ABSTRACT

The millennial generation is described as distinct from earlier generations, characterized by high individualism, feelings of entitlement, a focus on work-life balance and high turnover. We suggest that empowering leadership is suitable for enhancing psychological contracts and retention of this generation. We tested the relationship between empowering leadership, psychological contracts, and turnover intention in a multigenerational sample of 651 employees in the science, technology, engineering, and mathematics (STEM) fields. The psychological contract, specifically overfulfillment in terms of inducements exceeding obligations, mediated the relationship between empowering leadership and turnover intention. Generation was not found to moderate any path of the mediation model. The results indicate that empowering leadership effectively attenuates turnover intention for all generations, mediated by overfulfillment of the psychological contract. Generational differences should be more frequently tested in larger models in an organizational context to avoid overestimating generational effects. By testing differential effects of generations, this paper promotes a more profound understanding of consequences of empowering leadership.
Retention matters in today’s tight labor markets. Science, technology, engineering, and mathematics (STEM) fields in particular experience a shortage of qualified workers at all levels of education (Cai et al., 2018; Smith & White, 2019). To attract and retain the younger generation, companies develop an employer brand and present themselves as attractive employers (Lievens & Slaughter, 2016). The employer brand conveys information about the future psychological contract between employer and employee (Backhaus & Tikoo, 2004). The psychological contract, defined as the employee’s perception of the exchange relationship with their employing organization (Rousseau, 1989), ensures employee retention by reducing intended and actual turnover (Zhao et al., 2007). Leadership shows a similar positive effect on turnover and turnover intention (Kim et al., 2018), while fostering the psychological contract between employees and the employing organization (Tekleab & Taylor, 2003), Intended and actual turnover is higher in the millennial generation than in older generations (Costanza et al., 2012), especially when they are dissatisfied with their jobs (Lu & Gursoy, 2016). The millennial generation, which includes people born after 1982 (Twenge, 2010), is characterized as more demanding in the employment relationship because of high individualism, a focus on work-life balance, extrinsic motivation and feelings of entitlement combined with lower work centrality (Anderson et al., 2017).

Anderson et al. (2017) suggested that established leadership theories (i.e., information processing, leader-member exchange (LMX), transformational, authentic, and ethical leadership) are challenged by the younger generation. Emerging empirical research on leadership and the millennial generation has consistently supported different types of leadership (e.g., empowering, transformational, LMX, Alif & Nastiti, 2022; Lee et al., 2022; Nelson, 2012; Shacklock & Brunetto, 2011). A variety of outcomes have been examined (e.g., turnover intention, well-being, creativity, commitment), typically without comparing generations (Alif & Nastiti, 2022; Anselmo-Witzel et al., 2020; Malik & Malik, 2022; Zhang & Zhao, 2021). Existing research tends to lack a generational rationale for its leadership focus, which is selected for its fit with the current business environment. As a result, it remains unclear what types of leadership are appropriate for retaining millennial employees. Empowering leadership (Raub & Robert, 2010), not discussed by (Anderson et al., 2017), may be a better fit for the younger generation because it is more consistent with their leadership preferences (Dulin, 2008; Galdames & Guihen, 2022). Empowering leadership aims to enable employees to perform self-management and to develop self-leadership skills (Pearce & Sims, 2002). For example, the preference for collaborative working, the need for an open dialogue, the search for purposeful work, and the importance of self-management align with aspects of empowering leadership (Dulin, 2008; Galdames & Guihen, 2022). Empowering leadership supports retention (Kim et al., 2018), a current concern for millennial employees, and thus should be considered as a leadership style for the millennial generation. In addition, research on the relationship between empowering leadership and psychological contracts is very limited to date (Roader & Lønøy, 2022; Wu & Chen, 2015). The expected positive relationship with psychological contracts has not yet been substantiated for empowering leadership. Investigating the relationship between empowering leadership and psychological contracts, and their effect on turnover intention, helps to understand how empowering leadership is related to psychological contracts and whether it helps to retain the younger generation.

In this study, we aim to fill this research gap by examining the relationship between empowering leadership and psychological contracts in a generational context. Psychological contracts are tested as an intermediate variable between empowering leadership and turnover intentions. Psychological contracts are investigated in terms of the congruence of employer inducements and obligations as perceived by employees. The combination of obligations and inducements allows for a more detailed analysis (Lambert et al., 2003) than measuring whether organizations have fulfilled their obligations. The contextual variable generation is included as a moderator in all paths of the mediation model to test whether the relationships between variables and the entire model differ for generations. Much of the research on generations has focused on differences in core variables (Costanza et al., 2012). In addition to identifying differences, it is important to examine whether the relationships between variables vary across generations. Our moderated mediation model allows us to test whether the relationships between empowering leadership, psychological contracts, and retention vary systematically across generations (Figure 1). Our sample consists of employees in the STEM fields because attracting and retaining these employees is critical for many organizations.

