

## RESEARCH ARTICLE

# Older workers' knowledge seeking from younger coworkers: Disentangling countervailing pathways to successful aging at work

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**Summary**

Increasing age diversity in the workplace has led to growing research attention to the knowledge transfer between older and younger employees. The existing literature on age-diverse knowledge exchange has mostly focused on knowledge transfer from older to younger employees as a means of knowledge retention. In this study, we change perspectives by aiming to understand how and when older employees' knowledge seeking from younger coworkers is related to their successful aging at work (i.e., the motivation and ability to continue working). Grounded in the self-regulatory process model of successful aging at work, we predict two countervailing pathways: a positive self-enhancing path via perceived learning and a negative self-protective path via embarrassment. In a time-lagged study with 764 older employees, we found that their knowledge seeking from younger coworkers was positively related to motivation to continue working and workability via perceived learning and negatively related to workability via embarrassment. We further examined older employees' positive intergenerational affect as a boundary condition and found a buffering effect on the negative path to workability. This research shows that knowledge transfer from younger to older employees is a net contributor to successful aging at work and embarrassment can be mitigated by positive intergenerational affect.

**KEYWORDS**

age diversity, age norms, embarrassment, knowledge seeking, learning, motivation, older employees, social confidence

## 1 | INTRODUCTION

Many countries around the world experience demographic shifts leading to an aging population that is reflected in increased age diversity in the workplace (Beier et al., 2022; OECD, 2019; Truxillo et al., 2015). Knowledge exchange between younger and older

employees is essential to realize the benefits of age-diverse workforces (Harvey, 2012; Li et al., 2022). Age-diverse knowledge exchange (often referred to as intergenerational knowledge exchange) describes the sharing and receiving of knowledge between employees with a significant age difference, where employees up to the age of 35 years are typically defined as younger and employees above the

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age of 45 or 50 years as older (Burmeister, van der Heijden, et al., 2018; Fasbender & Gerpott, 2020). Research suggests that age-diverse knowledge exchange facilitates learning (Gerpott et al., 2017) and contributes to motivation to remain with the organization (Burmeister et al., 2020) and organizational performance (Li et al., 2021).

However, our current understanding of the consequences of age-diverse knowledge exchange is limited because research has mainly focused on the benefits of knowledge retention through older workers' knowledge sharing with younger coworkers, while the outcomes of older workers' knowledge seeking from younger coworkers have yet to be understood. Understanding the outcomes of older workers' knowledge seeking from younger coworkers is relevant because older knowledge seekers face a dilemma. On the one hand, prolonged careers drive the need for lifelong learning. Research suggests that older workers age more successfully when they have opportunities for learning and development (Kooij et al., 2020; Pak et al., 2019; Parker & Andrei, 2020). Younger coworkers' non-redundant knowledge may provide unique opportunities for them to learn new and relevant competencies and skills (Gerpott et al., 2017; Kearney et al., 2009; Ropes, 2014). On the other hand, based on organizational age norms, older workers are often considered to be ideal knowledge providers, and violating these norms by assuming the role of knowledge seekers may be associated with detrimental consequences (Burmeister, Fasbender, & Deller, 2018; Finkelstein et al., 2003). Research suggests that employees feel embarrassed by revealing a lack of knowledge when knowledge seeking from coworkers violates social norms (Gubbins & Dooley, 2021). By seeking knowledge from younger coworkers, this may be the case for older employees. Grounded in the self-regulatory process model of successful aging at work (Kooij et al., 2020), we delineate positive and negative consequences of older workers' knowledge seeking from younger coworkers for their successful aging at work (i.e., maintaining or restoring motivation and ability to continue working; Kooij et al., 2020). The self-regulatory process model of successful aging at work provides a useful overarching theoretical framework for our research because (a) it identifies knowledge seeking, or "asking others for help or advice" (p. 352), as a proactive self-regulatory behavior for successful aging at work, (b) it delineates countervailing self-regulatory pathways (of engagement and disengagement) to successful aging at work, and (c) it acknowledges the relevance of personal (related to the self) and contextual (related to the organization) factors in these self-regulation processes.

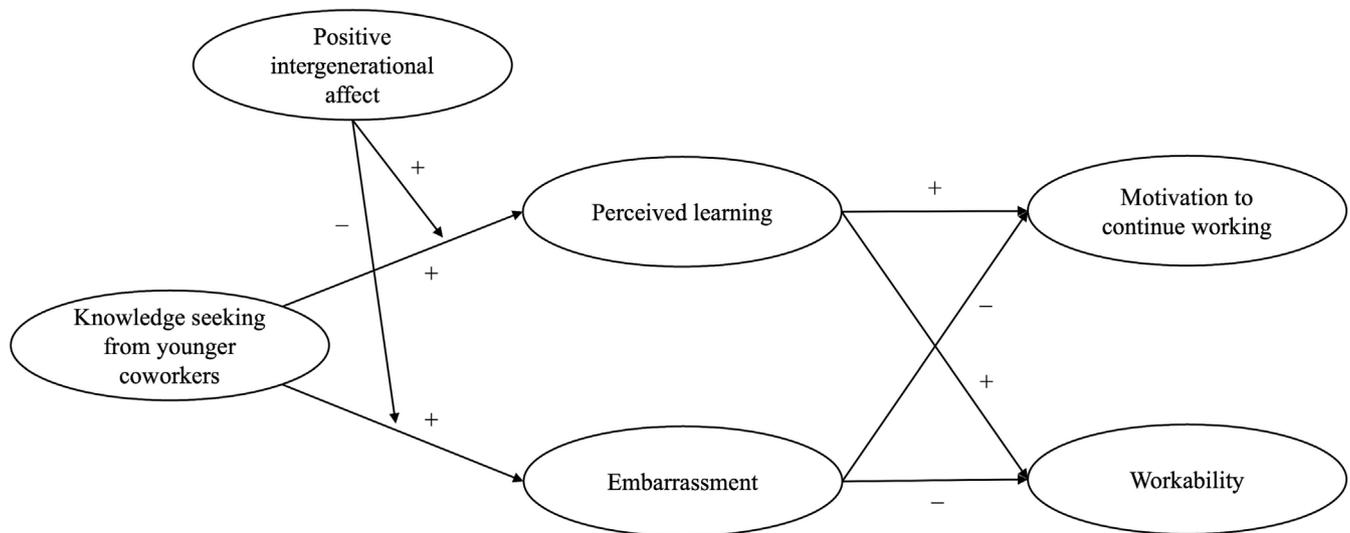
First, we distinguish the countervailing mechanisms. We argue that knowledge seeking from younger coworkers is a proactive self-regulatory behavior that enables older employees' perceived learning (i.e., a perceived sense of acquiring and applying knowledge and skills to build capability and confidence; Carver, 1998), which is positively related to their motivation and ability to continue working as a self-enhancing regulatory response. At the same time, seeking knowledge from younger coworkers violates organizational age norms, which may be associated with embarrassment (i.e., a negative self-conscious emotion triggered by the violation of social norms Keltner & Buswell, 1997) and negatively relate to older workers' efforts to

maintain ability and motivation to continue working as a self-protective regulatory response (Carver & Scheier, 1990; Keltner & Beer, 2005; Miller & Leary, 1992). Second, we examine positive intergenerational affect as a boundary condition of these self-regulatory processes. Positive intergenerational affect is a generalized affect-based attitude toward intergenerational interactions (King & Bryant, 2017). Here, it captures the extent to which older individuals enjoy conversations with younger coworkers and feel comfortable when interacting with them (King & Bryant, 2017). Research on knowledge integration has conceptualized the ease and comfort of interacting with the knowledge source as part of one's social confidence, which is crucial for acquiring and importing knowledge from others (Andrews & Delahaye, 2000). Positive intergenerational affect thus represents a context-specific personal factor that may reduce the psychosocial effort and concerns involved in older employees' knowledge seeking from younger coworkers, facilitating the cognitive learning process and buffering feelings of embarrassment. Figure 1 illustrates our conceptual model.

The current study makes three contributions. First, it advances our knowledge on whether older employees' knowledge seeking from younger coworkers is related to their successful aging at work, thereby extending research on age-diverse knowledge exchange that predominantly focused on individual and organizational benefits of knowledge flows from older to younger coworkers (Burmeister & Deller, 2016; Fasbender & Gerpott, 2020). Although prior research has theoretically proposed knowledge seeking from younger coworkers as a strategy to maintain older workers' motivation and ability to work (Kooij et al., 2020; Parker & Andrei, 2020; Sammarra et al., 2017), empirical evidence is scarce. We advance this literature by demonstrating that knowledge seeking from younger coworkers is an effective self-regulatory enhancement strategy for older employees.

Second, we extend the self-regulatory process model of successful aging at work (Kooij et al., 2020) by investigating perceived learning and embarrassment as proximal self-regulatory responses linking older employees' knowledge seeking from younger coworkers to motivation to continue working and workability. By doing so, we are able to explain why knowledge seeking from younger coworkers can be positively or negatively related to the motivation and ability to continue working. These novel insights also contribute to the general knowledge seeking literature by revealing the embarrassing consequences of social norm violations based on age (Gubbins & Dooley, 2021; Lim et al., 2020). The knowledge seeking literature often ignores the age of knowledge senders and recipients, although age can be a relevant diversity characteristic in knowledge exchange due to strong beliefs about associations of age with experience and knowledge (Avolio et al., 1990; Kearney, 2008; Knight & Parr, 1999; Sternberg, 2005).

