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ARTICLE

The flows of compassion to help create a more connected world

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Abstract: Compassion involves noticing suffering in self and others, and then trying to help alleviate and prevent it. At its core, therefore, compassion is relational, and it permeates through all interpersonal relationships, for example, those with partners, children, parents, colleagues, as well as with how individuals relate with strangers or people they dislike. As a result, there is a giver and a receiver of compassion, and how that is experienced in everyday life in these important relationships, can be the critical building blocks to how somebody starts to build their own self-relational style, which is also known as self-compassion. Each of these 'flows' of compassion, towards others, receiving, and towards self is shaped by context and impacts mental health. However, research has often focused on the individual, which is insufficient for a population-level understanding. This paper argues that this relational 'flow' framework is the necessary foundation for a new epidemiology of compassion—the study of its distribution and determinants in specified populations. Using this epidemiological lens, this paper: 1) examines the dyadic mechanics of compassionate 'transmission', 2) evaluates the methods to measure these flows, 3) reframes moral boundaries as a way to define 'at-risk' populations, and 4) proposes a systems-level, 'public health' approach to intervention, using healthcare as a key example. What is fundamental is the need for compassion; how to cultivate it at a systems level is a critical question if a safer and more connected world is to be realised.

Keywords: compassion, flows of compassion, fears of compassion, self-compassion, mental health

1. Introduction

In times of suffering, compassion can transform the emotional experience for the better – and that matters for mental health and wellbeing. Compassion can be defined as a sensitivity to suffering in self and others, with a commitment to alleviate and prevent it (Gilbert, 2020). Over the last 30 years, research has found compassion positively shapes many of the everyday interactions between people across diverse settings and relationships (Kirby, 2025). Despite the strong and growing interest in compassion science, when it comes to mental health the focus tends to largely remain on self-compassion (Neff, 2003; Neff & Germer, 2022), with meta-analyses demonstrating that self-compassion is significantly associated with psychopathology (MacBeth & Gumley, 2012) and wellbeing (Zessin et al., 2015). However, the first experience one has of compassion is receiving it from their parents (Kirby, 2025). This point is central to this paper, as most research in compassion tends to focus on either 1) compassion directed to others or 2) self-compassion, but one's ability to open to receiving compassion from others is equally as important for mental health and wellbeing (Hermanto et al. 2016; Kirby et al., 2019; Varley, Sherwell, Fu, et al., 2024).

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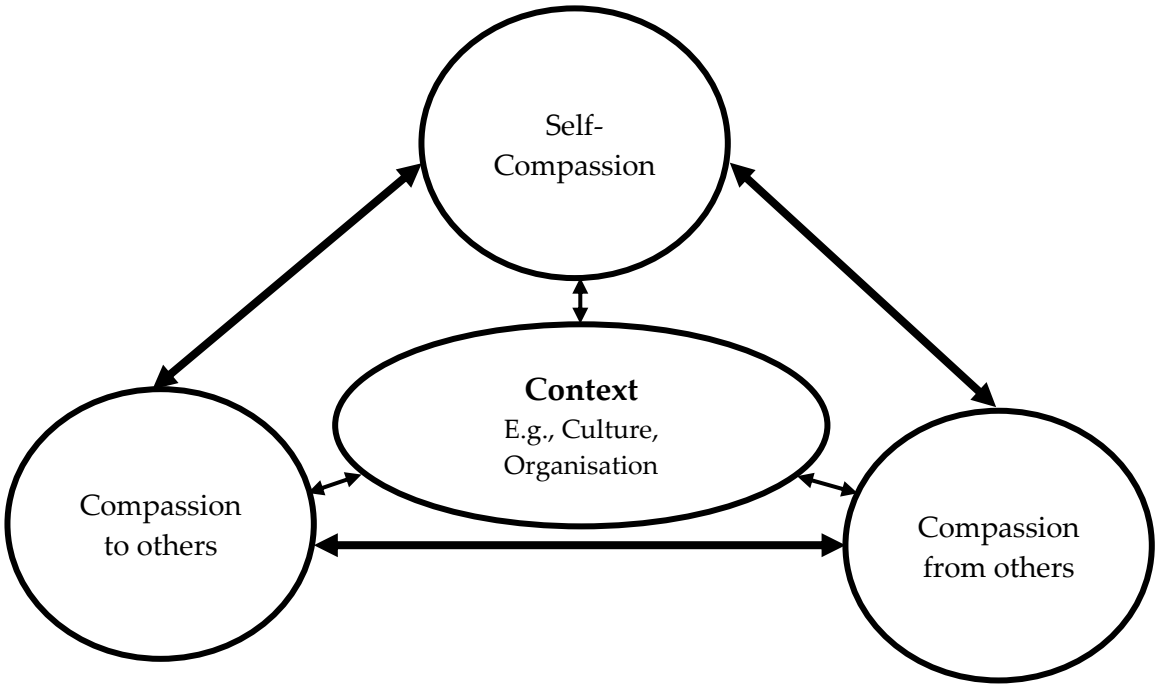
The three directions of compassion 1) to self, 2) to others or 3) from others was referred to as the *flow* of compassion by Gilbert (2014), and although correlated, individuals can be higher in one direction of compassion (to others) and lower in another direction (self-compassion) (Lopez et al., 2018; Sahdra et al. 2023). In Figure 1 we present a heuristic model of the flow of compassion. Importantly, as depicted in the figure, the context will significantly influence the likelihood of compassion being expressed or inhibited (Kirby, 2025). For example, if one is working in a psychologically safe environment, it is much more likely that compassion will be valued and expressed between staff and towards oneself (Leung et al., 2015), however, if the environment is textured by toxicity or it is clear that compassion is not valued then this reduces the tendency to express compassion (Pavlova et al., 2023). Thus, the flow of compassion can be altered by a range of social or environmental factors, these can include, but are not limited to, in- and out-group biases, where compassion is directed to family and friends (in-group) (Lowenstein & Small, 2007), but inhibited towards other out-group members, such as a competitor or somebody who is different (Crimston et al., 2016). Having limited time can reduce compassionate responses (Darley & Batson, 1973), as can group and economic inequality (Kirkland et al., 2023), competitive environments (Kirby et al., 2023), and lack of social support (Crawford, Brown, Kvangarsnes & Gilbert, 2014). There are also individual factors that can influence the flow of compassion, such as if the target of the compassionate action is liked or disliked (Kirby et al., 2022), whether one has self-efficacy or belief they can be compassionate (Perrykkad et al., 2023), or if they feel ashamed, which can stop people from being open to receiving compassion from others (Gilbert et al., 2011).