With our analysis, we seek to make three contributions to the literature on millennials and psychological contracts. First, this study enriches the discussion about appropriate leadership styles that enhance psychological contracts and retention of millennials. Our research on empowering leadership adds to the initial discussion on leadership that is effective in reducing the turnover intention of this generation. Second, it extends the currently sparse literature on empowering leadership and psychological contracts. Measuring psychological contracts with a combination of obligations and inducements (Lambert et al., 2003) allows for a more detailed understanding of why employees stay in their job. Third, using generation as a contextual variable goes beyond testing generational differences on individual
variables. It embeds generational differences in a larger model and contributes empirical evidence to the controversial discussion of whether generations are different.

LEADERSHIP AND THE MILLENNIAL GENERATION

Several widely used leadership theories are challenged by the values and attitudes of the millennial generation (Anderson et al., 2017). In their theoretical discussion, Anderson et al. (2017) identified that established and emerging leadership theories are not a fit for this generation (i.e., LMX, information processing, transformational, authentic, and ethical leadership). They argued that millennials are too individualistic to pursue collective goals promoted through transformational leadership or to achieve value congruence promoted through authentic leadership. Millennials are motivated by extrinsic rewards, so they are unlikely to respond to ethical appeals. Millennials value work-life balance too highly to be willing to invest in an exchange with their leader. Empirical research has not provided consistent support for appropriate types of leadership for the millennial generation. In line with the theoretical arguments of Anderson et al. (2017), LMX was not found to be effective in samples of millennials, while it increased the retention, autonomy, and affective commitment of older generations (Nelson, 2012; Shacklock & Brunetto, 2011). Contrary to Anderson et al. (2017), transformational leadership supported retention better for millennials than for older generations (Lee et al., 2022). Other research has used only millennial samples, which does not allow for generational comparisons. In millennial samples, an association of empowering leadership with creativity, engagement, and performance, but not work effort, was documented (Alif & Nastiti, 2022; Silva et al., 2020). Transformational leadership was found to be positively related to commitment and happiness (Malik & Malik, 2022; Yap & Badri, 2020). Responsible and inclusive leadership were correlated with well-being and task and creative performance (He et al., 2019; Zhang & Zhao, 2021). Servant leadership, particularly its empowerment dimension, was positively related to intention to stay and job satisfaction, but not to personal accomplishment (Anselmo-Witzel et al., 2020; Bilge et al., 2021). Unfortunately, none of these investigations referred to generations in explaining their choice of leadership theory. Instead, they argued with current business demands. While the empirical studies fail to present arguments as to why the form of leadership that is studied should be appropriate for millennials, Anderson et al. (2017) provide an intense discussion on leadership and generation. It is thus more promising to develop arguments in line with the theoretical discussion of Anderson et al. (2017).

In light of the concerns described by Anderson et al. (2017), effective leadership must take millennials’ sense of entitlement seriously. Empowering leadership could be suited to managing millennial employees and their sense of entitlement. Empowering leadership allows for a more contemporary view of followers as partners in a proactive role (Carsten et al., 2010). This focus on followership aligns with millennials’ demand for autonomy and their individualistic view. Researchers have argued that empowering leadership is related to employees’ psychological empowerment, which consists of four cognitions: meaning, competence, self-determination, and impact (Raub & Robert, 2010; van Dierendonck & Dijkstra, 2012; Zhang & Bartol, 2010). Thus, empowering leadership 1) increases the meaningfulness of work by making visible the importance of each individual’s work for organizational effectiveness; 2) expresses confidence in employees’ competence, thereby increasing their self-efficacy; 3) delegates autonomy and thus enhances self-determination because employees can decide how to perform their work tasks; and 4) allows employees to participate in decision making, thereby giving them control and a sense of impact.
Participative goal setting in empowering leadership (Pearce & Sims, 2002), combined with a focus on follower self-management, responds to millennials’ appreciation of accountability and supervisor feedback. Self-management and participative goal setting replace the demand on employees to accept supervisors’ values (Anderson et al., 2017) and take into account millennials’ emphasis on autonomy (Lyons & Kuron, 2014). The meaningfulness of work and participative goal setting potentially motivate employees to pursue their goals despite their high individualism and high importance of work-life balance. Supporting self-determination and enabling participation in decision making are suitable measures to attenuate millennials’ striving for extrinsic rewards.

Based on this assessment, we expect that empowering leadership can flexibly embrace millennials and their demands and motivate them to stay in the organization. Even if millennial employees feel entitled and refuse to accept the power of their leader (Anderson et al., 2017), empowering leadership may still be effective for retention. Millennials may more willingly accept empowering leadership than older generations.

**EMPOWERING LEADERSHIP AND PSYCHOLOGICAL CONTRACTS**

Leadership is one of the frequently studied antecedents of psychological contracts (Panaccio et al., 2015; Raeder & Lamøy, 2022; Tekleab & Taylor, 2003; Tseng & Wu, 2017). Empowering leadership, however, has only been considered in three investigations, showing a positive relationship with the fulfillment of the psychological contract (Wu & Chen, 2015) and a negative relationship with breach (Kodden & Roelofs, 2019). Fulfillment of the psychological contract denotes that employees perceive the employer’s obligations to be fulfilled, whereas breach, its opposite, indicates the failure to deliver on promised obligations. The third investigation in an educational setting found that some subscales of empowering leadership are related to agreement on the psychological contract between teachers and principal (Gökeyer, 2020). The study does, however, not report details on how agreement in psychological contract perceptions was captured.

