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Abstract

To improve special education teachers' (SETs') working conditions, SETs in greatest need of support need timely identification. Thus, we conducted a secondary analysis of a nationally representative sample of 846 SETs who completed a comprehensive working conditions measure (RESPECT) to examine (a) whether unique working conditions profiles existed via latent profile analysis and (b) how profile membership related to outcomes. We found a theoretically supported, four-profile solution: Profile 1: *Highest Responsibilities, Lowest Resources* (7%); Profile 2: *Higher Responsibilities, Lower Resources* (31%); Profile 3: *Lower Responsibilities, Higher Resources* (45%); and Profile 4: *Lowest Responsibilities, Highest Resources* (17% of SETs). Profile membership was associated with emotional exhaustion (a burnout component) and intent to leave, in expected directions. However, even in Profile 4 (i.e., SETs with the lowest responsibilities and highest resources), SETs on average responded *neither agree nor disagree* (rather than *disagree* or *strongly disagree*) to items measuring emotional exhaustion and *disagree* (not *strongly disagree*) to items measuring intent to leave. Thus, although SETs in Profiles 1 and 2 may be in greatest need of support, in no profile were SETs likely experiencing optimal working conditions.

Keywords: Working conditions, special educators, latent profile analysis, emotional exhaustion, intent to leave

Special Education Teachers' Working Condition Profiles: Implications for Emotional Exhaustion and Intent to Leave

Unsupportive working conditions predict special education teachers' (SETs) burnout, intent to leave their jobs, and turnover (Brunsting et al., 2025; Billingsley & Bettini, 2019; Scott, Powell et al., 2021), limiting schools' capacity to effectively serve students with disabilities (Bettini, Scott et al., 2024; Cumming et al., 2022; Kaler et al., 2026). Moreover, a small body of studies indicates SETs provide higher quality instruction when they experience more supportive working conditions (e.g., Cumming et al., 2021; Lillis et al., 2026; Mathews et al., 2021). Furthermore, SETs in schools with more socioculturally privileged students report more supportive working conditions than those serving more marginalized students (Bettini, Nguyen et al., 2022; Mason-Williams et al., 2022), leading to differential attrition from higher- vs. lower-poverty schools (Gilmour et al., 2026) and potentially exacerbating the inequitable distribution of qualified, experienced SETs (Bettini, Nguyen et al., 2022). Thus, improving working conditions is critical to strengthening the SET workforce (Billingsley et al., 2020).

To improve working conditions, scholars, leaders, and policymakers need a measure with strong validity evidence that they can use to evaluate working conditions, identify schools and SETs in need of intervention, and track changes over time. Scholars have recently developed and collected validity evidence for RESPECT, a comprehensive measure of SETs' working conditions, with extant evidence indicating it has strong psychometric properties and predictive validity evidence (Huggins-Manley et al., 2026). However, using RESPECT may present some challenges, as it includes 33 subconstructs within four constructs, complicating efforts to synthesize SETs' scores in accessible and usable ways. A more parsimonious representation of RESPECT scores, via latent profile analysis (Spurk et al., 2020), could address these challenges.

Latent profile analysis (LPA; Spurk et al., 2020), a person-centered approach, can identify whether latent subgroups or profiles, based on RESPECT scale and subscale indicators (e.g., high work responsibilities, limited access to resources), exist. Such use of RESPECT scores could allow users to, with a certain degree of probability, place an individual SET into distinct profiles, which, in turn, could support identification of SETs in greatest need of support and inform efforts to enhance their working conditions and outcomes. Thus, we aim to explore whether unique SET working conditions profiles exist using RESPECT. Given robust research on the relationship between working conditions and SETs' burnout (e.g., Bettini, Cumming et al., 2020) and attrition (e.g., Billingsley & Bettini, 2019; Gilmour et al., 2022), we also examine the extent to which these profiles are associated with SETs' emotional exhaustion (a component of burnout) and intent to leave. In the following sections, we review prior research on the importance of working conditions and describe existing SET working conditions measures.

Special Educators' Working Conditions and Outcomes

Conceptualizations of working conditions are often grounded in Conservation of Resources (COR) theory (Hobfoll, 1989), which posits that individuals are motivated to gain and protect resources that help them to fulfill work demands (Hobfoll et al., 2018). When they have resources needed to meet job demands, they can manage workloads successfully and experience positive work outcomes (e.g., satisfaction). Conversely, when they lack resources to meet demands, they experience stress, burnout, and attrition (Alarcon, 2011).

Grounded in COR theory (Hobfoll, 1989), Bettini et al. (2026) further delineated SET working conditions as "the job responsibilities special educators fulfill and the resources special educators experience, as a result of how their school is organized to structure and coordinate teachers' work" (p. 9). They argued that SETs' working conditions are distinct from those of

general educators, as SETs have different responsibilities (e.g., caseload management) and thus rely on different resources to fulfill responsibilities. For SETs, salient resources include social (e.g., collegial support), logistical (e.g., time), and informational (e.g., professional development) resources.

Prior research has found that challenging SET working conditions are implicated in teacher shortages, as they are associated with higher burnout, intent to leave, and actual attrition (Bettini, Cumming et al., 2020; Brunsting et al., 2022; Scott, Powell et al., 2021). For instance, research shows consistent relationships between working conditions and emotional exhaustion (a component of burnout; e.g., Brunsting et al., 2026), and that emotional exhaustion mediates relationships between working conditions and other outcomes, such as intent to leave, attrition, and poor student outcomes (e.g., Bettini, Cumming et al., 2020; Cumming et al., 2021; Brunsting et al., 2022; Madigan & Curran, 2020). Conversely, supportive working conditions are associated with lower SET emotional exhaustion, stronger commitment to their jobs, and stronger instruction (e.g., Bettini et al., 2016; Cumming et al., 2021; Lillis et al., 2026; Mathews et al., 2021). Collectively, extant evidence strongly indicates that working conditions play an essential role in SETs' experiences and outcomes (e.g., instructional quality, intent to leave), thereby contributing to the stability and composition of the SET workforce (Billingsley et al., 2020).

SETs may experience distinct responsibilities and rely on different resources, depending on the settings in which they work (e.g., region, urbanicity, Title 1 status, school level, service delivery model, student disability categories) and/or their own characteristics (e.g., gender, race/ethnicity; Bettini et al., 2026). For example, SETs in inclusive settings may depend more on social resources, as their work is integrated into general education classes, whereas SETs in self-contained settings may depend more on logistical resources, such as curricular materials and

planning time, as they are often responsible for teaching across subjects and grades (Mathews et al., 2026). Likewise, SETs in higher-poverty schools may depend more on support from leaders (Bettini, Gilmour et al., 2020), as these schools are often given weaker resources to serve students (Mason-Williams et al., 2022). Given that SETs of color often experience racialized marginalization in white-normative environments (e.g., Bettini et al., 2022; Cormier, Scott et al., 2022; Scott, 2025), they may especially depend on schools in which they experience a strong sense of belonging and supportive leaders. Overall, SET and school characteristics may shape SETs' experienced working conditions and the salience of those working conditions for their outcomes.

Measuring SETs' Working Conditions

To strengthen SETs' working conditions, measures with strong validity evidence are needed. Stark et al. (2023) conducted a systematic review of 44 studies measuring SETs' working conditions from 1983-2020, finding that most studies provided some content-related validity evidence, but less than half provided internal validity evidence (e.g., model fit, reliability), and only one examined external validity evidence (e.g., relationships with expected outcomes of working conditions, such as burnout). Moreover, studies used varied items and/or definitions of key constructs, limiting comparisons across studies. As such, Stark et al. (2023) concluded that a well-validated, comprehensive measure of SETs' working conditions is needed.

To address the need for a measure with strong validity evidence, scholars developed RESPECT (Bettini et al., 2025; Huggins-Manley et al., 2026). They conducted an extensive content development process, integrating measures and constructs from prior research with feedback from experts and key constituents (e.g., SETs, district leaders) to generate constructs, subconstructs, and items (Bettini et al., 2025). They piloted RESPECT with a nationally

representative sample of 846 SETs, examining: (a) dimensionality, using parallel factor analysis methods (Horn, 1965); (b) item fit, person fit, item parameter spacing, and reliability, by fitting a partial credit Rasch model (Masters, 1982) and assessing Cronbach's alpha; (c) correlations among all (sub)scale scores and external measures (e.g., emotional exhaustion, intent-to-leave); and (d) fairness, by conducting differential item functioning (DIF) analyses for salient participant groups (e.g., SETs of color vs. white SETs; SETs in Title 1 vs. non-Title 1 schools; Huggins-Manley et al., 2026). Collectively, these analyses yielded strong evidence of internal validity, external validity, and fairness (Huggins-Manley et al., 2026). Thus, in contrast to measures in Stark et al.'s (2023) review, RESPECT is a comprehensive SET working conditions measure with strong validity evidence supporting its use in research and practice.

Need for Parsimonious Representation of SET Working Conditions

Though RESPECT has strong validity evidence, its 33 subscales (within four scales) present both benefits and challenges. On one hand, the wide range of specific subscales can provide users with insight into specific working conditions in greater or lesser need of intervention, as well as nuanced assessments of the effectiveness of interventions to improve working conditions. Likewise, nuanced subscales can allow scholars to assess predictors and outcomes of specific working conditions. On the other hand, the range of subscales may pose challenges to researchers seeking to include working conditions as predictors or outcomes in regression models, as the large number of correlated subconstructs may lead to oversaturated models and multicollinearity. Further, the wide range of subscales poses a substantial challenge for *identifying* specific SETs in need of intervention, as it is unclear how scores might be synthesized to identify SETs at higher or lower risk of poor outcomes. Overall, for some applications of RESPECT, a variable-centered approach (i.e., focusing on scales and subscales)

is beneficial, yet such an approach also has limitations.

