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Article

Toward Sustainable Human Resource Development: The Influence of Workplace Friendship on Early Childhood Educators' Retention Intention, with Workplace Well-Being and Job Embeddedness as Parallel Mediators

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Abstract

Within the context of sustainable educational workforce development, enhancing the retention intention of early childhood educators is a critical issue for ensuring educational quality and long-term talent sustainability. This study surveyed 200 early childhood educators in Taiwan and developed a parallel mediation model to examine how workplace friendship influences retention intention through workplace well-being and job embeddedness. Confirmatory factor analysis and structural equation modeling were conducted using AMOS 24.0. The results indicate that workplace friendship does not exert a direct effect on retention intention; however, it significantly enhances workplace well-being and job embeddedness, which in turn fully mediate the relationship. These findings suggest that workplace friendship must be transformed into psychological and structural resources in order to promote retention, highlighting the applicability of the JD-R framework within the early childhood education context. The study responds to the needs of sustainable human resource management by identifying workplace friendship as an initial social resource that fosters well-being and embeddedness, thereby contributing to talent sustainability and the stable development of the educational system.

Keywords: workplace friendship; workplace well-being; job embeddedness; retention intention; job demands–resources model

1. Introduction

Within the broader context of sustainable development, talent sustainability has become a critical issue for maintaining long-term organizational competitiveness, with employees' retention intention serving as a core determinant. This challenge is particularly salient in the field of education, where educators are not only transmitters of knowledge but also foundational actors in sustaining human capital development. In early childhood education, in particular, high turnover rates have emerged as a global concern. A growing body of research has documented that early childhood educators frequently experience low wages, heavy workloads, and limited career advancement opportunities, all of which contribute to persistent professional attrition and undermine educational quality and children's learning opportunities [1-3]. Enhancing the retention intention of early childhood teachers has thus evolved beyond a single organizational issue and become a pressing global challenge related to educational system stability and long-term talent sustainability.

The antecedents of retention intention are multifaceted. Prior studies have tended to emphasize individual-level factors such as psychological empowerment [4], sense of calling [5], and professional

commitment [6]. However, emerging evidence suggests that the retention of early childhood educators is not solely determined by personal characteristics or career planning, but is also deeply shaped by the conditions of the work environment. Specifically, organizational climate, the quality of interpersonal interactions, and peer support [7,8] have been found to influence teachers' emotional attachment to their work and their willingness to remain in their positions. Building on this perspective, the present study focuses on the role of workplace friendship, seeking to clarify how such social relationships translate into psychological and organizational resources that strengthen educators' retention intention.

Despite growing scholarly attention, several gaps remain. First, existing studies on workplace friendship have predominantly examined its association with turnover intention, whereas research addressing its relationship with retention intention remains limited. Although turnover intention is often regarded as conceptually opposite to retention intention, the equivalence of these constructs has not been definitively established. Second, while prior studies suggest that workplace friendship may reduce turnover or enhance retention, the underlying psychological mechanisms remain insufficiently understood, limiting our ability to explain how friendship is transformed into concrete behavioral intentions to stay. In response to these gaps, this study adopts the Job Demands–Resources (JD-R) framework and conceptualizes workplace friendship as a valuable job resource, further exploring its mechanism of influence on retention intention.

Drawing from prior literature, two constructs job embeddedness [9-11] and workplace well-being [6,12-14] emerge as key determinants of retention intention, representing employees' structural connections within the organization and their positive psychological states, respectively. Accordingly, this study proposes a parallel mediation model to investigate how workplace well-being and job embeddedness jointly mediate the relationship between workplace friendship and retention intention.

In sum, this study, grounded in the JD-R framework, examines the relationships among workplace friendship, workplace well-being, job embeddedness, and retention intention, and validates the mediating roles of well-being and embeddedness. The findings further reveal that although workplace friendship does not directly enhance retention intention, it indirectly contributes through the accumulation of psychological and structural resources. This study not only enriches the literature on workplace friendship but also offers practical implications for early childhood institutions, emphasizing the importance of cultivating a supportive and friendly work environment, promoting well-being, and strengthening job embeddedness as strategies for fostering workforce sustainability.