Because research on empowering leadership and psychological contracts is limited to date, we refer to other types of leadership to explore the relationship with psychological contracts. This is possible because the pattern of results for empowering leadership is similar to that for other types of leadership, such as ethical or servant leadership and LMX (Delobbe et al., 2016; Kasekende, 2017; Kasekende et al., 2016; Panaccio et al., 2015; Peng et al., 2016; Raeder & Lamøy, 2022; Tseng & Wu, 2017). Leadership increases the fulfillment and reduces the breach of the psychological contract.

Lambert et al. (2003) argued that fulfillment of the psychological contract is best represented by the congruence of obligations and inducements in the employment relationship. Fulfillment indicates that obligations and inducements are aligned, but obligations and inducements might correspond at a high or at a low level. Breach denotes that inducements differ from obligations, in most instances because inducements remain below obligations. Considering congruence allows for a more differentiated approach to understanding the combination of obligations and inducements in the employment relationship. Tekleab and Taylor (2003) investigated the influence of LMX on the agreement between employer and employee perceptions on the psychological contract and found a significant effect for leader-reported LMX. They suggested that agreement between employers and employees is the optimal outcome of LMX. This agreement can be compared to fulfillment in terms of the congruence of obligations and inducements. Following Tekleab and Taylor (2003), we expect that empowering leadership increases the congruence and reduces the discrepancy between obligations and inducements. To the best of our knowledge, no other study has explored the influence of any type of leadership on this type of agreement or congruence.

Congruence has, however, been explored in relation to turnover intention (Kraak et al., 2018; Montes & Irving, 2008) that is an outcome in our model. Both studies show that the congruence of obligations and inducements does not diminish turnover intention, but overfulfillment does. Overfulfillment is a form of discrepancy in which inducements exceed obligations, that is, organizations offer more than was promised. Montes and Irving (2008) separately tested how relational obligations and inducements and transactional obligations and inducements relate to turnover intention. The term relational denotes socioemotional psychological contract content, and the term transactional refers to economic content. Kraak et al. (2018) investigated the work-life balance contents of psychological contracts. In both studies, overfulfillment was conducive to retention, and underfulfillment led to average or high turnover intention. Underfulfillment is a combination of high obligations and low inducements and represents the prototypical case of breach (Lambert et al., 2003). Congruence produces mixed results in relation to turnover intention, but congruence at lower levels of obligations and inducements has stronger effects than congruence at higher levels of obligations and inducements.

Overfulfillment is conducive to employee retention because it provides ample support through inducements (Montes & Irving, 2008), although congruence could be expected to be optimal in line with the reasoning of Tekleab and Taylor (2003). We argue that empowering leadership increases the perception of overfulfillment,
with the ultimate aim of reducing turnover intention. Empowering leadership provides a form of support that employees perceive as an inducement. Although this logic might be counterintuitive, we argue along the lines of Montes and Irving (2008) and Kraak et al. (2018) that empowering leadership contributes to the perceived overfulfillment of the psychological contract in the form of high inducements and low obligations.

Hypothesis 1: Empowering leadership is positively related to the overfulfillment of the psychological contract in terms of employer inducements exceeding employer obligations.

**TURNOVER INTENTION**

Previous research has shown that empowering leadership as well as psychological contracts are related to turnover intention (Kim et al., 2018; Zhao et al., 2007). Empowering leadership effectively attenuates turnover intention, defined as thoughts about quitting one’s job (Amundsen & Martinsen, 2014; Robert et al., 2000). Turnover intention is not equal to actual turnover, but a correlation between turnover intention and actual turnover has been reported (Griffeth et al., 2000; Tett & Meyer, 1993; Wong & Cheng, 2020). While turnover intention reveals dissatisfaction with current employment conditions, actual turnover depends on real opportunities in the labor market to find a new job. An indirect relationship between empowering leadership and turnover intention was observed in several studies (Albrecht & Andreetta, 2011; Chen et al., 2011; Dewettinck & Ameijde, 2011; Kim & Beehr, 2020; Robert et al., 2000), and this relationship was negative in all investigations. The direction of this relationship was corroborated in a meta-analysis (Kim et al., 2018).

