation in a more effective way.		Professional
	The intervention has allowed me to be more compassionate of myself and that has had repercussions in my mother role.		Personal

Results

Can the change elicitation script for focus groups (ACES-FG) evoke participants' discussion around putative changes emerging after a group intervention?

The pilot application of ACES-FG in three FGs with teachers following a compassion-based group intervention suggests that this script was effective in facilitating a shared discussion about what and how these individual participants, and the group as a whole, were able to change across all FGs. The FGs presented a mean duration of 69.3 min, ranging from 62 min (Group 2) to 81 min (Group 3) in which, in mean, 40% was spent in the discussion of novelties or exceptions (IMs) regarding the difficulties presented by the participants at pre-intervention (range from 32% to 50.8%; see Table 4).

Table 4. Proportion of IMs levels and total, organized by group.

IMs Levels	Group 1 IMs Proportion	Group 2 IMs Proportion	Group 3 IMs Proportion
Level 1	7.85	2.58	4.88
Level 2	23.90	22.68	13.15
Level 3	19.03	12.32	13.56
Total	50.77	37.58	31.59

Can an adapted version of IMCS methodology be used to reliably identify change markers from ACES-FG prompted narratives in a post-group intervention FG?

One of the main indicators of the applicability of IMCS to FGs following a psychological intervention is the reliable identification of IMs in this sample. In fact, coders found it possible to reliably identify all levels of IMs across the different FGs. Table 5 presents some examples of IMs coding in the present work, with examples from the FGs illustrating different levels, modalities and contexts of IMs.

Intercoder agreement was of 86.76% for group 1; 86.19% for group 2 and 99.31% for group 3. Thus, there was a strong agreement between coders. Likewise, reliability regarding the identification of IMs' level was also moderate to strong across groups: Cohen's weighted kappa was .71 for group 1, .85 for group 2, and .78 for group 3.

The IMCS was able to differentiate groups not only in terms of the total proportion of IMs (see Table 4), but also regarding IMs levels, that appeared to be distinctively expressed across groups. Group 1 presented the highest proportion, and this indicator tends to decrease across groups, group 3 being the one with the lowest IMs proportion. Level 1 IMs had the least proportion across all groups, and level 2 IMs had the highest proportion in groups 1 and 2.

Table 5. Examples of IMs levels in each FG group.

	Group 1	Group 2	Group 3
IMs Levels	Clinical vignette	Clinical vignette	Clinical vignette
Level 1	"(. . .) I understood that if I can be good with myself, personally, I can be better in my professional context" (individual IM, both contexts of change)	"(. . .) I realized that it was important to listen to our self, before focusing on others (. . .) if we are good with ourselves, the others will be more welcoming to what we have to give them" (individual, both contexts of change IM)	"The training helped us identify situations that caused us stress and irritation" (individual, indetermined context of change IM)
Level 2	"I learned to be more tolerant and to be calmer in certain situations [at school]" (individual, professional context of change IM)	"P1: I feel more powerful to face some situations . . . P2: That's exactly it!. . . P1: I feel more confident, that I have already noticed in three or four different situations after the training . . . It's like I have an alert mechanism in my head and when I am about to take some action . . . P2: the voice is set on . . . P1: yes, it tells me: wait a minute, what had we agreed on? P2: That is our self-confidence . . . P1: yes, exactly . . . P2: like a strength . . . P1: that's it." (coconstructed, professional context of change IM)	"it helped improving my sleep . . . doing the practical exercises, particularly at night . . . I did it three or four times per week and it helped me to have much more quiet nights without having to take pills to fall asleep. . . I also felt that helped me dealing with people, particularly people of whom I am not found of (. . .) the practices helped me see things differently, how our and other people's brains work (. . .) With the students in classes I learned to be more aware and say to myself: calm down, don't argue with them right away, take some time to breath" (individual, both contexts of change IM)
Level 3	"P1: one of the major learnings was realizing . . . being more aware of these moments [of anger and impulsivity], because it was . . . P2: a snowball . . . P1: yes, a snowball . . . and I was more conscious of those moments . . . and throughout the training I have talked to the students . . . P2: and they have said that to me as well that they noticed the change . . . P1: . . . that I was more able to control myself. P2: keeping calm . . . P1: breath and do the exercises . . . " (coconstructed, professional context of change IM)	"The training helped me, and I have noticed differences. I am learning to slow down, take it easy, being more at the here and now, and I feel like I have been more able to manage my stress and anxiety on a daily basis . . . it has been very helpful . . . I felt really good, I was not familiar with the training contents and it has helped me (. . .) both in my personal and professional life . . . even my daughters have said that I do not seem the same person, I am really calmer . . ." (individual, both contexts of change IM)	"I learned to filter things and give them a corresponding importance . . . first I learned to identify the problems . . . if it's in me, in the others, in all of us . . . and then to figure out the best way to sort it out . . . I also learned not to take all the responsibility and ask for help, when I need it . . . not only in my professional life but also at home . . . I don't keep it all to myself (. . .) I set my limits more clearly and do not assume the responsibility for others' actions anymore." (individual, both contexts of change IM)

Nevertheless, taken together there seems to be a clear predominance of level 2 and level 3 IMs' proportion, when compared to level 1 IMs.

