



Overqualified Employees' Actual Turnover: The Role of Growth Dissatisfaction and the Contextual Effects of Age and Pay

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Abstract

Overqualified employees are those with more knowledge, skills, and abilities than their job requires. While these competent workers can bring benefits to firms, they also pose a high risk of turnover. However, the evidence is insufficient on whether, why, and when they actually leave and how organizations can manage their turnover effectively. Based on self-determination theory, we propose that unfulfilled internal aspirations for personal growth can be a major driving force of turnover among overqualified employees. Moreover, we explore how such a mechanism varies by employee's age and whether pay can exert a mitigating influence. Using longitudinal data over three years (from 2017 to 2019) with a large sample of workers ($N = 2473$), we found an indirect effect where perceived overqualification reduces growth satisfaction, which in turn leads to actual turnover. Further, we found a three-way moderating effect of pay and age on the relationship between growth satisfaction and turnover, indicating that pay's effect of deterring turnover was stronger for older employees. This study has theoretical implications for a better understanding of overqualified employees' turnover driven by their internal impetus, as well as implications for pay policies that effectively manage overqualified workers in age-diverse modern organizations.

Keywords Perceived overqualification · Growth satisfaction · Turnover · Age · Pay

Over the past two decades, *perceived overqualification*, defined as the feeling that one's qualifications exceed job requirements, has garnered increasing attention from both researchers and practitioners due to its worldwide prevalence (see Erdogan & Bauer, 2021, for a review). It is estimated that about 20% of global employees are overqualified (International Labour Office, 2018), with percentages reaching 15.8% in the United States, 14.5% in the UK, and peaking at 25.1% in Greece (OECD, 2017). The National Bank of Korea recently reported

that more than 30% of graduates had accepted jobs below their qualification levels (Han, 2019). These overqualified employees are attractive to employers as they can add diverse value to companies by leveraging their superior expertise (Khan et al., 2022) or broadening their roles within the organization (Debus et al., 2020). However, researchers have frequently warned that these highly qualified employees may not deliver as much value as anticipated since they are prone to exiting their organizations sooner than expected (Erdogan & Bauer, 2009; Wu & Chi, 2020). Consequently, it becomes crucial to discern what propels overqualified employees toward departure and what persuades them to stay.

As Erdogan and Bauer (2021) reviewed, existing literature on overqualification has predominantly utilized theories of relative deprivation and person-job fit to elucidate its adverse consequences, including turnover or turnover intention (e.g., Deng et al., 2018; Johnson et al., 2002; Liu et al., 2015; Luksyte et al., 2022; Sánchez-Cardona et al., 2020). While these viewpoints offer valuable insights, they tend to focus more on externally driven situational factors rather than the internal states of overqualified employees. These mechanisms emphasize cognitive comparisons—either between what one possesses versus what others do or between one's abilities and the job's demands,

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which suggest that resulting discomfort or misfits lead to negative outcomes. However, we contend that these mechanisms may not fully account for why overqualified individuals depart from their jobs even when external comparison factors appear favorable. For example, physicians in hospitals frequently work alongside colleagues with similar qualifications (thereby minimizing relative deprivation) and undertake duties appropriate for their medical licenses (indicating satisfactory person-job fit). Yet, they may still perceive themselves as overqualified and opt to leave in pursuit of superior career opportunities (Li et al., 2020). This indicates that turnover among overqualified employees may also be influenced by unfulfilled internal aspirations rather than external comparisons, as previously believed. Therefore, we advocate for theoretical approaches that emphasize internal desires and their fulfillment as significant contributors to turnover among overqualified employees.

Drawing on perceived overqualification literature (e.g., Johnson & Johnson, 2000) and self-determination theory (SDT) (e.g., Deci et al., 2017; Ryan & Deci, 2002), we propose and test the indirect relationship between perceived overqualification and actual turnover via the mediation effect of growth satisfaction. Although scarcely being tested, growth has been implicitly emphasized as important in perceived overqualification literature, recognizing that “no-grow” is a key demotivator for overqualified employees (Johnson & Johnson, 2000). Further, overqualification researchers have investigated growth-related mechanisms or boundary conditions (e.g., empowerment, Erdogan & Bauer, 2009), though none of them examined the possibility that internal dissatisfaction with growth would be a major mechanism causing turnover. The importance of growth satisfaction is also consistent with SDT, which emphasizes the profound influence of internal needs and their motivational effect on attitudes and behaviors. With its overarching focus on internal aspects over extrinsic ones, SDT recognizes that the pursuit of growth represents one of the most powerful intrinsic aspirations for humans. This importance is mirrored in SDT’s introduction: “In the classical, Aristotelian, view of human development, people are assumed to possess an active tendency toward psychological growth and integration” (Ryan & Deci, 2002, p. 3). Kasser and Ryan (1996) demonstrated that among seven intrinsic desires—including relatedness and helpfulness—the desire for growth holds supreme significance for individuals. Regrettably, despite its importance, an overqualified work status often fails to offer challenging conditions that stimulate personal development; instead, it fosters an environment devoid of such growth experiences (Johnson & Johnson, 2000). When task characteristics lack such motivating factors, they can engender turnover through diminished satisfaction with growth (Richer et al., 2002). Given consistent findings in turnover research showing that job enjoyment, meaningfulness, and self-fulfillment have become strong determinants

of employee turnover in contemporary organizations (Chiang & Birtch, 2012; De Gieter & Hofmans, 2015; Hofmans et al., 2013), we aim to demonstrate that a significant reason why overqualified workers leave their organizations stems from dissatisfaction with personal growth.

Furthermore, according to SDT, the strength of needs varies across individuals (Ryan & Deci, 2002), implying that the feeling of unmet intrinsic needs resulting from overqualification may vary depending on individual characteristics. However, perceived overqualification literature has largely assumed homogenous impacts for employees, especially regarding how age can play a role in shaping overqualified employees’ experience (Harari et al., 2017; Liu & Wang, 2012). While researchers have proposed the importance of age in overqualification literature (Erdogan et al., 2011; Shultz et al., 2011), little empirical evidence is available to understand this issue. Notably, the current understanding only acknowledges that age is not a direct antecedent of perceived overqualification (Harari et al., 2017), leaving untested the possibility that overqualified employees’ reactions vary across age (i.e., moderation effects). Integrating the work-related motivation literature that found desire for growth declines with chronological age (Baltes & Baltes, 1990) and that the disappointment is greater for those who want something more (Robinson et al., 1994), we investigate whose growth satisfaction is more adversely affected by perceived overqualification considering their age.

Interestingly, not all employees dissatisfied with intrinsic factors leave their organizations (Erdogan & Bauer, 2021). Rather, employees’ final decisions may also be affected by an important extrinsic factor—their pay. Drawing on the compensatory mechanism in SDT, which posits that a deficiency in one motivational aspect can be compensated for by another satisfying aspect (Deci & Ryan, 2000), we propose that extrinsic rewards may offset some of the unfavorable intrinsic aspects associated with being overqualified, thus motivating these individuals to stay within their organizations. Recent advancements in SDT portray a positive perspective on pay in the workplace as it can contribute to a sense of self-worth (Deci et al., 2017; Gerhart & Fang, 2015). Given that “pay is a primary output and perhaps the most direct signal to employees of their worth to the organization” (Lobene et al., 2015, p. 700), it has the potential to serve as internalized rewards compensating for less favorable internal aspects among overqualified employees. Moreover, the well-known undermining effects of extrinsic rewards in SDT are less likely to emerge in this context mainly because they necessitate the presence of enjoyable tasks (Cerasoli et al., 2014). Overqualified workers often perceive their tasks as uninteresting or monotonous (Kim et al., 2021), so an increase in monetary compensation has very little intrinsic motivation to undermine. Rather, it may serve as an additional source of motivation. Bailey and

Fessler's (2011) finding further substantiates our expectation: monetary incentives are more effective when jobs are less enjoyable. Therefore, we aim to examine whether higher pay can deter overqualified employees from turnover caused by diminished growth satisfaction.