Psychological contracts, particularly overfulfillment, reduce turnover intention (Kraak et al., 2018; Montes & Irving, 2008; Zhao et al., 2007). Studying overfulfillment, or more generally congruence, delivers more detailed results than studying breach and turnover intention. Kraak et al. (2018) found with regard to the work-life balance contents of the psychological contract that low turnover intention occurs with a low level of obligations, regardless of the level of delivered inducements. With regard to relational and transactional contents, low turnover intention was associated with a low level of inducements, regardless of the level of obligations (Montes & Irving, 2008). These different patterns can be attributed to the fact that work-life balance content is more optional than the relational and transactional content of the psychological contract. In line with Montes and Irving (2008), we suggest that low inducements are related to high turnover intention. Low inducements can indicate underfulfillment in combination with high obligations. Low inducements can also be a part of congruence when both obligations and inducements are low. We expect that overfulfillment in terms of inducements exceeding obligations reduces turnover intention and, more generally, that low inducements contribute to turnover intention.

Our mediation model tests the relationship between empowering leadership and turnover intention. Congruence of the psychological contract, in terms of balance between obligations and inducements, acts as a mediator. Based on previous research (Kraak et al., 2018; Montes & Irving, 2008), we suggest that empowering leadership creates a perception of overfulfillment, which is conducive to employee retention, whereas low inducements stimulate turnover intention.

Hypothesis 2: The relationship between empowering leadership and turnover intention is mediated by the congruence of the psychological contract.

**THE CONTEXT OF GENERATIONS**

Research on generations has produced a myriad of individual results that do not yet form a complete picture. For example, turnover was found to be higher in early career stages among millennials than older generations (Lyons et al., 2015; Lyons et al., 2012). In a sample of millennial employees, empowering leadership was found to be related to engagement and performance (Silva et al., 2020). Millennials, Generation X, and baby boomers scored differently on dimensions of psychological contracts (e.g., stimulating job, Lub et al., 2012). Comparing generations has illustrated how younger generations may differ from older ones, and focusing on the younger generation has helped to identify the characteristics of this generation. Both of these widely used approaches do not explain why these differences occur or whether the relationships are typical of a generation. This calls for more comprehensive models that study whether relationships differ across generations. For example, Lub et al. (2016) showed that dimensions of psychological contract content were differentially related to turnover intention across generations. Job content and rewards reduced turnover intention more strongly for millennials than for older generations. No differential effects across generations were found for the dimension of development. Lee et al. (2022) showed that transformational leadership enhanced retention more strongly for Generation Y than for Generations X and Z. Other factors (e.g., corporate social responsibility, technology) did not produce differential effects.

Consistent with these designs, we argue that our mediation model is moderated by generation. The relationship between empowering leadership and
psychological contracts is expected to be stronger for the younger generation. Because this relationship has not been studied yet, we use the study of Eyoun et al. (2020) as an example. Eyoun et al. (2020) showed that millennials were more sensitive than other generations to the use of performance appraisals to determine rewards and promotions because they perceived higher obligations as a result. While psychological contracts did not differ across generations, generation did affect the relationship between performance appraisals and psychological contracts. As argued above, we expect empowering leadership to be particularly effective in developing psychological contracts and retaining the millennial generation. The relationship between empowering leadership and psychological contracts is expected to be stronger for millennials than for older employees. That is, empowering leadership contributes more to overfulfillment of the psychological contract in terms of inducements exceeding obligations.

Research has documented a higher number of job changes (i.e., turnover) in the early career stages of millennials compared to older generations (Lyons et al., 2015; Lyons et al., 2012). Millennials reported higher turnover intention in several investigations (Cennamo & Gardner, 2008; Kim et al., 2016; Lu & Gursoy, 2016; Lyons & Kuron, 2014), which was also documented in a meta-analysis (Costanza et al., 2012). As argued above, we expect that empowering leadership effectively addresses millennials’ demands and leadership preferences and thus has a more pronounced effect on reducing the turnover intention of young employees. We suggest that empowering leadership is effective in attenuating the high turnover intention of the millennial generation.

Psychological contracts and their effects on turnover intention vary across generations, but no consistent pattern has emerged (Hess & Jepsen, 2009; Lub et al., 2012; Lub et al., 2016; Lub et al., 2011). When comparing Generation X and millennials, fulfillment of the transactional contract was more strongly related to turnover intention in Generation X, whereas fulfillment of the balanced contract was more strongly related to turnover intention among millennials (Hess & Jepsen, 2009). No such generational effect was found for relational contracts. The balanced contract is located between the relational and transactional contract and refers to options for development and responsibility. Lub et al. (2016) reported different relationships between five dimensions of contract content and turnover intention for different generations. The dimensions social atmosphere and organizational policies only had effects for older generations, whereas the dimensions of job content and rewards reduced turnover intention only for millennials. The dimension of development obligations failed to reflect a generational effect. As discussed above, we expect that ensuring overfulfillment and avoiding underfulfillment are most critical to reducing millennials’ turnover intention. Because millennials appreciate work-life balance, extrinsic rewards, advancement opportunities and immediate recognition (Gursoy et al., 2013; Lyons et al., 2007; Mencl & Lester, 2014; Twenge, 2010), they are perceived as more demanding and entitled than other generations. In addition, they tend to quit their job more easily if they are dissatisfied with their work or their work environment. Based on these arguments, we expect a more pronounced relationship between overfulfillment and turnover intention for millennials, such that overfulfillment reduces turnover intention, which is comparatively high for millennials, more explicitly than for older generations.