A person-centered approach may permit a more parsimonious representation of SETs' working conditions using RESPECT scales and subscales as indicators. A person-centered approach relies on LPA to identify qualitatively different subgroups (i.e., profiles) of SETs who share unique patterns within a population (Spurk et al., 2020). These subgroups can then be compared, providing insight into differential need for intervention, as well as differential intervention effectiveness. Though prior U.S.-based studies have not used LPA to study SETs' working conditions, prior scholarship has examined unique working condition profiles or classes with general educators and SETs outside the U.S. For example, Murangi et al. (2022) examined the job demands-resources (i.e., working conditions) profiles of 200 SETs in Namibia. They found four profiles: resourceful job, demanding job, poor job, and rich job. The resourceful job profile was characterized by low job demands (i.e., responsibilities) and moderate to high resources, while the demanding job profile was made up of moderate demands and low resources. SETs in the poor job profile experienced high demands and low resources, while those in the rich job profile had moderate demands and high resources. The resourceful job and rich job profiles were associated with more positive outcomes, such as lower intent to leave (rich job profile only), while the poor job profile was negatively associated with developing new knowledge and skills. Although such findings are helpful, SET working conditions in the U.S. may be distinct.

In the U.S., Miller et al. analyzed a survey of over 64,000 teachers who completed the Virginia School Survey of Climate and Working Conditions (Miller et al., 2025). Using LPA, they found four unique classes of schools: Supportive (61%), Unsupportive (7%), Unstructured (22%), and Structured (11%), based on eight working conditions subconstructs. These classes

predicted school-level aggregate teacher satisfaction and career intentions, and schools in the Unstructured (e.g., high instructional agency, low rigorous instruction and leadership) and Unsupportive classes (e.g., negative on all working conditions) had higher turnover rates than schools in the Supportive class. These findings provide valuable information about schools in greatest need of intervention. Yet, because analysis was at the school level, they may have missed key aspects of SETs' experiences. SETs often experience different working conditions than their general education colleagues, due to their unique roles in schools (Mathews et al., 2026), and are in particular need of intervention, given higher attrition rates (e.g., Gilmour et al., 2026). In sum, while researchers have used LPA to identify subgroups of SETs or schools in need of working condition intervention, none have focused on the unique needs of SETs in the U.S.

Purpose and Research Questions

By conducting a secondary analysis of the extant RESPECT data, we aim to explore whether unique SET working conditions profiles (i.e., qualitatively different subgroups) exist, which could then be used to identify SETs in greater or lesser need of support. To explore the utility of these profiles, we examine the extent to which profiles are associated with SETs' emotional exhaustion (a component of burnout) and intent to leave. Further, to ensure potential differential utility of profiles for salient groups of SETs, we also examine whether school and SET level characteristics moderate the association between profile membership and expected outcomes. To do this, we conducted LPA with a nationally representative sample of U.S. SETs, posing the following research questions:

1. Do U.S. SETs demonstrate unique working condition profiles based on RESPECT subscales and scales (i.e., responsibilities and social, logistical, and informational resources)?
2. Is there a difference in emotional exhaustion and intent to leave among SET working

conditions profiles in the U.S.?

3. To what extent do school level characteristics (national region [e.g., south], local region [e.g., rural], school level [e.g., elementary], school SES [Title 1], school student race/ethnicity [e.g., % students of color]) and teacher level characteristics (gender, race/ethnicity [e.g., identify as person of color], service delivery model [e.g., self-contained], behavioral IEPs) moderate relationships between working condition profiles and outcomes (emotional exhaustion, intent to leave) for SETs in the U.S.?

Method

Procedures and Sample

We conducted a secondary analysis of RESPECT, administered to a nationally representative sample in partnership with RAND's American Educator Panels in Fall, 2024. RAND administered RESPECT to members of their panel who indicated they taught special education or were certified in special education. RAND used multiple contacts and an incentive ($30 gift card) to prompt responses. The survey administration ultimately yielded 846 eligible participants (response rate: 41.5%), including at least 108 in each critical group, providing power to evaluate fairness. Critical groups, which served as our moderators, included SETs who (1) serve > or <50% students with behavior support needs; (2) teach in elementary, middle, or high schools; (3) teach in Title 1 or non-Title 1 schools; (4) work in coteaching/inclusion, resource, or self-contained settings; (5) work in urban, suburban, or town/rural schools; (6) work in different geographic regions; (6) identify as people of color or White; and (7) identify as male or female.

By estimating the probability of selection for each teacher in the sample, RAND developed weights to ensure sample statistics produced from the data were representative of U.S. K-12 public school SETs. RAND developed weights with the following variables: school level

(elementary, middle, high), school size (small, large), school locale (suburban, town/rural urban), school % minority (below or above/at 50%), school neighborhood poverty (three categories from the Department of Education), SET gender (male, female), SET race (Black, Hispanic, other, White), and SET experience (up to 9 years, 10 or more years). We applied the weights during all analyses to ensure that results could be generalized to the U.S.

Measurement

Working Conditions

SET working conditions were measured via RESPECT. Table S1 provides specifications for the RESPECT tool, as it was administered to the U.S. national sample in Fall of 2024. The 132-item tool measures four higher-order SET working condition constructs: logistical resources, social resources, informational resources, and responsibilities. Within each of the higher-order constructs are multiple subconstructs (see Table S1). Respondents rated item agreement on a 5-point Likert scale (1=*strongly disagree* to 5=*strongly agree*) on all subconstructs except for Autonomy, which had a 5-point Likert scale to indicate amount of control (1=*no control* to 5=*total control*). Higher scores on the first three constructs represent more access to resources. Higher scores on the responsibilities construct represent more SET responsibilities.

RESPECT was developed using an argument-based validity framework (Kane, 2013). Huggins-Manley et al. (2026) established four claims for score inference from RESPECT (see Huggins-Manley et al., 2026, for in depth reporting of all validity evidence). For each claim, they gathered multiple types of validity evidence. Claim 1 states that test scores reflect four constructs of SETs' working conditions. Multiple sources of evidence supported this claim, including two literature reviews (Bettini et al., 2026; Stark et al., 2023), two focus groups (i.e., five national experts, five SETs from different settings), a survey on content alignment to construct definitions

with experts, a checklist review of all items focused on item writing quality as specified in Crocker and Algina (1986), cognitive interviews with 19 SETs, and psychometric analyses (i.e., factor analysis; Rasch partial credit model analysis). Claim 2 states that test scores are reliable. Results supported this claim for all reflexive subscales using Cronbach's alpha (range from α = .61 to α = .93) and Rasch marginal reliability (range from $\hat{\rho}$ = .62 to $\hat{\rho}$ = .92). Claim 3 states that test scores can be used to conduct research exploring SETs' working conditions in relation to other relevant variables. Huggins-Manley et al. (2026) supported this claim by correlating SET scores to two external variables, emotional exhaustion and intent to leave, and reported that, as hypothesized in the literature, all resource scores correlated negatively with the two variables and all responsibility scores correlated positively with the two variables. Claim 4 states that RESPECT scores have content and internal psychometric properties that are invariant across critical groups of SETs (which served as our moderator variables; listed above). RESPECT developers supported this claim through a focus group with five national experts who reviewed content while considering each critical group, cognitive interviews with 19 SETs from different critical groups, a focus group with five SETs from different critical groups, a sampling plan that stratified based on critical groups, and a logistic regression test of differential item functioning (difR package- Magis et al., 2010) that demonstrated negligible differences between critical groups.

Emotional Exhaustion

Emotional exhaustion is defined by a chronic sense of being emotionally depleted at work (Maslach & Jackson, 1981). It is the first burnout component to emerge, often signalling that one is on a developmental trajectory towards other burnout components (Brunsting et al., 2022; Brunsting et al., 2025). Emotional exhaustion was assessed with a widely used four-item scale,

which has shown strong psychometric properties with SETs (e.g., Bettini, Cumming et al., 2020). SETs used a five-point scale to rate each item as *strongly disagree* (1), *disagree* (2), *neither agree nor disagree* (3), *agree* (4), or *strongly agree* (5). Example items include *I feel emotionally drained from my work* and *I feel used up at the end of the workday.* Higher scores indicate greater emotional exhaustion. In our sample, Cronbach's alpha for this scale was 0.92.

Intent to Leave

Intent to leave refers to SETs' general intentions to leave or remain in their job, including (a) leaving their position to serve a different student population, (b) leaving their school, and (c) leaving the profession. A three-item scale widely used in prior research (e.g., Bettini, Cumming et al., 2020; Brunsting et al., 2022) was used to assess SETs' intent to leave (e.g., *I think about transferring to another school*) using a five-point scale ranging from *strongly disagree* to *strongly agree.* Higher scores indicate greater likelihood to plan to leave. Individual items are predictive of SETs' attrition three years later (Brunsting et al., 2025). In our sample, Cronbach's alpha for this scale was 0.72.

Analysis

Latent Profile Analysis

We began with the LPA and used the RESPECT subconstructs as working condition profile indicators (RQ1). Then, we introduced SET outcomes (i.e., emotional exhaustion and intent to stay) to the retained LPA model as auxiliary variables (RQ2). The intact analysis was managed through the 3-step Bolck-Croon-Hagenaars method (BCH; Bolck et al., 2004), which is recommended for continuous auxiliary outcomes (Asparouhov & Muthén, 2021). The first step is class enumeration, in which a series of unconditional LPA models are fitted to the data, with the goal of retaining a model that yields empirically adequate and theoretically interpretable latent

profiles (i.e., SET working condition profiles). Following Nylund-Gibson and Choi (2018), we began with a baseline LPA model (one latent profile), then successively fit models with one extra latent profile until the model did not present substantial improvement in classification. To assess model fit and classification quality, we reviewed the relative fit statistics (Akaike Information Criterion [AIC], Akaike, 1987; Bayesian Information Criterion [BIC], Schwarz, 1978; sample-size adjusted BIC [ABIC], Sclove, 1987), and the entropy value. We also requested the Vuong-Lo-Mendell-Rubin (VLMR) and the Lo-Mendell-Rubin (LMR) likelihood ratio test (LRT) in Mplus. The VLMR-LRT and LMR-LRT compare an LPA model with a nested model that has one fewer latent profile. If the result shows statistical significance, it suggests that the model with more latent profiles fits better. We also created an elbow plot of relative fit statistics to facilitate the selection of the final model. As suggested (Nylund-Gibson & Choi, 2018), an elbow plot provides visual clues to determine the appropriate range of profiles. In addition to the quantitative measures, we also considered the interpretability of working condition profiles to decide the final LPA model to retain. Profile memberships from the final model were saved for the multiple linear regression analysis to answer RQ3.