Third, this research advances the knowledge seeking literature by conceptualizing positive intergenerational affect as a context-specific personal factor relevant to older employees' social confidence that shapes their response to knowledge seeking from younger coworkers. Prior research has mostly focused on personal factors that predict knowledge seeking rather than personal factors that moderate the psychosocial process thereafter (Burmeister et al., 2022; Gubbins &



**FIGURE 1** Hypothesized conceptual model: the positive and negative paths from older workers' knowledge seeking from younger coworkers to their motivation to continue working and workability.

Dooley, 2021; Lim et al., 2020). Moreover, investigating positive intergenerational affect as a boundary condition extends the age-diverse knowledge exchange literature by highlighting that effective knowledge exchange can also be a function of older workers' ease and comfort in interacting with younger coworkers, in addition to age stereotypes and age discrimination against older workers (e.g., Burmeister et al., 2020; Burmeister, van der Heijden, et al., 2018; Fasbender & Gerpott, 2020).

## 2 | THEORETICAL BACKGROUND

The self-regulatory process model of successful aging at work (Kooij et al., 2020) builds on self-regulatory lifespan developmental theories (Atchley, 1989; Baltes, 1997; Baltes & Baltes, 1990; Freund & Baltes, 2000; Heckhausen et al., 2010). Accordingly, older workers aspire to maintain the same level of activity as in earlier life stages and the use of self-regulatory strategies provides the basis for successful aging. The model posits that older workers can maintain high levels of workability (i.e., the perceived job-related functional capacity to meet the demands related to carrying out one's work tasks; McGonagle et al., 2015) and motivation to continue working (i.e., the intention to work until or beyond the retirement age; Kanfer et al., 2013) through proactive and adaptive self-regulatory responses to personal aging-related changes (e.g., decreasing physical health and motivational shifts; Kanfer & Ackerman, 2004; Salthouse, 2012) and environmental changes (e.g., new work processes; Kooij et al., 2020). These self-regulatory strategies either aim at goal engagement (i.e., investing time and effort to achieve a goal, such as optimizing existing or acquiring new skills) or at goal disengagement (i.e., self-protective measures to preserve self-integrity, such as downgrading the value of a goal or withdrawal from a task) (Heckhausen et al., 2010; Kooij et al., 2020).

In this research, we argue that knowledge seeking from younger coworkers is a self-regulatory behavior that is associated with both perceived learning as a self-enhancing regulatory response, that is positively related to older employees' successful aging at work, and embarrassment as a self-protective regulatory response, that is negatively related to older employees' successful aging at work. On the one hand, the self-regulatory process model of successful aging at work proposes that asking others for help and seeking knowledge can be an effective strategy to facilitate engagement and successful aging at work (Kooij et al., 2020). Younger coworkers' perspectives, skills, and abilities are suggested to provide a source of knowledge that particularly fits older workers' learning needs (Gerpott et al., 2017; Li et al., 2021; Murphy, 2012). Thus, older workers' learning from younger coworkers may contribute to maintaining and enhancing a fit between their needs and abilities and their work.

On the other hand, the self-regulatory process model of successful aging at work theorizes that age-related bias and discrimination can affect older workers' self-regulation (Kooij et al., 2020). Organizational age norms (i.e., widely shared assumptions of the standard age for a given status or role; Lawrence, 1988) can also imply age-related bias and discrimination because they indicate which roles are seen as appropriate for employees of certain ages, thus limiting their options to adopt new roles. More specifically, organizational age norms create expectations for older workers to assume the role of knowledge providers because they are typically more experienced (Avolio et al., 1990; Burmeister, Fasbender, & Deller, 2018; Lim et al., 2020). Transgressing this age norm by becoming knowledge seekers and revealing a lack of knowledge might embarrass older workers as it contravenes their self-view as knowledgeable employees, raising concerns about how they will be perceived by others (Gubbins & Dooley, 2021; Keltner & Buswell, 1997; Miller & Leary, 1992; Tangney et al., 2007). Embarrassment is a self-conscious emotion that results from a perceived discrepancy between one's experience and

desired self-view (Keltner & Buswell, 1997; Miller & Leary, 1992).<sup>1</sup> As embarrassment is an emotional reaction to social interactions with regulatory implications (Miller & Leary, 1992), it is likely to activate a self-protective response that is detrimental to one's motivation and ability to continue working.

Furthermore, Kooij et al. (2020) highlight the role of personal factors in their model. Research on knowledge integration suggests that one's social confidence, that is, the ability and ease to interact with the knowledge source, is an essential personal factor for acquiring and accepting knowledge (Andrews & Delahaye, 2000; Eskerod, 2010; Grand et al., 2016) because knowledge seeking is a social interactional process (Burmeister et al., 2022; Gubbins & Dooley, 2021; Lim et al., 2020). In the present research, we identify positive intergenerational affect as a context-specific indicator of the comfort dimension of social confidence that shapes older employees' self-regulatory response to their knowledge seeking from younger coworkers. This is consistent with our theoretical lens because confidence beliefs are considered highly relevant personal factors for realizing the benefits of self-regulatory efforts (Bandura, 2001; Kooij et al., 2020). Prior research has found that positive interpersonal affect moderates the receptiveness to new knowledge because it enables individuals to become more open to new and even conflicting information (Estrada et al., 1997; Levin et al., 2010). Based on these insights, we contend that the comfort provided by positive intergenerational affect moderates the strength to which knowledge seeking from younger coworkers is related to older employees' perceived learning and embarrassment. Higher positive intergenerational affect may reduce the psychosocial effort and concerns involved in navigating the knowledge seeking interaction, which could free up cognitive capacity for learning (Burmeister et al., 2022; Lim et al., 2020) and countervail embarrassment due to image concerns related to age norm violations (Borgatti & Cross, 2003; Lim et al., 2020; Mickeler et al., 2022).

### 3 | HYPOTHESIS DEVELOPMENT

#### 3.1 | The positive pathway from older workers' knowledge seeking from younger coworkers to motivation to continue working and workability via perceived learning

Younger and older employees have different social networks, varied problem-solving abilities, and differ in their emotional regulation, goal priorities, perspectives, and motives (Kanfer & Ackerman, 2004; Rhodes, 1983; Salthouse, 2012; Sammarra et al., 2017; Warr, 2001).

<sup>1</sup>An emotional reaction that is closely related to embarrassment is shame. Both are negative emotions where the self is focal in attention and cares about the failure to meet appropriate standards (Crozier, 2014). We focus on embarrassment rather than shame because of two relevant conceptual differences. First, embarrassment is related to the transgression of minor social norms (such as age norms in the context of knowledge exchange), whereas shame is related to personal morality and more serious social norm violations (Tangney et al., 2007). Second, embarrassment is more situation specific and bound to a specific behavior, whereas shame tends to be more related to the revelation of a flaw in character or the self (Babcock, 1988; Lewis, 1995).

Due to these cognitive, affective, and behavioral differences, younger coworkers' knowledge can be a particularly valuable and non-redundant source of information for older employees that complements their existing knowledge (Li et al., 2021; Murphy, 2012; Sammarra et al., 2017). For example, younger coworkers can provide older workers with knowledge about new scientific and technological developments previously acquired from outside the organization and with different skills, such as how to identify and access new information by using advanced learning tools (Gerpott et al., 2017). Furthermore, the proactive and interactive nature of knowledge seeking from younger coworkers enables older employees to ask follow-up questions, reflect on their own experiences, and adjust the learning pace. These factors are positively associated with older employees' knowledge acquisition as they are aligned with aging-related changes in learning preferences and information processing capacity (Callahan et al., 2003; Mezirow, 1997; Schulz & Stamov Roßnagel, 2010). Thus, older employees' knowledge seeking from younger coworkers is likely to be positively related to their perceived learning.

In turn, we expect that perceived learning is positively related to the motivation and ability to continue working. First, motivation to continue working results from a fit between older employees' motives and their work environment (Kanfer et al., 2013). Older workers become more selective in their learning-related activities and focus on the acquisition of personally valued competencies and skills (Carstensen, 2006; Gegenfurtner & Vauras, 2012; Hess, 2014). Perceived learning that results from the proactive seeking of valued knowledge can be motivating to continue working for older workers because it signals a fit with their needs. It demonstrates the availability and opportunity to access valued resources to achieve work-related goals (Armstrong-Stassen & Ursel, 2009; Bal et al., 2012; Kooij, 2010; Ropes, 2014). Additionally, perceived learning from younger coworkers is likely to fit older employees' learning-related preferences as it is embedded in social interactions that allow for meaningful connections to others (Carstensen, 2006; Vauras et al., 2008; Volet et al., 2009).