Lastly, we aim to delve deeper into a three-way moderation effect where the mitigating effect of pay varies based on overqualified employees' age. As the importance of personal growth differs by age, we expect that the extent to which growth dissatisfaction is compensated for by pay will also vary (Fulmer & Shaw, 2018). An emerging stream of research has started to explore how organizations can alleviate overqualifications' adverse effects on employees by effectively using human resource management (Bochoridou & Gkorezis, 2023; Howard et al., 2022), but these efforts have been somewhat limited by not considering the heterogeneity of beneficiaries. Studies on SDT in various contexts, such as education (Lepper et al., 2005) and marketing (Gilal et al., 2020), have demonstrated that the degree to which individuals are influenced by extrinsic rewards may change depending on their age. By integrating socioemotional selectivity theory (Carstensen, 1992), which posits that attention toward multiple life domains changes with age, we hypothesize that older overqualified workers' narrowed life domain makes organizational treatment more salient and personally valued. This could lead pay to serve as an intrinsic reward, boosting one's self-worth and retaining these employees. Consequently, we anticipate that higher pay will be more effective in weakening the indirect effect of perceived overqualification on turnover among older workers (compared to younger workers).

In summary, this study makes several important contributions. First, this study diverges from conventional mechanisms for explaining turnover among overqualified employees, which rely on external cognitions such as relative deprivation or person-job fit. Drawing on SDT, which prioritizes intrinsic motivators, our research sets itself apart by identifying the internal satisfaction of growth among overqualified employees as a main driver of their turnover, which offers a new perspective for understanding the implications of perceived overqualification. Second, we examine how age shapes responses to overqualification itself and pay's moderating role in predicting turnover. On the one hand, this contributes to perceived overqualification literature, as researchers have called for a more systematic understanding of the heterogeneous impacts of perceived overqualification across employees of different ages (Harari et al., 2017; Liao et al., 2024; Liu & Wang, 2012; Shultz et al., 2011). On the other hand, this also has implications for turnover literature. De Gieter and Hofmans (2015) noted that turnover research typically assumed an "average" employee, discounting individual differences. Taken together, we contribute to both research areas by examining how age shapes overqualified

employees' psychological process and eventual turnover with a multi-stage model to account for such nuances. Third, our study answers the question of how organizations can use human resource management (i.e., pay) to reduce the negative influences of perceived overqualification and retain competent employees. While overqualification literature has long focused on its negative implications (see Liao et al., 2024, for a meta-analytic review), recent investigations have shown that overqualified employees possess valuable intellectual capital and are likely to benefit organizations given appropriate conditions, calling for more investigations on such boundary conditions to reduce the adverse effects of perceived overqualification (e.g., Luksyte & Spitzmuller, 2016; Zhang et al., 2016). Emphasizing human resource practices as boundary conditions, we extended this stream of investigation by showing the role of pay in retaining overqualified employees.

Theory and Hypothesis Development

Perceived Overqualification, Growth Satisfaction, and Actual Turnover

Johnson and Johnson (2000), an early seminal study on perceived overqualification, pointed out that "no-grow" (overqualified employees feel there is little prospect for development and change) is an important reason why overqualification demotivates employees and influences their job attitudes. While researchers have mainly focused on person-job fit theory and relative deprivation theory to explain the impacts of perceived overqualification (see also Erdogan & Bauer, 2021, for a review), research has also implicitly shown the importance of growth experience in understanding overqualified employees. For example, Erdogan and Bauer (2009) found that empowerment, which "provides followers an opportunity for learning and personal growth by making joint decisions" (Cheong et al., 2019, p. 47), weakened the link between perceived overqualification and negative outcomes (i.e., job satisfaction and turnover intention). We extend this stream of research and posit that growth satisfaction is an important mechanism for understanding the link between perceived overqualification and actual turnover.

According to SDT, personal growth is an innate human aspiration for self-extension, providing interest and pleasure without any external rewards (Kasser & Ryan, 1996; Sheldon & Kasser, 1995). As Ryan and Deci (2002) stated, "SDT conceives of humans as active, growth-oriented organisms, that innately seek and engage challenges in their environments, attempting to actualize their potentialities, capacities, and sensibilities" (p. 8). Dissatisfaction resulting from not fulfilling this desire for self-improvement and growth can be interpreted within the SDT framework as a

failure to satisfy the need for competence, one of the three primary human needs, along with the need for autonomy and relatedness (Deci & Ryan, 2000). Babenko and Oswald (2019) found that the need for competence is highly associated with individuals' mastery orientation. In this vein, Forner et al. (2020) asserted that, in organizational contexts, managerial efforts to provide growth opportunities and foster employees' self-directed learning are the most theoretically consistent ways to satisfy the need for competence. Thus, satisfaction with growth opportunities in workplaces captures whether the need for competence has been fulfilled. Within perceived overqualification literature, there have been discussions on how overqualified individuals' needs for autonomy or relatedness can be undermined or fulfilled by factors such as empowering leadership (Ma et al., 2020; Simon et al., 2019) or ostracism by coworkers (Peng, Yu, Kang, et al., 2023; Zhang, Bolino, & Yin, 2022), but there has been little exploration into how the need for competence is (un)satisfied and what consequences it leads to. As a result, this study, by integrating perceived overqualification literature and SDT, elaborates on growth satisfaction, which reflects the fulfillment of the need for competence in SDT.¹

Despite the critical role personal growth plays in human motivation, the status of perceived overqualification can severely inhibit such experiences. Perceived overqualification is likely to reduce growth satisfaction for two reasons. Firstly, employees who perceive themselves as overqualified may feel that their knowledge, skills, and abilities are more than sufficient or even excessive for handling daily job routines (Maynard et al., 2006). Consequently, they may perceive less necessity to develop their abilities further in their current positions. This could lead them to feel that their human potential has plateaued, thereby reducing satisfaction with aspects of growth. People grow when faced with positive stimuli and challenges, often referred to as "challenging stress" (Travis et al., 2020). When individuals encounter difficult tasks or situations that push them out of their comfort zones, they can experience personal growth by learning new skills and gaining experiences otherwise unattainable. However, when individuals are overqualified for positions, these challenging elements might be absent, which hinders the potential for growth, contributing to a decrease in satisfaction in this facet of work. Secondly, overqualified individuals may feel more dissatisfied as they are accustomed to continually gaining growth experiences. The desire for growth tends to increase once it has been partially

fulfilled (Sheldon & Gunz, 2009), supported by neuroscientific discoveries showing our brains adapt to continuous learning (Ng, 2018). Individuals who perceive themselves as overqualified often possess lofty educational or technical backgrounds. These individuals have likely undergone extensive learning experiences acquiring qualifications and thus expect continuing learning and growing experience. However, considering that higher expectations often lead to greater dissatisfaction when not met (Sutton & Griffin, 2004), these individuals may experience higher levels of dissatisfaction, especially concerning opportunities for growth.

Richer et al. (2002) presented a motivational model of turnover based on SDT (Deci & Ryan, 1991), proposing that job characteristics influence motivation and satisfaction, which subsequently lead to turnover. Accordingly, we posit that diminished growth satisfaction resulting from perceived overqualification could increase the likelihood of leaving organizations. Changing employments imposes a considerable burden on individuals (Mitchell et al., 2001). Still, as SDT suggests, if internal aspirations are not satisfied in work, one's motivation and well-being can be seriously hampered (Deci & Ryan, 2000), so dissatisfaction with growth can strongly drive individuals to make bold decisions to leave their organizations. The empirical evidence of such propensity, which occurs even in professions that would be rather stable under other conditions, supports our prediction. For instance, Nouri and Parker (2013) found that junior auditors in accounting firms with fewer career growth opportunities had higher turnover intentions. A study involving community college professors found dissatisfaction with growth opportunities to be the strongest predictor of inclination to leave (McBride et al., 1992). Therefore, we suggest that dissatisfaction with inadequate opportunities for personal growth at work could be a sufficient factor prompting individuals to consider turnover despite the associated costs. Integrating the arguments above, we propose that perceived overqualification indirectly influences actual turnover by reducing growth satisfaction.