In terms of the IMs' modality (individual vs coconstructed, one of the adaptations addressed in the present paper using a simplified form of the

IMCS-G in FGs; see Table 6) results suggest a different proportion of each modality across groups, with higher proportions of coconstructed IMs in groups 1 and 3. Furthermore, there were different proportions of IMs according to the context of changes, with IMs in the professional appearing as more preponderant (Table 6) across all groups, although changes related to personal context or to both contexts also presented a considerable proportion.

Table 6. Proportion of modality of IM (individual vs coconstructed) and context of change (personal vs professional) according to group.

	Group 1	Group 2	Group 3
IMs Levels	IMs Proportion	IMs Proportion	IMs Proportion
Modality			
Individual IMs	11.9	23.05	11.82
Coconstructed	38.87	14.53	19.77
Context of Change			
Personal	11.41	7.27	7.15
Professional	32.97	13.79	7.84
Both	4.46	14.03	6.35
Indetermined	1.92	2.5	10.25

Discussion and conclusion

The current study explores a new methodological approach to elicit and code participants' change talk after a group intervention in FGs. Towards that goal, ACES-FG was developed and applied to three groups of teachers after their attendance of a compassionate mind training intervention. In a second moment, participants' dialogue prompted by ACES-FG was examined according to a simplified version of IMCS-G methodology. The goal was to ascertain whether the ACES-FG did in fact focused participants' talk in changes that occurred due to the intervention and whether the adapted version of IMCS-G allowed to reliably track those changes.

Results suggest that ACES-FG was successful in evoking participants' discussion around what changed and how they have changed as a consequence of the intervention. This is particularly relevant as FGs have been pointed out as one of the preferred methods to assess participants' perspectives on the efficacy of interventions, moving beyond self-report measures limitations (Kowalski 2023; Quinio and Lam 2021). However, considering that FGs allow multiple possibilities in its structure and focus, many researchers may avoid using this form of assessment methodology due to uncertainties regarding the best way to conduct it and examine its results. Moreover, FGs heterogeneity (in form and shape) make it harder for different studies to compare outcomes, results, and address replicability. ACES-FG may provide a solution for both of these problems by offering a structured and viable way of assessing group intervention changes in retrospective FGs.

In addition, our findings suggest that the adaptation of the IMCS to the tracking and analysis of the narrative changes emerging throughout these FGs was successful and furthers the focus flexibility of the tool: from general group changes (the simplified version of IMCS-G presented in this study) to the micro-changes of participant' interaction between each other. We were able to reliably identify and categorize the different levels of IMs which suggests that the IMCS-G may work as an effective method for identifying and tracking narrative change, retrospectively, from post-intervention FGs. Curiously, all groups presented a higher expressiveness of level 2 and level 3 IMs, which according to previous IMs research (for a review see Batista et al. 2020; Gonçalves et al. 2017) may indicate that all groups considerably changed after the intervention. However, this study's focus was only on testing the applicability of the ACES-FG and of the IMCS-G to retrospective elicitation and coding of change talk after a group intervention. Possibilities regarding the meaning of IMCS's results and whether the system is being able to reliably capture effective change might be thoroughly explored in future studies where retrospective changes are assessed through ACES-FG, coded with IMCS-G and compared to pre/post intervention self-report outcome data.

The present study also accounts for the calling of several authors regarding the importance of considering interactional, turn-taking, and coconstructions of meaning when one intends to analyse group change processes in FGs (Cyr 2016; McVittie, Craig, and Temple 2020; Morgan and Hoffman 2018). Coconstructed IMs were more prominent than individual IMs in groups 1 and 3. Some hypothesis regarding this distinctive preponderance of coconstructive IMs across groups may be drawn. The first is that when collecting data in a group format, we cannot ignore the distinct dynamics that may emerge in the groups and how these can influence the obtained results. For instance, it could occur that one participant is more talkative and dominant than the others (even with the moderator's intervention), leading to the production of more individual IMs. In an opposed scenario, where participants' dominance is more equally balanced, participants would engage more often in collaborative elaboration, originating more coconstructed IMs. The influence of power dynamics among participants has been studied in FGs context (Ayrton 2019) and its influence on the collected data has been recognized (Smithson 2000). The specific dynamic that is created in FGs, where several participants with common features willingly accept to discuss around a few structured questions of interest, may also help explain why so many coconstructed IMs were identified, when compared to previous studies in which IMCS-G was used to assess change in psychotherapeutic settings (e.g., Esposito et al. 2022). Although out of the scope of the current study, this question of group dynamics is important to acknowledge and this hypothesis emerges as an interesting one to pursue in future studies that use IMCS-G to track change in post-intervention FGs.

