

The Impact of Work Meaning, Work Engagement, Cultural Intelligence, and Emotional Labor on Job Satisfaction among Employment Service Officers Working with New Immigrants in Taiwan

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ABSTRACT

Faced with the significant growth in the proportion of new immigrants, the cultural intelligence and emotional labor of employment service personnel have become essential factors influencing service quality. To fill this research gap, this study targeted current employment service staff from public and private institutions across Taiwan. Using purposive sampling, valid data were collected from 52 respondents through questionnaires to analyze the proposed research model. The research instruments were adapted from established academic survey scales, and the data analysis methods included descriptive analysis and statistical techniques such as independent-samples t-tests and one-way ANOVA with bootstrapping to examine differences in work meaning, cultural intelligence, emotional labor, job satisfaction, and job involvement across different social background variables. The results supported significant differences in job involvement across hierarchical groups, significant differences in cultural intelligence across tenure groups, and essential differences in work meaning, job involvement, emotional labor, and job satisfaction across age groups. These findings not only address the academic insufficiency in prior studies on employment service personnel but also provide concrete directions for training and support strategies for competent authorities and practical institutions.

KEYWORDS: Meaningful Work, Job Engagement, Cultural Intelligence, Emotional Labor, Job Satisfaction

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1. INTRODUCTION

Employment service officers (hereafter referred to as “ESOs”) play a pivotal role in facilitating job placement for unemployed individuals, assisting organizations in replenishing their workforce, and advancing employment matching (Frøyland, Andreassen, & Innvær, 2019). Consequently, ESO–client interactions are a key determinant of service quality (Cox & Land, 2019). As of July 2025, official statistics from Taiwan’s National Immigration Agency indicate that there are 611,875 registered foreign spouses nationwide, many of whom require employment services to support their integration and livelihoods in Taiwan (National Immigration Agency, 2025; Su, 2012). Effective service delivery in this context presupposes an adequate understanding and recognition of cultural differences, so that ESOs can fully comprehend the needs and constraints of new immigrants and thereby conduct employment matching more successfully. In addition, when engaging with anxious and distressed job seekers, ESOs must display positive, caring emotional attitudes to empathize with clients’ affective reactions and provide practical assistance (Glover & Frounfelker, 2011). The complexity of employment service tasks, coupled with clients’ emotional influences, exposes ESOs to substantial psychosocial strain (McDowell, Fossey, & Harvey, 2022). This underscores the multifaceted, complex nature of ESO work, which cannot be addressed solely through routine administrative procedures.

In practice, employment service agencies expect ESOs to deploy emotional labor to discern and respond to the diverse needs of job seekers. In real-time interactions, ESOs are required to demonstrate understanding of clients’ emotions and to respond with appropriate, empathic, affective expressions (Lee & Ok, 2015), providing authentic and individualized counseling and services that meet jobseekers’ needs and facilitate successful placement into suitable positions (Moreo, Cain, Rahman, & Chen, 2019; Wu & Liang, 2009). ESOs are further expected to exhibit positive emotions while suppressing negative ones in accordance with client demands and the emotional tenor of the interaction (Choi, Mohammad, & Kim, 2019; Gursoy, Boylu, & Avci, 2011). ESO emotional states may involve emotional dissonance, emotional effort, or the expression of genuine emotion; through corresponding emotional-labor strategies—surface acting, deep acting, or authentic display—ESOs deliver the affective performances that jobseekers expect during service provision (Wang, 2020). In service encounters, ESOs can suppress negative affect through surface acting, while displaying ostensibly positive emotions. Alternatively, they may engage in deep acting by attempting to change their inner feelings to align with organizational display rules. When felt emotions already match expected displays, authentic emotion expression occurs (Chu & Murrmann, 2006). However, frequent emotional labor—especially surface acting—can engender frustration, discomfort, and tension, which, over time, adversely affect ESOs’ mental and physical health (Hochschild, 1983).

Against the backdrop of Taiwan’s pronounced low-fertility trend, overall labor shortages, and a steadily growing new-immigrant population, labor intermediation and employment counseling face mounting pressure. When working with job seekers from diverse cultural backgrounds, ESOs must not only possess core employment-service skills but also exhibit higher-order cultural intelligence and emotional labor capabilities to enhance service effectiveness. Nevertheless, relatively few academic studies have examined the mechanisms through which cultural intelligence and emotional labor affect job satisfaction and work engagement in this setting. Accordingly,

this study focuses on ESOs and investigates how the meaning of work and emotional labor, via cultural intelligence, shape ESOs' work engagement and job satisfaction, thereby addressing the gap between academic inquiry and frontline practice. Guided by these motivations, the study pursues three objectives: (1) to examine differences in the focal variables across respondent background characteristics; (2) to analyze the relationships among the meaning of work, work engagement, cultural intelligence, emotional labor, and job satisfaction; and (3) to offer recommendations based on the empirical results.

To achieve these objectives, the study employs a questionnaire survey targeting currently serving ESOs at public and private employment service stations across Taiwan, using purposive sampling to obtain 52 valid responses. The survey instrument encompasses constructs such as the meaning of work, work engagement, cultural intelligence, emotional labor, and job satisfaction, as well as respondents' demographic and background information. All scales employ five-point Likert responses and were adapted from existing domestic and international literature. Data analysis proceeds by first using descriptive statistics and reliability/validity checks to assess instrument quality, followed by independent-samples t-tests and one-way ANOVA to test for differences across background variables, and finally by regression analyses and Sobel tests to evaluate the hypotheses and the mediating role of cultural intelligence. This design enables a rigorous examination of how the interplay between the meaning of work, work engagement, cultural intelligence, and emotional labor collectively influences job satisfaction among ESOs in Taiwan.

2. LITERATURE REVIEW

2.1 Meaningful Work

The meaning of work is a multifaceted construct, and scholars offer differing views on its connotations. To present major definitions and emphases in the literature, the following table summarizes representative positions:

Author(s) (Year)	Definition and Research Content
Dik & Duffy (2009);	Argue that the meaning of work is a component of life that strengthens the positive linkage between life and work.
Rosso, Dekas, & Wrzesniewski (2010)	Conceptualize the meaning of work along self- and other-oriented dimensions: self involves self-realization and growth; other involves helping others and contributing to larger collectives.
Steger, Dik, & Duffy (2012)	Define the meaning of work as a psychological state that creates value, exerts positive effects on one's surroundings, and promotes personal growth.
Lips-Wiersma & Wright (2012)	Develop and validate the Comprehensive

	Meaningful Work Scale, operationalizing meaning of work as seven facets: unity with others, service to others, expressing full potential, integrity, reality orientation, inspiration, and balancing tensions.
De Crom & Rothmann (2018)	Contend that meaning of work affords growth and broader horizons for workers while generating positive outcomes for both society and the individual.
Lips-Wiersma, Haar, & Wright (2020)	Define meaning of work as the existential significance and sense of purpose “personally experienced” by employees at work—a multidimensional psychological and behavioral state reflecting dynamic interactions among the person, others, and the environment.

Accordingly, drawing on and integrating the perspective of Lips-Wiersma, Haar, and Wright (2020), this study defines the meaning of work as: “a state in which employees, through the work process, attain self-growth and broadened horizons and, by serving others, maintaining personal integrity, and realizing their potential, experience a sense of value; at the same time, they find balance amid real-world challenges and tensions and thus regard work as an important component of life and life’s meaning.” On this basis, we examine its effects on work engagement and job satisfaction.

