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The roles of general mattering, anti-mattering, psychological distress, and mistake tolerance in teacher turnover: insights from Chinese educational settings

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Abstract

Despite increasing recognition of general mattering (GM) and anti-mattering (AM) as crucial psychological constructs in workplace well-being, gaps exist in understanding their mechanisms in educational settings, and longitudinal evidence examining these relationships is also lacking. This two-wave longitudinal study explores how GM and AM influence psychological distress (PD) and turnover intentions (TI) among Chinese teachers, while examining the moderating role of mistake tolerance (MT) on these relationships. Data were collected at two time points: February and March 2024 (Time 1), followed by a second survey after a four-month interval (Time 2), with participants including 812 school teachers in China. Structural equation modeling (SEM) with bootstrapping techniques was

used to analyze the mediation pathways from GM and AM to TI via PD. Results reveal that PD mediates the relationship between GM, AM, and TI, with higher GM linked to lower PD and TI, whereas AM was associated with increased PD and TI; additionally, MT moderated the GM-PD relationship such that in low-MT settings, lower GM increased PD, but this effect was absent in high-MT settings. This study confirms GM and AM as distinct constructs, with AM emerging as a unique psychological experience rather than merely the absence of GM, and introducing MT as a moderator highlights managerial support's role in reducing turnover, while its longitudinal design offers insights for improving teacher well-being.

Introduction

Concerns about employee well-being have gained global significance, particularly in education (UNESCO, 2022). Teaching is a profession marked by significant emotional demands, constant accountability pressures, and intense interpersonal interactions (Li & Tsang, 2023). Teacher well-being is fundamental to educational quality and institutional stability, yet elevated stress, burnout, and demotivation consistently drive turnover rates (Agyapong et al., 2022; Mijakoski et al., 2022). This phenomenon is not limited to specific regions but represents a global concern, with teachers' mental health challenges intensifying worldwide (García-Arroyo et al., 2019) as more educators leave the profession (Barrenechea, 2022). The context of the present study—China's educational system—exemplifies these urgent concerns. A recent latent profile analysis of 366 junior and senior high school teachers revealed alarming results: over three-quarters (75.96%) fell into "burnout" and "burnout-engaged" profiles, exhibiting severe symptoms of depression, anxiety, and stress (Gao et al., 2025). This high prevalence of burnout likely reflects the influence of recent educational reforms such as the "Double Reduction" policy, which has demonstrably contributed to declines in teachers' physical and mental well-being (Ao et al., 2023).

Given that burnout is a strong predictor for teacher turnover (Li & Yao, 2022), these findings underscore the critical importance of addressing teachers' psychological needs. To maintain a stable teaching workforce, existing research emphasizes leadership's role in mitigating these challenges through autonomy support, constructive feedback, and creating psychologically safe environments (Ford et al., 2019; Lee & Swaner, 2023). However, there remains a need to explore additional psychological variables that might influence retention. To expand the scope of factors related to teachers' turnover intentions (TI), this study investigates the concept of "mattering"—an innovative perspective that provides new insights into previously underexplored psychological mechanisms influencing teacher well-being and retention in educational settings.

Mattering: General Mattering and Anti-Mattering

Mattering is defined as an individual's perceived significance and value to others (Rosenberg & McCullough, 1981). While mattering conceptually overlaps with psychological constructs such as belongingness and perceived social support—which have been shown to relate to employee mental well-being (Richards et al., 2018; Smetackova et al., 2019)—it remains distinct at the conceptual level. As Elliott (2009) and Flett (2022) explain, perceiving support from one's social environment or feeling a sense of belonging to a specific group does not equate to feeling significant to others. An individual may feel they belong to a group yet still not feel important within it, highlighting that mattering possesses unique psychological elements beyond mere inclusion or support.