Second, workability results from a fit between older employees' knowledge, skills, and abilities and the requirements of the job and work environment (Kooij, 2015). Learning from younger coworkers provides access to complementary informational resources (Harvey, 2012) and extends older workers' repertoire for achieving work-related goals (Cerasoli et al., 2018; Froehlich et al., 2014). Being able to access these resources can enable older workers to engage more effectively in self-regulatory strategies aimed at compensating age-related losses (e.g., declines in fluid intelligence and information processing speed) by optimizing existing or learning new skills and competencies (Baltes & Baltes, 1990; Freund & Baltes, 2002). Relatedly, learning new skills and competencies can help prepare to meet the changing demands in one's work environment (Kooij et al., 2020), which is likely to result in a higher perceived fit with one's job. Taken together, we expect:

**Hypothesis 1.** Older employees' knowledge seeking from younger coworkers is positively and indirectly

related to older employees' (a) motivation to continue working and (b) workability via perceived learning.

### 3.2 | The negative pathway from older workers' knowledge seeking from younger coworkers to motivation to continue working and workability via embarrassment

When seeking knowledge from younger coworkers, older workers likely violate age-related norms in knowledge transfer processes because they are typically expected to have greater knowledge, work experience, and higher status (Berger et al., 1986; Burmeister, Fasbender, & Deller, 2018; Lawrence, 1988; Phillips et al., 2013; Ridgeway, 2001). By violating social norms in knowledge seeking, employees were found to fear social sanctions and negative repercussions, such as being ridiculed by others (Gubbins & Dooley, 2021). The act of seeking knowledge can be interpreted as a signal of lacking knowledge and dependency (Burgess, 2005; de Paulo & Fisher, 1980; Lee, 2002). Although individuals would like to avoid such experiences, they may be unavoidable sometimes to complete one's work tasks. The fact that they had to approach a younger coworker to ask for knowledge may be painful when it contravenes older employees' self-view as knowledgeable, competent, and independent employees. This is likely to trigger status and reputation concerns, such as the fear of looking stupid in the eyes of others (Gubbins & Dooley, 2021). These concerns are aversive and likely to elicit feelings of embarrassment as a negative affective consequence of knowledge seeking (Keltner & Buswell, 1997; Miller & Leary, 1992; Tangney et al., 2007).

In turn, we argue that the experience of embarrassment as a regulatory affective response is related to further self-protective consequences that reduce the motivation and ability to continue working. By signaling a discrepancy between one's behavior (i.e., knowledge seeking from younger coworkers) and internalized age-based normative role expectations (i.e., being wiser and sharing knowledge with younger coworkers) within interpersonal contexts, embarrassment is likely to activate self-regulatory disengagement strategies aimed at resolving this discrepancy (Carver & Scheier, 1990; Keltner & Beer, 2005; Miller & Leary, 1992). This is because individuals are motivated to regulate their affect to maintain a positive self-concept and present themselves as capable and competent (Hershcovis et al., 2017; Koopmann et al., 2019). As a disengagement strategy to avoid future embarrassment and to self-protect one's positive self-concept, older employees may devalue the goal of continued employment as not corresponding to their needs. Research demonstrated that embarrassment is negatively related to persistence and positively related to disengagement and the chances of withdrawal and exit from situations inducing it (Dai et al., 2018; Dong et al., 2013; Verbeke & Bagozzi, 2003). Older workers should be particularly likely to disengage from potentially embarrassing situations because they more strongly prioritize socioemotional experiences that are deemed pleasant and emotionally rewarding (Carstensen, 2006; Carstensen et al., 2003). Based on an increased focus on positive affect and the

protection of one's self-concept in older age, older employees' experience of embarrassment is likely to be negatively associated with motivation to continue working.

We further expect that feeling embarrassed is negatively related to older workers' workability. Experiencing embarrassment when seeking knowledge from younger coworkers is likely to threaten one's self-concept as a competent and knowledgeable employee due to concerns about the negative evaluation of others (Leary, 2007; Tracy & Robins, 2004). Embarrassment may be interpreted as a signal of lacking the capacity to execute one's job, such that older employees question their ability and skills to meet the demands of their work. Experiencing a mismatch between their perceived job-related functional capacity to continue working and the current demands of their work is likely to result in reduced workability (Brady et al., 2020; McGonagle et al., 2015). In addition to a perceived signalized misfit, feeling embarrassed may be related to an actual misfit and reduced workability. In fact, embarrassed employees were found to be less able to utilize adaptive resources such as being flexible and assertive (Verbeke & Bagozzi, 2003) because they feel threatened, vulnerable, and fear future embarrassment (Leary & Kowalski, 1995). Further, managing these negative emotional reactions requires regulatory resources that are no longer available to be invested in achieving work goals (Beal et al., 2005). Taken together, we expect:

**Hypothesis 2.** Older employees' knowledge seeking from younger coworkers is negatively and indirectly related to older employees' (a) motivation to continue working and (b) workability via embarrassment.

### 3.3 | The strengthening effect of positive intergenerational affect on the positive pathway via perceived learning

Learning from others is a demanding cognitive process that requires knowledge recipients to make sense of new information and often involves multiple iterative interactions because information transmitted by others also includes distracting noise (Grand et al., 2016; Hall, 1973). We argue that the extent to which older employees experience the knowledge integration process to be demanding and effective depends on their positive intergenerational affect. Experiencing interpersonal positive affect has been shown to be related to more open-mindedness and willingness to explore and integrate new information even if it contradicts prior existing knowledge (Estrada et al., 1997; Levin et al., 2010). Based on that, we hypothesize that the comfort and ease of interacting with younger coworkers provided by positive intergenerational affect makes the communication and knowledge exchange process easier and more effective because age-diverse coworkers are more likely to listen to and understand each other, which requires older employees to invest less effort into planning and framing their knowledge requests (Fay & Kline, 2011; Lim et al., 2020; Liu et al., 2018). For example, to enhance their understanding and enable learning, older employees with higher positive

intergenerational affect may feel more comfortable asking their younger coworkers follow-up questions and repeating explanations. As a result, older knowledge seekers need less energy and attention to manage social interaction and they can focus their cognitive effort on receiving, processing, and integrating the new and often complex incoming information into existing knowledge reservoirs (Grand et al., 2016; Paas et al., 2003; Seufert, 2018; Zimmerman, 2002). Thus, they are likely to have a better learning experience. In contrast, when positive intergenerational affect is low and older employees feel uneasy interacting with younger coworkers, they are likely to be less open to incorporating new information and instead invest more effort into impression management to maintain their reputation, leading, for example, to the reluctance to ask follow-up questions. Moreover, as communication is nuanced and complex, they may misinterpret information or misperceive verbal cues used by younger coworkers (e.g., jokes and abbreviations) in response to their knowledge seeking request, which is distracting and limits effective learning (Andrews & Delahaye, 2000; Borgatti & Cross, 2003; Burmeister et al., 2022). Therefore, we hypothesize:

**Hypothesis 3.** Older employees' positive intergenerational affect moderates the positive relation between their knowledge seeking from younger coworkers and perceived learning, such that the relation is stronger at higher (vs. lower) levels of positive intergenerational affect.

Integrating our arguments made in Hypotheses 1 and 3, we propose two conditional indirect links. We argue that positive intergenerational affect moderates the indirect links between older workers' knowledge seeking from younger coworkers and motivation to continue working and workability via perceived learning. The positive indirect links are stronger when positive intergenerational affect is higher (vs. lower).

**Hypothesis 4.** Positive intergenerational affect moderates the positive indirect relation between knowledge seeking from younger coworkers and older employees' (a) motivation to continue working and (b) workability via perceived learning, such that the indirect relation is stronger for higher (vs. lower) intergenerational affect.

### 3.4 | The buffering effect of positive intergenerational affect on the negative pathway via embarrassment

Embarrassment is an affective response to social norm transgressions in the context of knowledge seeking triggered by psychosocial concerns (Gubbins & Dooley, 2021; Mickeler et al., 2023). These concerns include the fear of social sanctions and negative repercussions (e.g., status and reputational loss) and the perceived discrepancy from one's own self-view as a competent and knowledgeable employee

(Borgatti & Cross, 2003; Ghosh & Gilboa, 2014; Gubbins & Dooley, 2021; Lim et al., 2020). We argue that the extent to which older employees perceive these psychosocial concerns may depend on their positive intergenerational affect. Research has shown that positive affect in social interactions enhances perceived similarities and social connectedness to others (Choi et al., 2018; Sels et al., 2021). In age-diverse social interactions, older workers' positive intergenerational affect is thus likely to strengthen social bonds with younger coworkers and alleviate excessive concerns about negative evaluations when seeking knowledge because these image concerns depend on how knowledge seekers feel in relation to knowledge senders (Lim et al., 2020; Menon et al., 2006; Menon & Blount, 2003). Fewer concerns about status and reputational loss prevent in turn the emergence of embarrassment (Keltner & Buswell, 1997; Miller & Leary, 1992). Moreover, as positive intergenerational affect is likely to be related to the perception of similarities and the perception of younger people as unique and interesting individuals (King & Bryant, 2017), age norms may be less cognitively accessible and activated in the first place. This makes it easier to accept younger coworkers' knowledge as valuable support without invoking a perceived violation of expected behavior. In contrast, older employees with low positive intergenerational affect are wary of younger coworkers and feel uncomfortable when interacting with them (King & Bryant, 2017). This may facilitate misunderstandings which fuel embarrassment by heightened concerns about being ridiculed. When required to seek knowledge from younger coworkers to complete a work task, older employees with a low positive intergenerational affect are likely to feel more dependent and inferior, which challenges their desired self-view (Ghosh & Gilboa, 2014; Gubbins & Dooley, 2021) and may be related to heightened feelings of embarrassment. We thus hypothesize:

**Hypothesis 5.** Older employees' positive intergenerational affect moderates the positive relation between their knowledge seeking from younger coworkers and embarrassment, such that the relation is weaker at higher (vs. lower) levels of positive intergenerational affect.