Figure 1. *The 'flow' of compassion, which is influenced by context*



This relational and context-dependent "flow" of compassion framework is a necessary foundation for establishing an epidemiology of compassion. An epidemiological approach—the study of the distribution and determinants of health-related states in specified populations—requires a framework that is inherently systemic, which the individual-focused view of compassion lacks. From an epidemiological perspective, the "flow" is the mechanism of

transmission, and the "context" is the determinants that alter its distribution in the population. The remainder of this paper will use this epidemiological framework to 1) examine the dyadic mechanics of this relational flow, 2) evaluate the methods used to measure compassion, 3) examine the moral boundaries that define at-risk populations, and 4) propose a system-level approach for public health interventions that cultivate compassion in healthcare organizations.

2. Compassion: Relational and contextual

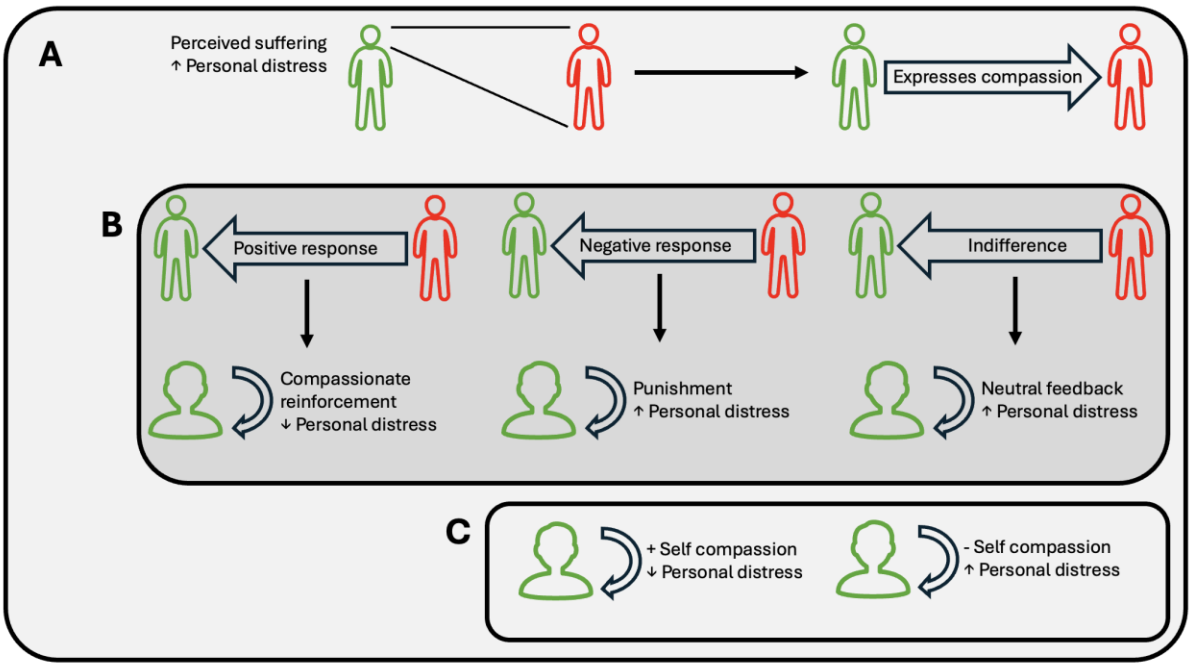
There are many different definitions and models of compassion, emphasising some elements as more important than others (e.g., Gilbert, 2020; Mascaro et al., 2020; Neff, 2003). The definition we have adopted in our understanding of compassion is, *"a sensitivity to suffering in self and others, with a commitment to try and alleviate and prevent it"* (p. 14, Gilbert, 2014). This definition of compassion underpins Compassion Focused Therapy and has been applied to a range of different settings beyond the therapeutic setting, such as politics, education and organisational settings (see Gilbert & Simios, 2022). The model highlights two distinct components, 1) first noticing and engaging with suffering, and 2) responding to the suffering with some kind of action (Kirby, 2025). Gilbert refers to this as the compassionate algorithm (Gilbert, 2020), where there is a stimulus detection for suffering, and a stimulus response of action congruent to the type of suffering encountered (e.g., emotional, physical). According to this approach, compassion is emphasised as being relational – that is, compassion is often experienced as an interaction between two people: a giver and a receiver (Condon & Makransky, 2020). This exchange is illustrated in Figure 2. In this figure, we first highlight how compassion tends to begin with the detection or perception of suffering in others, potentially initiating an increase in personal distress as the observer attempts to understand the suffering of the perceived individual via cognitive and affective empathic processes (Gilbert, 2014). Based on this information-gathering stage, the observer then may choose to express compassion to the target. It should be noted that this expression of compassion may take many forms, including emotional support (e.g., comforting), physical assistance (e.g., helping), or sharing needed resources, depending on what the perceived situation calls for (that is, what type of suffering is encountered).