As research on mattering advances, scholars have identified distinct but related dimensions within this construct. General mattering (GM)—the core conceptualization of feeling valued and significant to others across various life domains and relationships—has been associated with numerous positive psychological outcomes including enhanced self-esteem, reduced stress, and

greater psychological well-being (see Flett, 2022). Building on this foundation, more nuanced dimensions have emerged through rigorous empirical investigation. One significant finding reveals that individuals can positively perceive "not mattering," and this perception is not merely the absence of feeling that one matters, but represents a distinct psychological tendency (Flett et al., 2022). This construct, termed "anti-mattering (AM)," is not simply the opposite end of a continuum spectrum with mattering. In many studies, anti-mattering shows strong relationships with depression (Flett et al., 2022), psychological distress (PD) (Liu et al., 2023), and loneliness (McComb et al., 2020), even when controlling for the influence of GM. These findings suggest that AM captures a unique psychological experience with important implications for mental health and well-being.

Mattering in the Educational Context

Moving from the discussion of mattering's impact on individual well-being, research has extended this construct to workplace settings with significant implications. Ellington (2023) and Reece et al. (2021) demonstrated that mattering serves as a crucial indicator of organizational health and employee success, with positive relationships to key outcomes including job satisfaction, leadership roles, promotions, and retention. These findings establish mattering's significant role in workplace functioning and performance, providing a foundation for examining its specific relevance in educational settings.

The importance of perceived mattering for school teachers has recently attracted research interest (Barrenechea, 2022; Lee et al., 2023; Thornton, 2024; Wilfong, 2021; Wilfong & Donlan, 2021). Wilfong (2021) identified eight essential elements of mattering for K-12 teachers across interpersonal, intrapersonal, and external domains, while Wilfong and Donlan (2021) found that perceived mattering strongly correlated with teachers' self-efficacy and collective teaching efficacy. This suggests that when teachers feel they matter, they develop stronger beliefs in their

capabilities to influence student outcomes—a critical factor in educational effectiveness.

Concerning AM in educational contexts, Barrenechea (2022) provided evidence that feelings of insignificance could significantly decrease teachers' functional health and professional well-being, contributing to emotional exhaustion and decreased job satisfaction. Addressing this issue, Lee et al. (2023) emphasized that school management should prioritize creating environments where teachers perceive that they matter, suggesting specific leadership practices that validate teachers' contributions.

Recent research examining physical education teachers has found that feelings of mattering are tied to specific career stages, particularly the competency building and enthusiasm and growth phases (Schulz et al., 2025). This study revealed that perceptions of mattering increase over time through intentional relationship building, with administrative support being crucial in fostering teachers' sense of importance. These findings highlight how both career tenure and advocacy contribute to teachers' perceived mattering in educational settings, helping them mitigate the negative emotions associated with the sociopolitical pressures of the profession.

The present study

Despite these important contributions, research examining mattering in educational contexts remains relatively limited, particularly regarding its relationship with critical outcomes like teacher turnover. Additionally, most existing studies rely on cross-sectional designs, which limits our understanding of how GM and AM may influence key outcomes over time. The current study addresses these gaps by adopting a longitudinal approach to investigate how GM and AM influence teachers' TI in Chinese educational settings. In this study, we consider PD as the

mediator between GM/AM and TI, with mistake tolerance (MT) as a moderator of these mediation pathways.

To develop a comprehensive theoretical framework for these relationships, we integrate Self-Determination Theory (SDT) and Error Management Theory (EMT). These complementary theoretical perspectives allow us to examine both the psychological processes linking mattering constructs to TI and the contextual factors that may influence these relationships. Based on these theoretical foundations, we propose the following hypotheses.

Hypothesis development

This study is grounded in SDT, which posits that individuals have fundamental needs for competence, autonomy, and relatedness (Ryan and Deci, 2000). Fulfilling these needs promotes self-organization, adjustment, and flourishing across diverse cultural contexts (Slemp et al., 2018; Yu et al., 2018). In organizational contexts, mattering mainly fulfills the need for relatedness, offering emotional security and stability, while absence of GM disrupts this by fostering PD (Flett & Nepon, 2020). Such distress, arising from perceived insignificance, manifests as anxiety, depression, or exhaustion (Viertiö, et al., 2021) and is exacerbated by rumination, which amplifies emotional discomfort and accelerates burnout (Rose & Kocovski, 2020; Watkins, 2008).