Integrating our arguments from Hypotheses 2 and 5, we propose two conditional indirect links. Specifically, we argue that positive intergenerational affect moderates the indirect links between older workers' knowledge seeking from younger coworkers and motivation to continue working and workability via embarrassment. The negative indirect links are weaker when positive intergenerational affect is higher (vs. lower).

**Hypothesis 6.** Positive intergenerational affect moderates the negative indirect relation between knowledge seeking from younger coworkers and older employees' (a) motivation to continue working and (b) workability via embarrassment, such that the indirect relation is weaker for higher (vs. lower) positive intergenerational affect.

## 4 | METHOD

### 4.1 | Procedure and participants

We conducted a time-lagged field study with three measurement waves over a total period of 6 weeks. We chose this study design to alleviate concerns about common method bias by temporally separating independent, mediator, and outcome variables (Podsakoff et al., 2003). We chose a relatively short time lag of 2 weeks between each of the three measurement waves to allow for the investigation of older workers' more proximal reactions to knowledge-based interactions with younger coworkers (Dormann & Griffin, 2015). The sample was recruited through the online panel provider Prolific. According to recent meta-analytic findings, the data quality (i.e., psychometric properties and criterion validities) of samples recruited by online panel companies is comparable to the quality of samples obtained through conventional data sources (Walter et al., 2019). Prior to the study, the panel company sent a screening questionnaire to 4961 employees with a minimum age of 45 years. Eligibility for the study required that participants had at least one face-to-face meeting or video call per week with younger coworkers (i.e., maximum age 35 years) to have the opportunity for knowledge exchange. To be consistent with prior research on age-diverse knowledge exchange (e.g., Burmeister et al., 2020), we chose the same age cut-offs and coworkers had to work on the same hierarchical level.<sup>2</sup> In total, 942 employees completed the screening questionnaire and fulfilled these inclusion criteria. These employees were invited to participate in the study (the reward for participation was GBP 5.70).

Of these 942 employees, we received 867 responses at Time 1 (response rate T1 = 92.0%). To ensure that participants paid attention to the content of the survey questions, we included two quality check items (e.g., "Please select 'strongly disagree' here."). Of these 867 responses, we removed 21 participants because they did not correctly answer the quality check items. Twenty-seven participants were excluded because they had no social interactions with younger coworkers. Finally, we removed 55 participants who indicated they had experienced major work-related changes during the data collection period (e.g., change of coworkers due to a work role transition). As a further means to ensure data quality, we screened open comment fields that were included at the end of each survey, but we did not identify any responses indicating low data quality (e.g., statements indicating that participants did not meet the study's eligibility criteria, had problems to understand the questions, or did not take the study seriously). Of the resulting 764 employees who responded at Time 1, 740 employees participated at Time 2 (96.9%), and 727 employees participated at T3 (98.2%). Following

methodological recommendations intended to reduce bias and preserve statistical power when dealing with missing data in longitudinal studies (Graham, 2009; Newman, 2014; Wang et al., 2017), we applied full information maximum likelihood (FIML) estimation with robust standard errors to model missing values of participants who did not take part at Time 2 and/or Time 3. Thus, our final sample consisted of 764 employees.<sup>3</sup>

Participants were between 45 and 76 years old ( $M = 51.92$ ,  $SD = 5.63$ ), and 50.7% were female. Most participants lived in the United Kingdom (56.3%), the United States (19.8%), or European countries other than the United Kingdom (14.1%) (i.e., 9.8% in other countries outside of Europe). The average age of participants did not significantly differ across countries ( $F [4, 759] = 2.17$ ,  $p = .07$ ). Sixty-seven percent of our participants held a bachelor's degree or higher education degree. The majority of participants worked in large organizations with more than 1000 employees (36.6%). Participants worked in a variety of different occupations.<sup>4</sup> Their average organizational tenure was 11.80 years ( $SD = 9.23$ ) and they had an average work experience of 19.17 years in their current occupation ( $SD = 10.18$ ).

### 4.2 | Measures

Unless otherwise stated, participants reported their answers on Likert scales ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). Employees could choose to answer the surveys in either German or English. We report omega values as an estimate of reliability and followed the procedure described in Hayes and Coutts (2020) to compute omega values using Mplus. Omega is a more general form of Cronbach's alpha and more consistent with the latent variable approach in structural equation modeling (SEM) because it does not assume that each indicator measures a latent variable with the same degree of precision, which would otherwise imply equivalent factor loadings for a latent construct across indicators (Cheung et al., 2023).

### 4.3 | Knowledge seeking from younger coworkers

At Time 1, we measured knowledge seeking from younger coworkers with an adapted version of the four-item scale from Wilkesmann et al., 2009. We changed the word "colleagues" of the original items to "my younger coworkers". The term "younger coworkers" was defined at the beginning of the survey as colleagues with an age of up to 35 years who are not their direct supervisor. A sample item is "I turn to my younger coworkers for advice regarding special procedures so that I learn them". The omega value was .90.

<sup>2</sup>The literature on age-diverse knowledge exchange acknowledges the arbitrary nature of these age cut-offs to define older and younger workers (for a detailed discussion, see Fasbender & Gerpott, 2022). They have been applied because they allow for the empirical investigation of age-diverse knowledge exchange and ensure an age difference of at least 10 to 15 years. The fact that chronological age and specifically these age cut-offs are practically used in organizations to define employees' eligibility to participate in programs that promote age-diverse knowledge exchange also speaks in favor of their use.

<sup>3</sup>We also ran our analysis using listwise deletion to handle missing values (instead of using FIML). The results were stable as estimates remained significant and in the hypothesized direction using either approach.

<sup>4</sup>These occupations are: health, teaching, cultural, and scientific occupations: 30%; management and administration: 18%; technical and IT: 16%; trade and transportation: 9%; hospitality and personal service provision: 8%; accounting, banking, and insurance: 7%; production occupations in industry and commerce: 7%; and in other occupations: 5%.

#### 4.4 | Positive intergenerational affect

At Time 1, we measured positive intergenerational affect with the original four-item scale by King and Bryant (2017). A sample item is “I enjoy interacting with coworkers of different generations.” The omega value was .67.<sup>5</sup>

#### 4.5 | Perceived learning

At Time 2, we measured older workers' perceived learning with the five-item scale by Porath et al. (2012). A sample item is “At work, I find myself learning often.” The omega value was .91.

#### 4.6 | Embarrassment

At Time 2, we measured older workers' embarrassment with three items from Dai et al. (2018). Employees were asked to rate the extent to which their interactions with younger coworkers made them feel “embarrassed,” “ashamed,” and “disgraced” on a scale from 1 (*Not at all*) to 7 (*Very much*). The omega value was .83.<sup>6</sup>

#### 4.7 | Motivation to continue working

At Time 3, we measured motivation to continue working with the three-item scale by Kooij et al. (2014). Employees were asked whether they would generally like to continue working. A sample item is “Barring unforeseen circumstances, I would remain working as long as possible”. The omega value was .88.

#### 4.8 | Workability

At Time 3, we measured older workers' workability with the four-item scale by McGonagle et al. (2015). Participants were asked to assign points to their current ability to meet the general, physical, mental, and interpersonal demands of their job on a scale from 1 (*Cannot currently work at all*) to 10 (*Workability at its lifetime best*). A sample item is “Thinking about the mental demands of your job, how do you

rate your current ability to meet those demands?” The omega value was .81.