Hypothesis 1: Perceived overqualification has an indirect positive effect on actual turnover via reduced growth satisfaction.

Who Suffers More? The Moderating Effect of Age

The discussion centering on growth satisfaction further guided us to identify individuals for whom perceived overqualification more severely impedes growth satisfaction. Given that individuals differ in the extent to which they pursue growth experiences (Kooij et al., 2013), we can anticipate that those who desire these experiences will face greater disappointment when such desires are not fulfilled due to situations of being overqualified.

¹ SDT serves as an extensive meta-theoretical framework, and numerous investigations grounded in this theory have utilized its propositions and areas of interest without directly assessing the three fundamental needs (e.g., Chen & Hsieh, 2015; Lin et al., 2022; Sun et al., 2023; Zhang, He, et al., 2022). We followed these examples, taking advantage of SDT's strong theoretical potential.

Age-related theories (Baltes & Baltes, 1990; Carstensen, 1992) indicate that individuals' desire for growth decreases with age.² When individuals get older, their resource allocation shifts from growth to maintenance and preservation. Freund (2006) also underscores a transition from a predominant focus on achievement and gain (promotion) in early adulthood to a focus on loss minimization and risk avoidance (prevention) later in life. Such alterations occur because they coincide with a cost-benefit strategy that is beneficial for survival. Specifically, biological declines in physical and cognitive capacities (Baltes & Smith, 2003) escalate the effort and cost necessary to acquire new knowledge and skills or adapt to new environments. Macroeconomic analyses further elucidate why the benefits derived from growth experiences vary among individuals of different ages. Younger employees tend to prioritize growth opportunities early in their careers, as initial achievements can exert a disproportionate influence on long-term career outcomes (Kondo, 2007; Nouri & Parker, 2013). However, this necessity lessens for older employees due to the limited remaining time in their careers.

This divergence in age-related growth motivation suggests that young employees are more likely to experience heightened dissatisfaction when they are placed in overqualified situations as they have a stronger drive for growth (Kooij et al., 2011). As posited within the logic of psychological contracts, unmet expectations in areas of greater personal significance lead to heightened disappointment (Robinson et al., 1994; Sutton & Griffin, 2004). In contrast, the stagnation in personal development from overqualified jobs may elicit less discontent among older employees, as they feel less need for further growth. Erdogan et al. (2011) also noted that older overqualified individuals “are less focused on getting ahead in their careers than younger workers” (p. 227). Instead, their focus may shift toward other priorities, such as a more balanced life with families. Therefore, we hypothesize that for older employees (compared to younger employees), the impact of perceived overqualification on growth satisfaction will be weaker.

Hypothesis 2: Age moderates the negative relationship between perceived overqualification and growth satisfaction,

such that the relationship is weaker (vs. stronger) for older (vs. younger) employees.

Does Money Make Up for Growth Dissatisfaction? The Mitigating Effect of Pay

As previously discussed, dissatisfaction with growth can significantly increase the risk of overqualified individuals' leaving. However, from the organization's perspective, there is a strong incentive to retain these highly qualified individuals due to their superior knowledge and expertise (van Dijk et al., 2020). Therefore, guided by SDT specified for work contexts (Deci et al., 2017), we posit that higher pay, a powerful extrinsic motivator for employees, is likely to compensate for unfulfilled intrinsic aspirations of personal growth resulting from overqualified status, thereby reducing turnover.

There have indeed been debates in SDT literature regarding the effectiveness of extrinsic rewards (Deci et al., 2017; Gerhart & Fang, 2015; Wang & Chen, 2022). Gerhart and Fang (2015) argued that the theory's apparent negative stance toward extrinsic rewards may have limited its application in organizational contexts where monetary reward plays a crucial role. However, Deci et al. (2017) countered this argument by clarifying that SDT does not view all forms of extrinsic rewards as undesirable. Instead, it can be beneficial when it contributes to one's internal value. In contexts where rewards are considered informational rather than just material, they signal recipients' competence and value. The workplace or career field is an appropriate context where such an informing role of pay stands out because pay serves as a strong signal indicating how much employees are valued by their employer (Gagné & Deci, 2005; Kuvaas et al., 2016; Moller & Deci, 2014).

As such, higher pay may serve as a mitigating factor, attenuating the link between diminished growth satisfaction and actual turnover. As elucidated by Deci and Ryan (2000), the lack of motivation within one realm can be counterbalanced or supplanted by alternative sources of motivation through a mechanism termed *compensation* or *substitution*. As previously mentioned, we conceptualized growth deficiency resulting from overqualification as a situation wherein the need for competence remains unfulfilled. Nonetheless, recent advancements in SDT (Deci et al., 2017) suggest that within the framework of organizational settings, financial incentives function as indicators of an individual's competence and potential value to the organization (Moller & Deci, 2014). Therefore, high earning can communicate to both overqualified individuals and others in the vicinity that this person is competent, even if they are presently doing jobs below their advanced qualifications.

Additionally, monetary compensation holds other functional importance within SDT because it enables individuals

² Age encompasses various meanings beyond biological years (chronological age), including psychological age (one's subjective age), psychosocial age (age in other's view), and organizational age (tenure) (McCarthy et al., 2014). In this study, we focused on chronological age, because research about age has found chronological age to be an important predictor of individual's work motivation, grounded on the theories and research findings on how human's physical and mental capacities change over their lifespan and how such changes lead to strategic shifts in resource distribution from growth to preservation, influencing motivational dynamics (Kanfer & Ackerman, 2004; Kooij et al., 2013).

to acquire time and budget to pursue two other essential needs: autonomy and relatedness. Higher pay allows individuals to invest in their hobbies or facilitate social activities that foster connections with others (DeHaan et al., 2016; Di Domenico & Fournier, 2014). Therefore, even if overqualified workers are less satisfied with internal aspects of organizations due to dissatisfaction with growth, the benefits of enhanced self-views in the workplace and the instrumentality of money may significantly deter them from a final decision to leave organizations.

Hypothesis 3: Pay moderates the relationship between growth satisfaction and actual turnover, such that the negative relationship is weaker (vs. stronger) when pay is higher (vs. lower).

For Whom Does Money Work Best? The Differentiated Effects of Pay by Age

Scholars in the field of compensation and motivation concur that the compensatory role of monetary rewards may not operate uniformly across all employees (Chiang & Birtch, 2012; Vansteenkiste et al., 2020; von Bonsdorff, 2011). This variation arises because individuals place different weights on monetary versus non-monetary rewards (De Gieter & Hofmans, 2015; Judge et al., 2010). SDT further suggests that individuals who personally value extrinsic rewards and associate these rewards with their identity are more likely to internalize the influence of extrinsic factors, which means that monetary compensation can be perceived not as an external force controlling decisions but rather as an element pursued through autonomous decision-making (Moller & Deci, 2014). Given this theoretical background and previous SDT studies that found age differences in preference for extrinsic rewards (Gilal et al., 2020; Lepper et al., 2005), we posit that the mitigating effect of pay may vary depending on employees' age.