2.2. Job Engagement

Work engagement has been defined in various ways in the scholarly literature. The following summarizes key definitions and emphases advanced by representative scholars:

Author(s) (Year)	Definition and Research Content
Kahn (1990)	Defines work engagement as a state in which employees ‘bring in’ their personal selves during role performances, invest energy, and build emotional connections with work, achieving full psychological and affective engagement.
Maslach & Leiter (2000)	Position engagement in contrast to burnout: whereas burnout manifests in exhaustion and cynicism, engagement reflects energy, involvement, and efficacy—the opposing pole.
Schaufeli, Salanova, González-Romá, & Bakker (2002); Chughtai & Buckley (2008)	The author contends that work engagement is a state encompassing concentration, enthusiasm,

	pride, and challenge, characterized by employees' immersion in their work such that time seems to pass quickly and they become fully absorbed.
May, Gilson, & Harter (2004)	Portray engagement as akin to absorption, characterized by full concentration and joyful immersion in work.
Schaufeli, Bakker, & Salanova (2006)	Define engagement as a positive, fulfilling, work-related psychological state whose core components are vigor, dedication, and absorption.

Accordingly, in line with Schaufeli et al. (2006), this study defines work engagement as “a work-related psychological state in which employees feel enthusiastic about their tasks, are willing to devote themselves, and can become absorbed in their work.”

2.3. Cultural Intelligence

Cultural intelligence is commonly viewed as the capability to understand, adapt to, and interact with people from different cultural backgrounds. Scholars have proposed varying definitions and operationalizations; key formulations are summarized below:

Author(s) (Year)	Definition and Research Content
Earley (2002); Earley & Mosakowski (2004)	Define cultural intelligence as an individual's capability to understand, adapt to, and interact with different cultural contexts.
Earley, Ang, & Tan (2006)	View cultural intelligence as a multifaceted construct comprising metacognitive, cognitive, motivational, and behavioral dimensions.
Ang, Van Dyne & Koh (2006)	Define metacognitive CQ as the conscious capability to perceive, analyze, and learn others' cultural knowledge and value norms during cross-cultural interactions.
Ang, Van Dyne, Koh, Ng, Templer, Tay & Chandrasekar (2007)	Suggest that individuals high in metacognitive CQ can consciously detect and understand subtle cultural differences and others' cultural preferences, adjusting their thinking in intercultural exchanges.
MacNab & Worthley, (2012)	Describe behavioral CQ as observable conduct in dialogue—including language, speech,

	communication styles, and nonverbal behavior (e.g., gestures, facial expressions)—that reflects the ability and principles for enacting appropriate behavior with culturally different others.
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Integrating the above, and following Ang et al. (2006), this study defines cultural intelligence as “an integrated capability that, when individuals encounter new or different cultures, enables them—through metacognitive, cognitive, motivational, and behavioral capacities—to comprehend cultural differences, adjust cognitions and behaviors, and exhibit effective adaptation and interaction in intercultural contexts.”

2.4. Emotional Labor

Emotional labor is a key construct in service and interpersonal work settings, referring to employees’ regulation or management of emotional displays to meet organizational display rules and task demands. Scholars have conceptualized and operationalized emotional labor from multiple angles—some emphasizing surface and deep acting, others articulating finer subdimensions, including culturally specific facets. To clarify its development across research contexts, the following table summarizes representative positions:

Author(s) (Year)	Definition and Research Content
Hochschild (1983)	Introduces emotional labor as job tasks requiring employees to adjust emotional displays to comply with organizational display rules.
Kruml & Geddes (2000)	Propose three strategies—surface acting, deep acting, and genuine expression—and note that employees may experience emotional dissonance, emotional effort, and natural emotional expression.
Diefendorff, Croyle, & Gosserand (2005)	Conceptualize emotional dissonance as a mismatch between felt and expressed emotions; emotional effort as actively adjusting inner feelings and behaviors to display appropriate emotions; and add genuine expression as a third subdimension.
Chu & Murrmann (2006); Chu, Baker, & Murrmann, (2012)	The author notes that, in service contexts, employees must regulate their inner feelings and adjust their outward behaviors—suppressing or masking negative emotions and displaying positive ones—in order to meet organizational demands and situational expectations.

Gursoy et al. (2011)	Operationalize emotional labor as comprising two broad facets: emotional dissonance and emotional effort.
Lee & Ok (2014)	Emphasize that suppressing negative and displaying positive emotions shapes customers' perceived service quality and helps meet needs.
Yang, Chen, & Zhao (2019)	Develop, in the Chinese context, a scale with four dimensions: surface acting, deep acting, genuine expression, and emotional cessation—the latter referring to temporarily suspending emotional expression under high pressure or conflict to avoid disequilibrium.

Taken together, this study defines emotional labor as “the process of adjusting internal feelings and external displays in response to organizational requirements—typically manifested through surface acting, deep acting, and genuine emotional expression, and potentially including extended strategies such as emotional cessation.”

2.5. Job Satisfaction

In organizational management and employee development, enhancing overall well-being and productivity remains a core concern, with job satisfaction playing a central role. Scholarly definitions have evolved—from early subjective affect, to equity theory and expectancy discrepancies, to contemporary emphases on concrete job conditions. The following table summarizes key definitions and focal points:

Author(s) (Year)	Definition and Research Content
Hoppock (1935;as cited in Green, 2000)	The author argues that job satisfaction is employees' response to the work environment based on their subjective psychological and physiological feelings, emphasizing its essentially subjective nature.
Adams (1965)	Proposes that employees compare their input–outcome ratio with that of others; perceived equity engenders satisfaction, whereas inequity engenders dissatisfaction, underscoring the role of relative comparison.
Locke (1969)	Argues that job satisfaction depends on the discrepancy between expectations and actual outcomes: the smaller the gap, the higher the satisfaction; the larger the gap, the lower the satisfaction.
Seashore & Taber (1975)	Define job satisfaction as a multi-level psychological and affective response reflecting the congruence among individual needs, expectations, values, and job characteristics.
Salas-Vallina & Alegre (2018)	Conceptualize job satisfaction as a passive, reactive construct indicating whether employees obtain desired job conditions—focusing on appropriateness, adequacy, acceptability, and fit—and including evaluations

	of pay, promotion opportunity, coworker relations, and supervisory support.
Spector (1985)	Conceptualizes job satisfaction as combining employees' internal needs and values with the work environment, encompassing multiple facets such as pay, job content, coworker relations, and promotion opportunities.
Chang (1989)	Defines job satisfaction as the degree to which an individual or most employees feel satisfied with their work, noting that factors such as pay, pay-raise methods, work hours, location, job nature, promotion, interpersonal relations, and managerial practices all matter.
Wen(2006)	Defines job satisfaction as the extent to which employees like their jobs, influenced by rewards, promotion opportunities, work environment, and interpersonal relationships.

Accordingly, following Salas-Vallina and Alegre (2018) and integrating the foregoing, this study defines job satisfaction as “employees’ evaluative judgment of their job or work experiences based on the degree to which job conditions and outcomes meet expectations,” which in turn shapes their positivity and affect at work.

3. RESEARCH DESIGN

3.1 Participants and Sampling

To gain a deeper understanding of the research issue, this study focused on employment service personnel working in public and private employment service agencies across Taiwan. A purposive sampling strategy was adopted to recruit currently employed service staff to participate in the survey. Data were collected via an online questionnaire, yielding 52 valid responses, which were subsequently analyzed.

3.2 Research Instruments

3.2.1 Meaning of Work Scale

The meaning of work was assessed using a scale adapted from Lips-Wiersma et al. (2020). Participants responded using a five-point Likert scale ranging from “strongly agree” to “strongly disagree.” The instrument was used to capture employment service personnel’s subjective perceptions of meaning in their work. Reliability analysis indicated excellent internal consistency, with an overall Cronbach’s α of 0.96.