In the second step of the BCH approach, the goal is to calculate classification errors, and this is automatically produced in Mplus through SAVE = BCHWEIGHTS. Eventually, in the third step, auxiliary variables (i.e., emotional exhaustion and intent to stay) are included along with the incorporation of BCH weights from the previous step.

We conducted LPA using Mplus with the maximum likelihood estimation with robust standard errors (MLR). R (R Core Team, 2026) and MplusAutomation (Hallquist & Wiley, 2018) were used to manage the analysis and results (deidentified data and codes are available upon request).

Multiple Linear Regression

To answer RQ3, we conducted multiple linear regression analyses for emotional exhaustion and intent to stay, specifying SET and school level characteristics as moderators. For each outcome, we defined two separate sets of regression models, with one for SET level characteristics and the other for school level characteristics. In other words, the regression model consisted of SET working condition profiles (*Profile 1—Highest Responsibilities, Lowest Resources* as the reference), one SET or school characteristic, and the interaction of both. There were three categorical and one continuous predictors signifying SET characteristics, including the service delivery model (reference group: *general education classroom*; reference groups are in parentheses hereinafter), gender (*man*), person of color (*no*), and the percentage of students with behavioral IEP goals. School characteristics included five categorical predictors: urbanicity (*town/rural*), school ethnic composition (*majority White*), Title 1 status (*non-Title 1*), school region (*Midwest*), and school level (*elementary*). Note that, regarding gender, there were also 2, 1, and 9 participants who responded *non-binary*, *prefer to self-describe*, and *prefer not to say*, respectively. We treated these as missing because such a small group size may result in misleading results, which in turn may compromise the conclusions made about these groups; we acknowledge the limitations of this approach, and hope to understand the experiences of SETs with marginalized gender identities in future research. We used R to conduct the regression analysis. As a reminder, to account for the complex sampling design and to generalize to the U.S., we used normalized sampling weights in all inferential analyses, including the LPA.

Results

Working Condition Profiles

Profile Enumeration

We used an iterative process to determine whether empirically and theoretically supported latent profiles emerged (see Table 1 for model fit statistics from the LPA). Examining relative fit statistics (i.e., AIC, BIC, ABIC; smaller values suggest better fit), we found a decreasing trend as the number of latent profiles increased. The most rapid decline occurred when comparing a 2-profile model and the baseline model ($\Delta AIC = 5127.48$, $\Delta BIC = 4966.31$, $\Delta ABIC = 5074.28$). Increasing the number of latent profiles from two to three ($\Delta AIC = 1501.79$, $\Delta BIC = 1340.61$, $\Delta ABIC = 1448.58$), from three to four ($\Delta AIC = 705.36$, $\Delta BIC = 544.18$, $\Delta ABIC = 652.15$), and from four to five ($\Delta AIC = 477.26$, $\Delta BIC = 316.09$, $\Delta ABIC = 424.07$), the amount of change in relative fit was considerable. For LPA models with six or more latent profiles, the decrease in relative fit appeared subtle. A similar pattern is also revealed in Figure S1.

For the significance test of model comparisons (i.e., VLMR and LMR), also shown in Table 1, no comparisons showed statistically significant results, suggesting that introducing additional latent profiles to the LPA models did not lead to better fit. The entropy values were also all above .80, suggesting adequate classification quality (Weller et al., 2020). Accordingly, the number of latent profiles between two and five appeared reasonable. Although the VLMR and LMR results were not statistically significant, it is not uncommon for model fit statistics to not show congruent support for an LPA model (Nylund-Gibson & Choi, 2018). Therefore, besides reviewing model fit indices, the theoretical meaning and interpretability of latent profiles should be considered when determining the final model.

We first discussed the theoretical interpretability of the models that emerged. All five models were conceptually aligned with one another with similar patterns across constructs. For instance, in each of the five models, profiles consistently ranged in their relative support from most supportive (lowest responsibilities, highest resources) to least supportive (highest

responsibilities, lowest resources). Thus, we focused on which model would be most useful for researchers and practitioners. A five-profile solution may allow scholars to differentiate among SETs with greater degrees of nuance, yet the three middle profiles within the five-profile solution were too similar to offer unique insights. Conversely, a three-profile solution provided too little nuance. Thus, we decided to proceed with the 4-profile model, which differentiates among SETs with some nuance, while retaining meaningful differentiation among profiles.

Profile Labeling

Model estimated means for latent profile indicators are summarized in Table S2. We focused our profile labeling on relative differences between SET profiles with respect to their resources and responsibilities. *Profile 1* consisted of 7% of the teachers who showed the highest means on responsibility-related indicators and lowest means on indicators related to access to resources (logistical, social, and informational). For *Profiles 2* to *4*, the means on responsibility indicators decreased and the resource indicators increased gradually across profiles. We, therefore, labeled the four working condition profiles as *Highest Responsibilities, Lowest Resources* (*Profile 1*; 7% of SETs in national sample), *Higher Responsibilities, Lower Resources* (*Profile 2*; 31%), *Lower Responsibilities, Higher Resources* (*Profile 3*; 45%), and *Lowest Responsibilities, Highest Resources* (*Profile 4*; 17%). See Figure 1 for an illustration of working condition profiles and Table 2 for demographics of each working condition profile.

Difference Between Profiles in Emotional Exhaustion and Intent to Leave Outcomes

We found statistically significant differences for all pairs of working condition profiles. For emotional exhaustion, SETs in *Profile 1* showed the highest mean score ($M = 4.64$), followed by *Profile 2* ($M = 4.30$), *Profile 3* ($M = 3.67$), and *Profile 4* ($M = 2.81$). When interpreting results, we round mean responses to the nearest anchor. The differences in emotional

exhaustion scores suggest that, on average, as responsibilities decreased and access to resources increased, SETs reported lower rates of emotional exhaustion. For instance, SETs who experienced the highest responsibilities and the lowest access to resources (*Profile 1*) reported experiencing the highest levels of emotional exhaustion (*agree* to *strongly agree*), compared to peers in other working condition profiles. Yet SETs in *Profile 4*, who had the lowest responsibilities and highest resources, did not report an absence of emotional exhaustion; rather, they responded *neither agree nor disagree* to emotional exhaustion items. We observed a similar pattern for intent to leave ($M_{P1} = 3.86$, $M_{P2} = 3.20$, $M_{P3} = 2.58$, $M_{P4} = 1.93$), such that SETs in profiles characterised by incrementally more responsibilities and less access to resources increasingly agreed that they intended to leave (see *Profiles 1* and *2).* Yet, no profile was associated with *strongly disagree*, meaning even SETs in *Profile 4* on average responded *disagree (Profile 4)* to items measuring intent to leave. See Table 3 for exact results from pairwise comparisons and corresponding effect sizes.

SET Level Characteristics as Moderators

Among SET-level characteristics (i.e., gender, person of color, service delivery model, and percentage of behavioral IEP goals; Tables S3 and S5), we found statistically significant effects for the interaction between *Profile 3* and gender ($b = 0.64$, $p < .05$) in predicting emotional exhaustion, indicating SETs in *Profile 1* displayed a similar level of emotional exhaustion (i.e., women showed a slightly lower average score, but not statistically significantly lower, than men, [$b = -0.14$, $p > .05$]), but in *Profile 3,* women reported statistically significantly more emotional exhaustion than men in the same profile. We also found that differences in intent to leave between *Profiles 1* and *4* depended on whether SETs self-identified as a person of color (Yes/No; $b = 0.84$, $p < .05$). SETs in *Profile 1* had a similar level of intent to leave regardless of

whether they identified as a person of color, but SETs who identified as a person of color and were in *Profile 4* reported higher intent to leave than peers who did not identify as a person of color in the same profile. Figure 2 presents visualizations of these interactions.

We found no statistically significant moderation effect for service delivery model, indicating that the relationship between profile membership and outcomes (intent to leave, emotional exhaustion) did not vary depending on the service delivery model in which SETs taught. Although the interaction between *Profile 2* and percentage of behavioral IEP goals ($b = -0.01, p < .05$), as well as between *Profile 3* and percentage of behavioral IEP goals ($b = -0.01, p < .05$) were statistically significant, the coefficients were rather small, and their significance may be an artifact of an extremely small standard error (see Table S5 for details), so we do not interpret these results.

School Level Characteristics as Moderators

We found a statistically significant interaction effect between several school-level characteristics and profile membership in predicting emotional exhaustion and intent to leave (Tables S4 and S6). *Profile 2* interacted with school region (West; $b = 0.95, p < .05$) in predicting emotional exhaustion, indicating SETs in the Western region of the U.S. who were in *Profile 2* reported higher emotional exhaustion than peers in the Midwest in the same profile (Figure 3-A). We also found a statistically significant interaction effect between *Profile 3* and school level (middle school: $b = -0.68, p < .05$; high school: $b = -0.58, p < .05$) in predicting emotional exhaustion. SETs who taught in middle or high school and were in *Profile 3* reported lower emotional exhaustion than SETs in elementary schools in the same profile (Figure 3-B). *Profile 2* also statistically significantly interacted with school level (high school; $b = -0.60, p < .05$) in predicting intent to leave, indicating SETs who taught in high school and

were in *Profile 2* reported lower intent to leave than elementary SETs in the same profile (Figure 3-C). We found no statistically significant moderation effects involving urbanicity, school ethnic composition, and Title 1 status.

