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# Organizational compassion: a conceptual extension and scale development

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**Abstract**
While the concept of compassion has been extensively explored at the individual level, this study takes a new approach by examining the compassion of organizations and, more specifically, the compassion capacity of organizations from an organizational culture perspective. This study develops a unique organizational compassion capacity scale through four field studies using an exploratory sequential mixed-methods research design. The findings unveil that organizational compassion capacity is a multi-dimensional construct with five dimensions: noticing, feeling, responding, collective action, and resource usage-related culture. This study further discusses the theoretical and practical implications of the findings.

**Keywords** Organizational compassion capacity · Scale development · Organizational capacity · Compassion

## Introduction

The concept of compassion, defined as "the feeling that arises when witnessing the suffering of another that motivates a subsequent desire to help" (Goetz et al., 2010, cf. Bae et al., 2019, p. 333), has been a subject of interest across various disciplines, including philosophy (Nusbaum, 1996), political science (Whitebrook, 2002), healthcare (Martins et al., 2013), and psychology (Neff, 2003; Goetz et al., 2010; Cosley et al., 2010). Despite the growing attention to compassion as a research stream, few studies still focus on compassion at the organizational level of analysis in general and compassion capacity and its operationalization in the profit-seeking firm context in particular. Indeed, in the extended literature, studies primarily have focused on individual compassionate responses (e.g., how the emotion motivates intentions to alleviate others' sufferings) to a particularly traumatic experience (Miller et al., 2012; Lilius et al., 2008), the emergence of compassion in the organization (Madden et al., 2012), and collective compassionate responses at the workplace in organizations (Lilius et al., 2011b). These past studies viewed individual and interpersonal compassion among employees as organizational compassion (i.e., compassion in the organization) and dealt with the unintentional emergence and process aspects of compassion (Madden et al., 2012). However, past studies have mainly neglected how an organization, as an entity of unit, establishes intentional, goal-directed, and constructed compassion-related practices, procedures, and norms that management can control and create interventions and interactions among employees and managers to marshal compassion-related practices in the organization. In this respect, an intentionally structured aspect of compassion as an *organization's compassion capacity* is warranted to enhance the compassion-related theory and practices at the organizational level of analysis (Dutton et al., 2006). Indeed, from a resource-based view of the organization, studying compassion as a firm capacity is critical for organizations' competencies, operations, and performances (Guinot et al., 2020). Explicitly, a compassion capacity will enable and improve work processes that support managers in achieving the organization's goals, lead to a more effective and better-developed organization, and provide superior performance and sustainable competitive advantage in the environment through mobilizing a distinct set of compassion-related routines and practices that other firms have difficulty in imitating and are challenged to examine without understanding the organization's cultural values.

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Besides the fewer investigations on organizational compassion as a firm capacity, the current literature still lacks a study on operationalizing the phenomenon of organizational compassion capacity (herein, after OCC). The reason is that most relevant studies are conceptual or rely on qualitative studies, such as in-depth interviews (Lilius et al., 2011a). Although these abstract and qualitative works provide insightful information, they primarily serve as testing grounds for further research, which prevents the generalizations that are so important for empirical studies. In addition, while some past studies empirically assessed compassion in organizations, they measured it as a unidimensional variable. For example, Lilius et al. (2008) developed a three-item unidimensional measurement scale for "experienced compassion at work." That measure of organizational compassion is valuable and extensively used by many researchers (e.g., Moon et al., 2016; Guo & Wang, 2022; Mahipalan, 2023). However, it should be noted that organizational compassion was assumed to be based on images of people rather than on the compassion itself, as noted by Lilius et al. (2008), and does not contain the capacity view. Specifically, since independence or individualistic experience of compassion is different from interdependence or corporate values and norms, that unidimensional variable is not able to move forward beyond a dominant view toward one that more appropriately focuses on a wide range of actions and experiences, as implicitly highlighted by Chatterjee et al. (2021). In this regard, the conceptual scope of the OCC, which is probably wide and best portrayed in several dimensions, could be constrained by a unidimensional approach, requiring a multi-dimensional perspective.

We believe that a multi-dimensional view of OCC will allow researchers to examine the concept beyond a simple experiencing attribution and capture the potentially diverse dimensions of the compassion capacity construct. In addition, a multi-dimensional perspective will help managers develop efficient actions to improve the compassion practices of the organizations. It will provide a much deeper contextualization (i.e., how compassion works in an organizational context) of the complex organizational compassion phenomenon. Furthermore, a multi-dimensional perspective will advance theory development and refinement on the OCC by providing more parsimonious overall constructs (i.e., capturing complex ideas in simple abstractions) and enabling researchers to accurately link broad predictors with comprehensive outcomes and capture more significant variance. Here, it should also be noted that there is a notable exception in Simpson and Farr-Wharton's, 2017 study that operationalized organizational compassion as a construct composed of four dimensions: noticing, empathizing, assessing, and responding (i.e., NEAR scale) and used in empirical studies (e.g., Baluku et al., 2024). However, their scale, which was inspired by and compiled from the previous well-established organizational compassion studies (Kanov et al., 2004; Dutton et al., 2006), indicates *collective compassion*, such as how compassion occurs between colleagues (i.e., at the interpersonal level), which is similar to collective empathy, and an episodic community engagement of compassion in the organization rather than institutionalized compassion throughout the corporation or the compassion capacity of the organization. It is thus a helpful scale to assess the compassion of workplace groups and firms with fewer employees. Nevertheless, this scale does not focus on how corporate-wide compassion can be encouraged through organizational policies and culture.

Besides the lack of operationalization of OCC, the literature has contextual limitations on organizational compassion. Previous empirical studies on compassion at the organizational level were conducted in a hospital (Lilius et al., 2008), a university (Dutton et al., 2006), and a single unit of a hospital (Lilius et al., 2011b). Due to their founding philosophies, these organizations, which are likely to be dominated by service-orientated employees, promote pro-social behaviors, and serve different sets of stakeholders, maybe more compassionate than profit-seeking firms, which economic-orientated employees dominate, are aimed to maximize shareholder wealth and cash flows and focus on the competition with other firms. In addition, even though there are some studies investigated compassion in the organization (i.e., entrepreneurial compassion) (Stirzaker et al., 2021; Yitshaki et al., 2022), those studies considered compassion in the individual perspective (e.g., social entrepreneurs) rather than in an organizational level of analysis. Thus, findings from those past studies raise doubts about the validity of results across different firms, as Madden et al. (2012) highlighted. In this sense, researchers need an empirical investigation of OCC in profit-seeking firms that offers a reconceptualization and broad operationalization.

We conduct four studies using an exploratory sequential mixed-methods research design to gather, analyze, and integrate qualitative and quantitative data to establish a robust and accurate OCC scale (Creswell & Clark, 2007). The exploratory sequential mixed-methods design, in which the quantitative phase follows the qualitative phase in sequence, is especially advantageous when the researcher aims to investigate social phenomena thoroughly or when the measurements and variables are not yet known (Creswell & Clark, 2007). Within the scope of Study 1, we employ a qualitative approach through descriptive phenomenology and content analysis to better conceptualize the OCC concept, uncover the various facets of OCC, and produce question items for its characteristics. Second, in Study 2, we purify the OCC scale utilizing exploratory factor analysis. Third, by employing a different sample, we execute Study

3 to evaluate the OCC scale's reliability and convergent and discriminant validity. In Study 4, we compare the OCC scale with previous compassion scales offered by Lilius et al. (2008) and Simpson and Farr-Wharton (2017) and the collective empathy scale presented by Akgün et al. (2015) to demonstrate the discriminant validity between those scales.

Accordingly, this study contributes to the body of knowledge in several ways. Specifically, this study emphasizes organizational compassion from a firm capacity perspective, as indicated by the resource-based view of organizations, and extends the understanding of organizational compassion that reflects the cultural perspective of compassion. Also, this study provides a framework for compassion capacity in profit-seeking firms and assesses the capacity for compassion a business organization has. Further, this study provides a measurement scale for OCC that will allow researchers to investigate the predictors and outcomes of the OCC and will assist managers in evaluating how their firms are more compassionate than other firms and managing the compassion capacity effectively for fostering the firm's behavioral and operational outcomes better.

## Background and literature review

### The concept of compassion at the individual level

Studies indicate that compassion is a part of overarching self-transcendent emotions (Oriol et al., 2023). The term "self-transcendent emotions" refers to feelings that materialize due to other-focused evaluations, which cause an individual to transfer their attention away from themselves and onto the requirements and worries of other people (Stellar et al., 2017). At this place, people go beyond their own needs and desires and prioritize the needs of others to address critical social issues and improve the well-being of others via acts of kindness and cooperation (Stellar et al., 2017). The other self-transcendent emotions exemplify gratitude, awe, elevation, and compassion, which are specifically different from them (Wlodarczyk et al., 2023). For example, compassion focuses on alleviating the pain of others (other-suffering). In contrast, gratitude, which is to feel and show thanksgiving for a life experience and arises from others' generosity, focuses on praising others (other-praising) (Haidt, 2003). While compassion can be perceived as a more negative mood and urges individuals to care for those in need, awe is influenced by threat evaluations. It is related to a diminished estimation of one's unique value. Compassion is the result of recognizing the unwarranted suffering of other people. On the other hand, elevation, which is a feeling experienced as a result of recognizing the moral excellence in another person, is a result of the virtue of other people (Haidt, 2003).

Although compassion is characterized in a variety of different ways throughout the relevant literature in the field of psychology at the individual level, it is regarded as a social and dynamic process consisting of three interconnected stages: being aware of another's suffering (i.e., noticing), being empathetically concerned for the suffering situation (i.e., feeling), and taking action to eliminate or alleviate the suffering or making the suffering conditions for the sufferer more tolerable (i.e., responding) (Lilius et al., 2011a). Besides those main components of compassion, researchers considered sensemaking (also labeled as assessing or interpreting), which expresses the cognitive process of perceiving the emotional state and conditions of the suffering person, as the fourth separate dimension of the compassion process in some recent studies (Atkins & Parker, 2012; Simpson et al., 2013; Shahzad & Muller, 2016; Worline & Dutton, 2017).

Specifically, the noticing aspect of compassion involves awareness of a person's suffering about everything that causes material or affective harm, such as losing loved ones, illnesses, accidents, disasters, wars, or economic or political crises, which can trigger the compassion process (Lilius et al., 2008). Individuals may notice this compassion process started consciously or unconsciously by emotionally or physically reacting to pain triggers. Additionally, individuals may see a compassion trigger since the sufferer calls their attention or has experienced situations similar to the suffering condition (Kanov et al., 2004; Lilius et al., 2008; Worline & Dutton, 2017).