Our final moderated mediation model allows us to test whether the relationships between empowering leadership, psychological contract, and turnover intention vary by generation. We expect this mediation to be moderated by generation such that 1) the effect of empowering leadership on overfulfillment is stronger for millennials and 2) the effect of overfulfillment and low inducements on turnover intention is more pronounced for millennials than for older generations.

Hypothesis 3: The mediation model of empowering leadership, congruence of the psychological contract, and turnover intention is moderated by generation. The relationships are stronger for millennials than for older generations.

METHODS

SAMPLE

Data were collected through an online survey sent to employees of two organizations and alumni of a university and a college offering education in the STEM fields. One department was selected for data collection in each of the two organizations in logistics and public administration. Both organizations participated in the funded research project because they aimed to enhance the retention of younger employees in the STEM fields in the future. The alumni samples added a broader perspective to the organizational samples. In both organizations, employees were invited to participate in this research through internal emails. Participants were given three weeks to complete the questionnaire. At the university and the college, the invitation to participate was openly distributed through newsletters, so the response rate cannot be reported for the entire sample.

The questionnaire was completed by 676 participants. We excluded participants from the analysis if they did not report their age (N = 14), were retired (N = 2), or had missing values on three or four of the study variables (N = 4). The final sample consisted of 651 participants.
The remaining missing values were estimated with the expectation-maximization method.

The final sample consisted of 303 participants of the millennial generation, 302 of Generation X, and 46 Baby Boomers. The widely used definition of the millennial generation beginning with the birth year 1982 is adopted in this study (Twenge, 2010; Wong et al., 2008).

Participants included 506 men and 134 women (11 participants did not indicate their gender) who worked in informatics (N = 245), engineering (N = 178), construction (N = 66), life sciences (N = 51), physical sciences (N = 46), or other STEM fields (N = 65).

MEASURES

All measures used a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Empowering leadership was measured with four subscales – encourage teamwork, participative goal setting, encourage independent action and encourage opportunity thinking – from Pearce and Sims (2002). The 13 items were summarized in one scale because all subscales loaded on one second-order factor. Sample items for each subscale are “My team leader encourages me to work together with other individuals who are part of the team” (encourage teamwork); “My team leader works with me to develop my performance goals” (participative goal setting); “My team leader encourages me to search for solutions to my problems without supervision” (encourage independent action); and “My team leader urges me to think of problems as opportunities rather than obstacles” (encourage opportunity thinking). Cronbach’s alpha for the empowering leadership scale was .88.

Turnover intention was measured with three items from Cole and Bruch (2006). A sample item is “I often think about quitting my job at this company.” Cronbach’s alpha for this scale was .81.

Psychological contract obligations and inducements were measured in five dimensions – security and retention, flexibility, support for career and skill development, appreciation for performance, and participation – using the validated questionnaire of Roeder et al. (2009). We selected this questionnaire because the dimensions of psychological contract contents allow us to measure psychological contracts in detail. We can thus capture potential generational differences in turnover, flexibility, career, rewards, and participation (Anderson et al., 2017; Costanza et al., 2012; Gursoy et al., 2013; Lyons et al., 2007; Twenge, 2010). For the purpose of this study, we added six items to the existing measure with the goals of improving the flexibility subscale and adding a subscale measuring appreciation for performance. One item was added to the flexibility subscale in the context of this study referring to working in diverse teams. Obligations and inducements were measured with the same set of items but with a different introductory sentence. To measure obligations, we asked participants to indicate the degree to which the organization was obliged to provide them with each of the items. To measure inducements, we asked participants to indicate the degree to which their employer actually provided them with each of the items. Sample items for obligations and inducements are “opportunities for identification” (security and retention), “the option to work in a different field within the company” (flexibility), “support for my career” (support for career and skill development), “recognition for good performance” (appreciation for performance), and “participation in decision making” (participation). After we tested the discriminant validity and measurement invariance (see below), 18 items were retained. For obligations and inducements, all items were combined into one variable because all subscales loaded on one second-order factor. The internal consistency of the obligations scale was .84, and that for the inducements scale was .90.

Generation was measured based on respondents’ birth year. We distinguished a younger generation born in the years 1982 to 1999 (Twenge, 2010; Wong et al., 2008) and an older generation born before 1982 because only 46 participants belonged to the Baby Boomer generation.

Gender was used as a control variable because women more frequently leave their jobs in STEM than men (Glass et al., 2013).

ANALYSIS

Prior to the data analysis, we tested discriminant validity and measurement invariance with confirmatory factor analyses in Mplus 8.7 (Muthén & Muthén, 2017). We tested measurement invariance to establish that the questionnaire scales in this study measured the same construct in the two generational groups (Putnick & Bornstein, 2016). Measurement invariance was examined in two-group CFAs in three steps: 1) configural invariance tested the patterns of loadings in both generational groups; 2) metric invariance tested the equivalence of item loadings on factors; and 3) scalar invariance compared the equivalence of item intercepts in both generational groups.