Discussion

Working conditions are implicated in the substantial challenges facing the SET workforce (Bettini et al., 2025; Brunsting et al., 2026; Cumming et al., 2022). To address the need for timely identification of SETs in greatest need of support, we conducted a secondary analysis of RESPECT data with a nationally representative sample of U.S. SETs to identify whether SETs experienced unique working conditions profiles and the extent to which profile membership related to salient SET outcomes. Results showed (a) four distinct latent working condition profiles emerged, with RESPECT constructs and subconstructs serving as indicators; (b) working condition profiles reflecting more responsibilities and weaker resources were associated with higher emotional exhaustion and intent to leave; and (c) few SET and school characteristics moderated relationships between profile membership and outcomes. These findings not only add to the growing body of evidence regarding SETs' working conditions, but are the first to use a person-centered approach to shed light on SET working condition profiles using RESPECT.

We found scores on RESPECT served as significant indicators of four distinct profiles. SETs demonstrated similar patterns of responsibilities and resources in each profile but at ordinally different levels. SETs who reported having the highest responsibilities and lowest access to social, logistical, and informational resources formed *Profile 1*, while those with the fewest responsibilities and strongest resources formed *Profile 4*; both *Profile 2* and *3* demonstrated similar patterns but at increasingly or decreasingly levels. In other words, as SETs responsibilities increased, their access to social, logical, and informational resources decreased

accordingly. Most of our sample (62%) fell in *Profiles 3* and *4*, while 38% were in *Profiles 1* and *2*.

Our findings align with and diverge from prior LPA teacher working condition studies. Unlike prior studies using LPA to study teacher working conditions (Miller et al., 2025; Murangi et al., 2022), we identified profiles that were ordinally related to one another, reflecting a pattern – from highest responsibilities, lowest resources to lowest responsibilities, highest resources – potentially due to differences in our measure (which had many more subscales and more extensive validity evidence) or the population (i.e., U.S. SETs, vs. general educators [Miller et al., 2025] or Namibian SETs [Murangi et al., 2022]). Yet, like these prior studies, we also found that working conditions profiles were characterized by distinct responsibilities and access to resources.

SET working condition profiles were uniquely associated with SETs' outcomes, in expected directions, such that profiles with more responsibilities and less access to resources were linked to more emotional exhaustion and intent to leave. In contrast, profiles with fewer responsibilities and stronger resources were associated with progressively better outcomes in each of these areas. Our findings align with COR theory (Hobfoll, 2018), Bettini et al.'s (2026) conception of SETs' working conditions, and a growing body of SET working condition research using variable-centered approaches (e.g., Brunsting et al., 2022). As such, a person-centered approach, not only aligns with previous SET theory and research, but provides a more parsimonious and nuanced understanding of SET working conditions.

Importantly, in none of the profiles did SETs report optimal mean emotional exhaustion and intent to leave. Even in *Profile 4* (i.e., SETs with the least responsibilities, most resources, lowest emotional exhaustion, and lowest intent to leave), SETs on average selected *neither agree*

nor disagree for emotional exhaustion items – not *disagree* or *strongly disagree*, as would be optimal. Likewise, even in *Profile 4*, SETs on average selected *disagree* for items reflecting their intent to leave – not *strongly disagree*, as would be optimal. Thus, while profile membership meaningfully predicted SETs' emotional exhaustion and intent to leave, mean scores indicate that even the 17% of SETs experiencing the most positive working conditions may not be experiencing working conditions that fully eliminate emotional exhaustion and foster commitment. Alternatively, this may reflect other factors contributing to emotional exhaustion and intent to leave, not measured by RESPECT.

We also found four SET (i.e., gender, person of color) and school characteristics (i.e., West, middle/high school) moderated relationships between profile membership and outcomes. Our findings do not provide insights into why this is the case, but there are possible considerations. First, it may be that women in *Profile 3* are subjected to greater expectations to engage in more intensive emotional interactions with colleagues and students (e.g., Stark & Bettini, 2021) than men, yielding more emotional exhaustion despite similar working conditions. For SETs of color in *Profile 4,* it is possible that schools in this profile may have been predominantly White (Bettini, Nguyen et al., 2022; Fall & Billingsley, 2011; Green et al., 2021; Mason-Williams et al., 2022), which could lead to higher intent to leave among SETs of color, who may be motivated to teach in schools serving more students of color (e.g., Cormier, 2020). Yet future research is needed to explain findings related to SET and school level differential effects.

Limitations

This investigation has many strengths, including a large nationally representative sample of U.S. SETs, the use of a comprehensive SET working conditions measure (i.e., RESPECT), and data on emotional exhaustion and intent to leave. However, there are several key limitations.

First, LPA is an exploratory approach, and readers should use caution when interpreting results and associated implications. We analyzed data from a single time point, which precluded examination of trajectories over time. This is especially salient as SETs may experience distinct working conditions throughout the year. Though emotional exhaustion and intent to leave are key SET outcomes, we did not examine other salient SET outcomes (e.g., instructional quality, attrition), limiting insight into the importance of latent profiles for these outcomes. The response rate of 41.5% is also below the at least 50% guideline to reduce risk of non-response bias (Babbie, 1973). To address this limitation, we used normalized sampling weights in all analyses.

The labels we applied to the profiles are both subjective (i.e., based on our judgment, given profile characteristics) and relative (i.e., based on their relative relationship with one another). Thus, profiles do not indicate optimal or suboptimal working conditions. It is common to focus on relative profiles in LPA and in exploratory quantitative work generally, but future research could provide stronger implications by evaluating at what threshold of RESPECT scores SETs do not experience burnout, remain committed, and provide high-quality instruction.

Implications for Research

There are several areas for future research. First, RESPECT latent profiles can support stronger future descriptive research on variability in SETs' working conditions and consequences of that variability for SET and student outcomes. For example, prior studies have documented inequities in working conditions based on SET and student sociocultural identity markers (e.g., Mason-Williams et al., 2022), but these studies have been limited to examining only a small subset of working conditions and identity markers. With working conditions profiles, scholars could potentially explore how working conditions vary based on a full array of student and SET sociocultural identity markers, as well as interactions among those identity markers.

These profiles can be used in future intervention research in multiple ways. Researchers can use LPA to determine whether an intervention has differential effects based on SET working condition profile membership. Scholars can also use these profiles as an outcome. For example, do SETs who participate in a working conditions self-advocacy intervention move from less to more supportive profiles? RESPECT profiles can also be used to identify SETs and schools in greater need of intervention, and to determine whether to intensify an intervention. For example, does the nature, intensity, or dosage of a working conditions intervention need to vary depending on whether a SET is in a particular profile, and if so, how?

Further research is also needed to explore implications of profile membership for SETs' work and work outcomes. For example, given prior research showing relationships between working conditions and instructional quality (Lillis et al., 2026), does the quality of SETs' instruction vary with profile membership? Though we examined associations with intent to leave, intent is not perfectly predictive of actual turnover (Nguyen et al., 2025); does profile membership predict the likelihood that SETs actually turn over? Because working conditions often serve as barriers to implementation of interventions (e.g., Patton Terry & Tipton, 2026), latent profiles could also be useful for exploring factors that facilitate/constrain implementation and maintenance of interventions. For example, how does profile membership predict adoption, fidelity, and maintenance of an intervention? Do SETs in the working conditions profiles with more responsibilities, fewer resources require more supports to learn, enact, and maintain newly learned practices?

Implications for Practice

Working condition profiles can be especially useful for identifying SETs in the U.S. at greatest risk of negative outcomes, and therefore, in greatest need of intervention. We

recommend districts engage in initial screening and progress monitoring of their SETs using RESPECT. For example, although SETs in *Profile 4* may require the least support, we encourage that RESPECT data be collected annually to ensure they continue to experience supportive working conditions and do not shift into a profile with more responsibilities and fewer resources. Similarly, given that SETs in *Profile 1* and *Profile 2 had* higher rates of emotional exhaustion and intent to leave than those in *Profile 3* and *Profile 4,* SETs in these profiles may benefit from supports aimed at enhancing their working conditions. For example, SETs in these profiles may need the number of assigned responsibilities (e.g., bus duty, lunch duty) reduced and/or have enhanced access to resources to support their work (logistical resources [e.g., provided curricular resources], social resources [e.g., administrative support], informational resources [e.g., targeted professional learning opportunities]). Additionally, SET working condition intervention research, though limited, may offer some valuable considerations when supporting SETs. For instance, in their study, Brunsting et al. (2026) found that some schools that identified that their SETs needed additional collaborative planning time, determined that adjusting their weekly schedule to make this possible was feasible, and implemented this solution as a means to enhance their SETs' working conditions. Thus, we encourage researchers and leaders to work closely with SETs to identify and implement viable solutions, with post-test data collected to determine whether SET working condition profiles improved based on solution implementation.

In addition to working condition profiles, certain SET characteristics within specific profiles may indicate a need for differential intervention. For example, membership in *Profile 3* profile was associated with more emotional exhaustion for women than men, indicating women in this profile may benefit from more intensive supports than men in the same profile. Likewise, SETs of color in *Profile 4* reported higher intent to leave than White SETs in the same profile,

indicating that, even when they are in the profile with the least responsibilities and most resources, SETs of color may still benefit from supports to prevent attrition. Therefore, we encourage researchers and leaders to work closely with SETs to determine if additional supports are needed. Lastly, we encourage school districts to use the working condition profiles to identify schools with higher proportions of SETs at risk of poor outcomes and collectively target those schools to provide needed resources.