SDT states that extrinsic factors, such as money, are more internalized—that is, perceived as autonomous rather than controlling—when it is personally valued and related to self-evaluations (Moller & Deci, 2014). Given money's material function, it may hold greater value for older individuals due to their pressing financial needs, such as family care, maintaining social connections, or retirement planning (Cavanagh et al., 2020). In addition, Scott et al. (2008) highlight the symbolic function of money, which is related to self-worth, to elucidate why it has more value for older adults beyond its material benefits. According to socioemotional selectivity theory (Carstensen, 1992), aging individuals likely concentrate on fewer life domains, seeking purpose within these narrowed scopes. As individuals age, finding a sense of purpose within a single domain, especially in the work domain, becomes more critical (Scott et al., 2008), and the recognition and

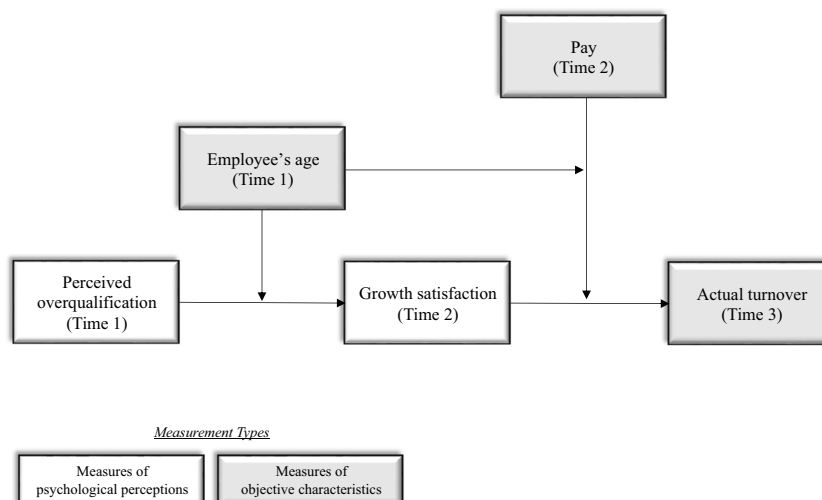
progression they receive within this domain become more influential (Krause & Shaw, 2003). Consequently, for older workers, the extent to which organizations recognize their value becomes a crucial determinant of their self-worth. Thus, for them, pay symbolizes personal value within their distinctive domain rather than merely serving as a force to persist in dull jobs. Shultz et al. (2011) also noted that older overqualified employees may opt to remain in their roles if they obtain other desirable aspects from their jobs. Hence, for them, high pay is expected to effectively compensate for their reduced growth satisfaction, mitigating the likelihood of turnover.

On the other hand, young individuals often seek to expand their domains of interest and are generally less influenced by evaluations in any single domain (Reker, 2000). As a result, the propensity to associate evaluations in one area with overall self-worth diminishes. This attenuation in association with self-value renders external rewards more likely to exert the controlling role instead of being internalized. These individuals likely perceive high compensation as a control mechanism, compelling them to tolerate and engage in tasks for which they are overqualified. Additionally, younger individuals face fewer financial obligations, such as family responsibilities (Cavanagh et al., 2020), and place a greater emphasis on career progression than on immediate financial gain (Adkins, 2016). Consequently, intrinsic factors tend to overshadow extrinsic ones in their decision-making. This suggests that monetary incentives might be less effective in retaining them within the organization, particularly if they are dissatisfied with personal growth that is related to their future income and long-term career success. Therefore, pay is expected to be more effective in mitigating the link between growth satisfaction and actual turnover among older employees as opposed to their younger counterparts.

Hypothesis 4: Pay and age jointly moderate the relationship between growth satisfaction and actual turnover, such that the negative effect is weakest for older employees with higher pay.

Taking the prior hypotheses together, we suggest that the effect of perceived overqualification on growth satisfaction is moderated by age (Hypothesis 2, in the 1st stage of the mediation model) and propose that pay can have two-way and three-way moderating effects on the relationship between growth satisfaction and actual turnover (Hypotheses 3 and 4 in the 2nd stage of the mediation model) (see Fig. 1). Therefore, when jointly considering the dual-stage contextual effects of age and pay, we hypothesize the conditional indirect effect of perceived overqualification on actual turnover via growth satisfaction as follows:

Hypothesis 5: Age and pay jointly moderate the indirect effect of perceived overqualification on actual turnover via growth satisfaction, such that the indirect effect is weakest for older employees with higher pay.

Figure 1 Hypothesized model and research design

Method

We utilized a large-sample longitudinal dataset (from 2017 to 2019) from the Korea Employment Information Service (KEIS) to test our full model ($N = 2473$). This data is especially appropriate for our study for two reasons. First, as actual turnover is usually an event of low base rate and low temporal frequency, its presence requires a large sample size with a sufficient time lag to capture. Second, the large sample size also ensures that we have participants at different stages of individual life (i.e., age) and with different compensation (i.e., pay). Therefore, the longitudinal data of this large sample is appropriate for testing our model.

Sample and Procedure

Our sample consisted of participants from a nationwide longitudinal study conducted in South Korea. Specifically, we utilized a longitudinal archival dataset collected by the Korea Employment Information Service (KEIS) for the purpose of understanding workers' employment and careers.³ This longitudinal data collection included a total of 13,722 Korean adults. More details about the sample and data collection procedures are available at <https://survey.keis.or.kr/eng/yp/yp01.jsp>. For our study, we used the data from the recent three years: the data collected in 2017 (named Time 1 in our study), 2018 (named Time 2 in our study), and 2019 (named Time 3 in our study). Obtaining measures at different times reduces potential common method biases (Podsakoff et al., 2024).

We matched the data for our study with the procedures described below (initial $N = 13,722$). First, we limited our sample to full-time workers ($N = 3397$) because overqualification has been identified as a different phenomenon from *hours underemployment* (i.e., work part-time but hope to get a full-time job) regarding both conceptualization and measures (see McKee-Ryan & Harvey, 2011, for a review). In our study, we focused on perceived overqualification. Second, we included those who remained employed by the same company and performed identical primary jobs at both Time 1 and Time 2 ($N = 2680$). This constraint was to ensure that the participants' ratings on growth satisfaction (Time 2) reflected their experience of perceived overqualification (Time 1), which was specific to a job in an organization. Third, as we focused on employees' voluntary turnover (deciding to quit or not), we needed to ensure that employees in our sample had the autonomy to decide whether to leave the organization at Time 3. To this end, we filtered out turnovers that occurred regardless of the employee's intention. Participants reported the reason why they left their previous organizations at Time 3, and we excluded the participants for the following departure reasons that indicated involuntary turnover: business closure, being fired, and the end of the contract.⁴ Out of the initial 346 resignations, 28 cases fell in these categories. We also filtered out another 8 cases of turnover with missing data on this question ($N = 2644$). Lastly, we did not include participants who had missing data for the predictors in our model because our data analysis software, *Mplus*, by default, models missing data in outcome variables but not predictor variables (Muthén & Muthén, 1998–2017). This resulted in a sample size reduction of 171 cases that had missing data. Our final sample thus included 2473 full-time employees. Their average age was 30.99 years

³ We obtained approval from the Institutional Review Board of the first author's university (Protocol No. E2207/003-003) to use the data for this study.

⁴ We thank an anonymous reviewer for this suggestion.

($SD = 4.74$); 46.0% self-identified as female, and 82.9% had a community college degree or above.