Importantly, following the previous proposals of IMCS-G (depicted in Table 1), our results go further, suggesting that coconstructed IMs can be identified even in retrospective analysis of change, as happens in post-intervention FGs. This is actually not surprising considering the dialectical and socially complex nature of FGs, where participants interact, share experiences and meanings, contributing to the development of a collective voice (Smithson 2000). This is an important contribution of the present study, considering the sparse and limited nature of the previous coding systems susceptible of application to FGs. For instance, while Morgan and Hoffman's (2018) system for coding participants' interaction in FGs accounts for the structure of these social exchanges and the transitions between group members, our preliminary data suggest that the IMCS-G can capture both the content (level of change, context of change) and the structure (modality of change). Therefore, this system allows us not only to identify and characterize change, but it also allows flexibility to simplify or complexify the dimensions of analysis, regarding the target of the research study at stake.

In the present study we explored the adaptation of the IMCS to capture the context in which narrative change elaborated by the participants emerged but another study could analyze the content of IMs qualitatively, looking for specific ingredients and processes of change. Although exploratory, this coding may provide meaningful information regarding the scope and range of applicability of an intervention. In this case, results suggest a higher expressiveness of change in professional context, although the representativeness of personal change was also considerable. In this sense, it seems that the intervention, despite being implemented in educational contexts, with the major aim of increasing compassionate motivation, competencies, and behaviours in schools (Matos et al. 2022, 2022) may have also resulted in considerable benefits for participants' functioning in their personal lives. If this data is validated in additional research, it will be significant since it aligns with the holistic framework of compassion-focused interventions (Gilbert et al. 2020; Lavelle 2017; Welford and Langmead 2015) and supports the intervention's applicability and potential for generalization.

Limitations and future studies

Despite the contributions and advances brought by the present study, some limitations need to be acknowledged. First, considering the small number of groups and of participants per group conclusions regarding the applicability of the ACES-FG and of the IMCS-G to the retrospective analyses of change in FGs should be cautiously interpreted. It might be argued that by centering on what has changed and how it has changed, the ACES-FG might bias the participants toward an over-identification of change. Furthermore, the methodology adopted by the FGs moderator, that is, a free and open invitation to group discussion about each

topic of the script might also have affected this individual versus group representation. In this sense, it might be pointed that individuals who have participated more are the ones inherently more motivated or the ones who have benefited more from the intervention. In order to empirically address these hypotheses, future studies might track each FG intervention to each specific participant, which would allow for the consideration of potential unbalanced contributions of some participants over the group. Each participant's contribution to individual and coconstructed IMs could be associated with individual outcome measures from pre/post intervention in order to assess whether individuals who contribute more are also the ones who, according to pre/post outcome measures, have benefited more from the intervention. In addition, a modified version of the ACES-FG could be tested and compared to the one presented in the current study, with more open-ended questions in an attempt give participants more space to address changes as well as problematic features that may still persist.

In sum, this exploratory study puts forward the ACES-FG and the IMCS-G as replicable and systematic methodologies to explore narrative change following a group intervention (i.e., retrospectively) both in individual and coconstructed terms in FGs. The ACES-FG seems to be able to prompt change talk and the IMCS-G appears to reliably track different levels of IMs, both in individual and coconstructed IMs, throughout this change talk, differencing the groups. Future studies should further empirically support this probing, particularly by associating these narrative change markers – IMs – with quantitative pre-post intervention outcome data, similarly to that conducted in most previous IMCS studies. This kind of studies would allow not only to corroborate the applicability of the ACES-G and IMCS-G for assessing change after a group intervention in FGs but also to understand the meaning of the differences in IMs proportions found across groups. Namely, it would allow the examination of whether a higher proportion of IMs, particularly of level 2 and level 3 IMs constitute an indicator of a more extensive change, as it happens in the previous extensive body of IMs research (for a review see Gonçalves et al. 2017). Moreover, the potential applicability of these methodologies is broad and diverse, ranging from counselling or clinical contexts to educational settings where group interventions are frequently delivered and its putative change effects on participants are important assessment targets.

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