How individuals respond to expressions of compassion from others can be highly variable, and consequently influences the compassionate capacity of the giver. Suffering individuals may respond positively, typically with gratitude, which reinforces compassion in the giver (Condon & Makransky, 2020; Kirby, 2025). This may occur through reinforcing the efficacy of the giver actions, providing evidence to the giver that their actions are efficacious and appreciated.

Recipients of compassion may also respond negatively or indifferently to expressions of help from others. Resistances, blocks, and fears of compassion have been well-documented in prior literature (Gilbert et al., 2011), with scholars suggesting that individuals may fear compassion and reject help or support from others despite the need for help, due to previous bad experiences (e.g., betrayal/hurt/trauma; Gilbert et al., 2011; Kirby et al., 2019). For the giver of compassionate expressions, the negative feedback or rejection of compassion can have differential impacts which overlap with the role of self-compassion. Aversive or negative reactions to offers of help can be devastating, as the personal distress experienced through sympathy is not alleviated, and possibly aggravated by the negative reaction. Similarly, indifference to offered help can diminish the initial drive to give help to others. However, the individual's self-compassion can be a protective factor. Acknowledgment that positive intentions can have negative outcomes is synonymous with the ethos of self-compassion: where failure is not a critical personal flaw. The application or capacity for self-compassion likely buffers the negative effects of poor receptive

feedback, reducing the likelihood that the interaction will reduce the likelihood of future compassion.

Figure 2. *Potential outcomes of expressing compassion to others*



Note. **A** Upon perceiving suffering in others, one takes on personal distress via empathic concern. Giving compassion can take many forms, such as helping, comforting, or resource sharing. **B** The receiver of compassion can react in multiple ways: they can be grateful and express gratitude or positive affect; they can react negatively, including expressions of anger or resentment for the proffered help; or they could be indifferent, showing neither appreciation nor rejection. **C** Where expressions of compassion are not met with positive reactions, the negative effects of personal distress can be moderated by one's capacity for self-compassion.

The interactional flow of compassion is often not captured in research sciences, due to the complex and dynamic nature of the interactions. Some studies have tried to capture these relational dynamics. For example, Reis, Maniaci, and Rogge (2017) conducted a daily diary study with 175 newlywed couples to examine the impact of compassionate acts on emotional well-being. Across a two-week period, partners reported compassionate behaviours, specifically whether they acted compassionately to their partner or if they received compassion from them. Findings demonstrated that both giving and receiving compassion were associated with greater daily well-being; however, the emotional benefits were stronger for givers than for recipients. Importantly, givers experienced enhanced well-being regardless of whether their partner recognised the compassionate act, and critically even when recipients did not recognise the compassionate act from their partner, they still experienced less negative emotions on those days compared to days their partner did not express compassion. The use of daily diaries as a methodological technique offer insights into how compassion is experienced in the context of couple relationships, however, expanding such an approach to other types of relationships is difficult, for example, as teacher-student or between colleagues or friends. Rather work in the compassion sciences has tended to focus on self-reported compassion from one individual.

2.1 Self-report measures of compassion

Several existing psychometric validated self-report scales measure trait-based compassion, which focus on the intent individuals have to be compassionate, for example, *"I try to be a compassionate person"* (Mascaro et al. 2020) or they focus on whether individuals feel compassion in situations. Although it is important to assess for intent, compassion also includes an action component, and to date this has largely been ignored in self-report scale measures of compassion (Steindl et al., 2021). Indeed, individuals may have high scores on self-reported measures of compassion, but this may not translate into a willingness to act compassionately towards others. In an effort to overcome this limitation, Steindl et al (2021) developed the Compassion Motivation and Action Scale to measure compassionate action, where individuals indicate whether they have been more compassionate towards others over a specified week time period (Steindl et al., 2021). Research has found that compassion interventions do increase compassionate actions towards others when using this scale (Matos et al., 2017), but they do not account for a range of different contexts that may influence how likely the person is to act compassionately and the measure does not stipulate who the targets are of their compassionate acts. As such the measure lacks variation, but it could be modified in future studies to include specific targets (e.g., friends, partner, colleague) of compassionate action. For example, Kirby et al. (2022) found using a series of scenarios people's willingness to act compassionately (on a scale from 1 to 10), towards a known disliked target is significantly lower when compared to a known liked target. This empirical research is important, as it demonstrates compassion is not expressed equally among all, and that one's willingness to act compassionately will differ depending on key target characteristics, such as likeability.

Another avenue for examining contextual factors that influence compassion is the use of vignettes, which are brief, descriptive scenarios presenting participants with hypothetical situations to assess likely behavioural responses (Hughes & Huby, 2002). Increasingly, researchers recognize the utility of vignettes for evaluating compassionate behaviours toward others. For example, Goetz and Halgren (2019) examined how relational closeness affects willingness to help alleviate another's suffering. Participants were asked to imagine that someone they were either closely or distantly acquainted with had recently suffered an accident resulting in paraplegia, and to rate their willingness to help on a six-point Likert scale (1 = Not at all, 6 = Extremely). Results indicated that willingness to help was strongly contingent on perceived relational closeness. While this study illustrates the effectiveness of vignettes for assessing intended compassionate behaviours, its generalizability is limited, as the scenario involved an extreme life event, and may not accurately reflect compassionate behaviours in more typical, everyday situations.

The use of scenarios to examine compassion offers a range of flexibility to examine both relational and contextual factors. For example, compassion is anchored in suffering, yet not all suffering is experienced in the same way. That is suffering can differ by emotion (e.g., anger, sadness, anxiety), it can be physical (e.g., injury or illness), or it can be resource based (e.g., without home or food) (Kirby, 2022). Yet, measures of compassion do not systematically vary these dimensions of suffering, instead measures focus on whether one has a tendency to be compassionate (Gilbert et al., 2011; Mascaro et al., 2020; Steindl et al., 2021). Consequently, vignettes and scenarios offer a fruitful avenue of research to further examine whether willingness to act compassionately differs depending on the type of suffering encountered. Using healthcare as an example, doctors are excellent medical technicians and are experts in reducing physical suffering, yet despite this, patients will not experience this as compassionate care, unless the doctor attempts to connect with the patient as a person (Fernando & Consedine., 2014; Sinclair et al., 2021). Indeed, Sensky (2010) highlighted how pain can be experienced in a particular part of

the body, but suffering is to do with the whole person. For instance, an individual might say, "*I have pain in my broken leg*" but would not typically say "*my broken leg is suffering*"; rather, the statement would be, "*I am suffering*"; suffering is a mental state.