#### 4.9 | Control variables

We considered five individual characteristics (subjective health, age, gender, organizational tenure, and trait negative affectivity), two interpersonal characteristics (communication frequency and older employees' knowledge sharing with younger coworkers), and two context-specific characteristics (age composition of work group and IT occupation) as control variables. We controlled for subjective health (Wöhrmann et al. (2017);  $\omega = .92$ ) because health is an established predictor of workability (Brady et al., 2020). We further included participants' ages to account for potential age-related differences in the focal processes and outcome variables of our model and to rule out alternative age-related explanations. We included gender to control for another important demographic characteristic that could be related to age-diverse social interactions (Burmeister et al., 2020; Harvey, 2012). We controlled for organizational tenure because it is an indicator of company-specific knowledge (Dunham & Burt, 2011; Harvey, 2012) and could be related to the perceived learning experience. Moreover, employees with longer organizational tenure tend to be more attached to the organization, which could be associated with their motivation to continue working (Mathieu & Zajac, 1990). We controlled for trait negative affectivity (five-item scale by Thompson, 2007;  $\omega = .86$ ) because it is related to individuals' tendency to become embarrassed (Miller, 1995). To account for interpersonal factors, we controlled for communication frequency (two items, one for video calls and one for face-to-face meetings) to rule out the possibility that our results are driven more generally by communication frequency than more specifically by knowledge seeking, and we controlled for older employees' knowledge sharing with younger coworkers (Wilkesmann et al., 2009;  $\omega = .77$ ). From a social exchange perspective (Blau, 1964), older employees' knowledge sharing with younger coworkers may legitimize their knowledge seeking from younger coworkers independent of age norms and thus be related to their perceived learning and embarrassment. Finally, we controlled for the age composition of the work group (i.e., the percentage of younger coworkers up to 35 years old in their work group) and IT occupation (i.e., dummy variable for technical/information technology profession) as important context-specific characteristics. If the work group is on average older, older workers may not have the same reaction as if their work group is generally younger because the work context can be associated with the salience of age and age norms in general (Cleveland & Shore, 1992; Lawrence, 1988). Similarly, the occupational context (specifically in technical/IT occupations) might be linked to outcomes of older employees' knowledge seeking from younger coworkers because age norms might be different in quickly evolving professions where younger individuals might benefit from a knowledge advantage due to more recent educational training (Ropes, 2014). We report the results with control variables included in our model because without accounting for statistical controls an

<sup>5</sup>Since we account for measurement error at the latent level in our analysis by performing structural equation modeling (e.g., Byrne, 2013), concerns regarding the lower reliability of positive intergenerational affect can be alleviated. We further identified that the Omega value improved to .72 upon removing the one reverse-coded item in the original scale. A potential reason for this could be the fact that the reverse-coded item of positive intergenerational affect stems from a different source and had the lowest factor loading in the original scale development studies by King and Bryant (2017). Running the model with or without this reverse-coded item did not change the results of our analysis.

<sup>6</sup>To alleviate potential concerns regarding the content validity of the embarrassment measure as mentioned by an anonymous reviewer, we ran a robustness check with the item that has the highest possible content validity for embarrassment (namely the item “embarrassed”). We found that all associations (direction and significance) reported in our final model are robust to measuring embarrassment using only “embarrassed.”

additional direct link between embarrassment and motivation to continue working appears which could not reliably be identified in a series of robustness checks (Bernierth & Aguinis, 2016; Spector & Brannick, 2011). Other than that, the exclusion or inclusion of these control variables in the model changed neither the direction nor the significance of our main findings.

#### 4.10 | Analytical strategy

We tested our hypotheses using SEM in Mplus. In order to take the non-normality of study variables into account and to preserve power by modeling missing values, we applied FIML estimation with robust standard errors (Yuan et al., 2000). When testing our hypotheses, we specified the links from the control variables to both mediator variables (i.e., perceived learning and embarrassment) and outcome variables (i.e., motivation to continue working and workability) in addition to our focal variables. When estimating the indirect links, we controlled for the direct links of knowledge seeking from younger coworkers to the outcome variables to avoid potential spurious inflations of indirect links (MacKinnon et al., 2012; Preacher & Hayes, 2008). We applied the latent moderated SEM method by using the XWITH command to create the latent interaction term. This method alleviates the problem of otherwise decreased reliability of interaction terms and accounts for various non-random and random measurement errors (Klein & Moosbrugger, 2000). To compute the confidence intervals of the indirect links and conditional indirect links, we used bootstrapping with 20 000 replications (Preacher & Selig, 2012). To establish the conditional indirect links, we calculated the index of moderated mediation (Hayes, 2015).

## 5 | RESULTS

### 5.1 | Preliminary analyses

Table 1 presents the means, standard deviations, and bivariate correlations of the study variables. To examine the construct validity and empirical distinctiveness of the six focal variables of our study (i.e., knowledge seeking from younger coworkers, positive intergenerational affect, perceived learning, embarrassment, motivation to continue working, and workability), we conducted a series of confirmatory factor analyses (CFAs). The proposed six-factor model yielded a good model fit ( $\chi^2[215] = 561.37$ ,  $p < .001$ , CFI = .960, RMSEA = .046, SRMR = .039), which was superior to alternative models, such as a five-factor model where knowledge seeking from younger coworkers and perceived learning loaded on one factor ( $\chi^2[220] = 2394.94$ ,  $p < .001$ , CFI = .748, RMSEA = .114, SRMR = .102,  $\Delta\chi^2[5] = 1833.57$ ,  $p < .001$ ), a five-factor solution where embarrassment and positive intergenerational affect loaded on one factor ( $\chi^2[220] = 1142.21$ ,  $p < .001$ , CFI = .893, RMSEA = .074, SRMR = .079,  $\Delta\chi^2[5] = 580.84$ ,  $p < .001$ ), and the one-factor solution where all indicators loaded on one factor ( $\chi^2[230] = 5687.58$ ,

$p < .001$ , CFI = .367, RMSEA = .176, SRMR = .156,  $\Delta\chi^2[15] = 5162.21$ ,  $p < .001$ ).

### 5.2 | Hypotheses testing

Hypothesis 1 addressed the paths from knowledge seeking from younger coworkers to older employees' motivation to continue working and to workability via perceived learning. As shown in Figure 2 and Table 2, we found a positive relation between knowledge seeking from younger coworkers and perceived learning ( $\gamma = .178$ ,  $SE = .043$ ,  $p < .001$ ), between perceived learning and motivation to continue working ( $\gamma = .474$ ,  $SE = .073$ ,  $p < .001$ ), and between perceived learning and workability ( $\gamma = .225$ ,  $SE = .044$ ,  $p < .001$ ). The path to motivation to continue working via perceived learning was positive and the bias-corrected confidence interval did not include zero (*indirect link* = .084, 95% CI [.039, .137]). The path to workability through perceived learning was also positive and significant (*indirect link* = .040, 95% CI [.018, .067]). Thus, Hypotheses 1a and 1b were supported.

Hypothesis 2 addressed the paths from knowledge seeking from younger coworkers to motivation to continue working and to workability via embarrassment. We found that knowledge seeking from younger coworkers was positively related to embarrassment ( $\gamma = .080$ ,  $SE = .025$ ,  $p = .002$ ). Embarrassment was unrelated to motivation to continue working ( $\gamma = -.100$ ,  $SE = .091$ ,  $p = .270$ ), but it was negatively related to workability ( $\gamma = -.144$ ,  $SE = .063$ ,  $p = .022$ ). The path to motivation to continue working via embarrassment was not significant (*indirect link* =  $-.008$ , 95% CI [ $-.025$ ,  $.006$ ]). Thus, Hypothesis 2a was not supported. In support of Hypothesis 2b, the indirect relation between knowledge seeking from younger coworkers and workability via embarrassment was negative and significant (*indirect link* =  $-.012$ , 95% CI [ $-.025$ ,  $-.002$ ]).

Hypothesis 3 addressed the moderating role of positive intergenerational affect on the positive relation between knowledge seeking and perceived learning. The interaction term was not significant ( $\gamma = .005$ ,  $SE = .055$ ,  $p = .931$ ) and the relation between knowledge seeking from younger coworkers and perceived learning was positive at higher and lower levels of positive intergenerational affect (i.e.,  $-1$  SD; *simple slope* = .174,  $SE = .058$ ,  $p = .003$ ;  $+1$  SD; *simple slope* = .182,  $SE = .063$ ,  $p < .004$ ; *slope difference* = .007,  $SE = .085$ ,  $p = .931$ ). Thus, Hypothesis 3 was not supported. We then tested the conditional indirect links as stated in Hypothesis 4. As the index of moderated mediation for the positive indirect link via perceived learning was .002 (95% CI [ $-.051$ ,  $.054$ ]) for motivation to continue working and .001 (95% CI [ $-.025$ ,  $.026$ ]) for workability, we concluded that Hypotheses 4a and 4b were not supported (the detailed results of the conditional indirect links can be found in Table 3).

