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Job satisfaction and self-efficacy as mediators of organizational support and job competency: a cross- sectional study among Shanghai community health personnel

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Abstract

Background

Job competency among public health personnel is essential for delivering quality community health services. This study examined the relationships among job competency, perceived organizational support, job satisfaction, and self-efficacy among public health personnel in Shanghai.

Methods

A cross-sectional survey was conducted among 3,809 public health personnel from 249 community health service centers across 16 districts in Shanghai. Multiple linear regression examined demographic differences in job competency. Spearman correlation analysis assessed relationships among the four core variables. A multiple mediation model was tested using structural equation modeling with 5,000 bootstrap resamples. Harman's single-factor test assessed common method bias.

Results

Job competency was associated with gender, marital status, professional title, number of professional training sessions, regular exercise, and sleep. The final mediation model showed good fit ($\chi^2 = 5.383$, df = 2, p = 0.068, CFI = 0.999, TLI = 0.998, NFI = 0.999, RMSEA = 0.021, SRMR = 0.007). The total indirect effect from perceived organizational support to job competency was 0.747 (95% CI [0.662, 0.834]). The indirect effect via job satisfaction was 0.426 (95% CI [0.350, 0.511]), and the sequential indirect effect via job satisfaction and self-efficacy was 0.320 (95% CI [0.270, 0.372]). Common method bias was not a serious concern.

Conclusions

Perceived organizational support was associated with job competency through job satisfaction and sequentially via self-efficacy. Community health service centers should strengthen organizational support, monitor job satisfaction, and provide self-efficacy training to improve workforce competency and public health service delivery.

Introduction

China has implemented the *National Basic Public Health Service Program* since 2009, placing community health service centers at the forefront of population health management[1]. Community health service centers provide comprehensive and continuous medical and health services, including chronic disease prevention and management, infectious disease prevention and control, and health education and promotion. Public health personnel in these centers are individuals who have received certain health

professional training and engaged in public health care, resident health management, disease prevention, and related work. A high-level public health workforce is essential for maintaining the health of community residents and promoting the development of public health[1].

The concept of competency was introduced in 1973 by McClelland[2], who defined it as personal characteristics associated with specific jobs or organizational environments. A competency model refers to the sum of abilities, skills, knowledge, and qualities required to undertake specific tasks or roles[3]. Common models include the Iceberg Model and the Onion Model. Globally, competency models for medical personnel has been widely applied. In the United States, the competency model jointly launched by the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Medical Specialties (ABMS) competency model focuses on six areas: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice[4]. In China, the "core competency framework for residents" covers professionalism, professional knowledge and skills, patient care services, communication and cooperation abilities, educational aptitude, and lifelong learning[5,6]. However, because public health practitioners and clinical physicians have different practice contexts and professional mandates, their competency frameworks differ substantially. A targeted empirical study established a domain-specific competency model for public health personnel consisting of five core dimensions: comprehensive ability, professional spirit, professional knowledge, professional skills, and research and development ability[7].

Previous studies have shown that job competency is associated with demographic attributes (e.g., age, marital status), professional background (e.g., education attainment, affiliated department, clinical training, years of clinical practice), and contextual factors (e.g., work environment, career development resources, occupational stress exposure, personal lifestyle patterns)l[8–12]. Beyond these factors, organizational behavior research has confirmed that psychosocial factors as important correlates of job competency. A multicenter cross-sectional study among registered nurses in Sweden and Norway found that higher job satisfaction was associated with better performance[13]. Self-efficacy, defined as an individual’s confidence in completing specific behaviors at a predefined proficiency level, has been recognized as a reliable predictor of work performance[14]. Among clinical nursing personnel, self-efficacy has been positively associated with core competency. Job satisfaction is also a core determinant of professional competency; a survey of general practitioners found that greater job satisfaction was associated with higher professional competency. In addition, perceived organizational support has been positively correlated with the competency of nurse mentors[15].

Perceived organizational support and job satisfaction are strongly correlated[16]. This indicates that the pathways through which these factors shape job competency may be more complex than those identified in bivariate analyses. In Spector’s structural equation model, organizational environment was a core determinant of job satisfaction[17]. Job satisfaction, in turn, influences professional commitment, work motivation, and burnout risk. Another study demonstrates that psychological capital, a higher-order construct encompassing hope, optimism, resilience and self-efficacy, mediates the association between

perceived organizational support and employee work behaviors[18]. Scott and Bruce found that organizational innovation climate was significantly linked to employees' innovative behavior, and self-efficacy served as a mediating variable bridging organizational innovation climate and employee innovative behavior[19]. Collectively, these findings suggest that self-efficacy may mediate the relationship between perceived organizational support and job competency.

Drawing on social exchange theory and organizational support theory [16], this study proposes an integrated mediation model in which perceived organizational support predicts job competency through job satisfaction and self-efficacy. Specifically, we hypothesize that perceived organizational support is positively associated with job satisfaction; job satisfaction is positively associated with self-efficacy; job satisfaction is positively associated with job competency; self-efficacy is positively associated with job competency; job satisfaction mediates the relationship between perceived organizational support and job competency; and job satisfaction and self-efficacy sequentially mediate the relationship between perceived organizational support and job competency.

This study aims to clarify these pathways among public health personnel in community health service centers in Shanghai. Shanghai has implemented comprehensive community health service reforms, making its community health workforce a useful case for studying competency-related mechanisms. By testing this integrated mediation model, this study provides policy-relevant evidence for strengthening the community public health workforce and improving public health service delivery.