The most advanced self-report measure that attempts to assess compassion as experienced by the receiver has resulted from work done in healthcare settings. Sinclair et al. (2021) developed a patient-reported measure designed to assess the experience of compassion in healthcare settings. Specifically, the Sinclair Compassion Questionnaire (SCQ) measures how patients perceive the compassionate behaviours of their healthcare providers. The SCQ evaluates multiple dimensions of compassionate care, including the recognition of patient suffering, emotional attunement, empathy, actions to alleviate distress, and the provision of support and respect. Items on the SCQ include, "*my healthcare provider took steps to help relieve my discomfort or distress"* or "*my healthcare provider understand what I was going through*". These items are scored on a Likert scale from 1 (*not at all*) to 5 (*extremely*). The SCQ provides a reliable and validated tool for quantifying compassionate interactions across diverse clinical contexts. Its application allows both individual clinicians and healthcare organizations to evaluate and enhance the delivery of compassionate care. The measure has been validated in multiple care settings, including palliative care, oncology, and emergency departments (Sinclair et al., 2021).

In relation to self-compassion, Neff developed the Self-Compassion Scale (2003) and this is the most widely-used measure of self-compassion in the field. The Self-Compassion Scale has been consistently linked to a range of positive outcomes. Meta-analytic research consistently finds that self-compassion is positively associated with improved wellbeing (Zessin et al. 2015), better health behaviour (Phillips & Hine, 2021), improved self-efficacy in the face of failures (Liao et al., 2021), and better adaptive coping skills (Ewert et al., 2021). One review concluded that self-compassion is a clear active ingredient in the prevention and treatment of anxiety and depression in young people (Egan et al., 2022).

2.2 Ecological Momentary Assessment

Given the decision to act compassionately is highly contextual, the best way to capture its real-world distribution and determinants is arguably experience sampling, also known as Ecological Momentary Assessment (EMA). Many argue that a combination of lab-based behavioural experiments and experience sampling is ideal for studying psychological phenomena (Depow et al., 2021). By repeated sampling of a participant's current behaviours and experiences in real time in their natural environment, experience sampling aims to minimize recall bias, maximise ecological validity, and allow study of microprocesses that influence behaviour in real-world contexts (Depow et al., 2021). This advantage is critical from an epidemiological perspective, as it captures compassionate behaviour in everyday life, thus, opening the window to varied contexts of suffering and varied targets.

A recent study by Varley, Sherwell, and Kirby (2024) demonstrates this potential. They collected 2,757 experience sampling responses from 125 participants over a one-week period. In each experience sampling survey participants were asked whether they had observed opportunities to be compassionate to others, self-compassionate, and whether they had the opportunity to receive compassion from others. If participants reported observing compassionate opportunities, they were asked whether they engaged in compassionate actions toward others, toward themselves, or whether others had acted compassionately toward them. Participants also reported the perceived positivity of their emotional experience related to any compassionate opportunities. Results from their study found that in total they had the most opportunities to be compassionate to others (522), then self-compassionate (398), then receive compassion from

others (286). However, when it comes to turning those opportunities into action, compassion to others was acted on 73% of the time, with a similar rate for self-compassion at 72%, while receiving compassion from others was higher, 77%. Critically, when acted upon for each direction, this significantly improved emotional experience. This is one of the first studies to examine the flow of compassion in everyday life. Future work should begin to examine the nature of the relationship, that is, who are participants are acting compassionate towards and receiving compassion from (e.g., colleagues, family, friends).

For mental health, what appears most valuable is maintaining a balanced and harmonious relationship between self-compassion and compassion for others. Using experience sampling methodology, Sahdra et al., (2023) assessed self-compassion, other-compassion, life satisfaction, mood, and various contextual factors six times per day across 42 time points with a clinical sample (n = 154). Most participants exhibited positive within-person associations between self- and other-compassion; increases in one corresponded with increases in the other. However, considerable individual variability emerged—some participants lacked such harmony. Critically, the degree of self-other harmony moderated the link between compassion and well-being: higher compassion correlated with better well-being—but this effect held only for individuals with harmonious compassion flow. For those without harmony, self- or other-compassion levels were largely unrelated to well-being. This study highlights the importance of engaging with the flow of compassion—extending it to oneself, to others, and being open to receiving it—rather than focusing exclusively on one direction (e.g., self-compassion). Future research on compassion-focused interventions should therefore expand beyond single dimensions, examining how enhancing the overall flow of compassion influences mental health across multiple outcomes, including self-report, physiological, and behavioural measures, at both state and trait levels.