Because parallel items of psychological contract obligations and inducements were correlated with one another, two models were built. The first included inducements, empowering leadership and turnover intention, and the second included obligations, empowering leadership and turnover intention. The two models testing discriminant validity (Table 1) reached an acceptable fit (RMSEA < .08, SRMR < .10) or a good fit (RMSEA < .05) in two indices but had an unacceptable fit in two other indices (CFI < .95, TLI < .95; Schermelleh-Engel et al., 2003). The two models testing measurement invariance were supported after six psychological contract items were removed because they had low factor loadings in either of the groups or models (Table 2). The differences between the models were below the...
Table 1 Model Fit for Models Testing Discriminant Validity.
Note. RMSEA = root-mean square error or approximation; CFI = comparative fit index; TLI = Tucker-Lewis index; SRMR = standardized root-mean square residual; AIC = Akaike’s information criterion.

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<th>CFI/TLI</th>
<th>SRMR</th>
<th>AIC</th>
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Table 2 Model Fit for Models Testing Measurement Invariance in a Two-Group Confirmatory Factor Analysis.
Note: RMSEA = root-mean square error or approximation; CFI = comparative fit index; TLI = Tucker-Lewis index; SRMR = standardized root-mean square residual; AIC = Akaike’s information criterion.

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All hypotheses were examined with SPSS 27. To investigate Hypothesis 1, we followed Tekleab and Taylor (2003) and used a general linear model with Wilks’ lambda to test whether the independent variables had different effects on obligations and inducements. The b path of the mediation model in Hypothesis 2 was tested with polynomial regression analysis that included the direct effects, the squared terms, and the interaction term of obligations and inducements on turnover intention. The relationship between the psychological contract and turnover intention was mediated by the congruence of the psychological contract, mediation (Hypothesis 2) was tested with the difference-in-coefficients approach, where the indirect effect (c’-c) is calculated by subtracting the direct effect (c) from the total effect (c) (MacKinnon et al., 2002). To examine Hypothesis 3, all terms were included in interaction with generation. Moderation is present if the moderated model explains significantly more variance than the model without moderation (Edwards, n.d.-b).

RESULTS

Descriptive statistics and correlations of all study variables are presented in Table 3. The variable generation was not correlated with empowering leadership or turnover intention (Table 3). Generation was related to psychological contract obligations, but not to inducements (Table 4, Model 1), indicating lower perceived obligations for millennials. Generation was negatively related to turnover intention in models with the mediator, but without moderator (Table 5, Models 2 and 3), indicating higher turnover intentions for millennials when the mediator is included.

Hypothesis 1 predicted a positive relationship between empowering leadership and psychological contracts (a path), particularly overfulfillment (i.e., inducements exceed obligations). Empowering leadership increased inducements (B = .43, p < .001) more than obligations (B = .16, p < .001), and this led to overfulfillment with more pronounced empowering leadership (Table 4, Model 1; Figure 2). The effect is indicated by the significant Wilks’ lambda (A = .781) in Table 4, Hypothesis 1 was supported.

In Hypothesis 2, we argued that the relationship between empowering leadership and turnover intention is mediated by the congruence of the psychological contract. The relationship between the psychological contract and turnover intention (b path of the mediation) was mainly determined by inducements (B = –1.02, p <
High turnover intention occurred with high obligations and low inducements (Figure 3), and low turnover intention combined with high inducements and low obligations. The combination of low inducements and high obligations was related to elevated turnover intention that did not reach the highest level. The slope along the line of discrepancy $a_1$ ($\beta = -1.44, p < .001$, diagonal from high obligations/low inducements to low obligations/high inducements) and the slope along the line of congruence $a_1$ ($\beta = -.057, p < .05$, diagonal from low obligations/low inducements to high obligations/high inducements) were significant (Shanock et al., 2010). The curvature along the line of discrepancy and the line of congruence were not significant. This shows that turnover intention increases with the discrepancy in the psychological contract and is highest with low inducements and high obligations and lowest with high inducements and low obligations. Turnover intention is lower for congruence at high levels of obligations and inducements and higher for congruence at low levels of obligations and inducements. Overall, low inducements are more important for employee retention than low obligations. The relationship between empowering leadership and turnover intention was mediated by the combination of obligations and inducements of the psychological contract. Hypothesis 2 found full support.

Hypothesis 3 expected that the mediation model is moderated by generation. No moderation effect was found in the relationship between empowering leadership and psychological contracts ($a$ path, Table 5, Model 2; $B = .04$, ns, for obligations; $B = -.05$, ns, for inducements). The relationship between psychological contracts and turnover intention ($b$ path) was not moderated by generation (Table 5, Model 5; $\beta = .16$, ns, for obligations; $\beta = .05$, ns, for inducements; $\beta = -.13$, ns, for obligations; $\beta = -.02$, ns, for inducements*obligations; $\beta = .11$, ns, for inducements*). Again, no moderation occurred in the relationship between empowering leadership and turnover intention ($c$ path, Table 5, Model 4; $\beta = -.17$, ns, for empowering leadership). Hypothesis 3 was thus not supported in our model.