2. Literature Review and Hypotheses Development

2.1. Workplace Friendship and Intention to Stay

Workplace friendship refers to non-romantic, voluntary, and informal relationships that develop among employees within organizational settings [15]. Unlike formal work interactions, such relationships emphasize autonomy and emotional exchange between colleagues. Prior research indicates that workplace friendship fosters trust, mutual assistance, and emotional support among peers, cultivating a sense of belonging and connectedness [16]. In addition, such friendships promote close and open communication, enabling employees to access greater social support and emotional comfort in the workplace, thereby contributing to a positive interpersonal climate [17]. Overall, workplace friendship can be regarded as a critical informal social resource within organizations, playing an important role in interpersonal interactions and psychological need fulfillment.

A substantial body of literature suggests that workplace friendship positively influences both individuals and organizations. Specifically, higher levels of workplace friendship have been found to enhance employees' work engagement, well-being, organizational identification, and organizational commitment, thus strengthening their positive attitudes toward work [16,18]. At the same time, workplace friendship can reduce burnout and stress, alleviate feelings of job insecurity, and

effectively decrease turnover tendencies [18]. Moreover, workplace friendship plays a meaningful role in employees' turnover behaviors and organizational attachment. Several studies report that friendship among coworkers significantly reduces turnover intention [19,20], suggesting that it functions as a supportive resource that mitigates negative psychological responses arising from work-related stress or role conflict. However, empirical studies directly examining the impact of workplace friendship on retention intention remain relatively scarce. Only a limited number of studies have shown that such friendships enhance employees' intention to stay through emotional support and a strengthened sense of belonging [16,21]. These findings indicate that although prior research has predominantly focused on reducing turnover intention, workplace friendship may also serve as a positive psychological resource that actively promotes employees' desire to remain.

From the perspective of the JD-R model, job resources not only help buffer the adverse effects of job demands but also stimulate employees' motivation, thereby promoting positive attitudes and behaviors [22,23]. As a social resource, workplace friendship provides emotional support, trust, and reciprocal assistance, which can enhance employees' psychological capital and well-being. Building on this theoretical foundation, the present study argues that workplace friendship not only reduces turnover tendencies but also strengthens employees' likelihood of staying through mechanisms related to resource conservation and motivational gains. Accordingly, this study proposes the following hypothesis:

H1: Workplace friendship has a significant positive effect on retention intention.

2.2. *The Mediating Role of Workplace Well-Being*

Well-being is a multidimensional and broadly defined construct that has increasingly been recognized as a critical factor influencing employees' attitudes and behaviors in organizational research. Employee well-being is commonly categorized into three major forms: workplace well-being, subjective well-being, and psychological well-being. Subjective well-being (SWB) reflects an individual's overall evaluation of life quality based on personal standards and comprises emotional experiences and cognitive assessments of life satisfaction. In contrast, psychological well-being (PWB) emphasizes positive psychological functioning and the realization of one's potential, including self-acceptance, purpose in life, environmental mastery, personal growth, and positive interpersonal relationships [24]. Building on these perspectives, workplace well-being directly reflects employees' sense of satisfaction with their work and their positive emotional experiences within the work environment, highlighting the contextualized nature of well-being in organizational settings [25].

Bartels, *et al.* [26] conceptualized workplace well-being through two core dimensions: interpersonal workplace well-being and individual workplace well-being. The interpersonal dimension focuses on social aspects such as support and belonging, whereas the individual dimension centers on personal growth and goal fulfillment. Thus, workplace well-being represents employees' subjective evaluation of their development and optimal functioning in the workplace, encompassing both personal and social aspects. It not only reflects psychological health but also embeds well-being within the specific context of work.

Recent studies suggest that workplace friendship enhances well-being, which subsequently reinforces employees' positive organizational attitudes and behaviors. For instance, Chen, Wang and Chu [16] demonstrated that workplace friendship promotes organizational commitment through increased well-being, thereby strengthening employees' willingness to maintain long-term relationships with the organization. Likewise, Çınar and Basım [21] found that workplace friendship significantly enhances employees' retention intentions through improved well-being, highlighting the pivotal mediating role of well-being in translating social relationships into behavioral outcomes.

From the perspective of the JD-R model, workplace friendship constitutes a social job resource that fulfills employees' emotional and social support needs, consequently enhancing their well-being. As a positive psychological resource, well-being fosters motivation, strengthens organizational attachment, and reduces the likelihood of negative behaviors [27,28]. Accordingly, workplace well-

being is conceptualized as a key mediating mechanism through which workplace friendship shapes retention intention, transforming social resources into positive psychological and behavioral outcomes. Based on this reasoning, the following hypotheses are proposed:

H2: Workplace friendship has a significant positive effect on workplace well-being.

H3: Workplace well-being mediates the relationship between workplace friendship and retention intention.