Empirical studies strongly support these relationships. Teachers who feel valued by colleagues and institutions consistently report lower burnout, higher job satisfaction, and stronger professional commitment (Barrenechea, 2022). Research specifically examining physical education teachers has shown that perceived mattering is associated with reduced isolation and marginalization (Richards et al., 2018) and enhanced resilience (Simonton et al., 2023). In

organizational contexts more broadly, Reece et al. (2021) found that employees with lower perceptions of mattering experience greater PD, which significantly increases their TI. These findings provide compelling evidence for the psychological pathways connecting mattering to organizational outcomes in educational settings. Therefore, this study proposes the following hypothesis:

Hypothesis 1 (H1): GM and AM have indirect effects on teachers' TI, mediated by PD.

Drawing from EMT (van Dyck et al., 2005), organizational MT potentially serves as a vital contextual factor shaping the relationship between mattering and PD. MT refers to employees' perceptions of an organization's willingness to accept and learn from errors rather than punishing those who make them, creating an environment that values learning and growth over blame (Lin et al., 2023). EMT frames mistakes as opportunities for growth, positing that organizations can cultivate environments where employees feel safe and valued, thereby countering feelings of insignificance. Such supportive environments provide psychological safety and validation for employees (Cannon & Edmondson, 2005; Edmondson & Lei, 2014).

High MT—characterized by open communication and constructive error handling (Cho et al., 2023)—likely buffers the harmful effects of AM on PD by promoting psychological safety. When employees feel secure in making and acknowledging mistakes, the negative impact of feeling insignificant may be reduced. In contrast, low MT fosters fear of mistakes, potentially amplifying feelings of undervaluation and strengthening the link between absence of mattering (i.e., low GM) and PD. Similarly, the association between AM and PD may intensify in punitive error cultures, as these environments can exacerbate feelings of insignificance and create a toxic psychological state.

Building on these insights from EMT, this study proposes the following hypothesis:

Hypothesis 2 (H2): MT moderates the relationship between (a) GM and PD, and (b) AM and PD, such that the relationships will be weaker when MT is high and stronger when MT is low.

Based on the above, we propose a conceptual model as shown in Fig. 1. In this model, GM and AM serve as the independent variables and are directly related to PD and indirectly related to TI. Moreover, MT is expected to moderate the paths from GM and AM to PD.

Fig. 1

Moderated Mediation Model Examining the Effects of Mattering and Mistake Tolerance on Psychological Distress and Turnover Intention.

Methods

Data collection and participants

This longitudinal study employed a two-wave design with convenience sampling. We began by contacting school administrators across China, who then distributed online surveys to teachers in their schools with voluntary participation. The inclusion criterion was current in-service teacher status, while those with diagnosed clinical mental disorders were excluded from participation. The initial survey was conducted between February and March 2024 (Time 1), with a follow-up survey distributed after a four-month interval (Time 2). Informed consent was obtained via an electronic form on the survey's first page before data collection began. The study received ethical approval from the Institutional Review Board of XXX (IRB reference: XXX).

We chose a two-wave longitudinal design to address the limitations of cross-sectional studies, which cannot establish temporal relationships. While a three-wave design would have been ideal for testing mediation effects, practical constraints including school academic calendars, potential participant fatigue, and the risk of increased attrition led us to implement a two-wave approach. To minimize common method bias, we temporally separated the measurement of predictor variables (Time 1) from outcome variables (Time 2) following recommendations by Podsakoff et al. (2003).