To explore the lack of moderation, we tested several other options to prevent this result from being determined by methodological choices. First, we tested all models with subscales of leadership and psychological contracts. Relative to the number of tests conducted, very few interactions with generation were found and significant moderation effects disappeared when the level of significance was adjusted to the number of tests. Second, we used birth year as a moderator to prevent an effect from remaining undetected because of the dichotomization of this
An interaction effect was found only for the relationship between empowering leadership and the psychological contract. Empowering leadership was related to overfulfillment for the youngest participants, to congruence of obligations and inducements for Generation X and to underfulfillment for the oldest participants. Third, we split the moderator into three generational groups (millennials, Generation X, and Baby Boomers), but no significant moderation was found. Finally, we tested the moderated mediation with psychological contract fulfillment (with the scale used in Tekleab & Taylor, 2003) instead of congruence. Congruence and fulfillment were highly correlated, but the models with fulfillment explained less variance, and moderation was not found. Because all additional tests failed to show consistent moderation, we conclude that the mediation model (Table 5, Model 3) represents the data well.

DISCUSSION

In this study, we aimed to test the relationship between empowering leadership and turnover intention, mediated by the congruence of the psychological contract and moderated by generation. We expected to find evidence of distinct relationships between the study variables for the millennial generation. While younger employees differed in their perceived employer obligations, they did not otherwise differ systematically from older employees. Millennials did not have higher turnover intention than older generations. For employees of all generations, empowering leadership effectively reduced turnover intention. The main mechanism of this relationship occurred through inducements of the psychological contract, which attenuated turnover intention. Inducements emerged as a more important mediator between empowering leadership and turnover intention.
than obligations or the congruence of obligations and inducements.

**THEORETICAL IMPLICATIONS**

The present study contributes to existing theory in three ways. First, we join the discussion of a leadership style that is appropriate for employment relationships and retention of the millennial generation. Empirical research has yet to identify a consistent suggestion for appropriate leadership styles (Alif & Nastiti, 2022; Lee et al., 2022; Nelson, 2012; Shacklock & Brunetto, 2011). The view of Anderson et al. (2017) seemed pessimistic because none of the leadership theories (i.e., LMX, information processing, transformational, authentic, and ethical leadership) passed the test on millennials. We were more optimistic that empowering leadership would qualify as a leadership theory that could retain employees of this generation. Our results, however, show that empowering leadership is beneficial for retaining employees of all generations. We cannot argue that empowering leadership is particularly suited for millennials because they do not experience leadership differently than their older colleagues. The lack of different relationships for the millennial generation and older generations, however, suggests that empowering leadership adapts well to millennials’ situations and their unique demands. Our results illustrate that the leadership styles that gained popularity at the beginning of this century were developed in line with the expectations and demands of younger employees.

Second, we explored the relationship between empowering leadership and psychological contracts that has not been well addressed in empirical research. As expected (Raeder & Lamøy, 2022; Wu & Chen, 2015), we found a positive relationship between leadership and psychological contracts, indicating that employees perceive leadership as supportive and stimulating. Our research contributes to a more nuanced view on the role of psychological contracts, which are frequently captured as fulfillment or breach. A large body of research has established that breach stimulates turnover intention and fulfillment attenuates it (Zhao et al., 2007). However, in line with earlier studies, breach is not the core motivation for turnover intention, but it is mainly attenuated by overfulfillment or delivered inducements (Kraak et al., 2018; Montes & Irving, 2008). Our results show that the three-dimensional model explains how psychological contracts affect turnover intention in more detail than models restricted to fulfillment or breach. The effect of overfulfillment could not be reproduced by measuring fulfillment or breach because the preferred incongruence in terms of overfulfillment could not be captured. However, the effect of empowering leadership on psychological contracts is largely driven by overfulfillment. Turnover intention is mainly determined by inducements, while obligations play a marginal role. It is thus through higher inducements that empowering leadership reduces turnover intention. It is positive that employees perceive empowering leadership as providing them with inducements or more generally with support. The high relevance of inducements, however,

<table>
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<th>PSYCHOLOGICAL CONTRACT OBLIGATIONS</th>
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<td>B(SE)</td>
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<tr>
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<tr>
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<td>.197</td>
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Table 4 Predicting Congruence of the Psychological Contract (a path).

**p < .01. ***p < .001.
expresses the perception of entitlement that is attributed to millennials (Anderson et al., 2017). In our study, entitlement is not typical for younger employees but for employees of all ages. In essence, employees are captive to inducements that employers offer.