2.3. *The Mediating Role of Job Embeddedness*

Job embeddedness (JE) refers to the combined forces that connect an individual to their organization and surrounding environment, making it difficult for them to detach or voluntarily leave their job or workplace [29,30]. Employees become “embedded” within an organization through three primary forces: links, fit, and sacrifice [29,31]. Links denote the quantity and quality of connections employees have with their job environment, organization, and interpersonal networks, such as interactions with colleagues and supervisors or roles and responsibilities held within the organization. Fit represents the degree to which employees’ values, career goals, and personal characteristics align with their job role, organizational culture, and work environment. Sacrifice refers to the perceived losses associated with leaving the organization, including compensation, benefits, social relationships, and developmental opportunities. Collectively, these forces strengthen employees’ attachment to both the organization and the broader community, thereby reducing the likelihood of turnover and promoting retention [32].

Extant research widely acknowledges that employees with higher levels of job embeddedness tend to form deeper emotional connections with their work and organization, which fosters more positive work attitudes and behaviors. Job embeddedness effectively enhances organizational attachment and increases employees’ willingness to remain when faced with external job opportunities [10]. Empirical studies have consistently demonstrated stable positive relationships between job embeddedness, organizational loyalty, and retention intention [9-11]. Although the effects of job embeddedness have been extensively supported, limited research has explored whether workplace environmental factors particularly a friendly and supportive social climate can further strengthen employees’ embeddedness.

Empirical evidence suggests that organizational, supervisory, and coworker support significantly enhance job embeddedness, which subsequently mediates the reduction of turnover tendencies [33]. In this regard, workplace friendship not only offers resource functions similar to coworker support but also enhances emotional involvement and belongingness, thereby strengthening employees’ embeddedness across the dimensions of links, fit, and sacrifice. Additionally, relationships with friends and the broader community have been shown to reinforce community attachment, which subsequently influences organizational connections and turnover tendencies. Notably, friendships—more so than core family ties—have stronger effects on community fit and perceived sacrifice, indirectly reducing turnover intention [34]. Qualitative research in the hospitality and tourism sector similarly reveals a close relationship between workplace friendship and job embeddedness, as friendships enhance employees’ sense of fit and interpersonal networks, ultimately lowering turnover tendencies [35]. Taken together, workplace friendship functions not only as a source of emotional support but also as an important social resource influencing job embeddedness through the mechanisms of links, fit, and sacrifice.

From the perspective of the JD-R model, job resources help buffer the adverse effects of job demands and cultivate motivational processes that foster positive attitudes and behaviors [27,28]. As a social job resource, workplace friendship provides emotional support and mutual trust, enhances employees’ sense of fit and connection, and subsequently strengthens their job embeddedness. Through this mechanism, workplace friendship may indirectly increase employees’ retention intention, illustrating its role in resource conservation and motivational enhancement. Based on these arguments, the following hypotheses are proposed:

H4: Workplace friendship has a significant positive effect on job embeddedness.

H5: Job embeddedness mediates the relationship between workplace friendship and retention intention.

Grounded in the JD-R theoretical framework and supported by empirical evidence, this study integrates workplace friendship, workplace well-being, job embeddedness, and retention intention into a unified research model. The proposed research framework is presented in Figure 1.

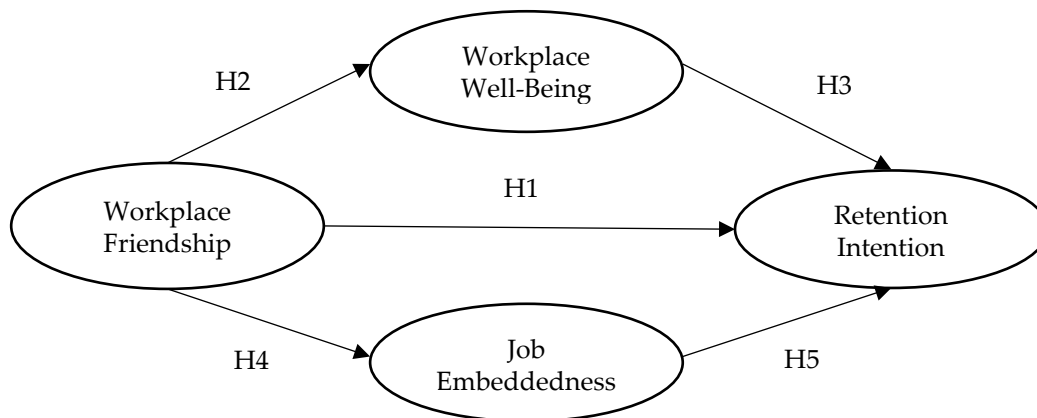


Figure 1. Research Framework.