2.3 Observational measures and virtual reality paradigms

While methods like experience sampling capture real-world frequency, an epidemiological approach also benefits from methods that can objectively observe the transmission of compassion (the 'flow') in action. Moving beyond self-report, observational lab-based paradigms allow for the capture of non-verbal behaviours and physiological responses during a compassionate exchange, which are critical for understanding the mechanics of this dyadic flow. Miller et al. (2015), for instance, had 83 mothers and pre-school aged children (3-5 years) come to the lab and complete a low- or high-stress task. In the low-stress task, mothers and children engaged in a cooperative puzzle-solving activity, designed to elicit typical parenting behaviours without high stress. In the high-stress task mothers were asked to guide their children through a frustrating or challenging task, intended to elicit physiological and emotional stress responses. The mothers were instructed that they could not physically help the child complete the task. The researchers were interested in whether mother self-reported compassion predicted the non-verbal behaviours expressed by mothers in the high-stress task specifically, and whether the mother's physiology also influenced behaviours. The researchers found that mothers who exhibited high levels of compassion demonstrated less negative affect, regardless of their autonomic patterns. In particular, mothers with high sympathetic and low parasympathetic activation (indicative of stress reactivity) showed reduced negativity in their parenting when they reported higher levels of self-reported compassion. These findings suggest that compassion may serve as a protective factor, enabling mothers to maintain positive parenting behaviours even under physiological stress, thereby promoting healthier developmental outcomes for children. This study links self-reported compassion and prosocial behaviours in the context of mother-child relationships; however, whether this would also generalise to other forms of relationship is unknown.

In research the most commonly used behavioural measures of compassion are prosocial behaviours such as donation behaviour (i.e., money donated to a charity; Bockler et al., 2016). However, the research has been mixed as to whether compassion, as measured on self-report scales, predicts prosocial behaviours, such as charitable donation, with many studies finding no association between trait compassion as measured on traditional self-report and charitable donation behaviour (Ashar et al., 2016; Bockler et al., 2016; Perrykkad et al., 2023). This has led researchers to question whether charitable donation is a good measure of compassionate behaviour, particularly when the charity used in research is typically forced to a single option (Perrykkad et al. 2023), thus reducing choice options, and moreover the money being donated is typically quite small (Perrykkad et al., 2023; Vastfjall et al., 2014). Thus, the selection of what observed behaviour can be used in experimental studies requires thoughtful consideration.

In other behavioural paradigms researchers have used a confederate, which is typically a stranger. In the biggest ever study of mindfulness training with the use of confederates in a lab experiment (n = 56), Lim and colleagues (2015) examined whether three-week self-directed audio guided mindfulness training or a cognitive training control program could influence compassionate behaviour. At post-intervention the participant had to come to the lab to complete final cognitive tasks. Lim and colleagues (2015) staged a waiting room with three chairs, two occupied by confederates. When the participant arrived, they were informed by the experimenter they were running late and to sit in the remaining chair. A third confederate then arrived, using crutches and in noticeable pain (suffering). The aim was to see whether the participant would help by giving up their chair to the suffering confederate. Results from the study showed that the mindfulness training led to significantly more compassionate behaviour, with 37% helping, compared to 14% in the control condition. This study is really important in understanding the impact of compassionate interventions on action, however, the paradigms are still restricted to the target being a stranger and also to one specific behaviour (giving up one's chair for another), thus it is unclear if this generalizes to other types of suffering. However, it is an excellent example of what can be done in behavioural lab experiments.

Beyond simple observation, an epidemiological framework also benefits from experimental paradigms that can model and manipulate the compassionate flow. Virtual Reality (VR) is uniquely powerful for this, as it allows researchers to simulate the full dyadic experience of both giving and receiving compassion. Pioneering work by Falconer et al. (2014), for example, used this approach for those high in self-criticism. In this VR compassion-focused paradigm participants are given the opportunity to deliver compassion to a distressed in-game character which would be a child. Participants embody a virtual avatar when delivering compassion in a scene generated based on their previous choices. The environment and the in-game character's appearance and behaviour can also be individualized. Participants are instructed to give compassion to a distressed child closely following the 3-phase approach of validation, redirection of attention, and memory activation, which is the standard approach recommended for use of compassionate approaches when dealing with emotional situations (Falconer et al., 2014). Critically, the participant's compassionate efforts are audio-recorded and then in the second phase, the participants assume the role of the crying child and receive their own compassion, which is the audio recording played back to them. Falconer et al (2014) found this significantly helped the participants increase self-compassion and also increased their feelings of being safe, as well as reduced self-criticism. This approach has since been replicated by others and found to significantly increase self-compassion and reduce depressive symptoms (Halim et al., 2023).

The possibility of VR self-compassion programs offers tremendous opportunity to help those with clinical disorders, such as those with anxiety or posttraumatic stress disorder. But equally,

the use of VR offers immense research opportunities to explore other critical relational and contextual factors, particularly with the rise of individualised VR (iVR). iVR is an emerging technology that can simulate realistic and immersive experiences within a virtual world to the unique demands of the individual. As a result, virtual worlds can be simulated that are specific to unique stressors and situations for that individual (Halim et al., 2023; Kritikos et al., 2021). For example, in an iVR paradigm the environment can be simulated so the child looks like their own child (same age, gender) and the father can interact with them on a topic that they find difficult, for example, managing emotional vulnerably in the child (sadness, anxiety) using compassionate (warm and affectionate) parenting responses.

3. Moving beyond the typical boundaries of our compassionate tendencies

If compassion is going to have an impact at scale, research needs to move towards examining boundary conditions of compassionate help (Kirby et al., 2023). One way to achieve this is to link compassion to moral circles. A moral circle, the boundary delineating who is considered worthy of moral concern, typically develops in a fairly predictable manner (Singer, 1981; Crimston et al., 2016). Individuals tend to prioritize their family and in-group members, while extending less concern to those who are socially distant, different from them, or perceived as having violated social norms. Evolutionary perspectives help explain this pattern, as in-groups are often structured around genetic and psychological kinship networks (Krebs, 2015), resulting in moral concern that is not evenly distributed across diverse individuals. Nevertheless, there are circumstances in which these moral priorities can shift, expanding beyond immediate in-group boundaries.

Moral expansiveness encompasses two central dimensions: (1) the extent to which living entities are considered as deserving of moral concern, and (2) the perceived personal responsibility to uphold and protect that concern (Crimston et al., 2016). This concept can be applied broadly, encompassing a range of entities from humans, such as family members or strangers, to non-human animals, including chimpanzees, and even components of the natural environment, such as plants and ecosystems. Importantly, moral expansiveness differs from moral reasoning or moral cognition, which focus primarily on the processes by which individuals determine what is morally right or wrong (Crimston et al., 2016).