Measures

Perceived Overqualification

Employees' perceived overqualification was measured with two items in the Time 1 survey: "How are the contents and levels of your work compared to your education?" and "How are the contents and levels of your work compared to your skill level?" (from 1 = *very low* to 5 = *very high*). We reverse-coded the two items, so higher values indicate a higher level of perceived overqualification. We averaged the scores for the two items to form a composite measure of perceived overqualification ($r = .44$; Cronbach's $\alpha = .61$; Omega = .67, 95% CI = [.63, .71]).⁵ We recognized that, due to the use of archival data, we were not able to measure perceived overqualification with well-established scales. With this concern in mind, we sought to provide evidence for the construct validity (convergent validity) of our measure of perceived overqualification. To this end, we conducted a validation study with 120 MTurk workers.⁶ We asked these participants to provide ratings of perceived overqualification with the measure used in our panel data ($r = .70$; Cronbach's $\alpha = .82$; Omega = .82, 95% CI = [.73, .88]), as well as other well-established measures of overqualification, including the 9-item scale developed by Maynard et al. (Maynard et al., 2006; Cronbach's $\alpha = .92$) and the 4-item scale by Johnson and Johnson (Johnson & Johnson, 2000; Cronbach's $\alpha = .77$). We calculated the correlations between the latent

variable of perceived overqualification composed of two panel items and those composed of established multiple-item scales through structural equation modeling, taking into account measurement errors. The results showed that our measure of perceived overqualification was highly correlated with Maynard et al.'s scale ($r = .73$, $p < .001$) and with Johnson and Johnson's scale ($r = .64$, $p < .001$). Both correlations were higher than the minimum threshold of .50 (Carlson & Herdman, 2012). The details of our findings were presented in the online supplementary material. Therefore, it appears that our measure of perceived overqualification displayed appreciable convergent validity.

Growth Satisfaction

Growth satisfaction was assessed in Time 2 with the following item: "How satisfied are you with your personal growth at work?"⁷ (from 1 = *very unsatisfied* to 5 = *very satisfied*). To examine the convergent validity of this measure, we also asked the MTurk workers in our validation study to provide ratings for both this measure and Hackman and Oldham's (1974) four-item scale of growth satisfaction. Hackman and Oldham's scale asked them, "How satisfied are you with each aspect of your job?" (from 1 = *strongly dissatisfied* to 5 = *strongly satisfied*). A sample item was "The amount of personal growth and development I get in doing my job" (Cronbach's $\alpha = .87$). We analyzed the relationship between growth satisfaction measured by the panel's single item and Hackman and Oldham's multiple items using structural equation model (see the online supplementary material). The results showed that our measure of growth satisfaction was strongly correlated with Hackman and Oldham's scale ($r = .86$, $p < .001$), indicating the appreciable convergent validity of this measure.

⁵ Although Cronbach's alpha is lower than a widely known standard of .70, this reliability coefficient tends to be inevitably low when there are only two items, as in the case of a shortened Big Five Inventory-10 (BFI-10) measuring each personality with two items (e.g., .30–.63 in Baumert et al., 2014; .44–.76 in Hahn et al., 2012). In this case, scholars have recommended judging the validity of measurement in conjunction with other various validity standards, including structural, concurrent, and content validities (Gosling et al., 2003; Guido et al., 2015; Nunes et al., 2018). Following Colquitt et al. (2014, 2019), we further tested content validation of short panel measures (i.e., two items for perceived overqualification and a single item for growth satisfaction) with an independent sample ($N = 100$) collected via Prolific and found that our short scales represented the variables they were intended to measure at a similar or better level than existing scales. Detailed information on this validation is provided in the online supplementary material.

⁶ All participants were full-time employees. They received 3 USD as a reward for their participation in the validation study. To ensure data quality, we included two attention check items in the survey (e.g., "If you are reading carefully, please choose 'Neutral' for this item."). All 120 participants provided corrected answers for the two attention check items, indicating high data quality. This validation study obtained approval from the first author's university (Protocol No. 2207/003-009).

⁷ The results from the content validation study (detailed in the online supplementary material) showed that our single-item growth satisfaction scale showed the highest correspondence score (4.26/5) for the growth satisfaction definition, even better than Hackman and Oldham's four-item scale (3.86/5). This is consistent with Nagy's (2002) finding that when *faceted* satisfaction is measured with a single item, it may have better face validity than a multi-item scale. Wanous and Hudy (2001) suggested that "single-item measures are most appropriately used in situations in which the construct of interest is (a) unidimensional rather than multidimensional, (b) clear to the respondents, and (c) sufficiently narrow (Sackett & Larson Jr, 1990)" (p. 368). Our growth satisfaction scale is single-dimensional, measures a sufficiently narrow concept, and appears to have been clearly communicated to respondents as a result of content validation, so it appears to be in a context where the use of a single item is most acceptable. Dierdorff and Ellington (2008) additionally commented that in the case of panel studies, the use of single items may be more tolerated, considering the strengths of the mass data.

Table 1 Means, standard deviations, and correlations of variables

Variables	Means	SD	1	2	3	4	5	6
1. Gender	.46	.50						
2. Age (Time 1)	30.99	4.74	-.24**					
3. Perceived overqualification (Time 1)	2.93	.34	.04*	-.02				
4. Growth satisfaction (Time 2)	3.65	.65	-.02	.05*	-.11**			
5. Pay (Time 2)	2.86	1.01	-.36**	.39**	-.15**	.17**		
6. Actual turnover (Time 3)	.13	.33	.06**	-.13**	.06**	-.07**	-.12**	

N = 2473. Gender was coded as 0 = male and 1 = female. Age was measured in years. Pay refers to monthly income with a unit of a million in KRW (approximately a thousand in USD). Actual turnover was coded as 0 = stayed in the same company and 1 = voluntarily left the company. **p* < .05. ***p* < .01. Two-tailed tests

Actual Turnover

Actual turnover was assessed with participants' employment status changes from Time 2 to Time 3. Specifically, in the Time 3 survey, they responded to this question: "You were working in a company in the previous survey. Are you still working at the same company? (Yes/No)" We coded the response to this question as 0 = *stayed in the same company* (no actual turnover) and 1 = *voluntarily left the company* (actual turnover). Note that our sample only consists of employees who have the autonomy to decide whether to quit at Time 3 (e.g., job changes as a result of business closure or dismissal are excluded; see our description of the sample for details), so this measure reflects voluntary turnover. In our sample, 296 out of 2473 employees (12.0%) reported that they had voluntarily left their organization, giving us sufficient information for analysis.

Age and Pay

Employees' age in years was computed as the time difference between Time 1 (2017) and employees' year of birth, which reflects employees' age at Time 1. Actual monthly pay was measured at Time 2 by the question: "How much is your pay at current work?" Pay in this survey refers to income before tax deductions and includes incentives and bonuses. It does not include other non-monetary benefits or income outside of employment. The average monthly pay is 286.06 (*SD* = 101.28) in units of KRW 10,000 (or approximately *M* = 2200 and *SD* = 779 in USD). To put pay on a scale similar to other variables, we divided it by one hundred in subsequent analyses.

Control Variable

We controlled for employees' gender (0 = *male*, 1 = *female*) because gender roles may impact employees' growth satisfaction in the workplace and job change (Weisberg &

Kirschenbaum, 1993). In our supplemental analyses, we removed this control variable and reached the same conclusions.

Analytic Strategy

We specified a path model in *Mplus* 8.7 (Muthén & Muthén, 1998–2017) to analyze our data. For a better interpretation of the results, we grand-mean centered all predictors in our model (i.e., perceived overqualification, growth satisfaction, age, pay, and gender) (Dawson, 2014). All interaction terms were created after the centering. All exogenous variables were allowed to freely covary with each other. As actual turnover was a categorical variable, we used logistic regression for the second stage of our model. Given the asymmetric distribution of indirect effects, we conducted a bias-corrected bootstrap procedure with 5000 bootstrap samples and obtained 95% confidence intervals (CIs) to test the indirect effect and moderated mediation effects (Wood et al., 2008).