Finally, we tested Hypothesis 5 regarding the moderating role of older workers' positive intergenerational affect on the negative relation between knowledge seeking from younger coworkers and embarrassment. The interaction term was negative and significant ( $\gamma = -.096$ ,  $SE = .040$ ,  $p = .015$ ). The simple slope at lower levels of positive intergenerational affect was significant (i.e.,  $-1$  SD; *simple*

**TABLE 1** Means, standard deviations, correlation, and reliability coefficients of the variables.

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Subjective health (T1)	7.55	1.54	(.92)														
2 Organizational tenure (T1)	11.80	9.23	.06	-													
3 Negative affectivity (T1)	2.61	.98	-.20**	-.11**	(.86)												
4 Age (T1)	51.92	5.63	-.01	.18**	-.14**	-											
5 Gender <sup>a</sup> (T1)	1.49	.50	-.07	-.04	-.15**	-.03	-										
6 Communication frequency (T1)	4.12	1.12	.05	.11**	.04	-.07*	.02	-									
7 Age composition of work group (T1)	41.62	20.03	-.01	-.03	-.08*	-.05	.09*	.08*	-								
8 IT occupation <sup>b</sup> (T1)	.17	.37	.02	-.06	-.01	-.08*	.24**	-.03	.03	-							
9 Knowledge sharing with younger coworkers (T1)	5.85	.87	.18**	.16**	-.14**	.08*	.01	.14**	.09*	.02	(.77)						
10 Knowledge seeking from younger coworkers (T1)	4.77	1.24	.05	-.01	.04	-.03	-.06	.03	.04	.06	.29**	(.90)					
11 Positive intergenerational affect (T1)	5.66	.78	.07	.06	-.14**	.06	-.17**	-.02	-.01	-.08*	.22**	.25**	(.67)				
12 Perceived learning (T2)	5.25	1.13	.18**	.08*	-.20**	.05	-.08*	.08*	.03	-.02	.27**	.23**	.20**	(.91)			
13 Embarrassment (T2)	1.26	.65	-.06	-.09*	.31**	-.09*	.03	.10**	.04	.11**	-.12**	.04	-.24**	-.10**	(.83)		
14 Motivation to continue working (T3)	5.30	1.55	.13**	.04	-.20**	.02	.01	-.00	.08*	-.02	.17**	.11**	.07	.36**	-.10**	(.88)	
15 Workability (T3)	8.33	1.16	.39**	.02	-.33**	-.01	-.01	.06	-.07	.03	.18**	.00	.16**	.30**	-.19**	.35**	(.81)

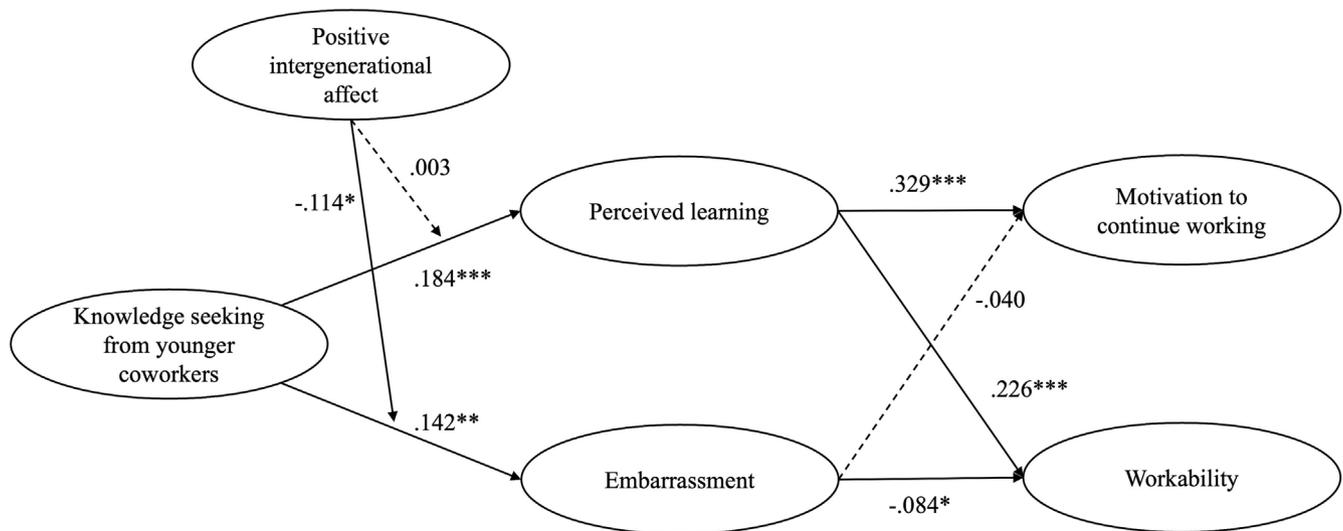
Note: N = 764 (pairwise deletion). Omega values as a measure of construct reliability are shown along the diagonal in parentheses. The omega value of positive intergenerational affect improved to .72 upon removing the one reverse-coded item of the original scale.

Abbreviation: T, time.

<sup>a</sup>Gender: 1 = female, 2 = male.

<sup>b</sup>IT occupation: 0 = no, 1 = yes.

\* $p < .05$ , and \*\* $p < .01$  (two-tailed).



**FIGURE 2** Results of structural equation modeling with standardized coefficients. Note:  $N = 764$ . The display of control variables in the figure was omitted to maintain readability. Dotted arrows indicate non-significant paths. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed).

slope = .155,  $SE = .052$ ,  $p = .003$ ) but it was not significant at higher levels of positive intergenerational affect (i.e., +1  $SD$ ; simple slope = .005,  $SE = .023$ ,  $p = .821$ ; slope difference =  $-.150$ ,  $SE = .062$ ,  $p = .015$ ). Figure 3 shows the band of significance for the simple slope of knowledge seeking from younger coworkers on embarrassment at the full observed centered range of positive intergenerational affect [−2.66 to 1.34]. As can be seen in Figure 3, the relation of knowledge seeking from younger coworkers and embarrassment is positive and significant for positive intergenerational affect values ranging from −2.66 to .48. The strength of the association decreases with higher levels of positive intergenerational affect, which supports Hypothesis 5.

Hypothesis 6a addressed the conditional indirect link between knowledge seeking from younger coworkers and motivation to continue working via embarrassment. As the index of moderated mediation was not significant for motivation to continue working (index = .010 (95% CI [−.008, .032])), Hypothesis 6a was not supported (detailed results of the conditional indirect links can be found in Table 3). Hypothesis 6b proposed a conditional indirect link for workability via embarrassment. The index of moderated mediation was .014 (95% CI [.002, .032]). The indirect link was negative at lower positive intergenerational affect  $-.022$  (95% CI [−.042, −.007]) and non-significant at higher positive intergenerational affect  $-.001$  (95% CI [−.012, .012]; difference = .022, 95% CI [.002, .049]). This result is consistent with Hypothesis 6b, suggesting that the negative path from older employees' knowledge seeking from younger coworkers to workability via embarrassment is buffered by positive intergenerational affect.

### 5.3 | Post hoc analysis

Given the simultaneous existence of a positive path via perceived learning and a negative path via embarrassment linking knowledge

seeking from younger coworkers with motivation to continue working and workability, we performed a post hoc analysis to calculate the size of the total indirect paths and the total strength of the associations (Preacher & Hayes, 2008). We calculated the total indirect paths by summing the positive indirect link with the negative indirect link. The total indirect paths for motivation to continue working (total indirect path = .076, 95% CI [.028, .133]) and workability (total indirect path = .029, 95% CI [.003, .058]) were both positive and significant. These results demonstrate that the positive paths from knowledge seeking from younger coworkers to motivation to continue working and workability via perceived learning were stronger than the negative paths via embarrassment. The total paths from knowledge seeking from younger coworkers to motivation to continue working and to workability were calculated by summing the direct paths from the independent variable with the indirect paths. The total path from knowledge seeking from younger coworkers to motivation to continue working was positive and significant (total path = .103, 95% CI [.053, .233]). The indirect path explained 74% of the total path. This means that perceived learning can largely explain why knowledge seeking from younger coworkers is positively related to older employees' motivation to continue working. For workability, the total path was not significant (total path =  $-.052$ , 95% CI [−.133, .020]), which can be explained by the negative, although insignificant, component of the direct path from knowledge seeking from younger coworkers to workability.

## 6 | DISCUSSION

In this study, we investigated the positive and negative consequences of older workers' knowledge seeking from younger coworkers for their successful aging at work. Drawing on the self-regulatory process model of successful aging at work (Kooij et al., 2020), we theorized

TABLE 2 Results of structural equation modeling.

	Perceived learning		Embarrassment		Motivation to continue working		Workability	
	Coeff. (SE)	$\beta$	Coeff. (SE)	$\beta$	Coeff. (SE)	$\beta$	Coeff. (SE)	$\beta$
Subjective health	.073 (.028)	.099*	.014 (.017)	.033	.028 (.042)	.026	.251 (.043)	.343***
Organizational tenure	.002 (.004)	.020	-.002 (.003)	-.032	-.004 (.006)	-.022	-.006 (.005)	-.051
Negative affectivity	-.187 (.043)	-.162***	.171 (.039)	.256***	-.120 (.069)	-.072	-.256 (.056)	-.223***
Age	.003 (.007)	.014	-.001 (.003)	-.006	-.007 (.011)	-.026	-.011 (.007)	-.053
Gender <sup>a</sup>	-.178 (.085)	-.079*	.004 (.050)	.003	.079 (.126)	.024	-.004 (.082)	-.002
Communication frequency	.062 (.034)	.061	.062 (.022)	.106**	-.050 (.056)	-.035	.057 (.038)	.057
Age composition of work group	.000 (.002)	.001	.002 (.001)	.050	.007 (.003)	.081*	-.005 (.002)	-.091**
IT occupation <sup>b</sup>	.005 (.112)	.002	.150 (.081)	.085	-.106 (.155)	-.024	.143 (.105)	.047
Knowledge sharing with younger coworkers	.184 (.060)	.142**	-.050 (.027)	-.066	.080 (.084)	.043	.073 (.053)	.056
Knowledge seeking from younger coworkers	.178 (.043)	.184***	.080 (.025)	.142**	.027 (.061)	.019	-.081 (.042)	-.084
Positive intergenerational affect	.201 (.080)	.119*	-.267 (.065)	-.272***				
Knowledge seeking from younger coworkers X Positive intergenerational affect	.005 (.055)	.003	-.096 (.040)	-.114*				
Perceived learning					.474 (.073)	.329***	.225 (.044)	.226***
Embarrassment					-.100 (.091)	-.040	-.144 (.063)	-.084*
R <sup>2</sup>	.192		.219		.156		.343	

Knowledge seeking from younger coworkers via	Coeff.	Motivation to continue working		Workability		
		LCI	UCI	Coeff.	LCI	UCI
Perceived learning	.084	.039	.137	.040	.018	.067
Embarrassment	-.008	-.025	.006	-.012	-.025	-.002

Note: N = 764.