3.2.2 Work Engagement

Work engagement was measured using the nine-item Utrecht Work Engagement Scale (UWES-9), adapted from Schaufeli et al. (2006). This version is a validated short form of the original 17-item UWES developed by Schaufeli et al. (2002), and has been supported in cross-national research. The decision to adopt the UWES-9 was further informed by Mills, Culbertson, and Fullagar’s (2012) examination of its factor structure and reliability. Responses were collected using a five-point Likert scale from “strongly agree” to “strongly disagree.” Reliability analysis demonstrated strong internal consistency (Cronbach’s α = 0.88).

3.2.3 Cultural Intelligence Scale

Cultural intelligence was measured using the Cultural Intelligence Scale developed by Ang et al. (2006). The scale also utilized a five-point Likert response format ranging from “strongly agree” to “strongly disagree,” allowing the study to assess participants’ cultural awareness and adaptability in their work contexts. The overall scale demonstrated high reliability (Cronbach’s $\alpha = 0.92$).

3.2.4 Emotional Labor Scale

Emotional labor was assessed using a scale adapted from Yang et al. (2019). A five-point Likert scale (from “strongly agree” to “strongly disagree”) was used to collect data on participants’ subjective experiences of emotional demands and regulation at work. Reliability analysis indicated acceptable internal consistency (Cronbach’s $\alpha = 0.80$).

3.2.5 Job Satisfaction Scale

Job satisfaction was measured using a scale developed initially by Schriesheim and Tsui (1980) and later revised by Salas-Vallina and Alegre (2018). Participants rated their agreement using a five-point Likert scale ranging from “strongly agree” to “strongly disagree.” The reliability coefficient indicated strong internal consistency (Cronbach’s $\alpha = 0.89$).

3.3 Data Analysis

Data collected from the questionnaire were analyzed using SPSS. In alignment with the research framework and hypotheses, the following analytical procedures were employed:

3.3.1 Descriptive Statistics

Descriptive statistics, including means and standard deviations, were used to summarize participants’ demographic characteristics (e.g., age, years of experience), countries of origin of the new immigrants they most frequently assisted, and foreign languages with which they were most familiar. This analysis provided an overview of the distribution and tendencies among the key variables.

3.3.2 Reliability and Validity Analysis

Reliability was assessed using Cronbach’s α , with values of .70 or above indicating adequate internal consistency of the scales. Construct validity was examined by evaluating factor loadings; loadings greater than .40 were considered indicative of satisfactory discriminant validity among the scale dimensions.

3.3.3 Independent Samples t-Test

Independent samples t-tests were conducted to examine whether marital status (a dichotomous variable) resulted in significant differences in the meaning of work, work engagement, emotional labor, and job satisfaction.

3.3.4 One-Way ANOVA

One-way analysis of variance (ANOVA) was used to analyze whether differences in the meaning of work, work engagement, emotional labor, and job satisfaction existed across groups categorized by age and years of work experience.

3.3.5 Regression Analysis

Multiple regression analyses were performed to explore the predictive relationships among the four focal variables—meaning of work, work engagement, emotional labor, and job satisfaction—thereby clarifying how these constructs interact and influence one another.

3.4 Demographic Characteristics

Table 1 summarizes the demographic characteristics of the 52 participants. The sample consisted predominantly of women (80%), with men representing 20%. In terms of age distribution, the largest proportion of respondents was in the 31–40 age group (36%), followed by those aged 41–50 (28%). Smaller proportions were aged 21–30 (17%), 51–60 (15%), and over 61 (2%).

Regarding job position, the majority were front-line staff (85%), while 12% were front-line supervisors and only a small number held mid-level staff or supervisory positions (2% each). In terms of years of service, most participants had been in the field for more than four years. Specifically, 37% reported 11–20 years of experience, 20% 1–3 years, and 15% each 4–6 and 7–10 years. Only 12% had worked less than one year, and 2% had more than 21 years of experience.

Geographically, most respondents were located in the Taoyuan, Hsinchu, and Miaoli region (81%), with smaller numbers in the Taipei metropolitan area (15%) and southern Kaohsiung–Pingtung area (4%). Additionally, 64% of participants were married, while 36% were unmarried.

Regarding language proficiency, nearly all participants reported familiarity with English (94%), while only a few indicated knowledge of Japanese (4%) or Vietnamese (2%). When identifying the countries of origin of new immigrants they most frequently assisted, Vietnam accounted for the highest proportion (55%), followed by Indonesia (28%), Thailand (4%), China (3%), and Malaysia (1%). Approximately 9% reported having no predominant country of assistance.

Overall, these findings indicate that the study sample primarily consisted of female frontline employment service personnel in their 30s and 40s, with several years of professional experience and frequent interactions with Vietnamese new immigrants.

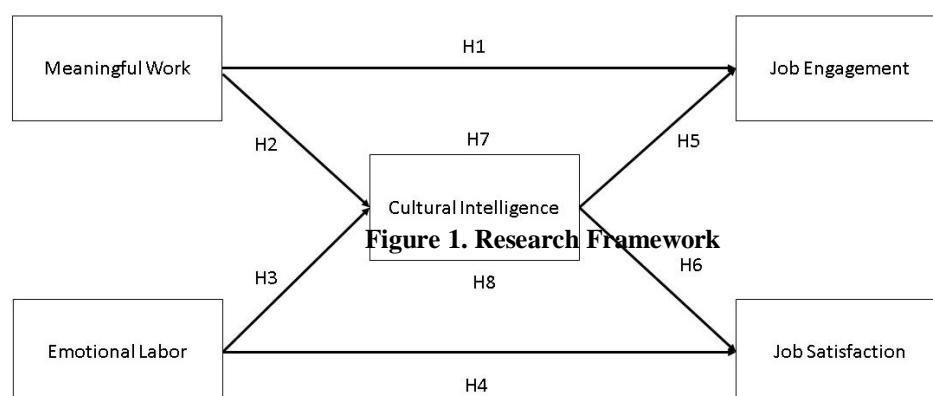
Table 1 Descriptive Statistics of Sample Demographic Characteristics (n = 52)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Female	42	80.8
	Male	10	19.2
Age	21–30 years	9	17.3
	31–40 years	19	36.5
	41–50 years	15	28.8
	51–60 years	8	15.4
	61 years and above	1	1.9
Job Position Level	Front-line Staff	44	84.6
	Front-line Supervisor	6	11.5
	Mid-level Staff	1	1.9
	Mid-level Supervisor	1	1.9
Years of Service	Less than 1 year	6	11.5
	1–3 years	10	19.2
	4–6 years	8	15.4
	7–10 years	8	15.4
	11–20 years	19	36.5
	More than 21 years	1	1.9
Work Location	Taipei–New Taipei–Keelung Area	8	15.4
	Taoyuan–Hsinchu–Miaoli Area	42	80.8
	Kaohsiung–Pingtung Area	2	3.8
Marital Status	Unmarried	19	36.5
	Married	33	63.5
Foreign Language Familiarity	Vietnamese	1	1.9
	English	49	94.2
	Japanese	2	3.8
Most Frequently Assisted New Immigrant Country	Vietnam	41	54.7
	Indonesia	21	28.0
	Thailand	3	4.0
	Malaysia	1	1.3

	China	2	2.7
	None	7	9.3

3.5 Research Framework

Based on the research objectives outlined earlier, this study adopts a survey research design to collect and validate empirical data. The conceptual framework proposes that the meaning of work influences both work engagement and cultural intelligence, while emotional labor affects cultural intelligence and job satisfaction. In turn, cultural intelligence is expected to influence work engagement and job satisfaction. Furthermore, cultural intelligence is hypothesized to mediate the relationships between the meaning of work and job satisfaction, as well as between emotional labor and work engagement. The research hypotheses are illustrated in Figure 1.