The feeling aspect of compassion indicates empathic concern for compassionate feelings, which establishes an emotional bond between the person who develops compassion and one in suffering. The compassionate feelings are short-term and diminish when the suffering is eliminated or continues for an extended period, such as having compassionate feelings for disabled people. The feeling aspect of compassion differs from the perspective-taking view of empathy (Kanov et al., 2004). Specifically, researchers have considered empathy under the umbrella of compassion. Here, empathy is related to understanding people from moment to moment, whereas compassion is broader or more profound than empathy, allowing deeper engagement with another person. In addition, empathy has an assumption that "we are distinct" and "we engage in subject-to-subject relating." In contrast, compassion has a presumption that "we are inseparable beings" and "we do not feel alone in our suffering." (Rubinstein, 2019). In this sense, empathy is a concept without a moral dimension or a behavioral response embedded within it. Conversely, compassion is a higher-order concept with a moral value[1] and behavioral dimension embedded in

[1] Moral value is related to the self-transcendence dimension in Schwartz's theory (1992), which includes benevolence and

it to help relieve the perceived suffering of the other (Linneberg et al., 2021). Furthermore, empathy is one's ability to connect with one's sufferer. Empathy does not involve an intent to alleviate suffering or a willingness to take action to reduce suffering. Instead, it reflects people's passive posture. However, compassion is more than feeling empathy; it is to act whether it successfully alleviates suffering (Kanov et al., 2004).

The concept of sensemaking is another aspect of compassion. Sensemaking involves gathering facts, evaluating them to understand the causes of suffering, and deriving meaning from it, ultimately motivating individuals to alleviate that suffering (Glover et al., 2023). The uncertainty inherent in the compassion process underscores the importance of sensemaking (Dutton et al., 2014). The ambiguity surrounding the probability and intensity of diverse adverse outcomes of suffering leads individuals to adopt sensemaking behaviors that diminish or hinder their genuine and empathetic concern for the afflicted (Kanov et al., 2017). When confronted with suffering, individuals strive to comprehend it to ascertain if it merits compassion (Paakkanen et al., 2021). The interpretation of these intentions and actions influences what each person notices, feels, and how they respond, thereby shaping the unfolding of the compassion response, as noted by Dutton et al. (2014).

The responding view of compassion refers to taking action to alleviate or eliminate another's suffering or make the suffering more bearable by giving the sufferer emotional support through words, providing financial aid, and helping them perform job tasks (Kanov et al., 2004; Dutton et al., 2007; Lilius et al., 2011a; Worline & Dutton, 2017). Compassionate responding is a critical aspect of compassion as it helps people manifest a humanizing approach to others and allows them to feel a sense of acceptance. Specifically, the responding view of compassion restricts people's self-focused interests, such as gaining versus losing resources (DeLury et al., 2020), conveys a non-judgmental perspective to others, and allows consistent acceptance of and enduring caregiving towards others (Madden et al., 2012). Also, compassionate responding makes compassion occur for broader purposes (DeLury et al., 2020). Here, compassion involves helping people alter their thoughts and behaviors and promoting helpful changes in their lives rather than just being concerned about their suffering. In this way, compassionate responding goes beyond one's personal needs to assist another's growth by dedicating time and resources and linking an individual with others who could supply more practical relief (DeLury et al., 2020).

The above components of compassion are interrelated and form compassionate behaviors of individuals. For instance, pro-social acting is not necessarily followed by noticing, feeling, and sensemaking the misfortune of others, and this is what distinguishes general helping behavior, social support, and citizenship behavior from compassionate behavior. Without the presence of elements of noticing, feeling, and sensemaking, these acts do not qualify as compassionate practices (Kanov et al., 2004; Lilius et al., 2008, 2011a; Worline & Dutton, 2017).

## Compassion in the organizations

In the management literature, aligning with the definition of compassion at the individual level, compassion is characterized as the ability of all employees in the workplace to collectively realize an employee's suffering (i.e., notice), assess the suffering (i.e., sensemaking), feel it empathically (i.e., feel), and take action to alleviate it (i.e., respond) (Lilius et al., 2011b).

Past studies have argued for compassion in organizations' dyadic and collective perspectives. Dyadic compassion occurs between two individuals, one suffering and the other who notices the suffering, feels it empathetically, and acts to eliminate or at least ease the suffering in the workplace (Lilius et al., 2011a).

Collective compassion is usually defined as a dynamic and interpersonal process that includes collectively noticing someone's suffering, assessing/interpreting the suffering, feeling empathetic concern for it, and responding to the suffering to alleviate or eliminate it in the organization (Dutton et al., 2007; Lilius et al., 2008). Here, collective compassion is more than an individual experience or a social process many people experience individually (Kanov et al., 2004). Instead, it is related to compassion organizing, defined as "a collective response to a particular incident of human suffering that entails the coordination of individual compassion in a particular organizational context" (Dutton et al., 2006, p.5). From this perspective, collective compassionate noticing, sensemaking, feeling, and responding are legitimized, propagated, and coordinated to eliminate or alleviate suffering through organizational factors. In this respect, studies on collective compassion investigated the role of organizational dynamics and social architecture (e.g., networks, interpersonal relations, leadership) during the formation or emergence of collective compassion (Dutton et al., 2006).

Besides compassion organizing, Madden et al. (2012) introduced compassion capacity as the emergence of organizational compassion without managerial direction in the collective compassion perspective. Compassion capacity

universalism. Schwartz (1992, p.1) defines values as "the criteria people use to select and justify actions and to evaluate people and events." In Schwartz's approach, values signify an ideal self (e.g., honesty or compassion) or an optimal condition of affairs (e.g., equality) that reflects basic human needs, such as the requirements for harmonious social interaction and the survival and well-being of groups.

was identified as a capacity to learn the behaviors of one another to be able to notice collectively, to understand the emotions of one another to be able to feel collective, and to learn how to coordinate their behaviors to be able to collectively respond to the existing and the future sufferings as well (Madden et al., 2012). While Madden et al. (2012) improved the concept of compassion at the organizational level of analysis by labeling it as compassion capacity, their study mainly focused on the emergence of compassion. It contributed to the literature on the collective and relational process view of organizational compassion. For instance, Madden et al. (2012) described the conditions necessary to create an organizational capacity for compassion without proper direction, such as cognitive, emotional, and resource diversity among people, the interdependence of people within the organization to fulfill their roles, and continuous social interaction among people in the organization.

We believe that as the term organizational capacity is related to a firm's resources, skills, and procedures that enable it to effectively achieve its goals and mission in the resource-based view of firms (Christensen & Gazley, 2008), organizational compassion capacity should also be associated with firm routines, procedures, values, and cultural artifacts that managers can control and assess it effectively in organizations. Nevertheless, those previous studies on organizational compassion disguised the complexity of compassion-related firm routines, norms, and values ingrained in the organizational culture.

### Cultural foundations of organizational compassion capacity

In this study, we examine the OCC from a cultural standpoint. Araújo et al. (2019) contend that compassion should be a part of an organization's culture. Jazaieri and Rock (2021) also assert that many organizations fail to acknowledge employee suffering, especially when it is ingrained in the organizational culture. Indeed, organizational culture is critical in either facilitating or hindering an organization's capacity for compassion (Simpson et al., 2015; Scerri & Presbury, 2021). A supportive organizational culture, in combination with careful consideration of available resources (i.e., resource usage culture), is essential for enabling employees to recognize, empathize with, and respond to others' suffering in a coordinated manner (Kanov et al., 2004). Here, resource usage culture refers to the policies and norms that ensure efficient resource allocation to support suffering employees. A supportive culture that provides physical and financial resources, as well as support staff, indicates that the firm is willing to go the extra mile, is concerned about declining standards, has more time to dedicate to its employees, and recognizes the emotional and physical impact of their work (Henshall et al., 2018; Lown et al., 2020). In addition, an entrenched organizational culture of mutual care fosters opportunities for employees to scrutinize and assess their behaviors, hence promoting and augmenting compassion inside firms. Conversely, obstacles to experiencing and implementing compassion, stemming from insufficient resources in the workplace and limited financial support for services, diminish employees' ability to cope and be compassionate, leading to high staff turnover, illness, absenteeism, and a perceived organizational threat (Henshall et al., 2018; Pestian et al., 2023).

Also, organizational culture, encompassing practices, norms, and values that unite individuals, legitimizes and systematizes compassion at the organizational level. Indeed, the perception of compassion may vary among different organizational social units, creating subcultures (Barsade & O'Neill, 2014). In this regard, Araújo et al. (2019) stress the importance of systematically reinforcing and communicating compassion in the organization. Here, the prevalence of compassion in organizations necessitates systemic organizational elements, such as values, practices, and routines, which mutually facilitate the notice, feeling, and response to suffering (Kanov et al., 2004). Simpson et al. (2015) also propose that an organization's compassionate mission should be deeply ingrained as a dynamic part of its culture. This way, the organization's culture often becomes the focal point of interventions related to compassion, challenging employees' professed values and underlying assumptions.

## Research methodology

We employ a meticulous approach to explore the notion of OCC and then construct a reliable and valid OCC scale, adhering to the recommendations of Churchill (1979) and the more recent studies conducted by DeVellis (2016), Yuan et al. (2019), Ellen et al. (2022), and Akgün et al. (2023). Our research contains four studies identifying and assessing the multi-dimensional conceptualization of the OCC (Netemeyer et al., 2003).

### Study 1: Item generation

We utilized deductive and inductive methods to determine the constituents of OCC by following the suggestions of Grant and Davis (1997) and Hinkin (1998). We thoroughly examined existing literature on organizational compassion to determine its distinct characteristics. We then formulated the interview questions using a deductive approach. Subsequently, we carried out semi-structured interviews to ascertain the constituents of the OCC and collect more comprehensive data.

### Procedure and sampling

We employed the phenomenological qualitative research in general and the descriptive phenomenology method in particular in this study. Descriptive phenomenology attempts to reveal the "essence" or "essential structure" of a phenomenon (i.e., specific experiences) by examining its variants (e.g., analyzing and evaluating individual descriptions of that experience) (Rangarajan et al., 2022). Descriptive phenomenology, in particular, is a method of phenomenological reduction that characterizes a phenomenon in terms of its essence. This method does not involve interpreting the described phenomenon. In other words, descriptive phenomenology focuses on elucidating the nature of an experience and discerning its distinctions from other experiences (Kirillova, 2018).