The initial survey yielded 812 complete responses from teachers in urban schools across 11 cities located in the northern, central, southern, and eastern regions of China. As shown in Table 1, participants' mean age was 41.54 years (SD = 9.25), with 67.9% ($n = 551$) being female. The vast majority (97.5%, $n = 792$) were employed in public schools. Teachers worked at various educational levels: primary schools (40.01%, $n = 326$), junior vocational schools (32.5%, $n = 264$), junior high schools (18.6%, $n = 151$), senior vocational schools (5.3%, $n = 43$), and senior high schools (3.4%, $n = 28$). Half of the respondents (50.2%, $n = 408$) had over 20 years of teaching experience. The most common subjects taught were Chinese language (26.5%, $n = 215$), mathematics (19.0%, $n = 154$), and specialized vocational subjects

(13.7%, $n = 111$).

Table 1 Demographic Information of Participants at Time 1 and Those Who Completed Both Time 1 and Time 2 Surveys.

At Time 2, 480 participants completed the follow-up survey, resulting in a 40.8% attrition rate. Comparative analyses using *t*-tests and χ^2 tests revealed no significant demographic differences between the initial sample (Time 1) and those who completed both surveys (Times 1 and 2), suggesting random attrition without systematic bias (see Table 1).

Measures

To establish the temporal order of variable associations, GM and AM were measured at Time 1, while PD, TI, AND MT were measured at Time 2.

General Mattering Scale (GMS)

The GMS (Marcus and Rosenberg, 1987) measures individuals' perceptions of how much they matter to other people in their lives. This study used the validated Chinese version (Liu et al., 2023; Wang et al., 2025), which comprises five items rated on a 1-to-4 scale, with higher scores reflecting GM. A sample item is "How much do other people depend on you?". The GMS demonstrated high internal consistency in our sample (Cronbach's $\alpha = 0.89$, McDonald's $\omega = 0.90$).

Anti-Mattering Scale (AMS)

The AMS (Flett et al., 2022) measures perceptions of feeling unimportant to others. This study applied the validated Chinese version (Ding et al., 2024; Liu et al., 2023; Wang et al., 2025), consisting of five items rated on a 4-point Likert

scale, with higher scores indicating greater feelings of AM. A sample item is, "How much do you feel like you don't matter?". Our data indicated strong reliability, with both Cronbach's α and McDonald's ω at 0.91.

Depression Anxiety and Stress Scale-21 (DASS-21)

The Depression Anxiety Stress Scales-21 (DASS-21; Lovibond and Lovibond, 1995) assesses PD across depression, anxiety, and stress subscales. This study employed the validated Chinese version of the instrument (Chen et al., 2023; Cao et al., 2023), which has been recently validated specifically for the Chinese teacher population (Wang et al., 2025; Zhou et al., 2024). The scale contains 21 items rated on a 0–3 scale, measuring symptom severity over the past week. Higher scores indicate greater distress. Sample items include, "I couldn't seem to experience any positive feeling at all" (depression), "I was aware of dryness of my mouth" (anxiety), and "I found it hard to wind down" (stress). The scale exhibited excellent internal consistency in this sample (Cronbach's α = 0.97, McDonald's ω = 0.97).

Turnover Intention Instrument

The Turnover Intention Instrument (Kelloway et al., 1999) was adapted to Chinese following Beaton et al.'s (2000) translation guidelines, with "organization" replaced by "school" to fit the context. Its four items assess teachers' intention to leave their school, rated on a 5-point scale, with greater scores indicating higher intention to leave. A sample item is, "I am thinking about leaving this school." In our study, the adapted measure showed high internal consistency (Cronbach's α = 0.90, McDonald's ω = 0.91).

Mistake Tolerance Scale

The Mistake Tolerance Scale (Weinzimmer & Esken, 2017) was adapted to Chinese also following Beaton et al.'s (2000) translation guidelines, with "managers" replaced by "school administrators" or "leaders" to better suit the educational context. The scale's five items, rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), assess teachers' perceptions of administrative tolerance for mistakes, with higher scores indicating greater perceived tolerance. The five revised items include: "School administrators are generally accepting of mistakes," "Teachers can engage in more risk-taking behaviors at work," "School leaders are tolerant of mistakes when teachers pursue innovative solutions," "School leaders understand that making mistakes is part of taking risk," and "Risk taking is encouraged without the fear of punishment." Our data indicated good internal consistency for the scale (Cronbach's $\alpha = 0.74$, McDonald's $\omega = 0.75$).