Results

The descriptive statistics of the variables are shown in Table 1. The unstandardized path model results (see Table 2) showed that perceived overqualification is negatively related to growth satisfaction ($b = -.21, p < .001$), and growth satisfaction is also negatively related to actual turnover ($b = -.27, p = .02$; odds ratio = $\exp^{-.27} = .77$, 95% CI = [.61, .96]). That is, for a one-unit increase in growth satisfaction, the odds of quitting rather than staying in an organization would decrease by 23%. To examine the indirect effect of growth satisfaction, we conducted a bias-corrected bootstrap procedure with 5000 bootstrap samples. The indirect effect in the top row of Table 3 showed that growth satisfaction significantly mediates the effect of perceived overqualification on actual turnover (*indirect effect* = .06, 95% CI = [.01, .12]). Therefore, Hypothesis 1 was supported.

Next, we tested the moderation effect of age on the relationship between perceived overqualification and growth

Table 2 Unstandardized path model

Variables	Growth satisfaction			Actual turnover				
	<i>Est.</i>	<i>SE</i>	<i>p</i>	<i>Est.</i>	<i>SE</i>	<i>p</i>	<i>Odds ratio</i>	<i>95% CIs of odds ratio</i>
Intercept	.00	.01	.98	−2.10**	.08	<.001		
Control variable								
Gender	.00	.03	.99	.05	.14	.73	1.05	[.80, 1.37]
Predictors								
Perceived overqualification	−.21**	.04	<.001	.35	.19	.07	1.42	[.97, 2.07]
Age	.01*	.003	.02	−.06**	.02	<.001	.94	[.91, .97]
Pay				−.34**	.09	<.001	.72	[.60, .86]
1 st stage interaction term								
Perceived overqualification × age	.01	.01	.12					
Mediator								
Growth satisfaction				−.27*	.11	.02	.77	[.61, .96]
2 nd stage interaction terms								
Growth satisfaction × pay				.06	.12	.66	1.06	[.83, 1.34]
Growth satisfaction × age				.02	.03	.45	1.02	[.97, 1.07]
Age × pay				.01	.02	.64	1.01	[.97, 1.04]
Growth satisfaction × pay × age				.05*	.02	.03	1.05	[1.01, 1.10]
Residual variance	.41**	.01	<.001					
<i>R</i> ²	.02			.11				

N = 2473. Actual turnover was coded as 0 = stayed in the same company and 1 = voluntarily left the company. **p* < .05. ***p* < .01. Two-tailed tests

Table 3 Indirect effects through growth satisfaction at different levels of pay and age

Dependent variable: actual turnover					
		First stage (<i>P</i> _{MX})	Second stage (<i>P</i> _{YM})	Indirect (<i>P</i> _{MX} × <i>P</i> _{YM})	95% CIs of indirect effect
Indirect effect		−.21*	−.27*	.06*	[.01, .12]
Conditional indirect effect					
1 st and 2 nd stage	2 nd stage moderator: pay	First stage (<i>P</i> _{MX})	Second stage (<i>P</i> _{YM})	Indirect (<i>P</i> _{MX} × <i>P</i> _{YM})	95% CIs of indirect effect
Low age (−1 <i>SD</i>)	Low pay (−1 <i>SD</i>)	−.28*	−.17	.05	[−.04, .15]
	Mean pay		−.36*	.10*	[.01, .21]
	High pay (+1 <i>SD</i>)		−.54	.15	[−.01, .37]
Mean age	Low pay (−1 <i>SD</i>)	−.21*	−.32*	.07*	[.01, .15]
	Mean pay		−.27*	.06*	[.01, .12]
	High pay (+1 <i>SD</i>)		−.21	.05	[−.02, .13]
High age (+1 <i>SD</i>)	Low pay (−1 <i>SD</i>)	−.15*	−.48*	.07*	[.01, .21]
	Mean pay		−.18	.03	[−.02, .12]
	High pay (+1 <i>SD</i>)		.12	−.02	[−.12, .04]

*P*_{MX} refers to the path from perceived overqualification to growth satisfaction; *P*_{YM} refers to the path from growth satisfaction to actual turnover. 95% confidence intervals (CIs) are based on 5000 bias-corrected bootstraps. *Significant direct and indirect effects

satisfaction. The results showed that this moderation effect was non-significant (*b* = .01, *p* = .12; see also Table 2). Therefore, Hypothesis 2 was not supported. Regarding the moderating effect of pay at the second stage of the mediation model, the two-way interaction term between growth satisfaction and pay was not significant either (*b* = .06, *p*

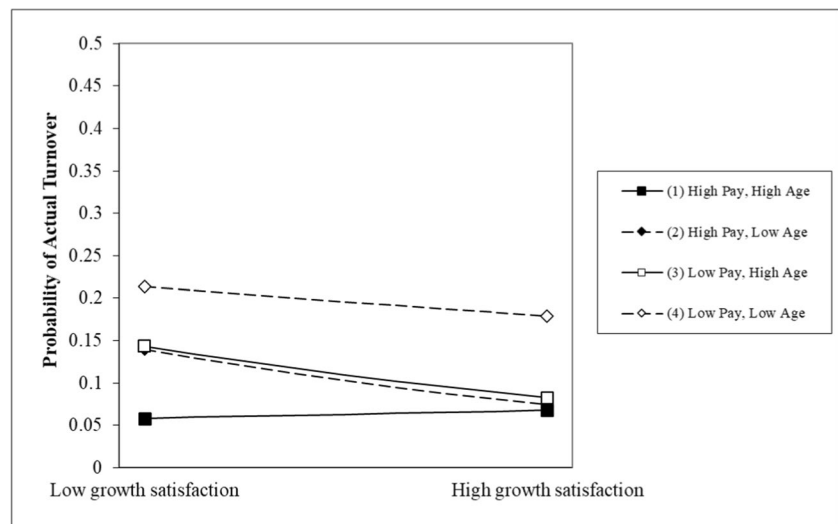
= .66; see Table 2).⁸ Therefore, we did not find support for Hypothesis 3.

⁸ For robustness check, we also specified a model without the three-way interaction term. The results also suggested that the two-way interaction term of growth satisfaction and pay was non-significant (*b* = .14, *p* = .24), which is consistent with the conclusion of our main model.

Table 4 Slope difference tests of the three-way interaction among growth satisfaction, pay, and age on actual turnover

Effect	<i>Est.</i>	<i>SE</i>	<i>p</i>
<i>Simple slopes</i>			
(1) High pay, high age	.12	.22	.58
(2) High pay, low age	−.54	.32	.09
(3) Low pay, high age	−.48*	.22	.03
(4) Low pay, low age	−.17	.15	.28
<i>Differences in simple slopes</i>			
(1) and (2)	.67	.38	.08
(1) and (3)	.60*	.28	.03
(1) and (4)	.29	.27	.29
(2) and (3)	−.07	.40	.87
(2) and (4)	−.38	.38	.32
(3) and (4)	−.31	.26	.22

Simple slopes refer to the effect of growth satisfaction on actual turnover at different levels of pay and age. Slope numbers are the same as in Fig. 2. * $p < .05$. Two-tailed tests

Figure 2 The three-way interaction among growth satisfaction, pay, and age on actual turnover

Concerning the combined moderating effects of pay and age at the 2nd stage, the three-way interaction term between growth satisfaction, pay, and age on actual turnover was significant ($b = .05$, $p = .03$; see Table 2), providing support for Hypothesis 4. The results of simple slope tests in Table 4 were consistent with our expectation, showing that the relationship between growth satisfaction and actual turnover was weakest when higher pay was given to older employees (simple slope = .12, $p = .58$; see Table 4) among all conditions (simple slopes range from −.54 to .12). Specifically, we followed the suggestions of Dawson and Richter (2006) to interpret this three-way interaction. Figure 2 illustrates the interaction effect, and Table 4 displays the computed differences between the slopes in this figure. When growth satisfaction decreases (from the right to the left side of Fig. 2),

there is a general increase in the hazard of actual turnover. When comparing two diamond-shaped slopes, (2) and (4), both representing lower age but different pay conditions, there appears to be no significant difference in their slopes between high and low pay (*difference in slopes* = −.38, $SE = .38$, $p = .32$). This suggests that higher pay does not statistically weaken the relationship between growth satisfaction and turnover among these younger employees. On the other hand, when comparing two square-shaped slopes, (1) and (3), both representing higher age but different pay conditions, there is a noticeable difference between the slopes (*difference in slopes* = .60, $SE = .28$, $p = .03$). Particularly in the condition of older overqualified employees receiving high pay (slope 1), even if growth satisfaction decreases, there is no significant change in the risk of turnover. These patterns are consistent with our Hypothesis 4, which suggests that higher pay weakens the link between growth satisfaction and actual turnover more effectively for older workers.