Descriptive phenomenology emphasizes the significance of bracketing, which involves researchers restraining their views, hypotheses, and assumptions to allow the phenomena to emerge from the available data (Dahlberg, 2006). In addition, descriptive phenomenology emphasizes intentionality, which suggests that awareness is constantly focused on something (Moustakas, 1994). Intentionality serves the purpose of elucidating the link between the noema (that is, what is experienced) and the noesis (that is, how those experiences are experienced) (Moustakas, 1994). Specifically, in the context of OCC, descriptive phenomenology examines how employees' perceptions of compassion and organizational culture and practices are in a mutually interactive relationship (Kirillova, 2018). Here, descriptive phenomenology generates detailed descriptions of how employees perceive compassion in a given organizational culture and practices, thus answering the 'What is going on?' or "What is it like?" question. Additional prescriptive research can build and improve assistance tools by considering these variables, themes, and patterns established by such detailed descriptions. (Wassler & Kuteynikova, 2020). Accordingly, descriptive phenomenology is a promising approach to investigating employees' lived experience of compassion. This approach comprehensively explains the individual elements that contribute to the perception of compassion, such as noticing, feeling, and responding. It also explores how these perceptions of compassion influence employees' behavior and perspectives when faced with others' suffering.

In the phenomenological qualitative study, we employed the purposive sampling method, providing a varied and rich source of information conducted in 2021 (Lincoln & Guba, 1986). To enhance the study's credibility aspect of trustworthiness, we employed maximum variation sampling before performing interviews (Lincoln & Guba, 1985). First, the participants must possess at least five years of tenure within the same organization to provide their experiences with organizational compassion well enough. In addition, these participants should have experienced suffering. Those sufferings specifically include the death of a family member, serious health problems of them or their family members, and organizationally inflicted suffering (e.g., layoffs, deadly accidents in the workplace, or death of a close friend or colleague in the organization). This way, we can capture their knowledge of the effectiveness of the firm's compassion-related policies and practices and improve the transferability aspect of trustworthiness by comprehensively describing the research setting and the underlying assumptions that played a crucial role in the study. Next, those participants should have been from different backgrounds, knowledge, sectors, and working settings to offer diverse experiences. Here, we aimed to generate themes and gain insights into organizational compassion beyond the existing literature. As a result, we identified and invited 15 out of 45 employees who experienced the organization's compassion from firms that collaborate with our School of Business administration. Those 15 participants, including eight male and seven female employees, were willing to participate in the research. They have a range of seven to fifteen years of professional experience and worked in information technologies (40%), manufacturing (27%), and service industries (33%). Besides those 15 MBA students working in the industry, we selected five top managers who influence, direct, or create the organization's compassion capacity to get more insights into the OCC. In our sampling, four male and one female managers were in the aluminum, textile, service (i.e., security), and food businesses. Those 20 respondents are sufficient for the data saturation of qualitative interviews. According to Saunders et al. (2016), at least twelve in-depth interviews should be performed to understand commonalities.

In the descriptive phenomenology method, the researcher asks, "What is this experience like?" "What does this experience mean?" and "How does this "lived experience" present itself to the participant?" (Rodriguez & Smith, 2018). Consistent with this approach, we first explained the concept of organizational compassion and the meanings of the three dimensions studied and argued in past studies during the interview, namely noticing, feeling, and supporting[2].

[2] In this study, we chose not to address the sensemaking aspect of compassion in the OCC context for specific reasons. First, according to some researchers (e.g., Lilius et al., 2011a), sensemaking is not a distinct sub-process of compassion. Instead, it occurs naturally throughout the compassion process, during which compassion givers evaluate their circumstances and the situation of needy individuals (Shahzad & Muller, 2016). Indeed, drawing from the social information processing theory of sensemaking, scholars have emphasized that organizational sensemaking comprises three closely interconnected processes– scanning (monitoring and collecting information regarding environmental trends, changes, and factors), interpretation (groups converting events into conceptual frameworks and forming a collective understanding of those events), and action (individuals determining suitable behaviors

Then, in the discussions, we used a semi-structured form that consisted of three main questions to describe those dimensions of OCC in detail. Our interview questions were: (1) how would you describe your organization's noticing, feeling, and responding aspects of compassion? (2) please give examples of your organization's noticing, feeling, and responding aspects of compassion, and (3) what kinds of practice do you use when implementing your organization's noticing, feeling, and responding to compassion? In addition, we inquired with in-depth questions, such as, "What exactly do you mean by that?" Are you able to elaborate on that further? Could you illustrate? These questions facilitated the process of improving and expanding the participants' responses. Upon the occurrence of data repetition and the absence of new data acquisition, we terminated the interview (Lincoln & Guba, 1986). When interviewing the employees and managers, we used the classroom setting as it was a natural environment and often a space that was not too noisy. Each interview lasted approximately 60 min (45–80 min), and the entire discussion was voice-recorded. Those procedures ensured the conformity aspect of trustworthiness, as we recorded all the decisions and stages of the study and provided a comprehensive report with their specifics. We transcribed audio recordings precisely using the Software program. We eliminated all identifying information and assigned pseudonyms to participants to guarantee anonymity. Before commencing the study, we verified transcripts against audio recordings to verify precision. Data analysis commenced immediately upon the initial data collection and persisted iteratively throughout the study.

## Analysis and results

After checking the records' accuracy, we followed the descriptive phenomenological analysis protocols, including a four-stage process, using the QSR NVivo software to systematically analyze and organize the interview data (Giorgi, 2009). This entails examining the transcripts to determine the overall relevance, identifying individual units of meaning, evaluating their importance, and combining them to create a structural depiction of the event (Langdridge, 2007). While depicted linearly in this context, Giorgi's (2009) four-stage phenomenological technique was, in fact, an iterative process.

Initially, our primary objective was to obtain a holistic perspective on the phenomenon under investigation (i.e., compassion). At this point, we meticulously reviewed the acquired data to comprehensively understand the phenomenon under investigation and compare the numerous components that comprise the experience of compassion and the distinctive qualities of noticing, feeling, and responding. In this stage, we did not make any presuppositions or judgments about the research data to keep the original appearance of the facts. To analyze transcripts describing the experience of compassion, we carefully considered all components of the experience. We devoted equal focus to every aspect of the experience, including noticing, feeling, and responding, and not just looking for instances of perception of compassion.

Second, we attempted to identify the meaning units through bracketing. At this stage, we broke down the overall experience into constituent meaning units or smaller units of meaningful information. We established a criterion to categorize the total experience into meaningful pieces. The criterion was to ascertain whether a specified component of the experience correlates with the cultural phenomenon of compassion. This may encompass expressions indicating cultural norms, values, artifacts, symbols, beliefs, practices, and procedures. By coding these meaning units, we highlighted the "significant statements" that explain how people experience compassion and its components.

Third, we transformed participants' words and expressions into phenomenologically sensitive expressions (i.e., higher levels of meaning) in the context of compassion capacity. We endeavored to transition from specific and unique meaning units to a broader interpretation. We converted the unprocessed data into narratives from a third-person perspective, making them more generalized to identify unchanging elements. For example, while the meaning units (e.g., the existence of norms) in person#1's transcript describe the specific experience of person#1, these specific experiences are also related to broader cultural frameworks. Person#1's description of the existence of norms can be analyzed as an instance of cultural norms to notice the suffering of others. In addition, we put the meaning units into groups based on changes in the noetic or noematic correlate of the participant's purpose. In this context, we have studied the environment or circumstance in which compassion occurred. This analysis includes assessing the organizational culture and practices and comparing the information

based on the collected information and shared understanding) (Daft & Weick, 1984; Weick et al., 2005; Shahzad & Muller, 2016). Here, it appears that sensemaking is intricately intertwined with other facets of the compassion process. Second, sensemaking theory suggests that individuals' understanding of a situation and their perception of the urgency of suffering influence their responses. Consequently, their interpretations and subsequent actions may not always align with feelings of compassion and could even contradict them (Paakkanen et al., 2021). Kanov et al. (2017) observed that individuals may interpret experiences of suffering in a manner that fosters empathic concern at times, while at other times, they may not. Third, an established tripartite model of the compassion process incorporates cognitive, affective, and behavioral elements (Kanov et al., 2004). According to this model, compassion only manifests in the combined and dynamic interrelationships of noticing, feeling, and acting processes, as Simpson et al. (2015) noted.

from the literature and theoretical framework with the textual descriptions.

In the final step, we used the converted meaning units to write a general structure of the experience (i.e., representing the phenomenon's essence). Here, we produced a chronological account of each participant's experience. Subsequently, the invariant qualities common to individual experiences are recognized and synthesized into a generalized structural experience. This phenomenon arises from eidetic reduction, which occurs when distinct meaning units are recognized as having similar underlying meanings. We illuminated the structure by considering the shared constituents of OCC while attending to variations of the participants' experiences. For instance, if cultural norms of noticing the suffering of others are evident among many participants, these recurring cultural norms would form the general structure of the compassion capacity for the given noticing culture.

The data regarding OCC revealed five experience constituents (invariant units): noticing, feeling, responding, collective action, and resource usage culture. Table 1 summarizes the descriptive phenomenological analysis.

To ensure confirmability, we used member-checking and peer-debriefing methods. We invited three participants to ensure the data analyzed was consistent with their experiences. The participants were allowed to express themselves comfortably and given enough time to describe their experiences. They indicated that the analyzed data were coherent with the meaning they gave to their lives. In addition to the respondents, our two colleagues in our faculty, experts in qualitative research and organizational behavior, examined the transcripts and formulated codes and themes. They subsequently compared their interpretations of the narratives with ours to assess the degree of consistency. They ensured that the codes, themes, and participants' ideas were congruent.

Based on the sample of employees and managers, we generated 76 items based on the experience constituents. However, we reduced the initial pool of 76 items to 65 items by removing redundant statements.

We then established a review panel to check the face and content validity of the generated 65 items. Seven experts, including four academicians and three industry professionals, were asked to identify redundancy, non-relatedness, and content ambiguity. Based on the expert opinions, we eliminated eight items from the initial pool of 65; thus, 57 remained for further analysis.

### Summary

For study 1, we performed interviews to understand the essence of OCC and created the primary questionnaire based on it. We conducted interviews with a sample of 20 industry professionals to delineate OCC's dimensions. The interview study identified five primary components common to OCC and 65 questionnaire items. After discussing with specialists, 57 questions were determined to evaluate the OCC.