3. Results

3.1. Participants and Procedure

The participants of this study were early childhood education and care (ECEC) personnel currently employed in early childhood education and childcare institutions in Taiwan, including directors, teachers, educare staff, and assistant educare staff. The inclusion criteria required that participants be employed at an early childhood education or childcare institution for at least three months to ensure sufficient familiarity with the work environment and the ability to provide meaningful assessments. Student interns were excluded from the study. Data were collected through anonymous self-administered questionnaires using convenience sampling. Recruitment was conducted with the assistance of ECEC personnel known to the researcher, who helped distribute the survey. Data collection was carried out from Month 2025 to Month 2025. All participants received a study description and provided informed consent before completing the survey. They were informed that participation was voluntary and could be discontinued at any time without penalty. The study adhered to the principle of minimal risk, and all data were used exclusively for academic purposes.

To minimize common method variance (CMV), several procedural remedies were implemented during questionnaire design and administration. First, reverse-coded items from the original scales were retained, and different scoring formats were used across scales to reduce response patterning. Items were also randomly ordered to mitigate potential context effects between adjacent questions. Second, anonymity and strict confidentiality were ensured throughout data collection. Participants were informed, in neutral language at the beginning of the questionnaire, that the survey was solely for academic research and unrelated to employment decisions or performance evaluations. This approach aimed to reduce social desirability bias and evaluation apprehension. Together, these procedures helped reduce potential CMV and enhance the validity of the data.

A total of 250 questionnaires were distributed. After excluding invalid responses—such as those with uniform answers or substantial missing data—200 valid questionnaires remained, yielding an effective response rate of 80%. To ensure the adequacy of the sample size for Structural Equation Modeling (SEM), this study followed Kline [36] recommendation that a minimum of 150 cases is sufficient when the model is not overly complex. Hair, *et al.* [37] further noted that a sample size of approximately 200 is considered desirable when the ratio of observed to latent variables is appropriate. Accordingly, the final sample of 200 valid responses not only exceeded the minimum

recommended threshold (150) but also met the ideal sample size suggested in methodological guidelines, thereby supporting the reliability and validity of the SEM results.

The demographic characteristics of the ECEC personnel are presented in Table 1. The participants were primarily aged 31–50 years (52.5%), followed by those under 30 years (31.0%) and those aged 51 years or above (16.5%). Most participants had fewer than three years of work experience (65.5%), while 21.5% had three to ten years of tenure, and 13.0% had more than eleven years. In terms of educational level, the majority held a university degree or higher (73.0%), whereas 27.0% had a high school diploma or junior college degree. Regarding job positions, teachers constituted the largest group (61.5%), followed by educare staff (23.5%) and center directors (15.0%). Monthly income levels were concentrated in the NT\$35,001–40,000 range (55.0%), with 25.5% earning NT\$35,000 or below and 19.5% earning above NT\$40,001. Overall, the sample mainly comprised teachers aged 31–50 with university-level education, relatively short job tenure (less than three years), and monthly earnings between NT\$35,001 and NT\$40,000, reflecting the typical profile of ECEC personnel in Taiwan.

Table 1. Demographic Characteristics of Participants.

Variable	Category	n	%
Age	30 years and below	62	31.0
	31–50 years	105	52.5
	51 years and above	33	16.5
Tenure in Current Institution	Less than 3 years	131	65.5
	3–10 years	43	21.5
	More than 11 years	26	13.0
Education Level	High school / junior college or below	54	27.0
	University degree or above	146	73.0
Job Position	Director	30	15.0
	Teacher	123	61.5
	Educare staff	47	23.5
Monthly Salary (NT\$)	≤ 35,000	51	25.5
	35,001–40,000	110	55.0
	≥ 40,001	39	19.5

3.2. Questionnaire Design

Workplace friendship was measured using the scale developed by Nielsen, *et al.* [38], which assesses the extent to which early childhood educators perceive friendship among colleagues in their work environment. The scale consists of six items, such as “I have formed a strong friendship with my colleagues” and “Being able to see my colleagues is one reason why I look forward to my job.” All items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating stronger perceptions of workplace friendship. Reliability analysis showed excellent internal consistency, with a Cronbach’s α of 0.948.