The hypothesized relationships among the variables are as follows.

H1: The Meaning of work has a significant positive effect on work engagement.

H2: The Meaning of work has a significant positive effect on cultural intelligence.

H3: Emotional labor has a significant positive effect on cultural intelligence.

H4: Emotional labor has a significant positive effect on job satisfaction.

H5: Cultural intelligence has a significant positive effect on work engagement.

H6: Cultural intelligence has a significant positive effect on job satisfaction.

H7: Cultural intelligence mediates the relationship between the meaning of work and job satisfaction.

H8: Cultural intelligence mediates the relationship between emotional labor and work engagement.

3.6 Reliability and Validity Analysis

3.6.1 Reliability Analysis

The internal consistency of each scale was examined using Cronbach's α . As shown in Table 2, the meaning of work scale consisted of 21 items, with a Cronbach's α of 0.96. The work engagement scale included seven items ($\alpha = 0.88$), while the cultural intelligence scale contained 18 items ($\alpha = 0.92$). The emotional labor scale comprised four items, yielding a Cronbach's α of 0.80, and the job satisfaction scale included six items with an α of 0.89. Overall reliability across all 56 questionnaire items was 0.96, indicating excellent internal consistency.

Table 2. Summary of Reliability Analysis for the Survey Scales (n = 52)

Scale	Number of Items	Cronbach's α	Reliability Level
Meaning of Work	21	0.96	Excellent
Work Engagement	7	0.88	High
Cultural Intelligence	18	0.92	Excellent
Emotional Labor	4	0.80	Acceptable
Job Satisfaction	6	0.89	High
Overall Scale	56	0.96	Excellent

3.6.2 Item Analysis

Item analysis was conducted using extreme-group comparison and item-total correlation testing. The initial questionnaire consisted of 68 items. Based on the analysis results, one item from the meaning of work scale (MW14), one item from the work engagement scale (EW03), and two items from the cultural intelligence scale (CQ6 and CQ17) did not meet the required criteria and were removed. Additionally, eight items from the emotional labor scale (EL02, EL03, EL04, EL05, EL06, EL010, EL011, EL012) were eliminated due to low item-total correlations. In total, 12 items failed to reach the acceptable standards and were discarded. Accordingly, 56 items were retained for the final version of the questionnaire and used in subsequent analysis.

3.7 Differences Analysis

3.7.1 Gender

An independent samples t-test was conducted to examine whether gender differences existed across the main study variables. The results indicated that meaning of work differed significantly between genders ($t = 0.07$, $p < .01$). However, no significant differences were found for work engagement ($t = -0.51$, $p > .05$), cultural intelligence ($t = -0.52$, $p > .05$), emotional labor ($t = -1.81$, $p > .05$), or job satisfaction ($t = -0.03$, $p > .05$). These findings suggest that gender does not substantially influence most of the focal work-related constructs in this study.

3.7.2 Job Position

A comparison of participants across different job positions revealed a significant difference in work engagement ($t = -0.76$, $p < .05$). Specifically, supervisors and higher-level personnel reported higher work engagement ($M = 3.53$, $SD = 0.44$) than frontline staff ($M = 3.38$, $SD = 0.78$). However, no significant differences were observed for the meaning of work, cultural intelligence, emotional labor, or job satisfaction (all $p > .05$), indicating that these variables are relatively consistent across job position levels.

3.8 One-Way ANOVA

3.8.1 Years of Service

A one-way ANOVA revealed a significant effect of years of service on cultural intelligence ($F = 2.92$, $p < .05$). Post-hoc comparison showed that employees with 1–3 years of service ($M = 3.72$, $SD = 0.50$) reported significantly higher cultural intelligence than those with 4–6 years ($M = 2.89$, $SD = 0.60$). No significant

differences were found for the meaning of work, work engagement, emotional labor, or job satisfaction across years of service groups.

3.8.2 Age

A one-way ANOVA was also conducted based on age groups. Significant differences were found in meaning of work ($F = 7.05$, $p < .05$), with participants aged 31–40 ($M = 3.44$, $SD = 0.65$) reporting lower meaning of work than both the 41–50 age group ($M = 3.93$, $SD = 0.63$) and the 21–30 group ($M = 4.23$, $SD = 0.34$). Work engagement also differed significantly ($F = 5.42$, $p < .05$), with participants aged 51 and above ($M = 4.06$, $SD = 0.35$) reporting higher engagement than those aged 31–40 ($M = 3.05$, $SD = 0.72$) and 41–50 ($M = 3.31$, $SD = 0.70$). Emotional labor demonstrated significant variation ($F = 3.19$, $p < .05$), with the 41–50 group ($M = 3.63$, $SD = 0.85$) scoring higher than the 51+ group ($M = 2.64$, $SD = 1.13$). Job satisfaction also varied significantly ($F = 5.86$, $p < .05$), with the 31–40 age group ($M = 2.78$, $SD = 0.66$) scoring lower than both the 21–30 group ($M = 3.80$, $SD = 0.40$) and the 51+ group ($M = 3.74$, $SD = 0.87$). However, no significant difference in cultural intelligence was observed across age groups.

Table 3. One-Way ANOVA Results of Age Differences on Key Variables (n = 52)

Variable	Age Group	n	Mean	SD	SS	df	MS	F	Post-hoc (Tukey HSD)
Meaning of Work (MW)	21–30	9	4.23	0.34	Between = 7.59	3	2.53	7.05*	21–30 > 31–40; 51+ > 31–40
	31–40	19	3.44	0.65	Within = 17.23	48	0.36		
	41–50	15	3.93	0.63	Total = 24.82	51	—		
	51+	9	4.43	0.62					
Work Engagement (WE)	21–30	9	3.67	0.66	Between = 6.92	3	2.31	5.42	51+ > 31–40; 51+ > 41–50
	31–40	19	3.05	0.72	Within = 20.45	48	0.43		
	41–50	15	3.31	0.70	Total = 27.37	51	—		
	51+	9	4.06	0.35					
Cultural Intelligence (CQ)	21–30	9	3.51	0.57	Between = 2.04	3	0.68	2.06 (n.s.)	— (no significant differences)
	31–40	19	3.17	0.59	Within = 15.80	48	0.33		

	41–50	15	2.99	0.52	Total = 17.84	51	—		
	51+	9	3.44	0.62					
Emotional Labor (EL)	21–30	9	3.42	0.74	Between = 6.32	3	2.11	3.19	41–50 > 51+
	31–40	19	3.53	0.60	Within = 31.73	48	0.66		
	41–50	15	3.63	0.85	Total = 38.06	51	—		
	51+	9	2.64	1.13					
Job Satisfaction (JS)	21–30	9	3.80	0.40	Between = 9.05	3	3.02	5.86	21–30 > 31–40; 51+ > 31–40
	31–40	19	2.78	0.66	Within = 24.73	48	0.52		
	41–50	15	3.30	0.83	Total = 33.78	51	—		
	51+	9	3.74	0.87					

Note. n.s. = not significant; * $p < .05$; ** $p < .01$; *** $p < .001$.

3.9 Regression Analysis

Regression analyses were conducted to examine the hypothesized relationships among the study variables. The results indicated that the meaning of work had a significant positive effect on work engagement ($\beta = .492$, $p < .001$), supporting H1. Meaning of work also demonstrated a significant positive effect on cultural intelligence ($\beta = .343$, $p < .05$), providing support for H2. Emotional labor had a significant positive effect on cultural intelligence ($\beta = .316$, $p < .05$), supporting H3, and on job satisfaction ($\beta = .303$, $p < .05$), supporting H4.