Third, our study revealed individual differences between generations (i.e., lower obligations of millennials), but the contextual variable generation did not support an overall different model for millennials. This suggests that the differing perceptions of generations do not translate into consistently different behavior at the workplace. The similar turnover intention of generations is particularly evident, although research has consistently shown a higher turnover intention for millennials (Costanza et al., 2012). The relationship between the psychological contract and turnover intention did not vary between millennials and older generations in this study as it did in previous studies (Hess & Jepsen, 2009; Lub et al., 2016). As discussed by Mencl and Lester (2014), differences between generations are overestimated. Whether millennials perceive their experiences in an organization differently than other generations depends on how they are integrated into the organization and what is expected of them. We conclude that there are some differences between generations, but these differences are neither consistent nor exhaustive. Perceptions of generations can be understood as stereotypes (Van Rossem, 2019) that do not play a role in all situations. When employees are fully integrated into a work context, such generational stereotypes potentially lose their relevance.

**LIMITATIONS AND FUTURE RESEARCH**

The results of this study are limited by its cross-sectional design. In a cross-sectional model of generations, the effects of age, career stage and cohort are confounded, and cultural and historical contexts and their changes over time cannot be considered (Kowske et al., 2010; Lyons & Kuron, 2014). Ideally, a longitudinal research design would follow the individual development over time and across career stages and recruit participants from several cohorts (Rudolph et al., 2021). Current research has, however, not yet used such complex and demanding designs (Rudolph et al., 2021). Our research found few differences between generations, so the confounding effects of career stage and cohort did not affect the results. It is unlikely that a more sophisticated

<table>
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<td>F</td>
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Table 5 Predicting Turnover Intention (b and c path). **p < .01. ***p < .001.
design, with several cohorts and multiple waves of data collection, would have discovered generational or age effects in our sample. The lack of moderation supports the view that differences between generations tend to be overestimated (Mencl & Lester, 2014).

Potential differences between generations may have disappeared in the organizational context and in corresponding empirical models. We thus suggest that future research considers how young newcomers are integrated into an organization and whether this integration affects their work values. The relative weight of socialization and onboarding should be explicitly regarded. In our study, the differences did not persist or manifest in relationships in larger models; thus, this is a promising approach for future research.

The lack of differences between generations may be due to the selection of the sample. This study is one of few to focus exclusively on the STEM fields, and we did not control whether differences between generations are less pronounced in STEM than in other occupational groups. Our sample is not representative of employees in the STEM field because we focused on two organizations and alumni from one university and one college.

We used generation as a dichotomous moderator, despite concerns that information is lost when age is transformed into generations (MacCallum et al., 2002). The continuous moderator of birth year produced a few more significant effects. Although this result can be interpreted as indicating that generation does not fully capture changes across the lifespan, the use of birth year failed to produce a fully moderated model. However, the moderation with birth year in the relationship between empowering leadership and the psychological contract indicates that this relationship evolves on a continuum that extends across the lifespan (Rudolph et al., 2018). Finally, most assumptions of Anderson et al. (2017) have yet to be tested. To better understand generational differences, other leadership styles and their relation to work outcomes should be explored.

PRACTICAL IMPLICATIONS
We suggest practical implications that address each of the study variables. Empowering leadership showed positive effects on psychological contracts and intention to quit for all employees. Empowering leadership is appreciated by employees of all ages, so organizations benefit from encouraging and supporting leaders in developing their empowering leader behavior.

Inducements supported through empowering leadership were the primary mechanism for retention. Employees could potentially demand excessive levels of inducements; thus, perceived obligations should be discussed with employees in relation to inducements. Long-term problems with overly demanding employees could be a detrimental consequence that should be prevented. Further, inducements could be enhanced by other practices, for example, human resource management.

Differences between generations may be overstated because of the media attention given to the millennial generation. However, leaders should be sensitive to potential generational differences and be flexible and receptive to employees’ needs and expectations. Millennials should be treated equally to other generations or be treated differently but fairly when doing so is helpful. Socialization and onboarding of new employees can help reduce generational differences among staff members. Organizations should thus prioritize integrating new members into a multigenerational workforce rather than offering them special treatment.

DATA AVAILABILITY STATEMENT
All data used in the analyses is available at: https://osf.io/ha5mr/?view_only=23c73692a60541ef8be899ec6693945.

TRANSPARENCY STATEMENT
In the methods section, we reported how we determined the sample size and the stopping criterion (sample). We reported all measures and variables (measures). We reported all data eligibility criteria and whether these were determined before or during data analysis (sample).

Preregistration statement: No part of the study procedures was preregistered prior to the research being conducted. No part of the study analyses was preregistered prior to the research being conducted.

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COMPETING INTERESTS
The second author of this article, SR, serves as an editorial board member of Swiss Psychology Open. Please note that she was not involved at any stage during the editorial process.

AUTHOR CONTRIBUTION
AG: conceptualization, data curation, formal analysis, funding acquisition, investigation, methodology, project
administration, resources, supervision, validation, writing – review & editing; SR: data curation, formal analysis, methodology, visualization, writing – original draft preparation; PK: conceptualization, funding acquisition, investigation, methodology, project administration, resources, supervision, validation, writing – review & editing.

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