## Study 2: Item purification

### Procedure and sampling

We deliberately chose the probable respondents from the industrial region associated with our university (i.e., convenience sampling). Stratton (2021) observed that researchers often resort to convenience sampling in academic studies with niche populations because of the inherent challenges in obtaining extensive data. We contacted firms where our university and the School of Business Administration collaborate on projects from diverse industries in Istanbul. We noted that involvement in our study is voluntary. We subsequently asked the management to identify at least two participants possessing the utmost expertise in the organization's culture and operations to participate in our survey to minimize the reliance on a single information source. The careful selection of experienced respondents who can grasp the measured concept aligns with Churchill's (1979) guidelines for scale development. Given that compassion phenomena manifest at the organizational level through cultural mechanisms, involving more experienced employees in this study is advantageous. Experienced employees better grasp the firm's culture (Mautla et al., 2022) and can elucidate the rationale behind organizational practices (Kwan et al., 2011). This clarification helps manage the unrealistic expectations that junior employees may have regarding what the organization should provide, ultimately nurturing compassion.

Also, experienced employees are well-versed in the current system and may navigate organizational processes differently or access relevant information more efficiently (Han et al., 2017). They can also identify ways to enhance the existing system (Bhattarai et al., 2022). Within the context of OCC, experienced employees can critically assess the existing constraints in implementing compassion practices within their organization, enabling them to explore potential improvements. Conversely, inexperienced individuals may be inclined to focus on short-term organizational issues when explaining compassion-related challenges without understanding how the organization operates to alleviate the negative impacts of employee distress.

Once the respondents were chosen, we instructed the management to notify each respondent, who can be top, middle, and lower-ranking employees, that their responses

**Table 1** Summary of descriptive phenomenological analysis

| Meaning Units– Example of Quotes | Description | Phenomenologically sensitive expression | Shared constituents |
|---|---|---|---|
| *Noticing a friend's suffering triggers corporate compassion. However, it is insufficient to notice someone's suffering from close friends. The organization should also be informed of the suffering. When people realize their friends are suffering, they notify the human resources department. The human resources department then disseminates information through e-mail, social media, and informal communication groups.*<br>*We have a hobby room in our firm. People meet, interact, and perform social events, such as celebrations, table tennis*, etc., *in that place. When we meet regularly there, we notice people's suffering by looking at their facial expressions, emotional moods (happiness and joys), behavioral clues, and job performance.* | Respondents indicate the collective awareness of workplace suffering nested in the organizational culture and norms guiding and encouraging them to display grief. Here, they know that noticing their colleagues' suffering is a valuable role and an appreciated practice in the organization. Respondents also note that organizations nurture relational networks, set formal communication mediums, and foster architecturally open spaces for people to notice other coworkers' sufferings. | Respondents mention that organizational values, norms, and practices encourage people to recognize others' sufferings in a short time. | Noticing culture |
| *We do not ignore the suffering of our organization's employees. Society-related norms, such as religion, national culture, traditions, and values, are infused into corporate culture and embody compassionate feelings. In addition to their education level and experience, we consider people's empathetic capacity when hiring them. We put ourselves in their shoes because many people work in the field. When we develop and implement new plans and policies, we consider the problems and suffering of employees because they have direct contact with customers.* | Respondents reveal their collective empathy and perspective-taking, which are embedded in the organizational culture. This aspect of compassion capacity highlights a work environment where warmth and concern are emphasized as organizational values and stories that inspire compassionate emotions and actions. | Respondents indicate that organizational values, norms, and practices encourage people to consider, deal with, and feel about others' sufferings. | Feeling culture |
| *Our firm has an online form every employee should complete when beginning their daily work. In that form, we ask if that person will work at home or in the office and how that person feels on that day. If that person does not feel good, we ask why that person feels that way. Then, during the day, one person from the human resources department calls them and tries to understand the problem with that person and solve that problem together.*<br>*We treat everyone equally when dealing with their sufferings. We have written formal procedures that direct us on how to treat people under different situations, levels, and types of suffering. We also use various actions to alleviate the suffering of people in organizations. For instance, we temporarily change their jobs to get them calm or feel better, reduce their job responsibilities, allow them to leave work earlier for a few days or weeks, and ask some people to spend time with them or be with them. We further change the positions of people in the organization. For example, we reposition a person from a clerical title to a warehouse employee.* | Respondents express how they eliminate or, at least, alleviate others' suffering and have a repertoire of possible responses to coworkers' suffering as part of cultural values. They internalize compassionate behavior as part of their beliefs and values to respond to workplace suffering. In addition, they continually modify their roles to include compassion or alter or ignore their work duties to react spontaneously to their coworkers' pain/suffering. | Respondents reveal that organizational values, norms, and practices encourage people to respond effectively and quickly to others' sufferings. | Responding culture |
| *People need to be heard when they suffer, and their pain should be solved or alleviated. Therefore, we meet with people regularly and spend time with them to create organizational synergy, constructive dialogue, and conversations. We ensure that they feel well, and we are friendly and sincere with them. This way, they talk honestly to us.*<br>*We create and use past stories to generate synergy in compassionate acts. For example, we had a terrible accident at our workplace. That person was injured, and later, he became paralyzed. That suffering made everyone sad. After we made that story part of corporate memory, we visualized it and made it an example for newcomers of what they should and should not do. In addition, we inquired into our policies and procedures. We asked how we could improve compassionate actions and make the situation smoother and less painful for people. For example, we make equal ordinate-subordinate people temporarily to deal with that person's suffering.* | Respondents report how they combine their compassionate actions to create synergy in the organization. Here, they learn from one another, create coherent actions, and enhance ties, trust, and credibility to establish compassionate acts collectively as cultural norms. | Respondents note that organizational values, norms, and practices encourage people to be coherent in their notice, feeling, and response to others' suffering, coordinate their compassionate actions, and create synergy. | Collective action culture |

**Table 1** (continued)

| Meaning Units– Example of Quotes | Description | Phenomenologically sensitive expression | Shared constituents |
|---|---|---|---|
| *While some people are suffering, rewarding others who assist them in their tasks makes the suffering people more depressed and unhappy. In this regard, we gave emotional rewards by recognizing them rather than monetary rewards. Also, we cut some percentage of people's wages as a backup fund for our firm. We have a policy and procedure regarding the use of that fund. For instance, we pay different funds to injured or divorced people. In addition, people donate money to suffering people, such as those with health issues. We contribute to them if they cannot get enough money from their coworkers. Furthermore, we provide plane tickets and vehicles to those needing help.* | Participants indicate the establishment of cultural procedures for using funds and resources to alleviate suffering at the workplace and the organization's social responsibility to compensate for the loss of people and their families after a suffering situation. | Respondents mention that organizations provide the necessary resources and funds to support people's suffering. | Resource usage culture |

would be kept confidential, assured those respondents that there were no correct or incorrect responses, and encouraged them to reply to the questions with the utmost honesty and openness. In addition, answering the 57 randomized statements/items derived from Study 1 within the survey was mandatory. Thus, we asked managers to request respondents to answer every question to avoid missing item issues. Each statement was assessed utilizing a 5-point Likert scale in the survey. The response category labels were "strongly disagree," "disagree," "neutral," "agree," and "strongly agree."

The recommended minimum sample size varies between 200 and 400 (Hair et al., 2010); nevertheless, we have considered more criteria to ensure robustness in the data. Researchers recommend a specific ratio of participants per variable or item (n: p), ranging from 5:1 to 20:1 ( Hair et al., 2010). Thus, we needed at least 285–1140 respondents to perform a data reduction analysis. We contacted 329 companies, and 244 responded to our email, indicating their interest in participating in our study. As a result, our sample of companies that could be analyzed ultimately consisted of 244 companies and 573 questionnaires. That sample size is more than 200 firms and above the 10:1 ratio size of 570 respondents. The data set was collected in the first part of 2022. In our sample, the respondents were employees/staff (37%), functional/department managers (21%), senior engineers (20%), product/project managers (14%), and owners/general managers (8%). 48% of the participants were female, whereas 52% were male.

The respondent departments were manufacturing (23), engineering and design (22%), marketing and sales (15%), finance (12%), human resources management (8%), quality management and control (8%), and other departments, such as logistics, operations, accounting (12%).

Those industries covered banking and finance (10%), information technologies (9%), automotive (9%), textile (9%), insurance (6%), software (6%), healthcare (6%), machinery (6%), pharmaceutical (5%), chemistry/chemical products (5%), consulting (4%), food (4%), plastics (3%), logistics (3%), retailing (3%), metal (3%), education (3%), security (2%) construction (2%), and telecommunication (2%).

## Exploratory factor analysis

We employed Exploratory Factor Analysis (EFA) to investigate the foundational structure of the data using the SPSS Version 21 statistical package (Hair et al., 2010). EFA details the number of variables/dimensions available to represent the data. Child (1990) states, "Exploratory Factor Analysis helps discover the probable original factor construction of a set of observed variables not having imposing a predetermined structure on the consequence."

Initially, we verified the data's factorability by utilizing the correlation matrix alongside Bartlett's sphericity test and the Kaiser-Meyer-Olkin (KMO) test (Zha et al., 2024). All inter-item correlations ranged from 0.309 to 0.825, within the permissible limits of 0.30 to 0.90 (Robinson et al., 1991). We also found that Bartlett's chi-square was $\chi2 = 14194.87$ with $df = 528$ and $p < 0.001$, demonstrating that the factors are interconnected. Further, The KMO value was determined to be 0.97, exceeding 0.90, indicating that the sample data is suitable for factor analysis.

We employ principal component analysis (PCA) and Varimax rotation as the rotation method to extract the factors. In PCA, the initial step is to ascertain the total number of components. The number of components was determined using Kaiser's criteria (also known as the eigenvalue technique), which is extensively used in the literature (Russell, 2002; Howard, 2016; Zha et al., 2024). According to suggestions from Hair et al. (2010), we eliminated the items whose component loadings were lower than 0.5 or those that deviated from the original idea (if there was a cross-loading).