Data analysis

In the first step, to evaluate potential common method bias, we employed a confirmatory factor analysis (CFA) approach with a method factor model as recommended by Podsakoff et al. (2003). We used the difference in Comparative Fit Index (ΔCFI) as the evaluation criterion, with a ΔCFI value less than 0.01 suggesting that common method bias is not a significant concern.

Means and standard deviations (SD) were calculated for all variables, including the two types of mattering (Time 1), along with PD (mediator), TI (dependent variable), and MT (moderator), all measured at Time 2. Pearson correlations examined the relationships among these variables.

Structural equation modeling (SEM) was employed to evaluate the mediation model, following a two-stage approach recommended in Hair et al. (2019). First, the measurement model evaluated construct validity and reliability. Second, the structural model tested direct and indirect paths of the hypothesized relationships.

Teachers' demographic variables (sex and school type) were included as control variables. Model fit was assessed using the CFI, Non-Normed Fit Index (NNFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR), with acceptable thresholds defined as CFI and NNFI ≥ 0.90, RMSEA < 0.08, and SRMR < 0.08 (Hu and Bentler, 1999).

Direct and indirect effects were analyzed to test the study hypotheses. The mediation effects of mattering types on TI through PD were assessed using statistical significance testing and bootstrapping with 2000 resamples to generate 95% confidence intervals (CI). Chi-square difference tests determined whether direct paths from mattering to TI should be included, testing for partial mediation.

To examine the moderating effect of MT between mattering and PD, observed scores were used to test the significance of the interaction term, addressing challenges with latent variables. A significant interaction term confirmed the presence of moderation. Hayes's (2022) guidelines were applied to assess the index of moderated mediation for the conditional indirect effect of mattering on TI. An index excluding zero confirmed significant differences in the indirect effect across moderator levels, prompting simple effects analysis at different moderator levels. Sex and school type were included as control variables in the regression model, consistent with SEM practices.

Results

Common Method Bias Examination

Prior to testing the proposed hypotheses, we first assessed the potential influence of common method bias. The comparison between the method factor model [χ^2 (177) = 302.65, CFI = 0.977] and the measurement model [χ^2 (199) = 356.85, CFI = 0.971] yielded a ΔCFI of 0.006, which is below the threshold of 0.01. This result

suggests that common method bias does not pose a significant threat to the validity of our findings.

Descriptive statistics, and Pearson correlations

Descriptive statistics (see Table 2) reveal that teachers reported moderate GM (M = 12.09, SD = 3.29) and slightly lower AM (M = 10.97, SD = 3.41). Moreover, based on DASS-21 cutoff criteria, 10.6% of participants had clinically significant PD. TI was generally low (M = 8.37, SD = 3.07), and, teachers perceived their schools provided low to moderate MT (M = 13.68, SD = 3.12).

Table 2 Descriptive statistics and Pearson correlations (*p*-value) among the variables of interests.

Pearson correlations (see Table 2) demonstrate several significant relationships among variables. GM was weakly associated with PD (r = −0.12, $p = 0.01$), while AM was positively correlated with both PD ($r = 0.28$, $p < 0.01$) and TI ($r = 0.12$, $p = 0.01$). GM exhibited a weak positive correlation with MT ($r = 0.10$, $p = 0.03$). PD was moderately positively related to TI ($r = 0.36$, $p < 0.01$). Contrary to expectations, GM and AM were not significantly related.

SEM results

The measurement model demonstrates an acceptable fit with the following indices: χ^2 (199) = 356.85, CFI = 0.971, NNFI = 0.966, RMSEA = 0.041, and SRMR = 0.048. Figure 2 presents the standardized factor loadings, with all loadings exceeding 0.45 and most surpassing 0.60. Based on these standardized factor loadings, we calculated the Average Variance Extracted (AVE) for each construct. The results show that AVE values for GM, AM, PD, TI, and MT were 0.64, 0.68, 0.91, 0.69, and

0.37, respectively. With the exception of MT, all constructs exceeded the recommended threshold of 0.50, indicating adequate internal convergent validity. The Heterotrait-Monotrait (HTMT) ratio of correlations was no greater than 0.85, indicating good discriminant validity among the constructs.