We further tested Hypothesis 5, which suggested that the indirect effect of perceived overqualification on actual turnover via growth satisfaction is weakest for older employees with higher pay. The conditional indirect effects at different levels of pay and age are shown in the bottom part of Table 3. Consistent with our prediction, the results showed that for employees with higher pay and higher age, the indirect effect of perceived overqualification on actual turnover was the weakest among other conditions (*indirect effect* = −.02, 95% CI [−.12, .04]), supporting Hypothesis 5. Specifically, for older employees, the conditional indirect effect of perceived overqualification on actual turnover via growth satisfaction decreased dramatically as pay increased (from .07 to .03 to −.02), indicating that higher pay effectively attenuated this indirect effect. For employees of average age,

this conditional indirect effect also declined with increases in pay (from .07 to .06 to .05); however, the magnitude of the decreases was smaller, suggesting that the pay's mitigating effect was weaker among these average employees compared to their older counterparts. Intriguingly, for younger employees, although a minor decrease was anticipated, the results indicated an increase in the indirect effect as pay levels rose (from .05 to .10 to .15). This implies that, among younger employees, higher pay does not mitigate the positive indirect relationship between perceived overqualification and turnover, as we expected, but may actually exacerbate it, leading to more turnovers. This unexpected finding is further discussed in the "Discussion" section.

Discussion

Over the past two decades, overqualification has received increasing attention from both researchers and practitioners (Erdogan & Bauer, 2009; Li et al., 2021; Lobene et al., 2015; Wu et al., 2022). Understanding why highly skilled talents leave their organizations, finding ways to retain them, and utilizing their abilities effectively within the organization have emerged as critical issues (Simon et al., 2019; van Dijk et al., 2020). Drawing on SDT, particularly focused in the context of the workplace (Deci et al., 2017), we investigated the mediating role of growth satisfaction between perceived overqualification and turnover, with age and pay as contextual factors. Our large-scale, longitudinal evidence spanning three years revealed that unfulfilled internal aspirations for personal growth could be a critical mechanism driving overqualified employees to eventually leave their organizations.

Contrary to our expectations, age did not moderate the influence of overqualification on growth satisfaction. That is, regardless of age, all employees suffer significant discontent related to growth experience when they are overqualified, thereby increasing their propensity for turnover. Notably, the anticipated moderating role of pay in the relationship between growth satisfaction and actual turnover was not supported either. This result is surprising given the strong influence that pay typically exerts in employment contexts (Fulmer & Shaw, 2018). One possible explanation for this null finding could be that the effects of an unsatisfied desire for growth outweigh the impact of monetary rewards. This explanation aligns with research indicating that well-educated knowledge workers are often more driven by intrinsic motivation (Thomas, 2009), and extrinsic rewards tend to have a diminished impact on their motivational systems in modern work environments (Deci et al., 2017; Kuvaas, 2006). While pay does not uniformly influence all overqualified employees, our study reveals that its moderating effect depends on age. Our findings illustrate that (a) higher pay

more effectively weakens the relationship between growth satisfaction and turnover among older employees, and (b) it is more potent in reducing the indirect relationship between perceived overqualification and turnover via growth satisfaction among older employees. Notably, among younger employees, higher pay not only fails to offset growth dissatisfaction but may even exacerbate turnover tendencies, as outlined in our statistical analysis of the conditional indirect effects. Theoretically, age-related differences in internalization mechanisms could explain this phenomenon. According to SDT (Deci et al., 2017), "Whether rewards have a positive effect, no effect, or a negative effect on intrinsic motivation and internalization depends on their functional significance" (p. 36). This implies that money can potentially exert a negative influence. The theory suggests that the degree of value people place on pay determines its role as an internalization mechanism; on the other hand, a lower level of value increases the likelihood of it acting as a controlling mechanism. Among younger employees, the functional significance of money may be lower. Thus, internalization (i.e., perceiving money not merely as a means to an end but as an end that provides the intrinsic pleasure of self-enhancement) may be minimal. This is consistent with the motivation and SDT literature concerning the potential undermining effects of extrinsic rewards (Cerasoli et al., 2014).

Furthermore, another reason for this intriguing finding might be the distinct subpopulations among younger employees. Notably, the broad confidence intervals for some conditional indirect effects suggest the presence of subpopulations. Our *variable-centered* analytical approach (regression) restricted our capacity to distinguish these differentiated populations within the same condition. Zhang and Hirschi (2021), using a *person-centered* approach (latent profile analysis), demonstrated that individuals have different motivational profiles concerning intrinsic (e.g., calling) and extrinsic work factors. Consequently, younger employees' responses to monetary incentives may vary based on their motivational profiles. Future research employing latent profile analysis could provide deeper insights into the complex responses of overqualified employees to HR practices.

Theoretical Implications

Our research makes several significant contributions. Firstly, in line with SDT emphasizing the importance of employees' internal motivation, our study underscores the importance of personal growth—an essential intrinsic aspiration of human nature that makes work enjoyable itself—in understanding why overqualified employees leave their jobs.

Consistent with Dumani's (2015) recommendation for greater utilization of SDT in overqualification literature, we sought theoretical expansion by emphasizing internally driven mechanisms as opposed to abundant discussions on

external cognitive comparison mechanisms such as relative deprivation or fit theories in predicting negative outcomes of perceived overqualification (e.g., Debus et al., 2023; Johnson et al., 2002; Li et al., 2021; Liu et al., 2015; Luksyte et al., 2022; Sánchez-Cardona et al., 2020; Schreurs et al., 2020). This approach helps balance the emphasis on one of the two key aspects of overqualification (Johnson & Johnson, 2000)—the “no-grow” aspect—which has been overlooked compared to the considerable attention given to the other “mismatch” aspect. A global survey by McKinsey (DeSmet et al., 2022) cited a lack of career advancement opportunities as the top reason for leaving workplaces by 41% of respondents. This problem can be particularly acute for those who have achieved high qualifications through consistent progress. Our findings suggest that satisfaction with personal growth among overqualified employees is a crucial factor that warrants further attention. Our study concentrated on compensating for growth dissatisfaction; future research may further investigate management practices for preventing feelings of stagnation. For instance, employer-sponsored external learning or tuition reimbursement programs can offer alternative growth experiences beyond the workplace, thereby mitigating dissatisfaction from perceived overqualification (Gilpin & Kofoed, 2020; Manchester, 2012). These investigations would be particularly interesting because they may pose double-edged sword effects by unintentionally exacerbating feelings of being overqualified due to increased general knowledge.