Furthermore, cultural intelligence significantly predicted work engagement ($\beta = .318$, $p < .01$) and job satisfaction ($\beta = .390$, $p < .01$), supporting H5 and H6. Mediation analyses using the Sobel test revealed that cultural intelligence significantly mediated the relationship between meaning of work and work engagement (Sobel = 2.569, $p < .01$), supporting H7. Cultural intelligence also significantly mediated the relationship between emotional labor and job satisfaction (Sobel = 2.053, $p < .05$), supporting H8.

Taken together, these results confirm that all hypothesized paths in the proposed research model (H1–H8) were supported. The validated structural relationships are illustrated in Figure 2.

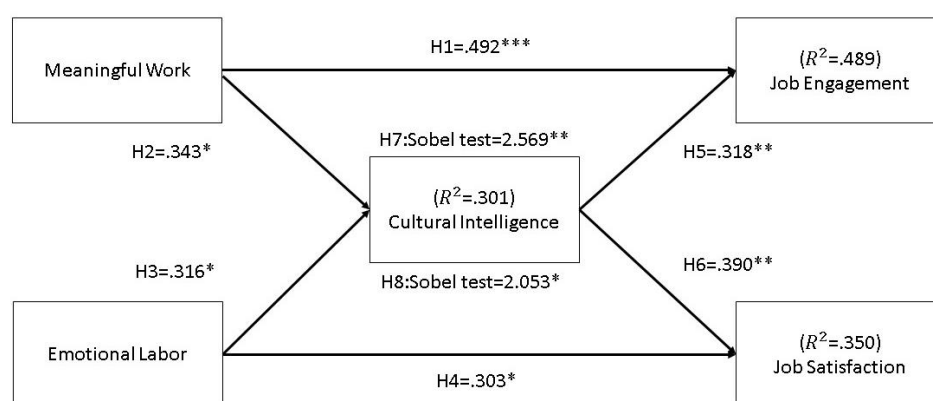


Figure 2. Standardized Regression Coefficient Model

4. CONCLUSION AND RECOMMENDATIONS

4.1 Research Conclusions

This study examined how the meaning of work, work engagement, cultural intelligence, and emotional labor influence job satisfaction among employment service personnel. Using a structured questionnaire, data were collected and analyzed to assess the relationships among these variables. The findings revealed that the majority of respondents were female, aged 31 to 40, with over four years of work experience, primarily serving in front-line positions in the Taoyuan–Hsinchu–Miaoli region, and frequently assisting new immigrants from Vietnam. The measurement instruments demonstrated strong reliability and validity, supporting the robustness of the research conclusions.

The results of the difference analyses indicated that supervisors exhibited higher levels of work engagement than front-line staff, although gender differences were not evident across the measured variables. With respect to years of service, those with one to three years of experience showed significantly higher cultural intelligence, suggesting that frequent interaction with diverse clients may enhance cross-cultural communication abilities. Age differences were also notable: employees aged 51 and above reported higher work meaning and work engagement than those aged 31 to 40, possibly due to greater responsibility and life experience. Emotional labor was highest among those aged 41 to 50, indicating greater emotional demands in that career stage. Meanwhile, job satisfaction was lowest among employees aged 31 to 40, a group likely balancing rising career expectations alongside family responsibilities.

Overall, the findings demonstrate that the meaning of work, emotional labor, and cultural intelligence play key roles in shaping work engagement and job satisfaction among employment service personnel.

4.2 Practical Recommendations

Based on the findings, several practical implications emerge for government agencies and employment service organizations.

First, additional support should be directed toward personnel aged 31 to 40, who experience the lowest levels of work meaning and job satisfaction. Targeted interventions, such as counseling services, emotional regulation training, and stress-management programs, may help sustain morale and reduce burnout in this group.

Second, in response to increasing cultural diversity in client populations, the development of cultural intelligence is essential. Organizations should implement structured cross-cultural training programs that include language learning, cultural sensitivity education, and scenario-based simulations to improve service responsiveness and effectiveness.

Third, emotional labor management is crucial. Agencies should cultivate supportive work environments and reduce excessive requirements for emotional displays to prevent emotional exhaustion. Practical strategies may include streamlining administrative processes, establishing peer support groups, and providing access to mental health resources.

Lastly, enhancing the perceived meaning and social value of employment service work can strengthen motivation and engagement. This may be achieved by sharing successful service outcomes, recognizing contributions, and reinforcing the role of employment service personnel in promoting social integration for new immigrants.

4.3 Research Limitations

Despite providing empirical insights, this study has several limitations. The sample consisted of 52 participants, primarily from the Taoyuan–Hsinchu–Miaoli region and predominantly front-line personnel. While the findings reflect local service conditions, they may not fully represent employment service personnel nationwide. Future research should expand the sample size to include multiple regions and organizational levels to enhance the generalizability of the results.

Additionally, this study utilized a cross-sectional design, which limits the ability to infer causal relationships. Longitudinal or mixed-method research is recommended to deepen understanding of how the meaning of work, cultural intelligence, and emotional labor evolve within the service profession.

REFERENCE

1. Adams, J. S. (1965). Inequity in social exchange. In *Advances in experimental social psychology* (Vol. 2, pp. 267–299). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60108-2](https://doi.org/10.1016/S0065-2601(08)60108-2)
2. Ang, S., Van Dyne, L., & Koh, C. (2006). Personality correlates of the four-factor model of cultural intelligence. *Group & organization management*, 31(1), 100-123. <https://doi.org/10.1177/1059601105275267>
3. Ang, S., Van Dyne, L., Koh, C., Ng, K. Y., Templer, K. J., Tay, C., & Chandrasekar, N. A. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and

- task performance. *Management and organization review*, 3(3), 335-371. <https://doi.org/10.1111/j.1740-8784.2007.00082.x>
4. Choi, H. M., Mohammad, A. A., & Kim, W. G. (2019). Understanding hotel frontline employees' emotional intelligence, emotional labor, job stress, coping strategies and burnout. *International Journal of Hospitality Management*, 82, 199-208. <https://doi.org/10.1016/j.ijhm.2019.05.002>
5. Chu, K. H. L., & Murrmann, S. K. (2006). Development and validation of the hospitality emotional labor scale. *Tourism Management*, 27(6), 1181-1191. <https://doi.org/10.1016/j.tourman.2005.12.011>
6. Chu, K. H., Baker, M. A., & Murrmann, S. K. (2012). When we are onstage, we smile: The effects of emotional labor on employee work outcomes. *International Journal of Hospitality Management*, 31(3), 906-915. <https://doi.org/10.1016/j.ijhm.2011.10.009>
7. Chang, C.-X. (1989). *Dictionary of Psychology*. Taipei, Taiwan: Donghua Publishing.
8. Chughtai, A. A., & Buckley, F. (2008). Work engagement and its relationship with state and trait trust: A conceptual analysis. *Journal of Behavioral and Applied Management*, 10(1), 47-71. <https://doi.org/10.21818/001c.17170>
9. Cox, M. E., & Land, K. A. (2019). The power of the employment specialist: Skills that impact outcomes. *Journal of Vocational Rehabilitation*, 50(3), 273-278. <https://doi.org/10.3233/JVR-191007>
10. De Crom, N., & Rothmann, S. (2018). Demands-abilities fit, work beliefs, meaningful work and engagement in nature-based jobs. *SA Journal of Industrial Psychology*, 44(1), 1-12. <https://doi.org/10.4102/sajip.v44i0.1496>
11. Diefendorff, J. M., Croyle, M. H., & Gosserand, R. H. (2005). The dimensionality and antecedents of emotional labor strategies. *Journal of vocational behavior*, 66(2), 339-357. <https://doi.org/10.1016/j.jvb.2004.02.001>
12. Dik, B. J., & Duffy, R. D. (2009). Calling and vocation at work: Definitions and prospects for research and practice. *The counseling psychologist*, 37(3), 424-450. <https://doi.org/10.1177/0011000008316430>
13. Earley, P. C. (2002). Redefining interactions across cultures and organizations: Moving forward with cultural intelligence. *Research in organizational behavior*, 24, 271-299. [https://doi.org/10.1016/S0191-3085\(02\)24008-3](https://doi.org/10.1016/S0191-3085(02)24008-3)
14. Earley, P. C., & Mosakowski, E. (2004). Cultural intelligence. *Harvard business review*, 82(10), 139-146.
15. Earley, P. C., Ang, S., & Tan, J. S. (2006). *CQ: Developing cultural intelligence at work*. Stanford University Press.
16. Frøyland, K., Andreassen, T. A., & Innvæ, S. (2019). Contrasting supply-side, demand-side and combined approaches to labour market integration. *Journal of Social Policy*, 48(2), 311-328. <https://doi.org/10.1017/S0047279418000491>
17. Glover, C. M., & Frounfelker, R. L. (2011). Competencies of employment specialists for effective job development. *American Journal of Psychiatric Rehabilitation*, 14(3), 198-211. <https://doi.org/10.1080/15487768.2011.598093>
18. Green, J. (2000). *Job satisfaction of community college chairpersons*. Virginia Polytechnic Institute and State University.