Workplace well-being was assessed using the scale developed by Pradhan and Hati [39], which captures the degree of well-being experienced by early childhood educators in their work context. The scale includes nine items, with sample statements such as “I am quite satisfied with my job” and “I enjoy meaningful work.” Participants responded using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), where higher scores reflect greater workplace well-being. Cronbach’s α for this study was 0.947, indicating excellent internal consistency.

Job embeddedness was measured using the scale developed by Crossley, Bennett, Jex and Burnfield [32], which evaluates the extent to which early childhood educators feel connected to and embedded within their job and work environment. The scale comprises seven items, such as “I feel a strong sense of belonging to my job as an early childhood educator” and “I feel closely connected to my job as an early childhood educator.” One item—“It would be easy for me to leave my job as an

early childhood educator (R)" –was reverse coded. Responses were recorded on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating greater levels of job embeddedness. The Cronbach's α for this sample was 0.925, demonstrating strong internal consistency.

Retention intention was measured using a four-item scale adapted from Cheng, *et al.* [40], assessing the extent to which early childhood educators intend to remain in their current position over the next three years. Sample items include "I will continue working in my current kindergarten" and "I intend to remain in this kindergarten for at least the next two to three years." One item—"I will look for a new job in the near future (R)" –was reverse coded. All items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicate stronger retention intention. The scale demonstrated good internal consistency, with a Cronbach's α of 0.812.

3.4. Data Analysis

This study employed AMOS 24.0 to conduct confirmatory factor analysis (CFA) and to test the structural paths and mediation effects within the structural equation model (SEM). First, for the measurement model, maximum likelihood estimation was used to perform CFA in order to assess convergent validity, discriminant validity, and overall model fit for the latent constructs.

For the structural model, a theory-driven SEM was developed to examine the hypothesized path relationships and mediation effects. Both path coefficients and indirect effects were evaluated using the bootstrap procedure with 5,000 resamples. Bias-corrected 95% confidence intervals (CIs) were used as the criterion for significance; when the CI did not include zero, the corresponding path or indirect effect was considered statistically significant. In addition to reporting indirect effects, this study also presents the direct effects and total effects to determine whether the observed mediation reflects full or partial mediation. This analytic strategy avoids reliance solely on p-values and provides a more comprehensive evaluation of the precision and stability of the estimated effects.

4. Research Results

4.1. Confirmatory Factor Analysis

Results of the confirmatory factor analysis indicated that all standardized factor loadings for the four latent constructs were statistically significant, ranging from 0.596 to 0.908, which exceed the recommended threshold of 0.50. This demonstrates that each item adequately represents its corresponding latent construct [37]. The composite reliability (CR) values ranged from 0.815 to 0.949, all above the recommended cutoff of 0.70, indicating strong internal consistency among the measurement indicators.

To further assess convergent validity, the average variance extracted (AVE) values were examined. The AVE values for all constructs ranged from 0.530 to 0.756, exceeding the 0.50 benchmark [41], thereby supporting adequate convergent validity. The normality of the measurement items was also assessed. Skewness values ranged from -1.004 to 0.064, and kurtosis values ranged from -0.703 to 0.095, all within the acceptable ranges (skewness < 2, kurtosis < 7) [37], suggesting no severe violations of the assumption of normal distribution.

Overall, the factor loadings, composite reliability, average variance extracted, and normality assessments all met the recommended statistical criteria, indicating that the measurement scales used in this study demonstrate strong reliability and validity.

Table 2. Measurement model.

Factors	Items	M	SD	Skewness	Kurtosis	Factor loading
	Workplace friendship (CR=0.949, AVE=0.756)					
	Workplace friendship 1	3.760	1.004	-0.406	-0.513	0.889