Moral expansiveness refers to the range and diversity of entities that individuals consider worthy of moral concern and ethical treatment. People differ in the breadth of their moral concern, with some exhibiting a narrow or restricted mindset and others demonstrating a wider, more inclusive perspective. Research has shown that a morally expansive mindset predicts prosocial thinking and behaviour in both adults (Crimston et al., 2016) and children (Neldner et al., 2023). Among the strongest and most reliable predictors of a morally expansive mindset is empathy (Crimston et al., 2016).

Moral expansiveness is also closely linked to compassion. Unlike empathy, which involves understanding another's emotions (affective empathy) and perspectives (cognitive empathy; Decety & Cowell, 2014), compassion entails both recognizing suffering and the motivation to actively reduce it (Decety & Cowell, 2014; Spinrad & Eisenberg, 2017). While empathy is associated with prosocial behaviour (Zaki, 2014), empathic responses are often biased toward in-group members and those similar to oneself (Bloom, 2016), and can be co-opted by self-interested motives (Loewenstein & Small, 2007). Furthermore, individuals tend to empathize more readily with positive states, such as happiness, than with negative experiences (Depow et al., 2021). In contrast, compassion is specifically oriented toward addressing suffering (Gilbert, 2020), making it a potentially key driver in expanding moral concern toward those in need.

Compassion extends concern to all sentient beings, including humans, animals, individuals from diverse backgrounds, and even those who are disliked (Kirby et al., 2022; Gilbert, 2020; Ricard, 2015), and can encompass concern for other living forms such as the environment. Recent research has begun to examine these relationships directly between compassion and moral expansiveness. Across three studies, Crimston et al. (2022) found that while empathy and mindfulness were associated with moral expansiveness, neither remained a significant predictor once compassion and fears of compassion, the tendency to avoid or fear compassionate responses (Gilbert et al., 2011), were accounted for. In other words, compassion and fears of compassion uniquely predicted moral expansiveness above and beyond more established predictors, highlighting the central role of compassion in shaping an inclusive moral perspective.

Given these links, researchers then examined whether a compassion-based intervention could increase moral expansiveness. In a randomised controlled trial, which included 102 participants, Kirby et al., (2024) conducted a brief compassionate mind-training seminar, and examined moral expansiveness pre-, two-weeks, and three-months post-intervention. At post-intervention the compassionate mind-training intervention led to significant increases in total moral expansiveness, as well as increases specifically for family and revered sub-groups, when compared to the control group. Critically, at 3-month follow-up, these outcomes improved, with reported moral concern for all sub-groups significantly increasing, including out-groups, stigmatized members of society, animals, plants, and the environment. One critical aspect of this research is that it took time to shift moral expansiveness for all subgroups. This is important, as there is no quick fix to improving moral concern for all entities. Indeed, this process takes time. However, this research offers a hopeful avenue, which could be creatively applied to leaders in various professions, such as in politics, business or education. Extending moral concern offers the hope of living in a more connected and supported society, yet work has not yet focused on whether the moral boundaries of organisations can be shifted. Over the last few decades there has been an increasing recognition that organisations should be concerned with the impact they have on environments in which they operate (e.g., natural environment, people; Kaplan, 2019), with organisations having a moral responsibility (Worline & Dutton, 2017). However, this tends to be focused on minimizing wrong-doing or causing harm, as opposed to focused on helping others (Waytz et al., 2019).

4. A systems level approach to expand compassion

While individual willingness and capacity to be compassionate are essential, the expression of compassion is not solely an individual act; it is profoundly influenced by the systems and contexts in which people are embedded. An individual-only approach is insufficient for creating widespread, sustainable change. To truly expand compassion, social and organizational systems must also be engineered that facilitate and reinforce it. Using healthcare as a primary example, it becomes clear how systemic factors can either enable or constrain the flow of compassion.

An important framework for understanding these dynamics is the *Transactional Model of Physician Compassion*, which posits that compassionate practice is not a static trait but a dynamic process emerging from the interplay of four key factors: the physician, the patient and their family, the specific clinical situation, and the broader environmental and institutional context (Fernando & Consedine, 2014). While all these elements are crucial, a systems-level approach places particular emphasis on the institutional and environmental factors that create the conditions for compassion to either thrive or wither. Research provides strong empirical support for the impact of these systemic factors. For instance, a recent large-scale study found that a perceived discrepancy between a clinician's personal values and the values of their organization

predicted a lower *ability* to provide compassionate care (Pavlova et al., 2023). Crucially, this value discrepancy did not affect clinicians' self-perceived compassion *competence*, suggesting the issue is not a lack of skill, but an environment that constrains its practice. This same study found value discrepancy was also associated with higher burnout, lower job satisfaction, and increased absenteeism. Theoretically, this kind of value conflict can lead to *moral distress*—the stress arising from being unable to take the right course of action due to institutional constraints—and highlights how systemic pressures can directly impact clinician wellbeing and the capacity for compassionate action.

These resource-based constraints are often symptoms of deeper, more pervasive cultural barriers embedded in healthcare systems. Many healthcare organizations operate under a "production-line" or "managed care" model that prioritizes financial metrics, efficiency, and productivity over relational aspects of care (Crawford et al., 2014; Leach et al., 2023). This can create a "threat culture" focused on tasks and targets, which is reinforced by rigid bureaucracy, formal controls, and high power distances that socially separate colleagues and reduce the autonomy needed for genuine compassionate responses (Simpson et al., 2020). Within such environments, staff may be socialized to suppress emotion and hide distress to maintain an image of professionalism, making it difficult for co-workers to notice suffering in the first place (Leach et al., 2023). These issues are compounded when organizational leaders perceive personal risks in championing compassion or when communication is consistently top-down and unsupportive, ultimately fostering a dysfunctional climate where compassion is systematically constrained (Smith-Merry et al., 2025).