19. Gursoy, D., Boylu, Y., & Avci, U. (2011). Identifying the complex relationships among emotional labor and its correlates. *International Journal of Hospitality Management*, 30(4), 783-794. <https://doi.org/10.1016/j.ijhm.2010.10.009>
20. Hochschild, A. (1983). Comment on Kemper's "Social Constructionist and Positivist Approaches to the Sociology of Emotions". *American Journal of Sociology*, 89(2), 432-434. <https://doi.org/10.1086/227874>
21. Hoppock, R. (1935). *Job satisfaction*. New York: Harper & Brothers Publishers.
22. Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of management journal*, 33(4), 692-724. <https://doi.org/10.5465/256287>
23. Kruml, S. M., & Geddes, D. (2000). Exploring the dimensions of emotional labor: The heart of Hochschild's work. *Management communication quarterly*, 14(1), 8-49. <https://doi.org/10.1177/0893318900141002>
24. Lee, J. J., & Ok, C. M. (2014). Understanding hotel employees' service sabotage: Emotional labor perspective based on conservation of resources theory. *International Journal of Hospitality Management*, 36, 176-187. <https://doi.org/10.1016/j.ijhm.2013.08.014>
25. Lee, J., & Ok, C. (2015). Examination of factors affecting hotel employees' service orientation: An emotional labor perspective. *Journal of Hospitality & Tourism Research*, 39(4), 437-468. <https://doi.org/10.1177/1096348013491593>
26. Lips-Wiersma, M., & Wright, S. (2012). Measuring the meaning of meaningful work: Development and validation of the Comprehensive Meaningful Work Scale (CMWS). *Group & organization management*, 37(5), 655-685. <https://doi.org/10.1177/105960111246157>
27. Lips-Wiersma, M., Haar, J., & Wright, S. (2020). The effect of fairness, responsible leadership and worthy work on multiple dimensions of meaningful work. *Journal of business ethics*, 161(1), 35-52. <https://doi.org/10.1007/s10551-018-3967-2>
28. Locke, E. A. (1969). What is job satisfaction?. *Organizational behavior and human performance*, 4(4), 309-336. [https://doi.org/10.1016/0030-5073\(69\)90013-0](https://doi.org/10.1016/0030-5073(69)90013-0)
29. MacNab, B. R., & Worthley, R. (2012). Individual characteristics as predictors of cultural intelligence development: The relevance of self-efficacy. *International Journal of Intercultural Relations*, 36(1), 62-71. <https://doi.org/10.1016/j.ijintrel.2010.12.001>
30. Maslach, C., & Leiter, M. P. (2000). *The truth about burnout: How organizations cause personal stress and what to do about it*. John Wiley & Sons.
31. May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of occupational and organizational psychology*, 77(1), 11-37. <https://doi.org/10.1348/096317904322915892>
32. McDowell, C., Fossey, E., & Harvey, C. (2022). Moving clients forward: A grounded theory of disability employment specialists' views and practices. *Disability and rehabilitation*, 44(19), 5504-5512. <https://doi.org/10.1080/09638288.2021.1937341>
33. Mills, M. J., Culbertson, S. S., & Fullagar, C. J. (2012). Conceptualizing and measuring engagement: An analysis of the Utrecht Work Engagement Scale. *Journal of Happiness Studies*, 13(3), 519-545. <https://doi.org/10.1007/s10902-011-9277-3>

34. Moreo, A., Cain, L., Rahman, I., & Chen, Y. (2019). How emotional displays and service quality impact satisfaction and loyalty: A gendered look. *Journal of Foodservice Business Research*, 22(6), 563-581. <https://doi.org/10.1080/15378020.2019.1663105>
35. Rosso, B. D., Dekas, K. H., & Wrzesniewski, A. (2010). On the meaning of work: A theoretical integration and review. *Research in organizational behavior*, 30, 91-127. <https://doi.org/10.1016/j.riob.2010.09.001>
36. Salas-Vallina, A., & Alegre, J. (2018). Happiness at work: Developing a shorter measure. *Journal of Management & Organization*, 27(3), 460-480. <https://doi.org/10.1017/jmo.2018.24>
37. Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness studies*, 3(1), 71-92. <https://doi.org/10.1023/A:1015630930326>
38. Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and psychological measurement*, 66(4), 701-716. <https://doi.org/10.1177/0013164405282471>
39. Schriesheim, C., & Tsui, A. S. (1980). Development and validation of a short satisfaction instrument for use in survey feedback interventions. In *Western Academy of Management Meeting* (Vol. 1980, pp. 115-17).
40. Seashore, S. E., & Taber, T. D. (1975). Job satisfaction indicators and their correlates. *American behavioral scientist*, 18(3), 333-368. <https://doi.org/10.1177/000276427501800303>
41. Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. *American journal of community psychology*, 13(6), 693.
42. Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The work and meaning inventory (WAMI). *Journal of Career Assessment*, 20(3), 322-337. <https://doi.org/10.1177/1069072711436160>
43. Su, J.-H. (2012). A study on the management of three immigrant care service centers in New Taipei City. *Fu-Jen Social Science Review*, (2), 33-54. <https://doi.org/10.29700/FJSS.201201.0002>
44. Wang, C. J. (2020). Managing emotional labor for service quality: A cross-level analysis among hotel employees. *International Journal of Hospitality Management*, 88, 102396. <https://doi.org/10.1016/j.ijhm.2019.102396>
45. Wen, S.-S. (2006). *Dictionary of Psychology*. Taipei, Taiwan: Sanmin Book Co., Ltd.
46. Wu, C. H. J., & Liang, R. D. (2009). Effect of experiential value on customer satisfaction with service encounters in luxury-hotel restaurants. *International Journal of Hospitality Management*, 28(4), 586-593. <https://doi.org/10.1016/j.ijhm.2009.03.008>
47. Yang, C., Chen, Y., & Zhao, X. (2019). Emotional labor: scale development and validation in the Chinese context. *Frontiers in psychology*, 10, 2095. <https://doi.org/10.3389/fpsyg.2019.02095>