Conclusion

SETs' working conditions are a critical area for identification and intervention efforts. Our study, using a person-centered approach, is the first to shed light on SET working condition profiles using the comprehensive working condition measure (RESPECT). Our findings provide a parsimonious and nuanced understanding of the working conditions SETs in the U.S. experience. These profiles predict expected outcomes of working conditions (i.e., emotional exhaustion, intent to leave), with few significant moderators of the relationships between profile membership and outcomes. We encourage future scholars and leaders to consider the importance of these profiles to better understand predictors and consequences of SETs' working conditions, identify SETs and schools in greatest need of intervention, and to track effects of interventions.

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Table 1

Summary of Model Fit of Latent Profile Analysis

						VLMR		LMR		
Profiles	LL	Parameters	AIC	BIC	ABIC	LRT	*p*	Adjusted LRT	*p*	Entropy
1	-33321.28	66	66774.55	67087.43	66877.83					
2	-30723.53	100	61647.07	62121.12	61803.55	5195.49	0.75	5172.92	0.75	0.93
3	-29938.64	134	60145.28	60780.51	60354.97	1569.79	0.76	1562.97	0.76	0.91
4	-29551.96	168	59439.92	60236.33	59702.82	773.36	0.76	770.00	0.76	0.91
5	-29279.33	202	58962.66	59920.24	59278.75	545.27	0.83	542.90	0.83	0.88
6	-29246.54	236	58965.08	60083.84	59334.38	548.68	0.58	547.25	0.58	0.90
7	-28930.66	270	58401.32	59681.26	58823.82	326.75	0.81	325.33	0.81	0.88
8	-28786.83	304	58181.67	59622.79	58657.38	286.92	0.76	285.67	0.76	0.89

Note. LL = log-likelihood, AIC = Akaike information criterion, BIC = Bayesian information criterion, ABIC = adjusted Bayesian information criterion, VLMR = Vuong-Lo-Mendell-Rubin likelihood ratio test, LMR = adjusted Lo-Mendell-Rubin (LMR) likelihood ratio test.

Table 2

Teacher and School Characteristics and Outcomes by Working Condition Profiles

	Highest responsibilities Lowest resources	Higher responsibilities Lower resources	Lower responsibilities Higher resources	Lowest responsibilities Highest resources
n	57	263	385	141
Frequency				
Gender				
Man	11	34	60	20
Woman	43	227	318	121
Nonbinary	1	0	1	0
Other	2	2	6	0
Person of Color				
No/Yes	45/11	221/36	322/56	112/28
Service Delivery Model				
Gen Ed	25	90	153	53
Resource Room	14	89	107	41
Self-Contained	17	78	120	47
Urbanicity				
Town/Rural	8	93	117	54
Suburban	22	99	167	54
Urban	27	67	98	32
School Ethnic Composition				
Majority White	20	132	177	67
Majority Color	37	127	205	73
Title 1 Status				
Non-Title 1/Title 1	20/36	91/166	122/256	48/92
School Region				
Midwest	10	35	48	16
Northeast	13	70	98	23
South	27	123	210	91
West	7	35	29	11
School Level				
Elementary	23	105	170	67
Middle	15	73	103	27
High	18	77	101	42
Mean (SD)				
Emotional Exhaustion	4.69 (0.53)	4.24 (0.78)	3.7 (0.85)	2.84 (0.96)
Intent to Leave	3.83 (1.06)	3.15 (0.90)	2.59 (0.89)	1.97 (0.86)
Pct Behavioral IEP Goals	39.6 (32.40)	33.1 (33.40)	30.4 (32.50)	26.4 (30.90)

Note. The *Other* gender category combines *self-describe* and *prefer not to say.*

Table 3

Comparisons of Emotional Exhaustion and Intent to Leave between Working Condition Profiles

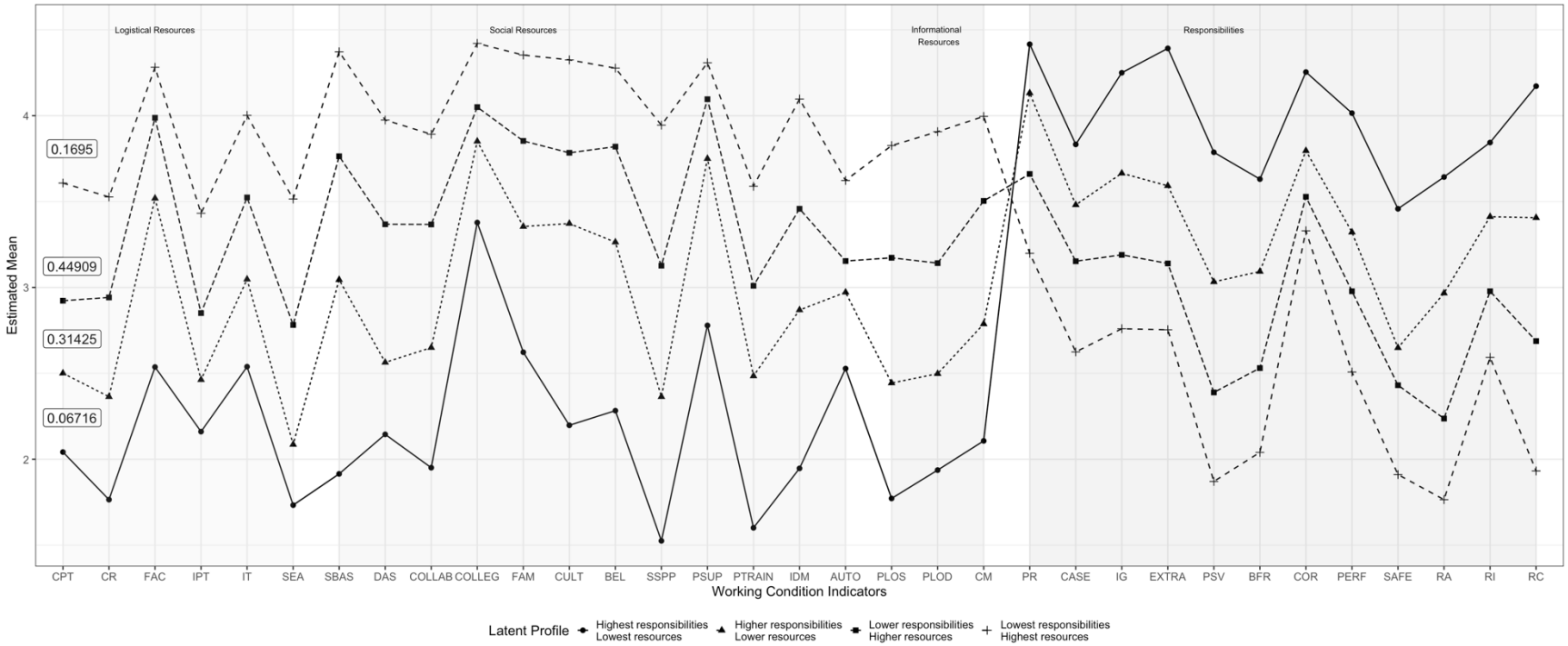
Outcome	Mean	Variance	Profile Comparisons					
			P2		P3		P4	
			Mean difference	Effect size	Mean difference	Effect size	Mean difference	Effect size
Emotional Exhaustion								
Highest responsibilities, lowest resources (P1)	4.64	0.38	0.34***	0.46	0.97***	1.20	1.83***	2.22
Higher responsibilities, lower resources (P2)	4.30	0.61			0.63***	0.77	1.49***	1.81
Lower responsibilities, higher resources (P3)	3.67	0.69					0.86***	1.01
Lowest responsibilities, highest resources (P4)	2.81	0.80						
Intent to leave								
Highest responsibilities, lowest resources (P1)	3.86	1.11	0.65***	0.73	1.28***	1.44	1.93***	2.12
Higher responsibilities, lower resources (P2)	3.20	0.73			0.62***	0.73	1.27***	1.49
Lower responsibilities, higher resources (P3)	2.58	0.74					0.65***	0.76
Lowest responsibilities, highest resources (P4)	1.93	0.72						

Note. *<.05, **<.01, ***<.001.

Cohen's d was calculated as the effect size, $d = \frac{Profile\ mean\ difference}{Pooled\ standard\ deviation}$, where the pooled standard deviation was computed using the variance of the outcome and profile count from the latent profile analysis.

Figure 1

Profile Plot of Working Conditions



Note. Logistical Resources includes CPT = Collaborative Planning Time, CR = Curricular Resources, FAC = Facilities, IPT = Individual Planning Time, IT = Instructional Time, SEA = Special Education Assessment. Social Resources contains SBAS = School-based Administrator Support, DAS = District-based Administrator Support, COLLAB = Collaborative Supports, COLLEG = Collegial Support, FAM = Supports for Family Relationships, CULT = School Culture, BEL = Belonging, SSPP = Supporting Student Positive Behavior, PSUP = Paraeducator Support, PTRAIN = Paraeducator Training, IDM = Inclusion in Decision Making, AUTO =

Autonomy. Informational Resources includes PLOS = Professional Learning Opportunities: School, PLOD = Professional Learning Opportunities: District, CM = Coaching and Mentoring Responsibilities includes PR = Paperwork Responsibilities, CASE = Caseload Size and Complexity, IG = Instructional Grouping, EXTRA = Extra Responsibilities, PSV = Paraeducator Supervision, BFR = Building Family Relationships, COR = Collaborative Responsibilities, PERF = Performance Pressure, SAFE = Safety Responsibilities, RA = Role Ambiguity, RI = Role Instability, RC = Role Conflict.