Abbreviations:  $\beta$ , standardized coefficient; Coeff., unstandardized coefficient; LCI, lower level of bias-corrected 95% confidence interval; SE, standard error; UCI, upper level of bias-corrected 95% confidence interval.

<sup>a</sup>Gender: 1 = female, 2 = male.

<sup>b</sup>IT occupation: 0 = no, 1 = yes.

\* $p < .05$ , \*\* $p < .01$ , and \*\*\* $p < .001$  (two-tailed).

that older employees' knowledge seeking from younger coworkers could trigger both a self-enhancing regulatory response through perceived learning, which benefits their motivation and ability to continue working, and a self-protective regulatory response through embarrassment with detrimental consequences for their motivation and ability to continue working. Our study revealed a positive path from older workers' knowledge seeking from younger coworkers to both motivation to continue working and workability via perceived learning. We also found a negative path from older workers' knowledge seeking from younger coworkers to workability via embarrassment. This negative path was buffered by older employees' positive intergenerational affect, such that knowledge seeking was not related to embarrassment for older employees with higher positive intergenerational affect. These findings suggest that knowledge seeking from younger coworkers is beneficial for older workers' successful aging at work when feelings of embarrassment can be mitigated by positive intergenerational affect.

## 6.1 | Theoretical Implications

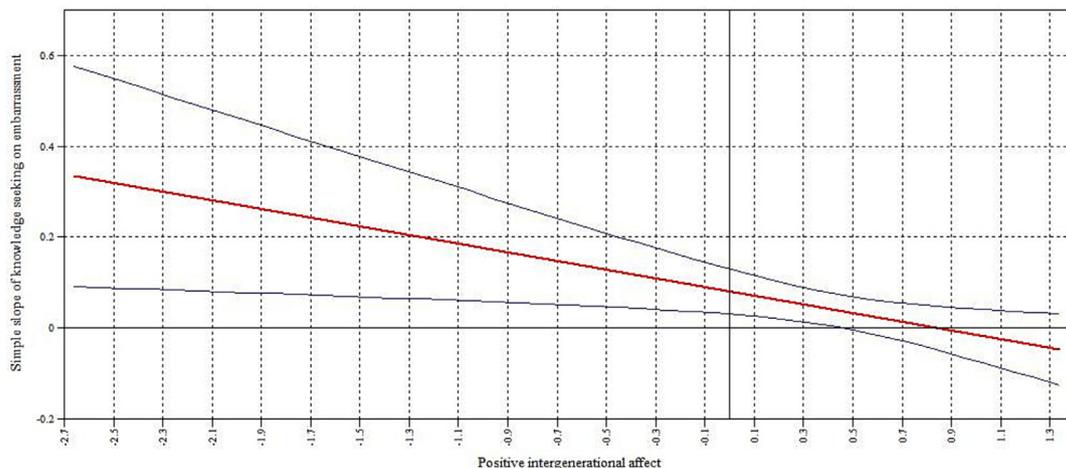
Our findings offer several theoretical contributions to research on knowledge exchange between age-diverse coworkers and successful aging at work. First, by changing the perspective and examining older workers in the role of knowledge seekers, we extend the existing age-diverse knowledge exchange literature which has mostly focused on knowledge transfer from older to younger employees (e.g., Burmeister, van der Heijden, et al., 2018; Fasbender & Gerpott, 2020, 2022). Prior research demonstrated that knowledge sharing with younger coworkers can be motivating for older employees (Burmeister et al., 2020). We thus extend this research by revealing incremental associations of older employees' knowledge seeking from younger coworkers beyond the motivating potential of older employees' knowledge sharing. This supports the idea that knowledge exchange between age-diverse coworkers should be conceptualized as a bidirectional process (Burmeister et al., 2020; Fasbender & Gerpott, 2022).

**TABLE 3** Conditional indirect links from knowledge seeking from younger coworkers to motivation to continue working and to workability via perceived learning and embarrassment.

	Motivation to continue working			Workability		
	Coeff.	LCI	UCI	Coeff.	LCI	UCI
<b>Knowledge seeking via</b>						
<b>Perceived learning at</b>						
Higher positive intergenerational affect	.086	.027	.155	.041	.012	.075
Lower positive intergenerational affect	.083	.027	.149	.039	.012	.073
<i>Difference</i>	.004	−.079	.084	.002	−.038	.039
<i>Index of moderated mediation</i>	.002	−.051	.054	.001	−.025	.026
<b>Embarrassment at</b>						
Higher positive intergenerational affect	−.000	−.008	.006	−.001	−.012	.012
Lower positive intergenerational affect	−.016	−.049	.012	−.022	−.042	−.007
<i>Difference</i>	.015	−.012	.051	.022	.002	.049
<i>Index of moderated mediation</i>	.010	−.008	.032	.014	.002	.032
<b>Total indirect path</b>	<b>.076</b>	<b>.028</b>	<b>.133</b>	<b>.029</b>	<b>.003</b>	<b>.058</b>
<b>Total path</b>	<b>.103</b>	<b>.053</b>	<b>.233</b>	<b>−.052</b>	<b>−.133</b>	<b>.020</b>

Note:  $N = 764$ . Higher and lower levels of positive intergenerational affect were estimated at  $\pm 1$  standard deviation.

Abbreviations: Coeff., unstandardized coefficient; LCI, lower level of bias-corrected 95% confidence interval; UCI, upper level of bias-corrected 95% confidence interval.



**FIGURE 3** Moderating effect of positive intergenerational affect: the regions of significance for the relation between older workers' knowledge seeking from younger coworkers and embarrassment. Note: The red line indicates the strength of the association between knowledge seeking from younger coworkers and embarrassment at values of positive intergenerational affect across the observed mean-centered range from  $-2.66$  and  $1.34$ . The outer blue lines indicate the 95% confidence interval. The association is significant and positive below the value of  $.48$  for positive intergenerational affect and non-significant for values above  $.48$ .

By focusing on motivation to continue working and workability as outcomes of knowledge seeking from younger coworkers, we respond to calls for more research on how older employees' successful aging at work can be enhanced (Kooij et al., 2020; Pak et al., 2019). Opportunities for continuous training and development have been identified as important antecedents of motivation to continue working that signal older employees that they are valued organizational members (Armstrong-Stassen & Ursel, 2009; Kooij et al., 2008). Our findings of positive total indirect links between knowledge seeking from younger

coworkers, motivation to continue working, and workability add to this by demonstrating that opportunities to learn are essential for older employees to enable their engagement in valued goals, which translates into continued motivation and ability to work.

Second, we contribute to the age-diverse knowledge exchange literature by deciphering the positive and negative mechanisms that explain the double-edged nature of older workers' knowledge seeking from younger coworkers. The positive path via perceived learning is in line with qualitative research and studies on mentoring suggesting

that older employees can learn effectively from younger coworkers (e.g., Chen, 2013; Gerpott et al., 2017). Accordingly, younger coworkers' knowledge represents a valuable source of opportunities to learn new competencies and skills that enable older employees' engagement in self-regulatory strategies to pursue personally meaningful learning goals (Hess, 2014; Ropes, 2014; Thieme et al., 2015). This finding also supports the view of motivational maintenance over the lifespan (Atchley, 1989; Gegenfurtner & Vauras, 2012) and seems to contradict the view of motivational changes across the lifespan with decreasing growth-related motives (Kanfer & Ackerman, 2004; Kooij et al., 2011). However, both views are reconcilable in fact. As older employees tend to increasingly direct their motivation toward personally meaningful goals (Carstensen et al., 2003), they only become more selective in their learning goals (Hess, 2014; Thieme et al., 2015) but not necessarily less interested in and motivated by learning per se.