Factors	Items	M	SD	Skewness	Kurtosis	Factor loading
	Workplace friendship 2	3.530	1.169	-0.445	-0.562	0.840
	Workplace friendship 3	3.755	1.044	-0.430	-0.557	0.889
	Workplace friendship 4	3.665	1.015	-0.312	-0.519	0.889
	Workplace friendship 5	3.610	1.069	-0.365	-0.366	0.848
	Workplace friendship 6	3.390	1.151	-0.287	-0.521	0.860
	Workplace well-being (CR = 0.947, AVE = 0.667)					
	Workplace well-being 1	4.920	1.481	-0.358	-0.620	0.805
	Workplace well-being 2	5.605	1.424	-0.931	0.057	0.742
	Workplace well-being 3	5.495	1.425	-0.700	-0.330	0.764
	Workplace well-being 4	5.865	1.340	-1.004	0.084	0.733
	Workplace well-being 5	5.270	1.506	-0.674	-0.267	0.889
	Workplace well-being 6	5.230	1.499	-0.544	-0.415	0.908
	Workplace well-being 7	5.265	1.409	-0.404	-0.572	0.796
	Workplace well-being 8	4.745	1.681	-0.355	-0.674	0.816
	Workplace well-being 9	5.235	1.425	-0.496	-0.565	0.878
	Job embeddedness (CR = 0.925, AVE = 0.640)					
	Job embeddedness 1	3.345	1.054	-0.209	-0.302	0.783
	Job embeddedness 2	3.060	1.050	0.064	-0.249	0.692
	Job embeddedness 3	3.825	1.034	-0.661	-0.137	0.858
	Job embeddedness 4	3.660	1.086	-0.572	-0.221	0.904
	Job embeddedness 5	3.115	1.081	-0.014	-0.348	0.700
	Job embeddedness 6	3.750	1.045	-0.443	-0.341	0.876
	Job embeddedness 7	3.930	1.039	-0.645	-0.430	0.758
	Retention intention (CR = 0.815, AVE = 0.530)					
	Retention intention 1	3.110	0.986	-0.096	0.095	0.773
	Retention intention 2	3.405	1.028	-0.232	-0.246	0.855
	Retention intention 3	3.750	1.065	-0.369	-0.703	0.596
	Retention intention 4	3.870	1.175	-0.609	-0.683	0.659

In addition, discriminant validity was assessed using the Heterotrait–Monotrait ratio (HTMT), following the criterion proposed by Henseler, *et al.* [42], which recommends a threshold of 0.85. The HTMT values for all constructs in this study ranged from 0.574 to 0.842, all below the suggested cutoff. These results indicate that the constructs demonstrate satisfactory discriminant validity.

Table 3. Discriminant Validity.

Variable	Workplace Friendship	Workplace Well-Being	Job Embeddedness
1. Workplace friendship	-		
2. Workplace well-being	0.664	-	
3. Job embeddedness	0.789	0.842	-
4. Retention intention	0.574	0.676	0.733

Note: The lower triangular matrix presents Heterotrait-Monotrait Ratio of Correlations (HTMT).

4.2. Model Fit

Because the chi-square statistic in SEM is sensitive to violations of multivariate normality and tends to inflate model misfit when sample sizes are moderate or when item distributions deviate slightly from normality, the Bollen–Stine bootstrap procedure was applied to obtain a corrected chi-square value. This procedure generates an empirical distribution of the chi-square statistic through resampling, thereby improving the accuracy and conservativeness of model fit assessment under mild non-normality conditions [37,43].

As shown in Table 4, the model demonstrated acceptable to excellent fit: $\chi^2/df = 1.434 (< 3)$, GFI = 0.924, AGFI = 0.905, RMSEA = 0.052 (< 0.08), CFI = 0.973, IFI = 0.973, NFI = 0.924, RFI = 0.914, and TLI = 0.973. All indices met their commonly recommended thresholds (Hair et al., 2019). These results indicate that the overall model fit is satisfactory, providing a robust foundation for subsequent path and mediation analyses.

Table 4. Bollen–Stine Bootstrap Model Fit Indices.

Fit Index	Criterion	Bollen–Stine Bootstrap Model
χ^2	Smaller is better	421.812
χ^2/df	< 3	1.434
GFI	> 0.90	0.924
AGFI	> 0.90	0.905
RMSEA	< 0.08	0.052
CFI	> 0.90	0.973
IFI	> 0.90	0.973
NFI	> 0.90	0.924
RFI	> 0.90	0.914
NNFI(TLI)	> 0.90	0.973

4.3. Path Analysis

The structural model was further examined through path analysis, and the results are presented in Table 5. First, regarding the relationships between the independent variable and the mediators, workplace friendship had a significant positive effect on workplace well-being ($\beta = 0.716$, $z = 10.577$, $p < 0.001$) and on job embeddedness ($\beta = 0.798$, $z = 10.841$, $p < 0.001$). These findings indicate that stronger workplace friendship enhances both well-being and embeddedness among early childhood educators. Thus, Hypotheses H2 and H4 were supported.