Figure 2

Visualization of Statistically Significant Interaction Effects (annotated using gray rectangles) Between Teacher Working Condition Profiles and Teacher Characteristics

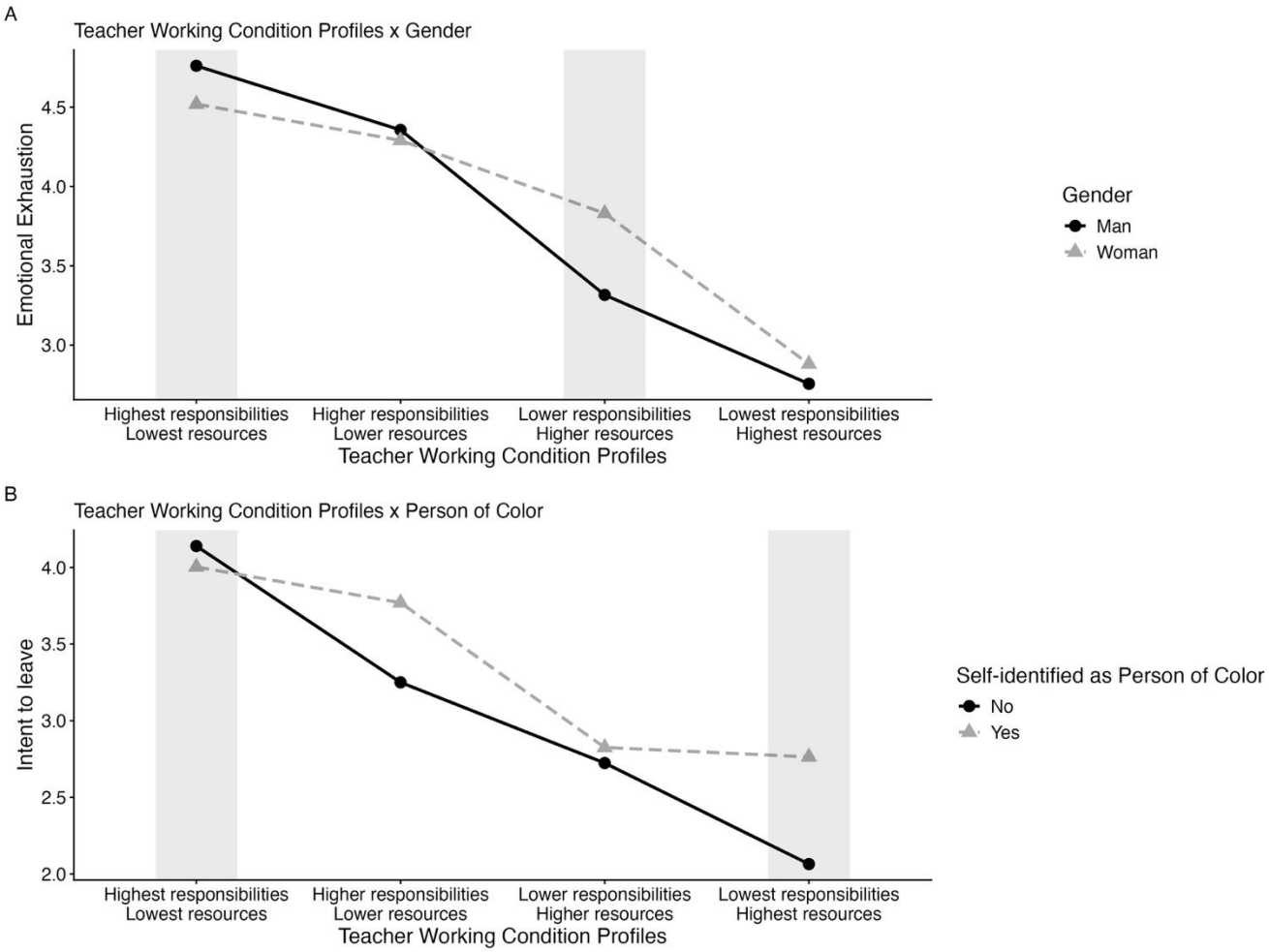
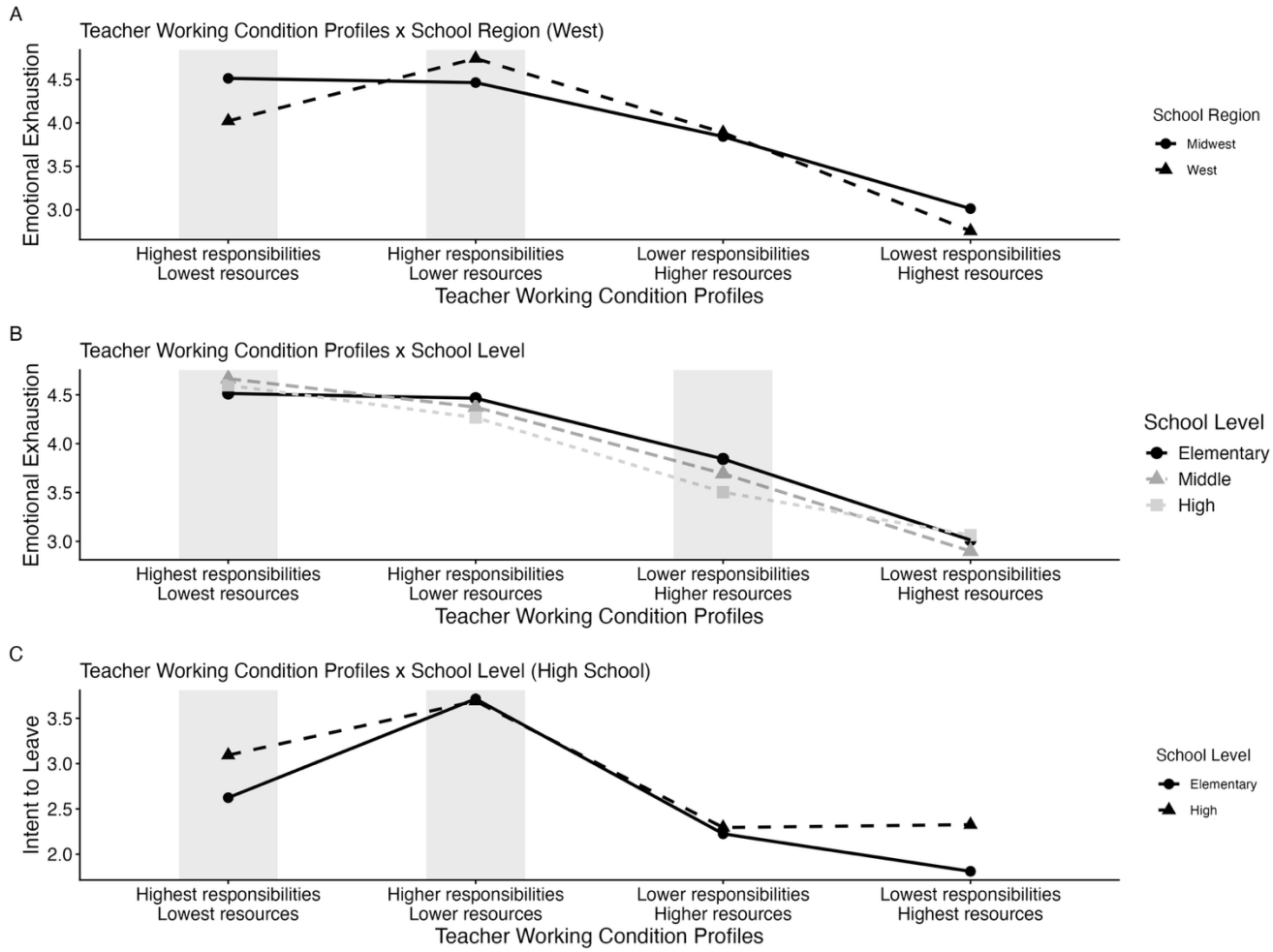


Figure 3

Visualization of Statistically Significant Interaction Effects (annotated using gray rectangles) Between Teacher Working Condition Profiles and School Characteristics



ARTICLE TITLE: Special Education Teachers' Working Condition Profiles: Implications for Emotional Exhaustion and Intent to Leave
Table S1

RESPECT Table of Specifications

Construct		Sub-Constructs	
Name	**Definition**	**Name**	**Definition***
Responsibilities	Special educators' job duties and their experiences of those job duties	Instructional Grouping	The size and heterogeneity (e.g., in terms of ability level, grade level, behavioral needs) of students' learning needs
		Paperwork Responsibilities	The perceived extent of responsibilities for completing special education and other work-related paperwork
		Collaborative Responsibilities	Special educators' responsibilities for supporting and coordinating the work of other educators (e.g., related service providers, general educators) in service of students in schools.
		Extra Responsibilities	The perceived extent of assigned tasks, that are above and beyond meeting teachers' own students' needs (e.g., bus duty, lunch duty)
		Paraeducator Supervision	The perceived extent of responsibilities for overseeing paraeducators
		Building Family Relationships	The perceived extent of responsibilities for collaborating with students' families
		Caseload Size & Complexity	The size and heterogeneity of student learning needs on a teacher's overall IEP caseload
		Performance Pressure	The extent to which teachers feel pressure from others (e.g., principal, colleagues, parents) to teach local and state standards and ensure student performance on standardized assessments
		Safety Responsibilities	The extent of teachers' responsibility for keeping themselves, their students, and their staff safe
		Role Ambiguity	The extent to which the job expectations for a teacher are unclear
		Role Conflict	The extent to which demands on a teacher are incompatible with one another or with the broader goal of serving students
		Role Instability	The extent of instability in the nature of—or schedule for—teachers' daily responsibilities