Further, we showed that knowledge seeking from younger coworkers can be negatively associated with workability via embarrassment, presumably due to the violation of age norms existing in the context of age-diverse knowledge exchange (Burmeister, van der Heijden, et al., 2018). Our finding is in line with anecdotal evidence from qualitative research hinting at the possibility that seeking knowledge from younger coworkers can be uncomfortable for older employees and make them feel embarrassed (Tomlinson, 2020). These novel insights also contribute to the general literature on knowledge seeking by revealing the consequences of social norm violations based on age (Gubbins & Dooley, 2021; Lim et al., 2020). Contrary to our expectations, we did not find a negative path to motivation to continue working via embarrassment. This might be explained by conceptual differences between ability and motivation. Workability refers to one's current competencies and skills (Brady et al., 2020) and might be more sensitive to embarrassment. Motivation to continue working instead refers to the goal of staying employable and embarrassment may not necessarily reduce that motivation when goals seem attainable. In fact, embarrassment as a self-regulatory emotion can also reinforce motivation by triggering the intention to repair one's self-image (Song et al., 2017). In sum, disentangling the countervailing pathways of older employees' knowledge seeking from younger coworkers advanced our understanding of how and why it is overall positively associated with older workers' motivation to continue working but not with their workability.

Third, our study contributes to the knowledge seeking literature by conceptualizing positive intergenerational affect as a specific personal factor indicating the comfort dimension of social confidence in the context of age-diverse coworkers (Andrews & Delahaye, 2000; Grand et al., 2016; Gubbins & Dooley, 2021). Our results revealed that the negative affective path to workability via embarrassment becomes non-significant at higher levels of positive intergenerational affect. This suggests that positive intergenerational affect can reduce the concerns tied to knowledge seeking from younger coworkers and thus prevent the experience of embarrassment. A potential reason as to why we did not observe a moderating effect for the learning path could be the fact that positive intergenerational affect mainly captures

the comfort component and less the ability component of social confidence.

In addition, investigating positive intergenerational affect as a boundary condition of the consequences of older employees' knowledge seeking from younger coworkers extends prior research on age-diverse knowledge exchange (e.g., Burmeister et al., 2020; Burmeister, van der Heijden, et al., 2018; Fasbender & Gerpott, 2020) and the self-regulatory process model of successful aging at work (Kooij et al., 2020), which has mostly focused on the influence of age stereotypes and discrimination against older workers as moderators. Our findings document that the effectiveness of older employees' knowledge seeking from younger coworkers, as a proactive self-regulatory enhancement strategy, also depends on older employees' own affect-based attitude, in this case, toward younger coworkers.

## 6.2 | Practical implications

By departing from the general focus on knowledge flows from older to younger employees, this study has implications for practitioners who aim to promote bidirectional age-diverse knowledge transfer and learning in organizations. In this study, we emphasized and demonstrated the potential of younger coworkers' knowledge for older employees' successful aging at work. To promote this potential, organizations need to foster age-inclusive management and climate that allow employees of all ages to assume the roles of knowledge seekers (and providers) (Burmeister, Fasbender, & Deller, 2018; Li et al., 2021). It is important that employees can feel free and safe to ask questions and to admit their own knowledge gaps regardless of their age.

This is essential because our findings demonstrated that knowledge seeking from younger coworkers can also be associated with embarrassment and negative implications for older workers' workability. The detrimental potential of age norm violations has also been captured by research on reverse mentoring (Chaudhuri & Ghosh, 2012; Finkelstein et al., 2003; Murphy, 2012). This implies that organizations need to become aware of the double-edged nature of older employees' knowledge seeking from younger coworkers for workability. A relevant practical question that emerges from this is how these negative implications can be mitigated.

Our study is instructive in that regard by showing that the negative path of knowledge seeking from younger coworkers to workability was contingent on older workers' positive intergenerational affect. Older employees with higher positive intergenerational affect were not embarrassed by seeking knowledge from younger coworkers. Organizations can focus on facilitating positive intergenerational affect by creating opportunities for intergenerational contact because research showed that intergenerational contact can reduce negative age bias and strengthen positive intergenerational attitudes (Burmeister et al., 2021; Henry et al., 2015; Iweins et al., 2013). To do so, they might initiate intergenerational lunches, connecting older and younger workers. A more relaxed setting outside the work context could enable coworkers to identify similarities and establish positive

and high-quality age-diverse relationships that facilitate positive intergenerational affect. Overall, by considering both countervailing mechanisms, our study shows that the positive path via perceived learning outweighs the negative path via embarrassment for both motivation to continue working and workability. Thus, organizations should commit to promoting intergenerational knowledge transfer at work.

### 6.3 | Limitations and future research directions

The findings of this research have to be interpreted in light of its limitations, which point to multiple avenues for future research. First, the use of a survey-based study design with self-reported measures may raise concerns about common source and method bias with inflated relations between variables (Podsakoff et al., 2003). To alleviate common method bias, we used a time-lagged study design and collected data of independent, mediator, and outcome variables at different measurement waves with 2-week intervals. To alleviate concerns of common source bias, future research may use multi-source data from younger and older coworkers involved in the knowledge transfer process. Second, our design does not allow us to draw causal conclusions. Thus, we cannot fully exclude the possibility of reverse causality. It is conceivable that employees who are motivated and able to continue working might be more interested in learning from their younger coworkers. To address this limitation, future research may use longitudinal research designs and apply cross-lagged panel models. Third, it should be noted that we measured perceived learning, which may not capture employees' actual learning. Actual learning is generally difficult to measure and often operationalized by knowledge tests or improved task performance as a proxy (e.g., Wielenga-Meijer et al., 2011). As measures of perceived learning have demonstrated positive links to actual learning, it may be a good proxy for actual learning as well (Arbaugh & Benbunan-Fich, 2006). Fourth, although we included chronological age and the age composition of older workers' work group as control variables in our model to rule out alternative age-related explanations, the chosen age cut-offs to define older and younger workers represent a limitation and area for future research (Fasbender & Gerpott, 2022). In particular, the distance between age norms and an individual's age is meaningful in this context and warrants further investigation (Lawrence, 1988).

Furthermore, this study offers several avenues to examine knowledge seeking among age-diverse coworkers more closely in the future. To begin with, the processes following knowledge seeking are inherently interpersonal between the knowledge seeker (older employee) and the potential knowledge source (younger coworker). The current research does not provide any insights into how this interaction unfolds, whether younger coworkers accept or reject the knowledge request, whether the knowledge exchange is balanced, and how they interact in transmitting the knowledge. It may also be worthwhile to differentiate knowledge seeking (i.e., asking someone proactively for information) from knowledge receiving (i.e., obtaining information from someone) and to investigate instances in which knowledge seeking does not result in knowledge receiving. To better understand the

countervailing pathways of older employees' knowledge seeking from younger coworkers, future research is encouraged to use multi-source data, experimental methods, and behavioral observation that allow to tap into these interactive processes.

Future research is also encouraged to further investigate boundary conditions of the positive and negative paths linking knowledge seeking from younger coworkers to perceived learning and embarrassment. We investigated positive intergenerational affect as a boundary condition in this study which, independently from that, might also function as a potential antecedent of older employees' knowledge seeking behavior. Future research could examine at what stages of the age-diverse knowledge exchange process positive intergenerational affect plays a role, separately, and jointly with the ability component of social confidence (e.g., learning self-efficacy beliefs). Other personal factors like older employees' meta-stereotypes (e.g., the assumption that younger coworkers think they cannot learn new technology; Finkelstein, 2015) may have embarrassment-inducing potential, whereas self-esteem may have an embarrassment-reducing potential. Relational factors that might affect the consequences of knowledge seeking from younger coworkers are trustworthiness and employees' relative positions in organizational hierarchies (Burmeister, Fasbender, & Deller, 2018; Perry et al., 1999). Hierarchical status differences are an interesting avenue for future research but were not a concern in our study because only age-diverse coworkers at the same organizational hierarchy level were included to limit the complexity of our research setting. Higher level contextual factors that could be relevant are organizational age diversity climate (Boehm & Dwertmann, 2015) and the occupational context because it is plausible that occupational demands differently shape age norms for continued learning and development. The self-regulatory process model of successful aging at work provides an overview and integration of societal (e.g., legislation), organizational (e.g., age-inclusive HR practices), workgroup (e.g., leadership and social norms), and job context factors (e.g., job autonomy) that can impact both self-regulatory engagement and disengagement strategies (Kooij et al., 2020). We encourage future research to integrate and systematically examine these contextual factors as suggested by the theoretical framing and the results to provide a more thorough test of the process model and to better understand the relative impact of these factors on older employees' self-regulatory efforts to successful aging at work.

## 7 | CONCLUSION

This study investigated the positive and negative consequences of older employees' knowledge seeking from younger coworkers. Drawing on the self-regulatory process model of successful aging at work, we demonstrated that knowledge seeking from younger coworkers contributes to older workers' motivation to continue working because it provides an important learning opportunity. For workability, knowledge seeking from younger coworkers was double-edged and depending on older employees' positive intergenerational affect. If older employees appreciated intergenerational interactions, the negative

pathway via embarrassment was suppressed. We hope that these insights enable a better understanding of the implications of knowledge transfer from younger to older employees and inspire future studies on age-diverse knowledge exchange and successful aging at work.

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## CONFLICT OF INTEREST STATEMENT

We declare that we have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## DATA AVAILABILITY STATEMENT

Data available on request from the authors.

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