Second, in predicting the dependent variable—retention intention—the direct effect of workplace friendship was not significant ($\beta = -0.022$, $z = -0.165$, $p > 0.05$), suggesting that workplace friendship alone does not directly increase educators' intention to stay. Therefore, Hypothesis H1 was not supported. In contrast, workplace well-being had a significant positive effect on retention intention ($\beta = 0.305$, $z = 3.187$, $p < 0.01$), and job embeddedness also demonstrated a significant positive effect ($\beta = 0.491$, $z = 4.067$, $p < 0.001$). These results indicate that retention intention is primarily influenced by workplace well-being and job embeddedness, which serve as mediating mechanisms through which workplace friendship exerts its indirect effects, rather than being explained by the direct effect of workplace friendship.

The structural model demonstrated satisfactory explanatory power for the endogenous variables. Workplace friendship accounted for approximately 54.5% of the variance in job embeddedness ($R^2 = 0.545$), representing a moderate to high level of explanatory strength. It explained 40.8% of the variance in workplace well-being ($R^2 = 0.408$), indicating moderate explanatory power. Finally, the model explained 43.0% of the variance in retention intention ($R^2 = 0.430$), suggesting a meaningful level of practical explanatory strength. These results support the theoretical proposition that workplace friendship—conceptualized as a key job resource—affects retention intention through both psychological (well-being) and structural (job embeddedness) pathways.

Table 5. Path Analysis Table.

Path Relationship	β	SE	z	95% CI	
				Lower	Upper
Workplace Friendship → Workplace Well-Being	0.716	0.086	10.577***	0.735	1.113
Workplace Friendship → Job Embeddedness	0.798	0.063	10.841***	0.546	0.816
Workplace Friendship → Retention Intention	-0.022	0.102	-0.165	0.017	0.362

Workplace Well-Being → Retention Intention	0.305	0.057	3.187**	-0.226	0.178
Job Embeddedness → Retention Intention	0.491	0.107	4.067***	0.150	0.759

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

4.4. Mediation Analysis

After confirming the significance of the primary structural paths, this study further examined the mediating effects of workplace well-being and job embeddedness on the relationship between workplace friendship and retention intention. The results are presented in Table 6. First, the direct effect of workplace friendship on retention intention was not significant ($\beta = -0.022$, $p > .05$), suggesting that workplace friendship alone does not directly enhance educators' intention to remain in their current positions. However, the indirect effects were significant. Workplace friendship exerted a significant positive indirect effect on retention intention through workplace well-being ($\beta = 0.165$, $z = 2.037$, $p < .05$). Similarly, workplace friendship demonstrated a significant positive indirect effect through job embeddedness ($\beta = 0.295$, $z = 2.610$, $p < .01$). These findings indicate that workplace friendship influences retention intention indirectly by increasing employees' well-being and embeddedness.

When considering both direct and indirect effects, the total effect of workplace friendship on retention intention was significant ($\beta = 0.588$, $z = 9.333$, $p < .001$). Importantly, the significance of the total effect derived entirely from the indirect paths rather than from a direct effect. This pattern supports a full mediation model, indicating that workplace friendship affects retention intention only when translated into psychological (well-being) and structural (embeddedness) resources. Overall, these results highlight that workplace friendship is not merely an emotional or relational resource; rather, it influences retention by fostering positive psychological states and deeper connections to one's work, which in turn shape educators' decisions to remain in their roles.

Table 6. Indirect Effects (Bootstrap Results).

Path Relationship	β	SE	z	95% CI	
				Lower	Upper
WF → WWB → RI	0.165	0.081	2.037*	0.012	0.339
WF → JE → RI	0.295	0.113	2.610**	0.106	0.551

Note: WF = Workplace Friendship, WWB = Workplace Well-Being, JE = Job Embeddedness, RE = Retention Intention.

5. Discussion

5.1. Theoretical Implications

The findings of this study reveal that although workplace friendship enhances positive interpersonal experiences, its direct effect on retention intention is not significant. This result contrasts with several studies suggesting that workplace friendship reduces turnover tendencies [19,20], indicating that friendship alone may not be a sufficient condition for employees' decisions to remain in their positions. In other words, a friendly interpersonal climate cannot directly translate into retention decisions unless accompanied by additional psychological or organizational resources. From the perspective of the JD-R model, workplace friendship constitutes a social job resource; however, if such social resources are not transformed into motivational or stress-buffering psychological resources, they are unlikely to exert a direct influence on retention intention.