Our analysis revealed five components with eigenvalues larger than the value of 1, as demonstrated in Table 2. The five-dimensional model of 33 items accounted for 69.97% of the total variance, exceeding the 60% requirement. The findings indicated that the first component accounted for

**Table 2** The results of EFA of organizational compassion capacity

| Variable | Items | F1 | F2 | F3 | F4 | F5 |
|---|---|---|---|---|---|---|
| | Collact1 | 0.51 | | | | |
| | Collact2 | 0.64 | | | | |
| | Collact3 | 0.68 | | | | |
| Collective | Collact4 | 0.70 | | | | |
| Action Culture | Collact5 | 0.74 | | | | |
| | Collact6 | 0.72 | | | | |
| | Collact7 | 0.73 | | | | |
| | Collact8 | 0.75 | | | | |
| | Resuse1 | | 0.82 | | | |
| | Resuse2 | | 0.77 | | | |
| Resource Usage Culture | Resuse3 | | 0.87 | | | |
| | Resuse4 | | 0.67 | | | |
| | Resuse5 | | 0.68 | | | |
| | Resuse6 | | 0.59 | | | |
| | Resuse7 | | 0.82 | | | |
| | Respcult1 | | | 0.71 | | |
| | Respcult2 | | | 0.75 | | |
| Responding | Respcult3 | | | 0.64 | | |
| Culture | Respcult4 | | | 0.62 | | |
| | Respcult5 | | | 0.66 | | |
| | Respcult6 | | | 0.73 | | |
| | Respcult7 | | | 0.67 | | |
| | Notice1 | | | | 0.72 | |
| Noticing | Notice2 | | | | 0.73 | |
| Culture | Notice3 | | | | 0.80 | |
| | Notice4 | | | | 0.77 | |
| | Notice5 | | | | 0.69 | |
| | Feel1 | | | | | 0.69 |
| Felling | Feel2 | | | | | 0.55 |
| Culture | Feel3 | | | | | 0.64 |
| | Feel4 | | | | | 0.71 |
| | Feel5 | | | | | 0.69 |
| | Feel6 | | | | | 0.58 |
| Eigenvalues | | 16.44 | 2.35 | 1.86 | 1.49 | 1.03 |
| % of variance | | 49.88 | 7.12 | 5.34 | 4.51 | 3.12 |

Only factor loadings greater than 0.50 are displayed in the table for clarity. Loadings below this threshold were suppressed. Extraction was conducted using principal component analysis, and varimax rotation was applied

49.88% of the total variation, below the 50% benchmark (Podsakoff & Organ, 1986). No substantial bias associated with common method variance was identified in the OCC scale (Fuller et al., 2016).

Besides the PCA technique, we additionally performed a parallel analysis to assess the appropriateness of the five-factor structure for the scale more rigorously and to evaluate the reasonableness of the EFA results following Thompson's (2004) recommendations. Here, parallel analysis was chosen because it is considered a superior alternative to other component selection techniques (O'Connor, 2000). For the parallel analyses, we compared the eigenvalues to randomly produced datasets characterized by the following parameters: 10 variables, a sample size of 573, 1,000 random datasets, and the 95th percentile of eigenvalues. The observed eigenvalues corresponding to the initial ten components were 16.44, 2.35, 1.76, 1.49, 1.03, 0.72, 0.63, 0.56, 0.51, and 0.49. The upper confidence bounds for the initial ten random-data eigenvalues were 1.21, 1.15, 1.08, 1.05, 1.01, 0.98, 0.94, 0.91, 0.85, and 0.80. The values indicate that the eigenvalues from the observed data exceeded those from the random data up to the sixth component, implying that a maximum of five components should be recovered from this dataset. In other words, the five factors extracted through PCA were reasonable.

### Summary

In Study 2, we analyzed 244 firms utilizing 573 surveys to refine the question items developed in Study 1. To enhance

the OCC question items, we carried out EFA, evaluated their reliability, and analyzed items. As a result of the findings, five dimensions consisting of thirty-three question items were revealed to evaluate OCC.

## Study 3: Construct validation and reliability assessment

### Procedure and sampling

We performed the same data collection procedure as Study 2 for Study 3 but used different firms and managers. However, the question items were categorized into groups based on their respective factors in the survey. Regarding the minimum sample size for confirmatory factor analysis, we estimated the required number of respondents based on the proposal made by Hair et al. (2010), who reported that 5 to 10 respondents per item ($k$) of the instrument are necessary for validation studies. Since we had 33 items, we needed responses ranging from 165 to 330. We also utilized Soper's (2021) formula to ascertain the sample size a priori, particularly for confirmatory factor analysis. We assumed an expected effect size of 0.30, a statistical power of 0.95, encompassing five latent and 33 observable variables, with a significance level of 0.05 (Cohen, 1992). We thus required a minimum sample size of 308 respondents to identify the effect. The data set was collected in the second part of 2022. During the data collection process, we reached out to 331 distinct companies. Of these, 209 companies willingly consented to participate in our research and promptly submitted the surveys via email. Following this, our sample for Study 3 consisted of 209 firms and 428 questionnaires, which exceeded the recommended minimum sample size of 10 times and Soper's (2021) criteria.

In our sample, the respondents were employees/staff (38%), functional/department managers (30%), senior engineers (14%), product/project managers (13%), and owners/general managers (5%). The respondents included 45% female and 55% male.

The respondent departments were engineering and design (21%), marketing and sales (16%), finance (18%), manufacturing (12%), human resources management (9%), quality management and control (6%), and other departments, such as logistics, operations, accounting (16%).

Those industries covered banking and finance (13%), textile (10%), information technologies (9%), chemistry/chemical products (8%), software (7%), food (6%), energy (6%), automotive (6%), machinery (6%), consulting (5%), healthcare (5%), construction (5%), education (4%), metal (3%), retailing (3%), security (2%), and pharmaceutical (2%).

**Table 3** The result of CFA about organizational compassion capacity variables

| Dimensions | Item Loadings | AVE | CR | Cronbach's α |
|---|---|---|---|---|
| *Collective Action Culture* | | 0.59 | 0.89 | 0.89 |
| Collact3 | 0.74 | | | |
| Collact4 | 0.76 | | | |
| Collact5 | 0.76 | | | |
| Collact6 | 0.75 | | | |
| Collact7 | 0.77 | | | |
| Collact8 | 0.80 | | | |
| *Resource Usage Culture* | | 0.61 | 0.92 | 0.92 |
| Resuse1 | 0.75 | | | |
| Resuse2 | 0.80 | | | |
| Resuse3 | 0.81 | | | |
| Resuse4 | 0.79 | | | |
| Resuse5 | 0.81 | | | |
| Resuse6 | 0.81 | | | |
| Resuse7 | 0.70 | | | |
| *Responding Culture* | | 0.59 | 0.89 | 0.89 |
| Respcult1 | 0.71 | | | |
| Respcult2 | 0.71 | | | |
| Respcult3 | 0.81 | | | |
| Respcult4 | 0.84 | | | |
| Respcult5 | 0.81 | | | |
| Respcult7 | 0.71 | | | |
| *Noticing Culture* | | 0.65 | 0.90 | 0.90 |
| Notice1 | 0.74 | | | |
| Notice2 | 0.80 | | | |
| Notice3 | 0.86 | | | |
| Notice4 | 0.83 | | | |
| Notice5 | 0.80 | | | |
| *Feeling Culture* | | 0.58 | 0.91 | 0.89 |
| Feel1 | 0.76 | | | |
| Feel2 | 0.78 | | | |
| Feel3 | 0.77 | | | |
| Feel4 | 0.76 | | | |
| Feel5 | 0.68 | | | |
| Feel6 | 0.80 | | | |

### Analysis and results

Using the AMOS 23, we conducted a Confirmatory Factor Analysis (CFA) to test the OCC scale's construct validity, reliability, and dimensionality. We used the maximum likelihood (ML) estimator for parameter estimation and did not allow any correlated errors and cross-loading to avoid misspecifications. For item retention in CFA, we used item loadings that were more than 0.65. Table 3 shows a construct comprising five factors with 30 questions and a measurement model with a good fit. The values of the Comparative Fit Index (CFI) = 0.921, Iterative Fit Index (IFI) = 0.921, and Tucker-Lewis index (TLI) = 0.913, above 0.90, indicating acceptable fit (Hu & Bentler, 1999). The $\chi^2$value was 1097,673 with 395 degrees of freedom and

$p = 0.000$, and the $\chi 2/df$ ratio was 2.779, which is less than three and indicates a good fit (Byrne, 2001). Further, the Root Mean Square Error of Approximation (RMSEA) value was 0.065 less than the 0.80 value, suggesting a good fit (Hair et al., 2010).

Besides the model fit indices based on fixed cutoffs, we applied dynamic fit index cutoffs (McNeish & Wolf, 2023). We utilized the web-based Shiny program (https://www.dynamicfit.app) to determine dynamic fit index cutoffs (McNeish & Wolf, 2023). The dynamic fit index conveys insights into the magnitude of the misfit rather than merely categorizing the fit as satisfactory or unsatisfactory. There are three levels of misspecification. Level 1 denotes the threshold for a "minor" misspecification, Level 2 signifies the threshold for a "moderate" misspecification, and Level 3 represents the threshold for a "significant" misspecification. The Level 1 fit indices for the model (SRMR = 0.033, RMSEA = 0.028, CFI = 0.985) conformed to the dynamic fit index cut-offs (SRMR = 0.074, RMSEA = 0.089, CFI = 0.963). Specifically, less than one-third of the items in the model exhibited significant residual correlations with other items in the model.

Also, we checked discriminant validity with the ten two-factor model (Bagozzi et al., 1991). According to this method, we compared the unconstrained and restricted models by forming pairs between the constructs. The changes in $\chi^2$ for each factor were significant ($\Delta\chi^2 > 3.84$), demonstrating discriminant validity.

We further examined several alternative measurement models to detect the dimensionality of the factor structure. According to the data presented in Table 4, Model 6 is the foundational model that accounts for all five factors. Model 5 is an identical representation of the five-factor model seen in model 6, with the distinction that the factors are not associated. Model 1 is a unifactorial model, where all 30 items are loaded onto a single factor. Finally, model 4 reflects compassion capacity as a second-order factor, where the five dimensions are first-order factors. We first examined each model's fit using the fit indices and the chi-square/df values. All alternative models demonstrated a worse fit than the base and second-order models based on absolute values. After that, we tested the relative chi-square/df of each alternative model to our basic model more rigorously. After considering all the conclusions, we selected the second-order model that aligns with five first-order factors as our primary model. Thus, we considered the compassion capacity scale as a second-order construct.

After conducting an assessment, we determined the reliability of each dimension. The composite reliability (CR) value, which was manually calculated, and Cronbach's Alpha value, calculated by SPSS 21, for each dimension of the OCC surpassed the required level of 0.70 (Fornell & Larcker, 1981). The dimensions' Average Variance Extracted (AVE), calculated manually, was higher than the specified cut-off value of 0.50 (Fornell & Larcker, 1981). We also calculated the descriptive statistics (mean and standard deviation), kurtosis, and skewness of the data to determine whether the data were acceptable using SPSS version 21. The kurtosis and skewness values were lower than seven and two cutoff values, respectively, indicating that variables were normally distributed (Tabachnick et al., 2013). We further calculated the mean values of items for each variable to demonstrate the correlations among those variables. All correlation values were less than 0.80 cutoff values, demonstrating a moderate relationship. For assessing discriminant validity, the square root of the AVE value for each variable was compared to the correlation between pairs of variables, as presented in Table 5. The results show that those variables are distinct from each other.