Fig. 2

Standardized Factor Loadings of the Measurement Model. Note: GMS = General Mattering Scale, AMS = Anti-Mattering Scale, Dep = Depression subscale of the Depression Anxiety Stress Scales-21, Anx = Anxiety subscale of the Depression Anxiety Stress Scales-21, Stress = Stress subscale of the Depression Anxiety Stress Scales-21, TII = Turnover Intention Instrument, MTS = Mistake Tolerance Scale.

The structural model, incorporating sex and school type as control variables, also demonstrates good fit: χ^2 (141) = 227.71, CFI = 0.982, NNFI = 0.978, RMSEA = 0.036, SRMR = 0.034. Path analysis reveals that GM was significantly negatively related to PD ($\beta = -0.12$, $t = -2.45$, $p = 0.014$), while AM was positively related to PD ($\beta = 0.29$, $t = 5.59$, $p < 0.001$). PD was positively related to TI ($\beta = 0.37$, $t = 6.88$, $p < 0.001$). Notably, although not a focal relationship in our model, the non-significant association between GM and AM ($\beta = -0.10$, $t = -1.51$, $p = 0.13$) is consistent with the earlier Pearson correlation results. Standardized path coefficients are displayed in Fig. 3.

Fig. 3

Standardized Path Coefficients of the Structural Equation Model.

PD mediated the relationships between both types of mattering and TI. GM exhibited a significant indirect effect on TI ($b = -0.07$, $t = -2.35$, $p = 0.019$), as did AM ($b = 0.13$, $t = 4.76$, $p < 0.001$). Bootstrapping with 2000 resamples confirmed these findings, yielding 95% bias-corrected confidence intervals excluding zero: GM [95% BC CI: −0.13, −0.02] and AM [95% BC CI: 0.08, 0.19]. A chi-square difference test comparing models with and without direct paths found no significant differences ($\Delta\chi^2$ (2) = 0.55, $p = 0.759$), supporting full mediation by psychological distress.

Moderating effect of mistake tolerance

Table 3 shows the regression results for the moderated mediation model. The interaction effect between GM and MT on PD was significant ($b = 0.10$, SE = 0.05, $t = 2.06$, $p = 0.040$), indicating that MT moderates the relationship between GM and PD. The index of moderated mediation was 0.054 (95% CI [0.053, 0.055]), with the confidence interval excluding zero, supporting the hypothesized moderated mediation effect.

Table 3 Regression coefficients in the moderated mediation analysis.

Table 4 and Fig. 4 further elucidate the conditional effects of GM on PD across levels of MT. Following standard procedures (Hayes, 2022), we defined high and low levels of MT as one standard deviation above and below the mean (M = 13.68, SD = 3.12). Thus, high MT was operationalized as scores ≥ 16.80 (M + 1SD), while low MT was defined as scores ≤ 10.56 (M − 1SD). The results reveal a significant negative relationship between GM and PD at low levels of MT ($b = -0.68$, SE = 0.23, $t = -3.00$, $p = 0.003$), whereas this relationship was not significant at high levels of MT. The indirect effect of GM on TI through PD was significant and negative at low MT ($b = -0.06$, SE = 0.02, $t = -2.82$, $p = 0.005$), but non-significant at high levels.

Table 4 Analysis of Simple Effects Across Varying Levels of Mistake Tolerance.

Fig. 4

Simple Effects of General Mattering on Distress at Different Levels of Mistake Tolerance.

Discussion

This study employs a longitudinal design to examine how GM and AM influence teachers' TI through PD. Additionally, it investigated whether MT moderates the effects of GM and AM on PD.