The results show that workplace friendship significantly improves workplace well-being and strengthens job embeddedness among early childhood educators. This finding aligns with Chen, Wang and Chu [16] who reported that workplace friendship enhances organizational commitment through increased well-being. It also corresponds with the observations of Asgharian, Yusoff, YaserMazhari, Mardani and HazratSoltan [35] and Dechawatanapaisal [33], which highlight that

workplace support enhances fit, attachment, and retention. From the JD-R framework, workplace friendship provides essential job resources that stimulate psychological resources (well-being) and structural resources (embeddedness), thereby reducing turnover tendencies. Although workplace friendship does not directly predict retention intention, it exerts indirect influence by enhancing employees' psychological and structural resources.

This study further demonstrates that workplace friendship influences retention intention only through the dual mediators of workplace well-being and job embeddedness, forming a full mediation pattern. This finding echoes the results of Çınar and Basım [21] and Setthakorn, Rostiani and Schreier [30], which emphasize the essential roles of well-being and embeddedness in linking workplace relationships to retention outcomes. Unlike studies suggesting that friendship directly reduces turnover Wu, Chen and Zhuang [20], the present study underscores that retention in educational settings is more strongly shaped by the accumulation of psychological and organizational resources.

This insight aligns with broader discussions on talent sustainability: the key challenge lies in transforming social interactions into capital that continuously strengthens well-being and embeddedness, thereby supporting educational quality and systemic stability. From the JD-R perspective, social resources derived from workplace friendship must be converted into motivational gains and enhanced organizational fit to effectively protect employees from turnover risks and ultimately strengthen their intention to stay.

5.2. Managerial Implications

First, the findings highlight that workplace friendship serves as an essential foundation for fostering workplace well-being and job embeddedness. ECEC institutions should leverage this resource by cultivating a friendly and trusting organizational climate. Practical approaches include organizing regular professional learning communities, inter-role workshops, or informal social gatherings, as well as encouraging supervisors to adopt open and supportive communication styles. Such practices help strengthen employees' sense of belonging and reduce isolation and turnover risks [17].

Second, workplace well-being plays a central role in predicting retention intention. Institutions can enhance employees' psychological resources by implementing flexible scheduling practices, providing professional development subsidies, and cultivating a culture of positive feedback. These strategies can elevate satisfaction and motivation among staff [27].

Third, job embeddedness is another key mediator through which workplace friendship influences retention intention. Management interventions may focus on the three core dimensions of embeddedness—links, fit, and sacrifice. Specifically: (1) Establishing mentoring programs to increase interpersonal links; (2) Ensuring alignment between employees' values and the center's culture through targeted training and cultural onboarding; and (3) Offering attractive benefits such as educational allowances or family-support policies to increase the perceived sacrifice of leaving. Such measures reinforce employees' embeddedness and strengthen long-term retention [32,33].

Most importantly, these strategies should be integrated into a broader Sustainable Human Resource Management (Sustainable HRM) framework. Institutions should view employees' well-being and job embeddedness as long-term human capital and incorporate these factors into indicators of educational sustainability [44]. By doing so, ECEC institutions can ensure a stable supply of qualified personnel and foster long-term system development, aligning with the core objectives of SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth) (UNESCO, 2024; United Nations, 2025).

5.3. Research Limitations and Future Research Developments

First, this study relied on self-reported questionnaire data. Although anonymity, reverse-coded items, and several procedural controls were implemented to reduce social desirability bias, the potential for common method variance (CMV) cannot be entirely ruled out. Future research may incorporate multi-source data (e.g., colleague or supervisor ratings), longitudinal designs, or

objective indicators such as actual retention records or performance metrics to further validate the robustness of the findings.

Second, this study adopted the JD-R framework and focused primarily on workplace friendship as a social job resource, examining its indirect effects on retention intention through workplace well-being and job embeddedness. However, according to the JD-R model, other job resources—such as organizational support, positive leadership styles, or career development opportunities—may also influence employees' retention decisions. Future studies may expand the model by incorporating additional job resources to provide a more comprehensive understanding of retention among early childhood educators.

Finally, although this study found that workplace friendship does not directly predict retention intention, this result diverges from some prior findings and suggests the presence of potential moderating mechanisms. Based on the JD-R perspective, both personal resources (e.g., self-efficacy, sense of calling, emotional intelligence) and organizational resources (e.g., fairness climate, perceived organizational support, job autonomy) may moderate the relationship between workplace friendship and retention outcomes. Furthermore, future research may conduct sustainable HRM intervention studies—such as mentoring programs or community-oriented benefits—to examine their long-term effects on well-being, job embeddedness, and retention intention, and to assess their cost-effectiveness in promoting talent sustainability and educational quality.

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