### Summary

Study 3 validated an OCC scale comprising five distinct components and 30 items. The findings supported the OCC's construct validity since each dimension had internal solid consistency. Additionally, the findings indicated that OCC encompasses noticing, feeling, responding, collective action, and resource usage culture.

## Study 4: Scale comparison

Since some scales of organizational compassion were previously developed in the literature, such as experienced compassion (Lilius et al., 2008) and NEAR (Simpson & Farr-Wharton, 2017), it is essential to show divergent validity between them and the OCC scale. In other words, it should be proven that those scales are distinct.

**Table 4** Test of alternate models

| Model | Details | $\chi 2$ | Df | $\chi 2/df$ | *p*-value | CFI | IFI | TLI | RMSEA |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Single factor model | 2669,909 | 405 | 6.592 | 0.000 | 0.745 | 0.746 | 0.726 | 0.114 |
| 2 | Two-factor model | 2256,213 | 376 | 6.001 | 0.000 | 0.787 | 0.788 | 0.771 | 0.115 |
| 3 | Three-factor model | 1982,289 | 402 | 4.931 | 0.000 | 0.816 | 0.816 | 0.812 | 0.104 |
| 4 | Second order model | 1122,635 | 400 | 2.807 | 0.000 | 0.919 | 0.919 | 0.911 | 0.065 |
| 5 | Five-factor uncorrelated | 2442,989 | 405 | 6.032 | 0.000 | 0.770 | 0.771 | 0.753 | 0.109 |
| 6 | Base Model (five-factor correlated) | 1097,673 | 395 | 2.779 | 0.000 | 0.921 | 0.921 | 0.913 | 0.065 |

**Table 5** Correlations and descriptive statistics

| Dimensions | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| Collective Action Culture | 1 | (0.77) | | | | |
| Resource Usage Culture | 2 | 0.58*** | (0.78) | | | |
| Responding Culture | 3 | 0.65*** | 0.72*** | (0.77) | | |
| Noticing Culture | 4 | 0.53*** | 0.56*** | 0.69*** | (0.81) | |
| Feeling Culture | 5 | 0.64*** | 0.64*** | 0.75*** | 0.71*** | (0.76) |
| Mean | | 3.63 | 3.14 | 3.27 | 3.49 | 3.56 |
| S. dev. | | 0.77 | 0.98 | 0.89 | 0.92 | 0.83 |
| Skewness | | −0.80 | −0.31 | −0.31 | −0.50 | −0.55 |
| Kurtosis | | 0.93 | −0.48 | −0.16 | −0.07 | 0.08 |

***$p<0.01$, **$p<0.05$, *$p<0.1$

Values along the diagonal are the square root of AVE

### Measures and sampling

We used multi-item scales from previous research to compare the various organizational compassion scales. We utilized 5-point Likert scales ranging from "strongly disagree" (1) to "strongly agree" (5) to measure OCC, NEAR, and collective empathy-related variables. Specifically, the response category labels were "strongly disagree," "disagree," "neutral," "agree," and "strongly agree." However, experienced compassion was measured using an itemized rating scale including "extremely low" (1), "low" (2), "normal" (3), "high" (4), and "extremely high" (5). The appendix contains the utilized measures. We grouped the question items based on their respective factors. Below is a short overview of the measures.

For Simpson and Farr-Wharton's (2017) NEAR organizational compassion scale, we adopted 21 questions to assess its collective noticing, emphasizing, evaluating, and responding variables. In the NEAR scale, collective noticing denotes the shared and individual recognition of pain within a social system via a relational interaction. The collective feeling inside an organization denotes shared emotions among closely interacting individuals. Individuals who experience emotions are more inclined to empathize with others who endure shared feelings. Collective responding refers to a coordinated response to the emotional distress experienced by individuals within an organization. The collective assessment reveals the rational interpretations or sensemaking of suffering, its causes, the deservingness of the sufferer, and the degree of help that ought to be offered inside the organization.

We adopted Lilius et al.'s (2008) experienced compassion scale by asking three questions, including how frequently people experienced compassion on the job and from their supervisor and co-workers.

For collective empathy, which refers to a shared state of empathy among multiple individuals, reflecting the degree to which members of a team or group empathize collectively, we modified the question items developed by Akgün et al. (2015) from teams to organizations. We asked seven questions to assess cognitive empathy, five to measure emotional empathy, and three to evaluate behavioral empathy. Collective empathy comprises three dimensions: collective, affective, and behavioral empathy. Cognitive empathy denotes the capacity to comprehend another person's emotions and adopt their perspective. It signifies the understanding of perspectives inside organizations. Affective empathy demonstrates individuals' emotional responses to the emotional states of others. Here, individuals empathetically experience the emotions of others in the organization they have observed and comprehended. Behavioral empathy refers to individuals' capacity to react to others' emotions, typically manifested as a communicative response to those emotions.

Upon selecting the English question items, two research assistants translated them into Turkish. Afterward, a third individual translated them back into English using the parallel translation technique suggested by Usunier (2011). We emphasized translation's semantic and cultural aspects rather than linguistic and technical aspects. After resolving all discrepancies, we created the questionnaire through consultations with knowledgeable researchers specializing in organizational behavior and serving as knowledgeable evaluators. The appropriateness of the Turkish version of the survey was subsequently evaluated through pre-testing by eleven full-time industrial personnel who are also part-time graduate students. The respondents exhibited no difficulty in comprehending the items. After confirming the validity of the questionnaire items, we disseminated and collected the surveys.

We collected a new dataset for the fourth study by adhering to the same methods and rationale for picking samples as we did for the second and third studies when we conducted the research. The data set was collected in the first part of 2023.

We contacted 184 firms, of which 128 willingly consented to participate in our research and subsequently submitted the surveys. Consequently, our sample that could be analyzed ultimately consisted of 128 firms with 289 questionnaires.

In our sample, the respondents were employees/staff (44%), functional/department managers (21%), senior engineers (19%), product/project managers (10%), and owners/general managers (6%).

The respondent departments were marketing (22%), engineering and design (21%), finance (15%), human resources (12%), manufacturing (10%), quality management and control (8%), and other departments, such as logistics, operations, and accounting (12%).

Those industries covered banking and finance (12%), manufacturing (10%), electronics and information technologies (8%), retailing (8%), telecommunication (7%), machinery (6%), textile (6%), automotive (6%), plastics (6%), construction (5%), and chemistry (5%), consulting (5%), software (5%), healthcare (4%), education (4%), and tourism-hotels (3%).

#### Measurement validation

For Study 4, we utilized the PLS-SEM to determine the validity of the measures due to the smaller sample size and many variables and their related question items (Ringle et al., 2015). Based on the findings of the PLS-SEM investigation, as shown in Table 6, we found that the PLS-based AVE, composite reliability, and Cronbach's alpha values were above the reliability level. All question items used in the research project have received acceptable outer loadings significantly higher than the recommended standard 0.70.

Table 6 displays the PLS-SEM-based outcomes of the correlation analysis, Heterotrait-Monotrait (HTMT) values, and the square roots of AVE. The square root of the AVE for each variable exceeded the shared variance across pairs of variables. The HTMT ratio values fall within the range of 0.07 to 0.84, meeting the specified conditions (Henseler & Sarstedt, 2013).

Table 6 further demonstrates that the scale of OCC differs from the other NEAR scale of Simpson and Farr-Wharton (2017). The correlation between OCC-related and NEAR-related variables ranges from 0.29 to 0.62, and HTMT values range from 0.37 to 0.67, respectively. Similarly, the correlation between OCC-related variables and the experienced compassion scale variable of Lilius et al. (2008) ranges from 0.46 to 0.58, and HTMT values range from 0.51 to 0.66, respectively. Further, the correlation between OCC-related variables and the collective empathy-related variables of Akgün et al. (2015) ranges from 0.45 to 0.62, and HTMT values range from 0.48 to 0.66, respectively. These results demonstrate that organizational compassion-related scales are distinct from each other.

#### Summary

Study 4 supports that organizational compassion-related scales are different and have discriminant validity. In addition, OCC is distinguished statistically from collective empathy and collective compassion.

## Discussion and implications

### Theoretical implications

This study offers various theoretical contributions. First, this study improves the researchers' current understanding of organizational compassion components in the literature. For instance, concerning the noticing aspect of compassion, previous studies showed that noticing, as a developing process, is connected to the collective acknowledgment of suffering inside the organization (Kanov et al., 2004; Simpson & Farr-Wharton, 2017). From this point of view, individuals have a mutual understanding that their friends or colleagues suffer in their functions or cultural subgroups rather than other people in different functions or subcultures, as noted by Nolan et al. (2022). In the context of OCC, this study emphasizes that noticing is not necessarily a naturally occurring activity in the organization. Instead, noticing is an activity that occurs within a framework of cultural norms, routines, and procedures. Noticing culture encourages employees to focus on the suffering of others in a non-judgmental way and less likely to maintain stereotypes, and develops cultural equality for diverse employees in different departments.

Regarding the feeling aspect of compassion, past studies viewed compassion as the interpersonally empathic response to another person's suffering (Kanov et al., 2004; Simpson & Farr-Wharton, 2017). However, it should be noted that empathy might be swept away by time-sensitive tasks, as noted by Henshall et al. (2018, and each function, unit, or group may have a distinct emotional climate capable of reflecting its empath with suffering people (Burch et al., 2016). On the other hand, this study emphasizes that OCC embeds employees' empathic concerns and responses into corporate norms, values, and practices that last longer. Specifically, this study highlights that OCC enables an organization to establish and structure an empathic culture[3] regulating empathic emotional expressions and encapsulating the process of empathy that moves individuals in a

[3] Researchers observed that an empathic culture exists when empathy is integrated across organizational levels, characterized by a shared cultural trait among individuals within their corporate practices, embedded in the organization's intricate framework of values, beliefs, and assumptions (Lourenço et al., 2022; Arghode et al., 2022).