Supporting Hypothesis 1, the results demonstrate that Chinese teachers with high GM experience lower PD, subsequently reducing their TI. Conversely, high AM is associated with elevated PD, increasing TI. These findings align with prior research highlighting the role of emotional well-being in job satisfaction and retention (Ellington, 2023; Reece et al., 2021). Psychological distress emerges as a key mechanism linking both GM and AM to TI. These findings echo recent research emphasizing the importance of mattering for teacher well-being (Barrenechea, 2022; Lee et al., 2023; Thornton, 2024; Wilfong, 2021; Wilfong & Donlan, 2021).

Hypothesis 2 is partially supported. In low-MT environments, GM plays a significant protective role in reducing psychological distress. However, its buffering effect weakens in high- MT settings, where supportive environments already provide psychological safety for teachers. These findings extend EMT (Frese & Keith, 2015; van Dyck et al., 2005) by revealing how error management cultures influence not just stress levels directly, but also employees' reliance on alternative coping resources. EMT suggests that punitive error cultures deplete psychological resources and increase vulnerability to stress. Our results show that in such depleted conditions (low-MT), employees' sense of mattering becomes a critical compensatory resource. This aligns with EMT's resource-based perspective: when organizational error management fails to provide psychological safety, employees must draw on personal resources like mattering to cope with distress.

AM shows no significant interaction with MT, highlighting its persistent psychological impact regardless of organizational tolerance for mistakes. This aligns with Flett et al.'s (2022) findings that AM is a distinctive construct with enduring negative effects, beyond the mere absence of mattering. Even in high-mistake-tolerance environments, AM's effects persist (simple effects for AM at different levels of MT were not presented since the AM × MT interaction term was not statistically significant), underscoring the need to address it directly, as a culture of accepting errors alone cannot mitigate its psychological impact.

Notably, although not a focal relationship in our model, the non-significant association between GM and AM warrants discussion. This finding provides empirical support for the conceptualization of GM and AM as distinct constructs rather than opposite ends of a single continuum (Flett et al., 2022). Unlike Western studies that often report negative correlations between these constructs (e.g., $r = -0.58$ in Besser et al., 2022), our results reveal independence between GM and AM among Chinese teachers. This cultural difference may reflect variations in self-construal and social values between collectivistic and individualistic contexts. Importantly, our findings are consistent with Ding et al. (2024), who similarly found no significant relationship between GM and AM among Chinese junior high school students. This pattern suggests that in Chinese educational contexts, perceptions of mattering and anti-mattering may develop through separate psychological pathways, allowing individuals to simultaneously experience aspects of both constructs—a phenomenon that merits further cross-cultural investigation.

Implications

This study offers valuable theoretical contributions to understanding psychological well-being in the teaching profession. First, our findings reveal that mattering and anti-mattering operate as distinct psychological experiences among teachers, providing empirical support for the dual-continuum model of psychological well-being within educational settings. This distinction suggests that interventions aimed at enhancing teachers' sense of mattering may not automatically reduce feelings of anti-mattering, requiring separate strategies to address each construct. Second, our research demonstrates that GM serves a vital protective function primarily in low-MT environments, highlighting its critical importance in the Chinese educational system. Given that mistake tolerance in Chinese schools is often restricted by district-level policies beyond school administrators' direct control, cultivating teachers' sense of mattering becomes even more essential. This finding

underscores that in educational contexts where organizational flexibility is limited by systemic constraints, fostering perceptions of mattering may be one of the most actionable strategies for promoting teacher well-being—offering a more contextually sensitive understanding of psychological resources in education systems than previously recognized.

This study also extends EMT by examining mistake tolerance as a moderator in the mattering-distress relationship. While high MT neutralizes the relationship between low GM and PD (making the negative effect non-significant), it does not mitigate AM's psychological impact, underscoring the limitations of error-accepting organizational cultures in addressing entrenched perceptions of insignificance.