Appendix 1. Demographic Information and Questionnaire Items

A. Demographic Information

1. Gender: (1) Male (2) Female
2. Age: (1) 20 or below (2) 21–30 (3) 31–40 (4) 41–50 (5) 51–60 (6) 61 or above
3. Position: (1) Front-line staff (2) Front-line supervisor (3) Mid-level staff (4) Mid-level supervisor (5) Senior staff (6) Senior supervisor
4. Total years of employment service experience: (1) Less than 1 year (2) 1–3 years (3) 4–6 years (4) 7–10 years (5) 11–20 years (6) More than 21 years
5. Workplace region: (1) Taipei–New Taipei–Keelung (2) Taoyuan–Hsinchu–Miaoli (3) Taichung–Changhua–Nantou (4) Yunlin–Chiayi–Tainan (5) Kaohsiung–Pingtung (6) Eastern region (7) Offshore islands
6. Marital status: (1) Married (2) Unmarried
7. Foreign language(s) you are familiar with: (1) Vietnamese (2) Indonesian (3) Thai (4) Malay (5) English (6) Japanese
8. Most frequently assisted immigrant nationality: (1) Vietnam (2) Indonesia (3) Thailand (4) Malaysia (5) Europe/America (6) Japan (7) Other

B. Questionnaire Items

1. Work Meaning
 - (1) I feel a sense of belonging with my colleagues.
 - (2) I talk with my colleagues about matters that are personally meaningful to me.
 - (3) I enjoy working together with my colleagues.
 - (4) I feel that my work genuinely helps others.
 - (5) I believe that the purpose of my work is to improve human well-being, the environment, products, or services.
 - (6) I feel that my work is worth investing effort in.
 - (7) I believe the work I engage in contributes to something significant.
 - (8) My work allows me to make meaningful contributions or differences to others.
 - (9) I gain a sense of accomplishment from my work.
 - (10) I feel excited when my work gives me opportunities to realize my potential.
 - (11) I can maintain my personal values and moral judgment at work.
 - (12) I like the colleagues I work with.
 - (13) I can act consistently with what I believe at work.
 - (14) I face my work with a realistic attitude.
 - (15) I hold a tolerant attitude toward others at work.
 - (16) I understand that work may not always go as expected, and I try to accept that.
 - (17) My work gives me hope for the future.
 - (18) I am inspired by the shared vision and effort of my colleagues.
 - (19) My work provides me with emotional or spiritual support.
 - (20) I have time and space at work to reflect.
 - (21) I can maintain flexibility in my work (e.g., time management or approach to tasks).
 - (22) I can balance my own needs with the needs of others at work.
-
- Work Engagement
- (23) I feel passionate about my work.
 - (24) I feel proud of the work I do.

- (25) I sometimes become so absorbed in my work that I lose track of time.
 - (26) I am deeply immersed in my work.
 - (27) I feel emotionally uplifted when I work seriously.
 - (28) I actively participate in employee training activities.
 - (29) I usually feel energetic when working.
 - (30) I have sufficient physical strength and vitality to devote to my work.
-

Cultural Intelligence

- (31) I use my cultural knowledge to interact with people from different backgrounds.
 - (32) I adapt my cultural knowledge flexibly when interacting with people from unfamiliar cultures.
 - (33) I actively apply what I know about cultures when communicating across cultures.
 - (34) During cross-cultural interactions, I check whether the cultural knowledge I use is accurate.
 - (35) I am familiar with the legal and economic systems of other countries.
 - (36) I understand the rules of foreign languages (e.g., vocabulary and grammar).
 - (37) I understand the cultural values and religious beliefs of other cultures.
 - (38) I am familiar with marriage customs in other cultures.
 - (39) I am familiar with the technical strengths of workers from other countries.
 - (40) I am familiar with culturally appropriate body language in other cultures.
 - (41) I enjoy interacting with people from different cultures.
 - (42) I am confident in integrating into an unfamiliar culture.
 - (43) I am confident in coping with stress in unfamiliar cultural environments.
 - (44) I enjoy living in an unfamiliar cultural environment.
 - (45) I am confident in adapting to the concepts and customs of different cultures.
 - (46) During cross-cultural communication, I adjust my verbal communication (e.g., accent, tone).
 - (47) When adapting cross-culturally, I use pauses or silence when needed.
 - (48) In cross-cultural communication, I adjust my speaking speed (e.g., faster or slower).
 - (49) In cross-cultural contexts, I adjust my body language.
 - (50) In cross-cultural contexts, I adjust my facial expressions.
-

Emotional Labor

- (51) I communicate with job seekers with a positive attitude.
 - (52) I sometimes pretend to display emotions required by my job.
 - (53) I “wear a mask” to show the emotions my job requires.
 - (54) I try to feel the emotions I must display to job seekers genuinely.
 - (55) I try to experience the emotions I need to show to others deeply.
 - (56) I try to understand job seekers’ feelings in order to satisfy them.
 - (57) The emotions I express to job seekers are genuine.
 - (58) The emotions I display to job seekers feel natural.
 - (59) The emotions I display match how I genuinely feel.
 - (60) When I disagree with job seekers, I still provide service as expected without emotional change.
 - (61) When job seekers are dissatisfied, I choose to remain calm or silent.
 - (62) I feel helpless when job seekers make excessive demands or when their needs cannot be met immediately.
-

Job Satisfaction

- (63) How satisfied are you with the nature of your work?
 - (64) How satisfied are you with your supervisor?
 - (65) How satisfied are you with your relationships with colleagues?
 - (66) How satisfied are you with your work compensation?
 - (67) How satisfied are you with promotion opportunities in your organization?
 - (68) Considering all of the above, how satisfied are you with your current job overall?
-

Appendix 2.

A. Consolidated Item Analysis Table for the Research Measurement Scales(n=52)

	Extreme Group Comparison	Comparison	Homogeneity Test	Significance Test	
Item	Critical Ratio (CR)	Item-Total Correlation	Corrected Item-Total Correlation	Cronbach's α if Item Deleted	Item Decision
MW01	-6.06***	0.79**	0.77	.956	Retain
MW02	-4.12*	0.66**	0.64	.957	Retain
MW03	-7.51***	0.75**	0.74	.956	Retain
MW04	-4.53***	0.71**	0.70	.957	Retain
MW05	-4.07**	0.54**	0.52	.957	Retain
MW06	-6.23***	0.77**	0.75	.956	Retain
MW07	-5.81***	0.77**	0.76	.956	Retain
MW08	-3.41*	0.71**	0.69	.957	Retain
MW09	-3.74*	0.63**	0.61	.957	Retain
MW10	-5.91***	0.75**	0.74	.956	Retain
MW11	-3.37*	0.58**	0.57	.957	Retain
MW12	-4.21**	0.66**	0.65	.957	Retain
MW13	-3.70*	0.58**	0.57	.957	Retain
MW14	-2.89	0.30*	0.28	.958	Delete
MW15	-2.44	0.37**	0.35	.958	Retain
MW16	-2.99	0.61**	0.60	.957	Retain
MW17	-6.38***	0.75**	0.74	.956	Retain
MW18	-5.46***	0.77**	0.76	.956	Retain
MW19	-7.03***	0.73**	0.72	.957	Retain
MW20	-5.34***	0.63**	0.60	.957	Retain
MW21	-6.31***	0.64**	0.62	.957	Retain
MW22	-6.31***	0.69**	0.68	.957	Retain
EW01	-9.17***	0.84**	0.83	.956	Retain
EW02	-7.04***	0.74**	0.72	.956	Retain
EW03	-1.26	0.29*	0.26	.958	Delete
EW04	-6.51***	0.77**	0.76	.956	Retain
EW05	-2.63	0.40**	0.37	.958	Retain
EW06	-3.02	0.40**	0.37	.958	Retain
EW07	-5.79***	0.73**	0.72	.957	Retain