**Table 6** Correlations, Fornell-Lacker, and HTMT ratio values in study 4

| Mean | S. dev. | Variables | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.67 | 0.62 | Collective action culture | 1 | (0.79) | *0.45* | *0.68* | *0.58* | *0.68* | *0.67* | *0.62* | *0.60* | *0.62* | *0.57* | *0.61* | *0.65* | *0.65* |
| 2.89 | 0.94 | Resource usage culture | 2 | 0.43*** | (0.84) | *0.54* | *0.52* | *0.56* | *0.37* | *0.43* | *0.44* | *0.45* | *0.51* | *0.51* | *0.50* | *0.48* |
| 3.05 | 0.78 | Responding culture | 3 | 0.64*** | 0.50*** | (0.83) | *0.74* | *0.81* | *0.47* | *0.57* | *0.57* | *0.56* | *0.60* | *0.66* | *0.61* | *0.55* |
| 3.34 | 0.87 | Noticing culture | 4 | 0.54*** | 0.48*** | 0.68*** | (0.87) | *0.84* | *0.42* | *0.47* | *0.51* | *0.52* | *64* | *0.59* | *0.54* | *0.56* |
| 3.46 | 0.72 | Feeling culture | 5 | 0.62*** | 0.52*** | 0.74*** | 0.77*** | (0.83) | *0.51* | *0.52* | *0.54* | *0.52* | *0.66* | *0.59* | *0.59* | *0.57* |
| 3.65 | 0.65 | Collective noticing | 6 | 0.62*** | 0.35*** | 0.45*** | 0.39*** | 0.47*** | (0.90) | *0.70* | *0.70* | *0.68* | *0.60* | *0.64* | *0.61* | *0.65* |
| 3.39 | 0.78 | Collective empathizing | 7 | 0.57*** | 0.40*** | 0.53*** | 0.43*** | 0.48*** | 0.65*** | (0.88) | *0.77* | *0.81* | *0.65* | *0.71* | *0.69* | *0.65* |
| 3.40 | 0.72 | Collective assessing | 8 | 0.56*** | 0.41*** | 0.52*** | 0.47*** | 0.50*** | 0.66*** | 0.71*** | (0.90) | *0.84* | *0.57* | *0.77* | *0.71* | *0.74* |
| 3.43 | 0.74 | Collective responding | 9 | 0.58*** | 0.42*** | 0.53*** | 0.48*** | 0.49*** | 0.65*** | 0.76*** | 0.78*** | (0.89) | *0.63* | *0.78* | *0.75* | *0.71* |
| 3.23 | 0.72 | Experienced compassion | 10 | 0.50*** | 0.46*** | 0.53*** | 0.57*** | 0.58*** | 0.53*** | 0.58*** | 0.51*** | 0.56*** | (0.88) | *0.70* | *0.65* | *0.63* |
| 3.31 | 0.66 | Cognitive empathy | 11 | 0.57*** | 0.48*** | 0.62*** | 0.54*** | 0.55**** | 0.61*** | 0.67*** | 0.72*** | 0.74*** | 0.62*** | (0.84) | *0.82* | *0.79* |
| 3.45 | 0.67 | Emotional empathy | 12 | 0.59*** | 0.46*** | 0.56*** | 0.49*** | 0.53*** | 0.57*** | 0.63*** | 0.65*** | 0.69*** | 0.57*** | 0.75*** | (0.83) | 0.83 |
| 3.59 | 0.64 | Behavioral empathy | 13 | 0.59*** | 0.45*** | 0.50*** | 0.51*** | 0.51*** | 0.60*** | 0.59*** | 0.68*** | 0.66*** | 0.56*** | 0.73*** | 0.75*** | (0.89) |
| | | Composite reliability | | 0.91 | 0.93 | 0.93 | 0.92 | 0.92 | 0.96 | 0.93 | 0.94 | 0.95 | 0.85 | 0.94 | 0.90 | 0.94 |
| | | Variance extracted | | 0.63 | 0.71 | 0.69 | 0.76 | 0.68 | 0.81 | 0.77 | 0.82 | 0.79 | 0.77 | 0.71 | 0.70 | 0.71 |
| | | Cronbach's α | | 0.90 | 0.93 | 0.92 | 0.92 | 0.91 | 0.95 | 0.92 | 0.93 | 0.95 | 0.85 | 0.94 | 0.89 | 0.94 |

The diagonal values of Fornell-Lacker's criteria represent the square root of AVE; the italicized values above the diagonal denote HTMT values, and the correlation between variables is displayed below

***$p<0.01$, **$p<0.05$, *$p<0.05$

coordinated way when feeling people's suffering. In a sense, this finding empirically supports the assertion of Arghode et al. (2022). They note that empathy is most effectively conveyed through compassion, and an empathic culture encompasses cultural awareness and the capacity to envision the experiences, emotions, or perspectives of individuals who may differ in ethnic or cultural background.

Concerning the responding aspect of compassion, past studies emphasized the individualistic and collective responsive behaviors of employees (Simpson & Farr-Wharton, 2017; Henshall et al., 2018). This study implies that responding culture legitimizes and coordinates individual or collective responses to suffering through established practices and policies (Lilius et al., 2011b). Indeed, some employees may not get enough support when suffering due to ignorance or unawareness of other people or units in the organization. Here, responding culture justifies the responsive injustice about suffering and reduces hegemonic practices in the different groups and units in the organizations through the formation and articulation of common values systems and action frames.

This study highlights that collective action culture is a new dimension of organizational compassion. Previous studies emphasized acting individually or collectively for the suffering of individuals as a part of the responding aspect of compassion (Dutton et al., 2014; Guinot et al., 2020; McAllum et al., 2023; Baluku et al., 2024). In addition, those compassionate actions were dispersed differently in groups or units and were idiosyncratic based on the person's suffering (Steindl et al., 2018). This study highlights that compassion should not be realized through acting alone or collectively and that compassioned actions should have coalesced through norms and values for viable organizational compassion to manifest. In line with the self-transcendence literature (Sánchez-Hernández et al., 2023), this study also affirms that collective action culture reflects a sense of "we-ness" or "one-ness" based on shared cultural attributes, bringing together seemingly diverse individuals and functional and social units, supporting the assertation of Yitshaki et al. (2022). Yitshaki et al. (2022) note that compassion can trigger collective action as it relates to the broader applicability of social concerns, extending from individual suffering to communal demands.

The resource usage culture is also a new dimension of organizational compassion. Previous research highlighted the importance of resources, such as psychological (e.g., gestures), social (e.g., facilitation of vacation time), and financial support (e.g., funds to support employees), allocations to alleviate people's suffering in the literature (Madden et al., 2012; Dutton et al., 2014; Henshall et al., 2018; Guinot et al., 2020; Lourenço et al., 2022). However, it should be noted that there is still much room for improvement in the resource usage aspect of compassion. This study emphasizes that firms need some policies, procedures, and norms for managing resource usage to optimize resource utilization. This way, resource usage culture ensures that resources are allocated and distributed efficiently and systematically, explicitly signals to employees suffering that they are valued, and entails the organization's long-term orientation of compassionate behaviors as a source of long-term competitive advantage.

Second, this study enhances the comprehension of compassion within the organizational context. Previous studies indicate that compassion is demonstrated in brief encounters between individuals or between individuals and groups/subunits (Dutton et al., 2007; Kabadayi et al., 2019). These micro-occasions arise from interpersonal connections, signifying brief units of ephemeral relational micro-moments that necessitate closeness or intimacy (Dutton & Heaphy, 2003). On the other hand, this study underlines that OCC is an organizational characteristic that includes publicly available cultural values objectified in the organization and a dynamic instrument under the control of management. Such an organization's culture serves as a resolution to compassionate activities in organizations and promotes and reinforces compassionate behavior among its members.

Also, this study extends the theoretical boundary of the organizational compassion concept. Past studies mainly investigated compassion from a social exchange perspective (i.e., an emergent and relational process of noticing, feeling, and suffering the sufferings of others) (Lilius et al., 2011b; Madden et al., 2012). Conversely, this study emphasizes the RBV framework in the context of organizational compassion. The resource-based view highlights the role of resources (e.g., cultural resources, such as noting culture) and capabilities/capacities (organizational compassion capacity in this case) in explaining firm performance differences (Barney et al., 2001). For example, RBV argues that a resource can be a sustainable competitive advantage if it possesses the following characteristics: it cannot be imitated, it varies among firms, another firm cannot obtain it, another resource cannot replace it, and it provides value to the firm (Ferreira & Ferreira, 2024). Here, organizational compassion, as an organizational capacity referring to the resources and culture of an organization to implement compassionate activities in practice, is difficult to delineate and is often described as an invisible asset. In this case, OCC generates positive value for the firm, is exceptional or uncommon among existing and potential competitors, is not easily imitable, and cannot be replaced by another source by firms competing with the organization.

This study further emphasizes that OCC is useful for larger firms to obtain its benefits as a strategic advantage by conducting a field study on manufacturing and service firms.

Indeed, past studies either have not considered firm size's role in organizational compassion[4] (Moon et al., 2016) or conducted empirical investigations in small and medium-sized firms so far where people are familiar with each other (see, Moon et al., 2016; Guinot et al., 2020).

### Managerial implications

Based on our findings, we advise managers to view compassion as a part of organizational culture and legitimize and propagate it. In this respect, they should develop and implement values, norms, and practices to encourage employees to recognize, feel, and respond to others' sufferings. For that, managers should ensure that the daily language in the organization includes compassionate words and that stories of compassion are shared as cultural values. Organizational stories facilitate the dissemination of individual acts of compassion, enabling employees to learn about and adopt compassionate behaviors and experiences. This process also allows newcomers to absorb these stories, gaining insight into the compassionate emotions and memories of others. In addition, managers should encourage employees to use symbols in the corporate culture to alleviate people's suffering. Next, managers should design a working environment where workplace sufferings are considered, and employees assume that the organization would be concerned with their own needs and interests and positively engage with social issues.

Managers should also improve the role of human resources departments in organizations to leverage OCC. For instance, managers can encourage and support the human resources department to educate employees and elevate their self-transcendent emotions. Additionally, managers can form a social development, service, and affairs subunit in the human resources department. That subunit's responsibilities include dealing with people's suffering, organizing pain relief activities, and developing and implementing an emergency plan for organization-wide suffering. That subunit can also educate employees about different tasks so that they can become alternatives to each other and redefine their duties and roles during the suffering situations of others. Also, managers can create a discretionary notification system that enables employees to report suffering circumstances on their own or their families to the top management and human resources management department. This communication system allows employees to be collectively informed about their colleagues' suffering situations, contributing to the capacity for noticing.