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Construct		Sub-Constructs	
Name	**Definition**	**Name**	**Definition***
Social Resources	Social supports that help special educators to fulfill their roles	School-Based Administrator Support	School-based administrators' (e.g., principals', assistant principals') support for special educators' academic and behavioral instruction and care for special educators
		District Administrator Support	District administrators' (e.g., special education directors') support for special educators' responsibilities and care for special educators
		Collaborative Supports	The extent to which special educators feel that they have adequate opportunities to communicate and work with other professionals to fulfill responsibilities
		Supports for Family Relationships	The extent to which special educators feel their school supports their efforts to build productive relationships with students' caregivers
		Collegial Support	Special educators have a colleague or colleagues with whom they have positive and collaborative relationships, who support their work
		School Culture	The extent to which the school overall has a positive climate, characterized by a value for students with disabilities and special educators' work
		Belonging	The extent to which special educators feel a sense of belonging in their school based on their individual identity
		Systems of Support for Promoting Positive Student Behavior	The extent to which special educators perceive the school has a systematic, effective process for promoting positive behavior and responding to challenging behavior
		Paraeducator Support	The extent to which special educators feel they can rely on paraeducators who have aligned goals and clear roles/responsibilities
		Paraeducator Training	The extent to which paraeducators are well-trained for their jobs
		Autonomy	How much control the special educator has over planning and instruction

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Construct		Sub-Constructs	
Name	**Definition**	**Name**	**Definition***
		Inclusion in Decision Making	The extent to which special educators are respected and included in school-wide decision making
Logistical Resources	Practical supports that make it possible for special educators to fulfill roles	Individual Planning Time	The adequacy and productivity of scheduled planning time for fulfilling individual responsibilities (e.g., planning instruction, completing paperwork, connecting with families), and the number of hours that the special educator spends on planning each week
		Collaborative Planning Time	The adequacy and productivity of collaborative planning time with other educators, and the number of hours that the special educator spends on collaborative planning each week
		Curricular Resources	The availability and effectiveness of instructional materials/resources that teachers are provided
		Instructional Time	The adequacy of time scheduled with students for providing instruction in all of the assigned content areas and grade levels for which special educators are responsible
		Special Education Assessment	The perceived sufficiency of time to conduct special education assessment and fulfill assessment responsibilities.
		Facilities	The sufficiency of access to professional space, and the cleanliness and safety of the classroom environment
Informational Resources	Resources that provide special educators information about how to do the job	Professional Learning Opportunities: School	How often special educators participate in professional development provided by the school and the quality and relevance of the professional development
		Professional Learning Opportunities: District	How often special educators participate in professional development provided by the district and the quality and relevance of the professional development

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Construct		Sub-Constructs	
Name	**Definition**	**Name**	**Definition***
		Coaching & Mentoring	Frequency and helpfulness of the feedback special educators receive from school personnel in support of their professional growth

Note. *All constructs are defined as perceptions from the perspective of the special educator.

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Table S2

Model Estimated Means on Working Condition Profile Indicators (Profile Prevalence in Parentheses)

Profile Indicators	Working Condition Profiles			
	Highest responsibilities, lowest resources	Higher responsibilities, lower resources	Lower responsibilities, higher resources	lowest responsibilities, highest resources
	(0.07)	(0.31)	(0.45)	(0.17)
Logistical Resources				
Collaborative Planning Time	2.04	2.50	2.92	3.61
Curricular Resources	1.77	2.36	2.94	3.53
Facilities	2.54	3.52	3.99	4.28
Individual Planning Time	2.16	2.46	2.85	3.43
Instructional Time	2.54	3.05	3.52	4.00
Time for Assessment	1.73	2.09	2.78	3.52
Social Resources				
School-based Administrator Support	1.92	3.05	3.76	4.37
District-based Administrator Support	2.15	2.56	3.37	3.98

Collaborative Supports	1.95	2.65	3.37	3.89
Collegial Support	3.38	3.85	4.05	4.42
Supports for Family Relationships	2.62	3.36	3.85	4.35
School Culture	2.20	3.37	3.78	4.33
Belonging	2.28	3.26	3.82	4.28
Supporting Student Positive Behavior	1.53	2.36	3.13	3.95
Paraeducator Support	2.78	3.75	4.10	4.31

Profile indicators	Highest responsibilities, lowest resources	Higher responsibilities, lower resources	Lower responsibilities, higher resources	lowest responsibilities, highest resources
	(0.07)	(0.31)	(0.45)	(0.17)
Paraeducator Training	1.60	2.49	3.01	3.59
Inclusion in Decision Making	1.95	2.87	3.46	4.10
Autonomy	2.53	2.97	3.15	3.62
Informational Resources				
Professional Learning Opportunities: School	1.77	2.44	3.17	3.83

Professional Learning Opportunities: District	1.94	2.50	3.14	3.91
Coaching and Mentoring	2.11	2.79	3.50	4.00
Responsibilities				
Paperwork Responsibilities	4.42	4.13	3.66	3.20
Caseload Size and Complexity	3.83	3.48	3.15	2.63
Instructional Grouping	4.25	3.67	3.19	2.76
Extra Responsibilities	4.39	3.59	3.14	2.75
Paraeducator Supervision	3.79	3.03	2.39	1.87
Building Family Relationships	3.63	3.09	2.53	2.04
Collaborative Responsibilities	4.25	3.80	3.53	3.33
Performance Pressure	4.02	3.32	2.98	2.51
Safety Responsibilities	3.46	2.65	2.43	1.91
Role Ambiguity	3.64	2.97	2.24	1.77
Role Instability	3.84	3.41	2.98	2.59
Role Conflict	4.17	3.41	2.69	1.93

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Table S3

Regression Results for Emotional Exhaustion on Teacher Characteristics

	Gender	Person of Color	Service Delivery Model	Pct Behavioral IEP Goals
Intercept	4.73 (0.21)***	4.58 (0.12)***	4.60 (0.15)***	4.71 (0.18)***
Higher responsibilities, lower resources (P2)	−0.40 (0.24)	−0.33 (0.13)*	−0.28 (0.18)	−0.38 (0.20)
Lower responsibilities, higher resources (P3)	−1.47 (0.23)***	−0.95 (0.13)***	−0.85 (0.17)***	−1.05 (0.19)***
Lowest responsibilities, highest resources (P4)	−2.04 (0.27)***	−1.79 (0.14)***	−1.69 (0.19)***	−1.94 (0.20)***
Gender (Woman)	−0.14 (0.25)			
P2 × Woman	0.10 (0.28)			
P3 × Woman	0.64 (0.27)*			
P4 × Woman	0.33 (0.31)			
Person of Color (Yes)		0.21 (0.30)		
P2 × Yes		−0.05 (0.34)		
P3 × Yes		0.03 (0.32)		

P4 × Yes		0.14 (0.36)		
Service Delivery Model (Resource Room)			−0.14 (0.26)	
Service Delivery Model (Self-contained)			0.25 (0.29)	
P2 × Resource Room			0.16 (0.29)	
P3 × Resource Room			0.11 (0.28)	
P4 × Resource Room			−0.16 (0.31)	
P2 × Self-contained			−0.43 (0.31)	
P3 × Self-contained			−0.49 (0.30)	
P4 × Self-contained			−0.22 (0.33)	
Pct Behavioral IEP Goals (IEP)				−0.00 (0.00)
P2 × IEP				0.00 (0.00)
P3 × IEP				0.00 (0.00)
P4 × IEP				0.01 (0.00)
n	823	831	834	830

R^2	0.316	0.292	0.297	0.287
$Adjusted\ R^2$	0.311	0.286	0.288	0.281

Note. specification of reference group for categorical predictors in the regression analysis: teacher working condition = highest responsibilities, lowest resources (P1); service delivery model = general education classroom; gender = man; self-identified person of color = no; urbanicity = town/rural; school ethnic composition = majority White; Title 1 status = non-Title 1; school region = Midwest; school level = elementary.

$* p < .01. ** p < .01. *** p < .001.$

ARTICLE TITLE: Special Education Teachers' Working Condition Profiles: Implications for Emotional Exhaustion and Intent to Leave

Table S4

Regression Results for Emotional Exhaustion on School Characteristics

	Urbanicity	Ethnic Comp	Title 1	School Region	School Level
Intercept	4.61 (0.36)***	4.70 (0.19)***	4.71 (0.18)***	4.49 (0.26)***	4.43 (0.17)***
Higher responsibilities, lower resources (P2)	−0.28 (0.37)	−0.46 (0.20)*	−0.33 (0.20)	−0.32 (0.30)	−0.10 (0.18)
Lower responsibilities, higher resources (P3)	−0.83 (0.37)*	−1.09 (0.20)***	−1.13 (0.19)***	−0.93 (0.29)**	−0.63 (0.18)***
Lowest responsibilities, highest resources (P4)	−1.69 (0.38)***	−1.74 (0.22)***	−1.81 (0.22)***	−1.57 (0.33)***	−1.55 (0.20)***
Urbanicity (Suburban)	0.21 (0.40)				
Urbanicity (Urban)	−0.16 (0.40)				
P2 × Suburban	−0.21 (0.42)				
P3 × Suburban	−0.38 (0.41)				
P4 × Suburban	−0.28 (0.43)				
P2 × Urban	0.00 (0.42)				
P3 × Urban	0.03 (0.41)				
P4 × Urban	0.02 (0.44)				

School Ethnic Comp (Majority Color)	−0.13 (0.23)				
P2 × Majority Color	0.19 (0.25)				
P3 × Majority Color	0.21 (0.25)				
P4 × Majority Color	−0.06 (0.27)				
Title 1		−0.15 (0.23)			
P2 × Title 1		−0.01 (0.25)			
P3 × Title 1		0.27 (0.25)			
P4 × Title 1		0.08 (0.27)			
School Region (Northeast)			0.35 (0.36)		
School Region (South)			0.31 (0.31)		
School Region (West)			−0.72 (0.40)		

	Urbanicity	Ethnic Comp	Title 1	School Region	School Level
P2 × Northeast				−0.37 (0.40)	
P3 × Northeast				−0.41 (0.39)	
P4 × Northeast				−0.80 (0.45)	
P2 × South				−0.17 (0.35)	
P3 × South				−0.11 (0.33)	

P4 × South				−0.27 (0.38)	
P2 × West				0.95 (0.44)*	
P3 × West				0.76 (0.43)	
P4 × West				0.25 (0.51)	
School Level (Middle)					0.49 (0.30)
School Level (High)					0.23 (0.25)
P2 × Middle					−0.55 (0.32)
P3 × Middle					−0.68 (0.32)*
P4 × Middle					−0.59 (0.35)
P2 × High					−0.37 (0.28)
P3 × High					−0.58 (0.27)*
P4 × High					−0.20 (0.30)
n	829	829	831	835	812
R^2	0.291	0.287	0.288	0.31	0.294
$Adjusted\ R^2$	0.281	0.281	0.282	0.297	0.284

Note. specification of reference group for categorical predictors in the regression analysis: teacher working condition = highest responsibilities, lowest resources (P1); service delivery model = general education classroom; gender = man; self-identified person of color = no; urbanicity = town/rural; school ethnic composition = majority White; Title 1 status = non-Title 1; school region = Midwest; school level = elementary.