Conversely, systems can be intentionally designed to foster compassion. Leadership is paramount; compassionate and transformational leaders are crucial for cultivating a culture where compassion is valued and practiced (Vogus & McClelland, 2020). This involves creating policies and providing resources that support staff wellbeing and prioritize compassionate care. The immediate team environment is also highly influential. Positive team dynamics, open communication, and mutual support create a climate of psychological safety where clinicians feel more able to express compassion towards patients and themselves. Indeed, the perception of team caring has been found to be a strong predictor of how employees rate the compassion of the entire organization, which in turn is linked to their engagement (Lown et al., 2020).

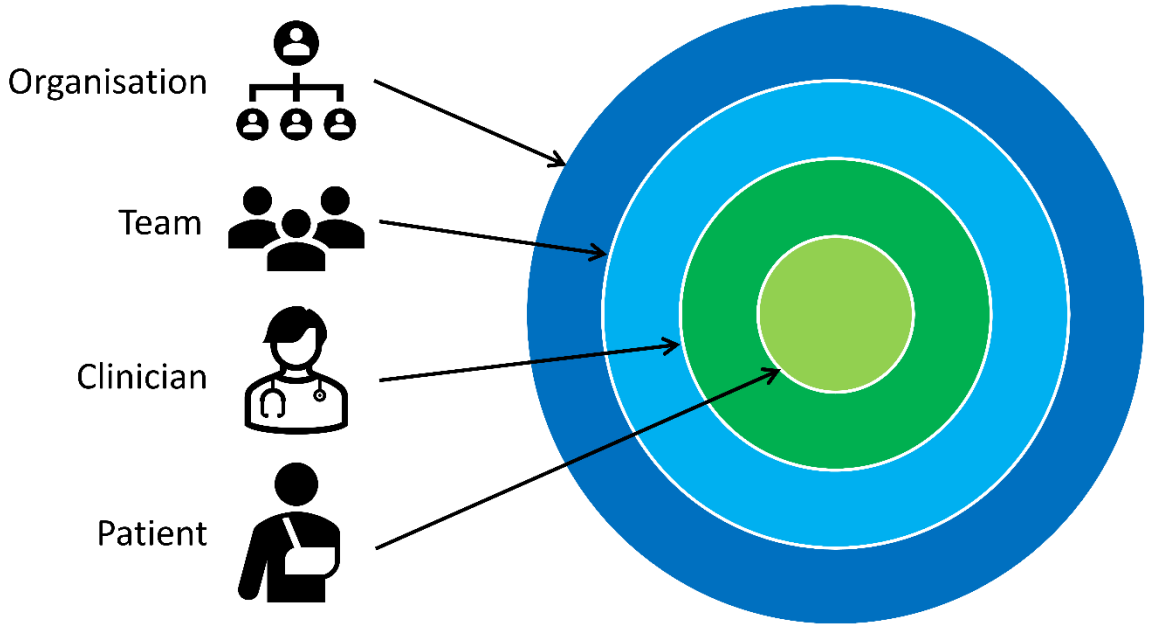
Several targeted interventions have been developed to bolster organizational compassion, such as *Schwartz Rounds*, which allow staff to discuss the emotional aspects of their work, and *Code Lavender*, a rapid response to support staff after stressful events (Cochrane et al., 2019). One of the most well-researched relational interventions is Schwartz Rounds, an interdisciplinary forum where clinical and non-clinical staff come together to discuss the social and emotional challenges of their work (Lown & Manning, 2010). The structured, one-hour sessions begin with a panel of staff members sharing their experiences related to a specific patient case or theme, which then serves as a springboard for a facilitated group discussion. The focus is not on problem-solving, but on reflection and the shared human experience of caregiving (Adamson et al., 2018). Research has consistently shown that these Rounds enhance teamwork, increase appreciation for the roles of colleagues across different disciplines, reduce feelings of stress and isolation, and improve communication between staff (Farr & Barker, 2017; Lown & Manning, 2010).

A recent qualitative synthesis of organizational interventions for compassionate care reinforces the value of such relational approaches (Tunstall et al., 2025). The review found that interventions like Schwartz Rounds are highly valued by staff because they "humanise healthcare" by creating a dedicated space for reflection, connection, and recognising shared

humanity. The benefits extend beyond individual wellbeing; staff report that these interventions facilitate clinical creativity and improve compassionate behaviours towards both patients and colleagues. Crucially, the synthesis highlighted that for these interventions to be effective and sustainable, they must be genuinely supported by the organisation and aligned with its core values, rather than being implemented as a superficial, 'tick-box' exercise (Tunstall et al., 2025).

The interplay of these factors is well-articulated in the multi-level conceptual model of organizational compassion shown in Figure 3 (Thienprayoon et al., 2024). This model illustrates that the patient's experience of compassion is nested within layers of influence. The clinician's behaviour is shaped by their experience of team-level compassion (e.g., support from colleagues) and organizational-level compassion (e.g., fair policies, manageable workload). These, in turn, are influenced by the broader organizational and societal context. This framework shifts the responsibility for fostering compassion from being solely on the individual clinician to the systemic structures that surround them. Therefore, creating a more compassionate world requires a dual focus: cultivating compassion within individuals while simultaneously redesigning the systems—in healthcare, education, and business—to be environments where compassion can truly flow and flourish.