For educational leaders, these findings emphasize the need to cultivate environments where teachers feel valued through sustained recognition practices. To enhance mistake tolerance, administrators should implement structured reflection sessions after errors, encourage open discussions about mistakes during staff meetings, and establish protocols for constructive feedback that focus on solutions rather than blame. Additionally, educational institutions should consider integrating mistake tolerance awareness into teacher pre-service training programs, where prospective teachers can learn to view errors as learning opportunities rather than failures through case studies, simulated teaching scenarios, and mentorship experiences that normalize the mistake-making process in professional development. Most importantly, given the distinct nature of AM, leaders must develop targeted strategies that specifically address feelings of insignificance, as mistake tolerance alone cannot mitigate these perceptions.

Limitations

This study has several limitations that may influence the interpretation and generalizability of its findings. First, reliance on self-report measures introduces

potential response biases, such as social desirability and recall bias, which may impact data accuracy. Although we addressed this concern by employing temporal separation in data collection and our common method bias analysis showed no substantial influence, these measures cannot entirely eliminate response biases. Future research could further strengthen validity by incorporating alternative methods, such as observations or structured interviews, for a more nuanced understanding of these constructs.

Second, the relatively short four-month interval between data collection points presents an unavoidable limitation. This condensed timeframe may not adequately capture the dynamic nature of psychological processes such as mattering and psychological distress. Additionally, school-specific activities or external events during the study period may have influenced variable relationships, introducing external interference. Longer longitudinal studies with multiple measurement points spanning several academic years would provide more comprehensive insights into temporal development while better accounting for situational factors, yielding more stable findings.

Third, the use of convenience sampling limits generalizability. This approach may not fully represent the diversity of the teaching profession, particularly as our participants were exclusively from urban public schools, excluding rural or private educational institutions. Moreover, several important school-level variables were not collected, including school size, student-teacher ratio, and funding levels. Future studies could adopt stratified or random sampling methods to improve representativeness across various educational contexts and collect comprehensive ecosystem information for conducting multi-level analyses to examine school-level influences on teacher well-being and turnover intentions.

Additionally, this study is situated within the specific cultural and institutional context of Chinese education, which may limit the generalizability of findings to

other cultural settings. China's high power distance, collectivist norms, and strong emphasis on performance and face-saving may influence how teachers perceive constructs such as mattering and mistake tolerance. For instance, the cultural emphasis on 'face' (mianzi) may lead teachers to underreport feelings of insignificance, while hierarchical relationships and expectations of perfectionism could shape unique interpretations of mistake tolerance. Future research should examine these constructs across diverse cultural contexts to better understand their cross-cultural validity and applicability.

Conclusion

This study advances our understanding of teacher psychological well-being by demonstrating that GM and AM operate as distinct constructs with differential effects on teachers' intention to leave through distress. A key finding is that while MT moderates the relationship between GM and emotional strain, it fails to buffer against AM's harmful effects. This asymmetry reveals a critical insight: organizational cultures that merely accept errors cannot address deeply rooted feelings of insignificance.

These findings have important implications for educational practice. Rather than relying solely on creating error-tolerant environments, educational leaders must develop targeted strategies to foster teachers' perceived significance while simultaneously addressing feelings of not mattering. This dual approach is essential for building resilient educational communities that support teacher well-being and reduce teacher turnover in an increasingly demanding profession.

Data availability

The datasets used and/or analyzed during the current study are available from the

corresponding author on reasonable request.

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Ethics declarations

Competing interests

The authors declare no competing interests.

Ethical Approval

The present study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board (IRB) of the Jiangxi Psychological Consultant Association (IRB ref: JXSXL-2024-JA08/Date: January 8th, 2024). The ethics approval for this study was for teacher turnover intention.

Informed Consent

Electronical written informed consent to participate and publish was obtained from all the participants through online consent forms by the author team between February and March 2024, before the data collection. All participants have been provided with complete disclosure concerning: (1) the assurance of their anonymous status, (2) the research aims and justification, (3) the planned utilization of their data, and (4) any possible risks involved in participating.

Additional information

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