ARTICLE TITLE: Special Education Teachers' Working Condition Profiles: Implications for Emotional Exhaustion and Intent to Leave

$* p < .01.$ $** p < .01.$ $*** p < .001.$

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Table S5

Regression Results for Intent to Leave on Teacher Characteristics

	Gender	Person of Color	Service Delivery Model	Pct Behavioral IEP Goals
Intercept	4.16 (0.23)***	3.83 (0.13)***	3.88 (0.16)***	3.45 (0.19)***
Higher responsibilities, lower resources (P2)	−0.97 (0.27)***	−0.73 (0.14)***	−0.57 (0.19)**	−0.26 (0.21)
Lower responsibilities, higher resources (P3)	−1.56 (0.25)***	−1.27 (0.14)***	−1.20 (0.18)***	−0.90 (0.20)***
Lowest responsibilities, highest resources (P4)	−2.04 (0.29)***	−2.00 (0.15)***	−1.81 (0.21)***	−1.56 (0.22)***
Gender (Woman)	−0.52 (0.27)			
P2 × Woman	0.52 (0.31)			
P3 × Woman	0.49 (0.29)			
P4 × Woman	0.32 (0.33)			
Person of Color (Yes)		−0.11 (0.32)		
P2 × Yes		0.65 (0.35)		
P3 × Yes		0.25 (0.34)		

P4 × Yes	0.84 (0.37)*			
Service Delivery Model (Resource Room)		−0.15 (0.28)		
Service Delivery Model (Self-contained)		−0.11 (0.31)		
P2 × Resource Room		−0.03 (0.31)		
P3 × Resource Room		0.00 (0.30)		
P4 × Resource Room		−0.00 (0.34)		
P2 × Self-contained		−0.09 (0.33)		
P3 × Self-contained		−0.07 (0.33)		
P4 × Self-contained		−0.08 (0.35)		
Pct Behavioral IEP Goals (IEP)				0.01 (0.00)*

	Gender	Person of Color	Service Delivery Model	Pct Behavioral IEP Goals
P2 × IEP				−0.01 (0.00)*
P3 × IEP				−0.01 (0.00)*
P4 × IEP				−0.01 (0.00)
n	823	831	834	830

R^2	0.249	0.268	0.252	0.251
$Adjusted\ R^2$	0.243	0.262	0.242	0.245

Note. specification of reference group for categorical predictors in the regression analysis: teacher working condition = highest responsibilities, lowest resources (P1); service delivery model = general education classroom; gender = man; self-identified person of color = no; urbanicity = town/rural; school ethnic composition = majority White; Title 1 status = non-Title 1; school region = Midwest; school level = elementary.

$* p < .01.$ $** p < .01.$ $*** p < .001.$

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Table S6

Regression Results for Intent to Leave on School Characteristics

	Urbanicity	Ethnic Comp	Title 1	School Region	School Level
Intercept	3.80 (0.39)***	3.71 (0.20)***	4.01 (0.19)***	3.63 (0.28)***	3.55 (0.18)***
Higher responsibilities, lower resources (P2)	−0.67 (0.40)	−0.57 (0.21)**	−0.90 (0.21)***	−0.35 (0.32)	−0.36 (0.20)
Lower responsibilities, higher resources (P3)	−1.28 (0.40)**	−1.20 (0.21)***	−1.38 (0.21)***	−1.14 (0.31)***	−0.96 (0.19)***
Lowest responsibilities, highest resources (P4)	−1.82 (0.41)***	−1.69 (0.23)***	−2.07 (0.23)***	−1.70 (0.36)***	−1.77 (0.21)***
Urbanicity (Suburban)	0.10 (0.43)				
Urbanicity (Urban)	−0.05 (0.42)				
P2 × Suburban	0.01 (0.45)				
P3 × Suburban	−0.06 (0.44)				
P4 × Suburban	−0.12 (0.46)				
P2 × Urban	0.09 (0.45)				
P3 × Urban	0.22 (0.44)				
P4 × Urban	0.00 (0.46)				

School Ethnic Comp (Majority Color)		0.17 (0.25)			
P2 × Majority Color		−0.07 (0.27)			
P3 × Majority Color		−0.03 (0.26)			
P4 × Majority Color		−0.28 (0.29)			
Title 1			−0.31 (0.24)		
P2 × Title 1			0.42 (0.27)		
P3 × Title 1			0.24 (0.26)		
P4 × Title 1			0.33 (0.29)		
School Region (Northeast)				0.18 (0.39)	
School Region (South)				0.31 (0.33)	
School Region (West)				−0.04 (0.43)	

	Urbanicity	Ethnic Comp	Title 1	School Region	School Level
P2 × Northeast				−0.39 (0.43)	
P3 × Northeast				−0.14 (0.42)	
P4 × Northeast				−0.30 (0.48)	
P2 × South				−0.40 (0.37)	
P3 × South				−0.14 (0.36)	

P4 × South				−0.27 (0.41)	
P2 × West				−0.02 (0.47)	
P3 × West				−0.01 (0.46)	
P4 × West				0.30 (0.55)	
School Level (Middle)					0.36 (0.32)
School Level (High)					0.52 (0.27)
P2 × Middle					−0.34 (0.35)
P3 × Middle					−0.40 (0.34)
P4 × Middle					−0.17 (0.37)
P2 × High					−0.60 (0.30)*
P3 × High					−0.50 (0.29)
P4 × High					−0.06 (0.32)
n	829	829	831	835	812
R^2	0.248	0.249	0.248	0.252	0.255
$Adjusted\ R^2$	0.238	0.242	0.241	0.239	0.245

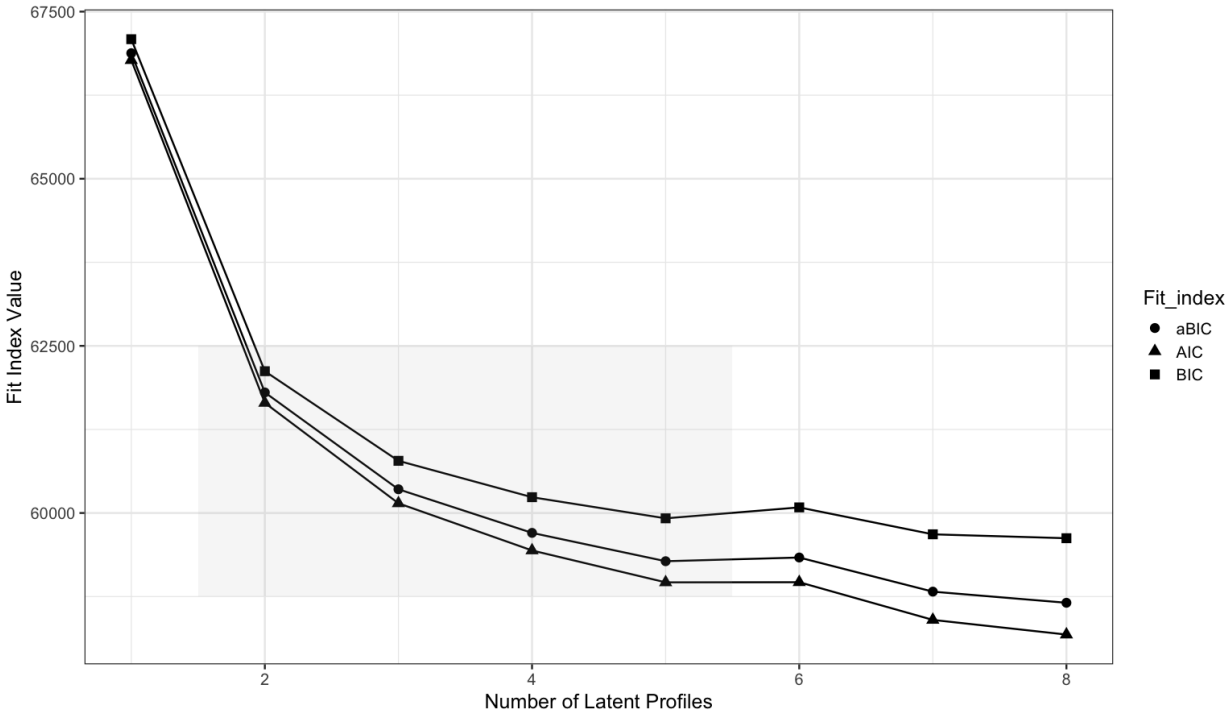
Note. Specification of reference group for categorical predictors in the regression analysis: teacher working condition = highest responsibilities, lowest resources (P1); service delivery model = general education classroom; gender = man; self-identified person of color = no; urbanicity = town/rural; school ethnic composition = majority White; Title 1 status = non-Title 1; school region = Midwest; school level = elementary.

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$* p < .01.$ $** p < .01.$ $*** p < .001.$

ARTICLE TITLE: Special Education Teachers' Working Condition Profiles: Implications for Emotional Exhaustion and Intent to Leave

Figure S1

Elbow Plot of Relative Fit Indices from Latent Profile Analysis



Note. The number of latent profiles ranges between 1 and 8.