Figure 3. *A systems level view of compassionate flow through an organisation*



Importantly, this compassionate flow is often directed top-down from the leadership team of the organisation with the chosen policies they have implemented. However, this compassionate flow can also come from a bottom-up approach, if clinicians and teams are able to effectively communicate through feedback channels their desires or needs for more compassionate conditions to the leadership team of the organisation. Whether the leadership group listen, adopt and try to change organisations policies in relation to feedback, however, can be a real source of pain. If the teams or clinicians in the organisations do not perceive the organisation as being responsive this can further lead to increased value discrepancy in that environment, which can further add to staff moral distress, wellbeing, and other important factors such as staff turnover and absenteeism (Pavlova et al., 2023).

5. Compassionate flow at the systems level: The new frontier

This multi-level framework leads to a critical question for the future epidemiology of compassion: Does the system merely function as an effect modifier—a force that facilitates or constrains the flow of compassion between individuals—or is the system itself an essential part of the flow? Current research largely adopts the former view, treating systemic features as independent variables that predict individual compassion (e.g., Fernando & Consedine, 2014). However, a more radical and necessary step for the field is to conceptualize the system as an active agent that can give and receive compassion.

While organizations are not sentient creatures capable of "warm-heartedness", they possess the primary driver of compassion: intention. If compassion is defined as the sensitivity to suffering with a commitment to alleviate it, then organizational policies and resource allocation are the manifestations of that commitment. From this perspective, compassion "flows" from the organization to the individual when systems are architected with the specific intention to reduce suffering. For example, if the intent or aim of an organisation (or government) was to reduce homelessness through social housing, metrics such as lower homelessness rates are not merely a sterile outcome; they are valid indices of the compassionate intention at the societal level. Or if a government's intent is to reduce child maltreatment, population wide access to free evidence-based parenting support would be a compassionate intention to reduce rates of child maltreatment (suffering) – which would be the index used to assess if the policy has had positive impact (Prinz et al., 2009).

This framing resolves the tension between neuroscientific definitions of compassion (focused on individual affect) and public health definitions (focused on community outcomes) by grounding both in the observable alleviation of suffering. Critically, that raises the notion of what is considered 'suffering'. In Buddhism, suffering is typically conceptualised as Dukkha – which is often translated as an 'unsatisfactoriness', often arising because we crave something we do not have (e.g., status), or having something that you do not want (e.g., chronic illness) (Wallace, 1999). This conceptualisation of suffering as Dukkha in many ways again anchors back to the individual. However, suffering can occur on large scales – and if taking a systems view of compassion, the conceptualisation of suffering also needs to expand to recognise that suffering occurs at scale. For example, famine, genocide, and natural disasters are global indices of suffering. Organisations and governments can choose to enact a compassionate intention towards them, actively helping and intervening to reduce famine, stop genocide and provide assistance when disasters occur.

The flow of compassion *from* the individual *to* the system is conceptually more complex. How does one show compassion to a non-sentient entity? If an organization is viewed not as a monolith, but as a "collection of minds" united by a purpose, then compassion toward the system may be understood as actions that support its benevolent mission. For example, in a healthcare setting, staff who remain committed to the organization's values despite external pressures may be engaging in a form of compassionate flow toward the collective. However, this is not without risk, as 'blind loyalty' can have consequences. At this stage, the flow of compassion from the system down to the individual is clearer. Future work, however, needs to consider and contemplate whether it can flow from the individual up to the system. In addition, future epidemiological research must develop new tools to measure this dynamic, moving beyond static snapshots of individual traits to capture the bidirectional flow between people and the systems they inhabit.

6. Limitations and future directions

The present paper proposes an integrated framework for understanding compassion as a dynamic 'flow' influenced by systems-level factors. However, several limitations should be considered that also point toward avenues for future research.

First, the review of the literature in this paper was argument-driven and selective, not systematic or exhaustive. It was structured to support our central thesis that a new epidemiological approach requires a relational, contextual, and systemic model. We have therefore highlighted methods and concepts that serve this argument, rather than providing a comprehensive meta-analytic review of all compassion measurement and intervention literature.

Second, this paper has relied heavily on healthcare as its primary example of a "population." This focus allowed for a concrete analysis of systemic determinants (e.g., organizational culture) and specific interventions (e.g., Schwartz Rounds). However, the specific contextual factors, risks, and protective factors identified in healthcare may not be directly generalizable to other populations, such as corporate, educational, or community settings. Future research should explore how the flow of compassion operates within the unique systemic determinants of these other important contexts.

Third, while we have highlighted existing interventions like Schwartz Rounds and the conceptual model proposed by Thienprayoon et al. (2024), this remains a relatively new area of research. A significant limitation in the field is the lack of empirical studies that directly test the impact of multi-level, systems-based interventions on the 'flow' of compassion (i.e., giving, receiving, and self) for individuals. Future research is needed to design and evaluate such interventions, moving beyond individual-only training.

Finally, the concepts of compassion, self-compassion, and barriers such as shame or fears of compassion may be experienced and expressed differently across cultures. Much of the research cited is based on Western, Educated, Industrialized, Rich, and Democratic (WEIRD) samples. Future research should explicitly examine the cultural generalizability of this 'flows' framework to ensure its relevance across diverse populations."

7. Conclusion

Compassion is central to wellbeing, yet, compassion is often studied in one direction, most notably being focused on either self-compassion or compassion outwards. This paper points to the importance of the flow of compassion (other, self, and receiving), and how this flow of compassion is experienced in contexts, such as work contexts or family structures. It is important to consider, from a public health perspective this flow of compassion, as individuals operate within systems. The key implication for research is the need to shift from measuring individual traits to adopting epidemiological methods, such as EMA, to map the 'flow' and identify the systemic determinants that predict its distribution in a population. The key implication for practice is a shift in viewing compassion as an individual-only skill to an organizational-level outcome that is sensitive to the environment and can be actively managed by addressing systemic risk factors and investing in protective factors. Thus, if a greater compassionate world is to be truly experienced, there must be a focus on systems-level thinking to consider what policies would help nurture and support compassionate flow in the environments where individuals live and work in everyday life.

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