Finally, managers should deal with suffering-related issues from a more humanistic perspective. Here, managers should be role models for compassionate actions within and outside the organization to strengthen the compassionate culture, demonstrate paternalistic leadership, and create resources and funds for employee suffering. In addition, managers should encourage employees to express their negative feelings and solve their problems or deal with their suffering quickly. If they become late in solving those issues, employees' suffering gets more profound and becomes chronic in the organization. Next, managers should encourage honesty in the organization to deal with suffering employees' excessive demands and abusive behavior. Employees should have the courage to express their feelings authentically and understand the difference between "I will not work today because I do not want that" and "Since I feel terrible now, I cannot work very effectively. I need your permission for a day break" in the organization.

## Limitations and future research

There exist some restrictions within this study. For example, this study covers only companies operating in Turkey. Although organizational compassion has gained momentum as a research area in recent years, mainly in the Western countries in the literature, its importance is still underestimated in other countries. Organizational compassion is essential for the business environments in Turkey, where pandemics, earthquakes, and economic and regional crises have been a concern recently. However, it should be noted that the Turkish context may not be generalized and should be considered a limitation of the study. Those question items of OCC can be tested in different countries and cultures, such as the USA.

There are also certain methodological limitations. For instance, the first factor (i.e., collective action culture) explains 48% of the estimated common variance in Study 2, raising concerns about the potential influence of common method bias on the results. Even though that result may be statistically acceptable, the researchers should be cautious in interpreting and evaluating associated variables. As such, common method bias inflates the correlations among OCC-related variables and leads to a potential risk to the validity of the conclusions on the interrelationships among those variables. In addition, within research models that examine the impact of OCC-related variables on outcome variables (e.g., employee well-being, firm performance), certain variables may overshadow others, complicating the analysis and interpretation of their respective influences. In this respect,

[4] Even though Lilius et al. (2008) used a large community hospital to investigate the relationship between the frequency of compassion experienced at work, positive emotion, and affective organizational commitment, their sample is restricted to one firm, which is not enough for the generability of the findings from a statistical point of view.Akgü

in future research, data collection can be carried out through longitudinal research with a time separation between the measurement points (e.g., the data of collective action culture and responding culture variables can be collected at different times). Future research can also use multi-source methods to gather data. For instance, a beneficial approach would be to measure OCC-related variables from diverse sources, including supervisors, their subordinates, and the subordinates' coworkers, to enhance the validity of the measures.

We believe that this study provides several future researchers. For instance, future studies can investigate OCC's antecedents and consequences. Specifically, researchers can investigate workplace diversity, interdependence, social interactions, perceived similarity, and organizational philanthropy as the antecedents of OCC. Regarding the consequences, how OCC influences psychological outcomes, including affective commitment, collective gratitude, employee attraction and retention, and organizational effectiveness, can be empirically investigated. In addition, the previous ones and OCC scales should be investigated in the proposed model involving psychological outcomes and organizational effectiveness to figure out whether those scales have different relationships with affective commitment, collective gratitude, employee attraction and retention, and organization effectiveness in a nomological net. Further, which compassion scale is more important and performs better than other scales in the relationship between psychological outcomes and organizational performance can be investigated. Here, researchers can perform an importance-performance matrix analysis (IPMA) by including all scales in the proposed model to estimate the importance of the compassion-related scales and their performance in describing the target construct (e.g., effective commitment, collective gratitude, employee attraction and retention, and organizational effectiveness) in the structural relationship. This way, practitioners and managers can prioritize and focus their limited resources and actions on the factors most influential in achieving desired outcomes.

Each aspect of the OCC can be investigated in detail. For example, resource usage culture can be evaluated based on scale (i.e., quantity of resources), scope (i.e., diversity of resource kinds), speed (i.e., time required to generate resources), and customization (i.e., aligning resources with the requirements of those affected). In addition, the collective action culture aspect of OCC can be investigated through forms of bonding, bridging, and a sense of continuity over time.

The innovation management literature has disregarded cultural values such as compassion capacity. In this respect, it is timely to investigate compassionated organizational culture and its interrelationship with firm product, process, and service innovations.

We primarily focus on the positive effects of OCC by overlooking its "dark side." Future studies may investigate the potential adverse impacts of organizational capacity for compassion, such as diminished productivity due to the deviation of time and resources to alleviate suffering, preclusion of financial objectives, emotional exhaustion, and employee burnout. In addition, in this study, we emphasized that OCC is ingrained in the organizational culture. However, past studies also proposed that continuous acts of compassion can create a "compassion spiral," ultimately influencing the organizational culture (Lilius et al., 2011b; Dutton et al., 2014). The researchers can investigate whether OCC is an element of organizational culture that revitalizes organizational culture literature.

Finally, future studies might further compare the compassion capacity of service and manufacturing firms since the nature of relationships (e.g., proximity to customers, and task interdependence between employees) differs by industry type.

## Conclusion

The notion of compassion has garnered considerable scholarly interest across various disciplines. However, the capacity aspect of organizational compassion is still emerging and nascent in the literature. This study empirically identified OCC's dimensions: noticing, feeling, responding, collective action, and resource usage culture. This study provided a limited examination of compassion studies within organizations, but it provides crucial empirical data to the ongoing debate on the lasting importance of OCC.

## Appendix

## Measures

## Organizational capacity for compassion (New Scale)

Noticing Culture

Notice1: Our corporate norms guide our behavior in sharing our sufferings at work in our firm.

Notice2: Recognizing the sufferings of others is considered a part of corporate value in our firm.

Notice3: One of the corporate practices is noticing the sufferings of others in our firm.

Notice4: Our corporate norms encourage us to notice the suffering of others in our firm.

Notice5: We consider noticing a colleague's suffering as a valuable role of us in our firm.

Feeling Culture.

Feel1: We emphasize the expression of "warmth" and "concern" in our corporate values to better rouse the feelings of others' sufferings.

Feel2: Feeling the suffering of others is viewed as one of the essential values of our firm.

Feel3: We encourage using the stories of kindness and caring about the suffering people throughout our firm to feel others' suffering better.

Feel4: We use a common language to cover the word "compassion" in our firm.

Feel5: Leaders display compassionate feelings in public events to represent our firm.

Feel6: Feeling a colleague's suffering is remarked upon as a valuable attribute of our firm.

Responding Culture.

Respcult1: We continually modify our roles to notice others' suffering in our firm.

Respcult2: We continually modify our roles to feel others' suffering in our firm.

Respcult3: As a part of our corporate values, we embrace our coworkers' sufferings to respond to them.

Respcult4: Our corporate norms urge us to organize our responses to the suffering of others in our firm.

Respcult5: Compassionate responding practices are viewed as one of the corporate priorities in our firm.

Respcult6: We can take the initiative to change our work duties contemporarily to respond to others' sufferings without the direction of a superior in our firm.

Respcult7: We use a repertoire of behavioral responses to deal with our coworkers' suffering in our firm.

Collective action culture.

Collact1: We can easily recognize our coworkers' needs after a suffering situation in our firm.

Collact2: When a coworker modifies his/her behavior to respond to another's suffering situation, we also change our behavior to act compassionately to others in our firm.

Collact3: We stress the necessity of compassionate actions to others' suffering in our social interactions.

Collact4: We learn from each other's compassionate actions in our firm.

Collact5: We make our compassionate responses more visible through our interactions in our firm.

Collact6: We increase the coherence of our compassionate acts by imitating each other's compassionate behavior.

Collact7: We coordinate our collective compassionate actions in our firm.

Collact8: We combine our compassionate actions to create synergy to deal with our coworkers' suffering in our firm.

Resource usage culture.

Resuse1: We apply formal employee support programs that employees fund to assist people after suffering situations in our firm.

Resuse2: We employ corporate resources, such as equipment and materials, to support our employees after suffering situations in our firm.

Resuse3: We compensate for the financial loss of our coworkers after a suffering situation by using special funds in our firm.

Resuse4: We consume our financial resources, such as medical funds, to quickly respond to our coworkers' sufferings after a suffering situation in our firm.

Resuse5: We reward employees (e.g., recognizing them) who demonstrate compassionate behaviors to others in our firm.

Resuse6: We rely on corporate resource usage policies to comfort our suffering colleagues.

Resuse7: In corporate rituals, we present collective gifts and memorials to the suffering people to alleviate their grief in our firm.

## The NEAR organizational compassion scale (Adopted from Simpson & Farr-Wharton, 2017)

Noticing.

When someone is suffering in my organization, others tend to….

notice the signs.

recognize the distress.

pay attention.

identify the indicators.

sense the suffering.

become aware.

Empathizing.

When someone is suffering in my organization, others tend to….

connect with the pain.

feel their co-worker's suffering.

feel the distress as their own.

become emotionally invested.

feel distressed and challenged by the situation.

Assessing.

When someone is suffering in my organization, others tend to….

seek to understand if the co-worker is able to help themselves.

assess the prior circumstances leading to the co-worker's suffering.

assess if the co-worker had prior warning.

assess the co-worker's level of responsibility for their distress.

Responding.

When someone is suffering in my organization, others tend to….

take practical steps.

respond.

take action.

address the distress.

get involved.

champion the cause.

## Experienced Compassion (Adopted from Lilius et al., 2008).

How frequently people experienced compassion:

on the job.

from their supervisor.

from their co-workers.

## Collective empathy (Adopted from Akgün et al., 2015)

Cognitive empathy.

Our organizational members.

are able to see things from each other's points of view.

understand the feelings of others within our organization.

are able to read the subtle social cues and signals given by others within our organization to determine what emotions are being expressed and understand the perspective of the other individuals.

can predict how someone within our organization will feel and what they will do.

understand what others within our organization are thinking.

make an effort to understand one another's attitudes and views.

Affective empathy.

Our organizational members tend to get emotionally involved with others' feelings within our organization.

The feelings and moods of our organizational members are influenced by the feelings of the other members around them.

Members of our organization experience the same or other appropriate emotions in response to others' feelings within our organization.

The attitudes of organizational members are affected by the feelings of others within our organization.

Behavioral empathy.

In a coordinated manner, our organizational members demonstrate verbal and non-verbal communication reactions in response to the feelings of others within our organization.

Our organizational members react in response to the feelings of others within our organization.

Our organizational members have behavioral answers to the feelings of others within our organization.

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**Data availability** Data can be obtained from authors based on the request.

## Declarations

**Ethical approval** The studies are based on questionnaires. The studies were performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki. Approval was obtained in line with the customs of the participating institutions.

**Consent to participate** Participants tacitly gave their consent by completing and returning the questionnaire.

**Conflict of interest** The authors declare that they have no conflict of interest.

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