Second, we contributed to the literature by investigating whether the response to perceived overqualification may vary depending on an employee’s age. This addresses a gap in perceived overqualification literature because the theoretical importance of age has been underestimated as a control variable (Harari et al., 2017), even though overqualified employees are not homogeneous (Liu & Wang, 2012), and scholars have consistently implied the possibility of varying responses according to age (Erdogan et al., 2011; Shultz et al., 2011). Whereas some scholars expected older individuals to respond in a less negative way (Liu & Wang, 2012), our findings suggested that older employees may suffer equivalent degrees of growth dissatisfaction from overqualified jobs. Therefore, perceived overqualification and its implications for senior workers need to be considered equally important and actively managed. In addition, we found that the pay incentive policy is more effective in deterring turnover for older individuals, substantiating the prior expectation of individual differences in pay reactions (Fulmer & Shaw, 2018). We suggest that future studies consider the demographic characteristics of overqualified workforces rather than merely use them as control variables. For instance, Li et al. (2023) found that flexible HR practices can enhance the positive impact of perceived overqualification on work-family

balance self-efficacy, thereby aiding in their work engagement. However, this effect can vary significantly depending on age because, as Shultz et al. (2011) suggest, older individuals may place greater importance on work-life balance. Moreover, gender—another criterion for distinguishing populations—can also impact responses to perceived overqualification. Luksyte and Spitzmueller (2011), based on referent cognition theory (Folger & Martin, 1986), proposed that overqualified women are likely to compare their treatment with similarly qualified men and interpret opaque compensation processes as a glass ceiling phenomenon.

Third, our research contributes to the literature by elucidating the effects of pay on the turnover mechanism among overqualified employees. Although pay undoubtedly affects workers’ attitudes and behaviors, particularly for highly talented employees (Fulmer & Shaw, 2018), evidence in perceived overqualification literature has been sparse. Our research makes a distinctive contribution by diverging from numerous studies on perceived overqualification that have sought to mitigate its adverse effects through psychological and intangible factors (e.g., Debus et al., 2020; Erdogan & Bauer, 2009). We observed the mitigating impact of pay, which is material and objectively measurable. Furthermore, the lack of support for the overarching effects of pay, coupled with the finding of conditional effects only, calls for a more in-depth exploration of pay’s influence. For example, it is necessary to clarify the impact according to different pay structures, such as pay-for-performance (PFP). SDT (Deci et al., 2017) also suggest that undermining effects could persist even in organizational contexts, especially if the pay is a contingent reward dependent on work performed. Given these mixed predictions and evidence, we encourage future researchers to investigate diverse aspects of pay structure and its impacts on overqualified individuals’ work attitudes and behaviors. For instance, PFP plans might motivate overqualified individuals by allowing them to leverage their exceptional abilities for higher rewards. Conversely, as Deci et al. (2017) predicted, these systems might emphasize control functions rather than signaling individual value—potentially undermining their motivation. Pay secrecy is another interesting area for future research (Alterman et al., 2021). Studies suggest that keeping salary information confidential may help integrate highly qualified talents into organizations and maintain their tenure there (Belogolovsky & Bamberger, 2014; Brown et al., 2022). Overqualification often induces jealousy among coworkers and consequent knowledge hiding (Li et al., 2021), so a pay secrecy policy may have a significant impact.

Practical Implications

Talented individuals with excellent capabilities are valuable assets to any organization, but their departure can result in

significant losses, such as recruitment and training costs. Our study highlights an important reason why overqualification can demotivate employees and lead them to leave their organizations—dissatisfaction with personal growth. Moreover, our results indicate that overqualified employees' reactions may vary depending on their age and pay level. Considering our findings that dissatisfaction with growth emerges irrespective of age, to effectively manage overqualified employees, it is crucial for managers to implement various measures aimed at fostering a sense of personal growth. Providing internal job rotation opportunities (Wu & Chi, 2020) or increasing job complexity (Peng, Yu, Peng, et al., 2023) could be viable strategies. Additionally, our study reveals that offering higher pay is not a universal solution for all overqualified employees—it only mitigates the effect of growth dissatisfaction on actual turnover among older workers. As Judge et al. (2010) suggested, it is crucial to determine who will benefit most from financial incentives in terms of desirability and cost-effectiveness. Therefore, organizations should carefully design their compensation plans to maximize effectiveness in addressing specific human resource concerns. For young, overqualified workers who prioritize personal growth over financial gain (Chavadi et al., 2022), excessive pay might not be effective; instead, strategies addressing issues directly related to personal growth may be more effective in retaining them.

Limitations and Future Research

Our study is not without limitations. First, we have made efforts to validate the use of panel items via reliability tests, structural analyses, and two independent construct and content validation studies guided by Colquitt et al. (2019). Nonetheless, as in other panel-based studies (e.g., Raffiee & Coff, 2016), the fact that we did not use established multi-item scales remains a limitation. In particular, there can be greater concerns about the use of a single item for growth satisfaction. According to the accumulated discussion (Heidemeier & Moser, 2009; Katsikeas et al., 2023; Wanous & Hudy, 2001), the use of a single item is inappropriate when measuring broader concepts; however, when measuring narrow concepts, a single item can have high validity because the subjects are less likely to interpret the item differently. Therefore, our single-item growth satisfaction scale, which is exclusively focusing on growth experience, holds some validity. Empirically, Matthews et al. (2022), after comparing single-item and multi-item scales of dozens of commonly used concepts in the field of organizational psychology, also concluded that “the majority of single-item measures examined demonstrated little to no comprehension or usability concerns” (p. 639). Still, we suggest that our findings be replicated with well-established multi-item scales.

Second, the characteristics of panel data imposed an additional limitation on our investigation. Our utilization of panel data deviates from the conventional approach, which ideally requires pre-registration or a theoretical foundation prior to data collection. In light of this deviation, Jebb et al. (2017) advocated that the inductive approach maximizes the value of data. Woo et al. (2017) also highlighted the importance of such a reversed approach for the progression of balanced social science, noting it “should be valued for their ability to detect new phenomena and new patterns in data” (p. 257). Despite these considerations, it is hoped that the insights derived from this panel study will foster more meticulously planned and pre-registered empirical research.

Third, as discussed earlier, the characteristics of pay—whether contingent on performance or not—can critically impact its operational effects (Kuvaas et al., 2016). Deci et al. (2017) suggested that pay independent of performance likely yields more favorable results. Nonetheless, our absolute pay level data did not clearly distinguish between base pay and performance-based incentives. Given that non-contingent base pay makes up a significant portion of overall pay, particularly in South Korea (Chang & Hahn, 2006), we made assumptions about positive effects. However, as these factors act as criteria for determining whether extrinsic reward operates positively, future studies should take into account various facets of pay. For instance, following the example by Kuvaas et al. (2016), researchers could consider elements such as performance-based versus base salary or unit versus individual pay schemes.

Lastly, as we conducted our study only in one country (i.e., South Korea), the cultural context may impact the generalizability of our findings. Specifically, South Korea is a country with high long-term orientation, power distance, and collectivism (Hofstede & Hofstede, 2001). Past studies have suggested that culture, such as power distance and collectivism, may impact overqualified employees' reactions (e.g., Harari et al., 2017; Liao et al., 2024). Yet, the effect of culture has not been fully understood in perceived overqualification literature (see also Erdogan & Bauer, 2021). We thus urge future research to replicate and expand on our findings across diverse cultural backgrounds (Wang et al., 2022). Throughout the literature review, we identified several panels within Western cultural settings, such as the Swiss Household Panel (Frei & Sousa-Poza, 2012) or the Canadian National Graduates Survey (Boulet, 2022), that similarly assess the perceived level of overqualification. We hope future studies leverage each panel's advantages in exploring the cultural differences in perceived overqualification.

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Author Contributions All three authors substantially contributed to the study's conceptualization, theorization, and research design. Sunghyuck Mah conducted data analyses. The first draft of the manuscript was written by Sunghyuck Mah and Chengquan Huang, and all authors commented on previous versions. Seokhwa Yun also took the overall supervisory role. All authors read and approved the final manuscript.

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Declarations

Conflict of Interest The authors declare no competing interests.

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