EW08	-5.40***	0.70**	0.69	.957	Retain
CQ1	-4.33**	0.60**	0.58	.957	Retain
CQ2	-4.99***	0.67**	0.66	.957	Retain
CQ3	-7.25***	0.67**	0.65	.957	Retain
CQ4	-3.00	0.49**	0.47	.957	Retain
CQ5	-4.09**	0.45**	0.43	.958	Retain
CQ6	-1.21	0.22	0.19	.959	Delete
CQ7	-4.16**	0.53**	0.51	.957	Retain
CQ8	-3.30*	0.40**	0.37	.958	Retain
CQ9	-4.04**	0.45**	0.42	.958	Retain
CQ10	-4.11**	0.52**	0.50	.957	Retain
CQ11	-2.99	0.47**	0.44	.958	Retain
CQ12	-4.29**	0.58**	0.56	.957	Retain
CQ13	-4.89***	0.56**	0.54	.957	Retain
CQ14	-3.23	0.48**	0.46	.957	Retain
CQ15	-3.54*	0.53**	0.51	.957	Retain
CQ16	-2.81	0.40**	0.37	.958	Retain
CQ17	-2.72	0.31*	0.29	.958	Delete
CQ18	-3.15	0.37**	0.34	.958	Retain
CQ19	-2.7	0.41**	0.38	.958	Retain
CQ20	-3.0	0.38**	0.36	.958	Retain
EL01	-4.16*	0.47**	0.45	.958	Retain
EL02	0.79	-0.17	-0.20	.960	Delete
EL03	0.64	-0.15	-0.18	.960	Delete
EL04	-0.51	0.10	0.07	.959	Delete
EL05	0.19	-0.01	-0.04	.959	Delete
EL06	-2.43	0.29*	0.27	.958	Delete
EL07	-2.04	0.46**	0.44	.958	Retain
EL08	-2.93	0.54**	0.52	.957	Retain
EL09	-2.93	0.41**	0.39	.958	Retain
EL10	-1.26	0.14	0.12	.959	Delete
EL11	-0.50	0.04	0.01	.959	Delete
EL12	0.38	-0.10	-0.13	.959	Delete
SA01	-9.06***	0.81**	0.80	.956	Retain
SA02	-5.30***	0.68**	0.66	.957	Retain
SA03	-5.56***	0.68**	0.66	.957	Retain

SA04	-4.11**	0.50**	0.47	.957	Retain
SA05	-7.16***	0.65**	0.63	.957	Retain
SA06	-6.71***	0.78**	0.77	.956	Retain

Note : n.s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

B. Summary of Item Analysis Results for the Research Questionnaire (n = 52)

	Extreme Group Comparison	Comparison	Homogeneity Test	Significance Test	
Item	Critical Ratio (CR)	Item-Total Correlation	Corrected Item-Total Correlation	Cronbach's α if Item Deleted	Item Decision
MW01	-6.06***	0.79**	0.77	.956	Retain
MW02	-4.12*	0.66**	0.64	.957	Retain
MW03	-7.51***	0.75**	0.74	.956	Retain
MW04	-4.53***	0.71**	0.70	.957	Retain
MW05	-4.07**	0.54**	0.52	.957	Retain
MW06	-6.23***	0.77**	0.75	.956	Retain
MW07	-5.81***	0.77**	0.76	.956	Retain
MW08	-3.41*	0.71**	0.69	.957	Retain
MW09	-3.74*	0.63**	0.61	.957	Retain
MW10	-5.91***	0.75**	0.74	.956	Retain
MW11	-3.37*	0.58**	0.57	.957	Retain
MW12	-4.21**	0.66**	0.65	.957	Retain
MW13	-3.70*	0.58**	0.57	.957	Retain
MW14	-2.89	0.30*	0.28	.958	Delete
MW15	-2.44	0.37**	0.35	.958	Retain
MW16	-2.99	0.61**	0.60	.957	Retain
MW17	-6.38***	0.75**	0.74	.956	Retain
MW18	-5.46***	0.77**	0.76	.956	Retain
MW19	-7.03***	0.73**	0.72	.957	Retain
MW20	-5.34***	0.63**	0.60	.957	Retain
MW21	-6.31***	0.64**	0.62	.957	Retain
MW22	-6.31***	0.69**	0.68	.957	Retain
EW01	-9.17***	0.84**	0.83	.956	Retain
EW02	-7.04***	0.74**	0.72	.956	Retain
EW03	-1.26	0.29*	0.26	.958	Delete

EW04	-6.51***	0.77**	0.76	.956	Retain
EW05	-2.63	0.40**	0.37	.958	Retain
EW06	-3.02	0.40**	0.37	.958	Retain
EW07	-5.79***	0.73**	0.72	.957	Retain
EW08	-5.40***	0.70**	0.69	.957	Retain
CQ1	-4.33**	0.60**	0.58	.957	Retain
CQ2	-4.99***	0.67**	0.66	.957	Retain
CQ3	-7.25***	0.67**	0.65	.957	Retain
CQ4	-3.00	0.49**	0.47	.957	Retain
CQ5	-4.09**	0.45**	0.43	.958	Retain
CQ6	-1.21	0.22	0.19	.959	Delete
CQ7	-4.16**	0.53**	0.51	.957	Retain
CQ8	-3.30*	0.40**	0.37	.958	Retain
CQ9	-4.04**	0.45**	0.42	.958	Retain
CQ10	-4.11**	0.52**	0.50	.957	Retain
CQ11	-2.99	0.47**	0.44	.958	Retain
CQ12	-4.29**	0.58**	0.56	.957	Retain
CQ13	-4.89***	0.56**	0.54	.957	Retain
CQ14	-3.23	0.48**	0.46	.957	Retain
CQ15	-3.54*	0.53**	0.51	.957	Retain
CQ16	-2.81	0.40**	0.37	.958	Retain
CQ17	-2.72	0.31*	0.29	.958	Delete
CQ18	-3.15	0.37**	0.34	.958	Retain
CQ19	-2.7	0.41**	0.38	.958	Retain
CQ20	-3.0	0.38**	0.36	.958	Retain
EL01	-4.16*	0.47**	0.45	.958	Retain
EL02	0.79	-0.17	-0.20	.960	Delete
EL03	0.64	-0.15	-0.18	.960	Delete
EL04	-0.51	0.10	0.07	.959	Delete
EL05	0.19	-0.01	-0.04	.959	Delete
EL06	-2.43	0.29*	0.27	.958	Delete
EL07	-2.04	0.46**	0.44	.958	Retain
EL08	-2.93	0.54**	0.52	.957	Retain
EL09	-2.93	0.41**	0.39	.958	Retain
EL10	-1.26	0.14	0.12	.959	Delete
EL11	-0.50	0.04	0.01	.959	Delete

EL12	0.38	-0.10	-0.13	.959	Delete
SA01	-9.06***	0.81**	0.80	.956	Retain
SA02	-5.30***	0.68**	0.66	.957	Retain
SA03	-5.56***	0.68**	0.66	.957	Retain
SA04	-4.11**	0.50**	0.47	.957	Retain
SA05	-7.16***	0.65**	0.63	.957	Retain
SA06	-6.71***	0.78**	0.77	.956	Retain

Note : n.s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$