Methods

Participants

From October to December 2022, a cross-sectional study enrolled public health personnel from all community health service centers across 16 districts of Shanghai. A structured questionnaire was administered to the eligible participants to collect relevant data.

Data Collection

The study used a self-developed Competency Survey Questionnaire for Public Health Personnel at Shanghai Community Health Service Centers. The questionnaire contained four main sections: (1) Sociodemographic and professional characteristics, including gender, age, educational attainment, academic major, institution of graduation, workplace, professional title, work experience (years), and completion status of standardized training for public health physicians as well as participation in relevant continuing education and training programs. (2) A competency module consisting of five dimensions: comprehensive ability, professional spirit, professional knowledge (including basic medical knowledge, public health knowledge, and health management), professional skills, and research capacity. This module comprised 42 items in total. (3) Psychosocial scales to assess job satisfaction,

self-efficacy, and perceived organizational support. (4) Lifestyle-related indicators covering smoking status, alcohol consumption, physical activity routines, and sleep duration.

The questionnaire was distributed electronically via an online survey platform. Logical validation settings were implemented to ensure the completeness and accuracy of the responses.

Job Competency

Based on competency theory and integrating findings from literature analysis, expert consultation, and behavioral event interviews, this study developed a competency assessment questionnaire for public health personnel working in Shanghai community health service centers[7]. The questionnaire demonstrated excellent overall internal consistency, with a Cronbach's α coefficient of 0.985. The five core dimensions also showed strong reliability, with Cronbach's α coefficients of 0.935, 0.959, 0.955, 0.969, and 0.916 respectively, indicating good internal consistency at both overall and dimensional levels. The split-half reliability analysis further supported the instrument's stability. The overall split-half reliability coefficient was 0.842, while the Spearman-Brown coefficients for the five dimensions ranged from 0.913 to 0.952, and the corresponding Guttman split-half reliability coefficients ranged from 0.912 to 0.949, confirming satisfactory split-half reliability. Principal component analysis extracted five common factors that collectively explained 62.241% of the total variance. All items demonstrated adequate factor loadings, ranging from 0.495 to 0.868. Confirmatory factor analysis results indicated good model fit (χ^2/df = 2.288, TLI = 0.943, CFI = 0.957, IFI = 0.958, NFI = 0.928, RMSEA = 0.081[7]).

Perceived Organizational Support

Perceived organizational support, a concept first proposed by social psychologists including Eisenberger from the University of Delaware in 1986, refers to employees' overall perception of the extent to which the organization values their contributions and genuinely cares about their well-being. A nine-item abbreviated questionnaire was used to evaluate organizational support in enterprises, involving three dimensions, namely work support, identity recognition, and interest care, with a total of nine items[20]. Work support refers to the help and support that employees feel the organization provides in work aspects; identity recognition means that employees feel that the organization values their own values and contributions; interest care refers to that employees feel that the organization cares about their lives and interests. This scale includes two reverse questions ("Even if I try my best to do the work well, the unit will not notice it" and "The unit seldom cares about me"), and reverse scoring is required[20]. Each item was scored using a seven-level Likert scale, where 1 point represents strong disagreement and 7 points represents strong agreement. The scores of all items were added up to obtain the total Perceived organizational support score, and the higher the score, the higher the organizational support. Previous studies have found that the Chinese version of Perceived organizational support, as a measurement standard for perceived organizational support, has high reliability and validity, with Cronbach's alpha being 0.883 and 0.956 in relevant populations[21,22].

Job Satisfaction

Job satisfaction was assessed using the validated short-form Minnesota Satisfaction Questionnaire (MSQ). This instrument operationalizes job satisfaction across two distinct subdomains: intrinsic job satisfaction and extrinsic job satisfaction. Intrinsic job satisfaction captures positive, self-rewarding work-related attributes that foster satisfaction, including opportunities for promotion and professional growth, recognition for contributions, perceived responsibility, and sense of achievement. Extrinsic job satisfaction reflects work-contextual extrinsic attributes that contribute to overall satisfaction, encompassing supervision quality, remuneration, institutional policies, working conditions, interpersonal dynamics in the workplace, and perceived occupational safety[23]. The 20-item short-form MSQ employs a 5-point Likert scale, anchored sequentially at "strongly dissatisfied", "dissatisfied", "neutral", "satisfied", and "strongly satisfied". A summed total score is calculated, with higher scores indicating greater overall job satisfaction. The Chinese version of the MSQ has been widely applied in domestic occupational health research, with well-documented satisfactory psychometric properties: its Cronbach's α coefficient was reported as 0.952 among Chinese psychiatrists[24] and 0.93 among community health workforce[25].

Self-Efficacy

Self-efficacy, defined as individuals' perceived capability to organize and execute the courses of action required to achieve given goals, is a critical psychological determinant influencing work performance[26]. Its positive association with professional competency has been well-documented among various healthcare personnel groups[27]. In this study, self-efficacy was measured using the Chinese version of the 10-item General Self-Efficacy Scale (GSES), which assesses individuals' perceived capacity to cope with challenges and setbacks. This widely used scale employs a 4-point Likert scale ranging from 1 ("completely disagree") to 4 ("completely agree"), yielding a total score from 10 to 40, with higher scores indicating stronger self-efficacy. The Chinese version of the GSES has demonstrated good reliability and validity in prior studies[28].

Ethics Statement

This study was approved by the Ethics Review Committee of the School of Public Health, Shanghai Jiao Tong University School of Medicine (Approval Number: SJUPN-202108) and strictly adhered to the principles of the Helsinki Declaration. All participants were fully informed of the significance and purpose of the survey and the informed consent was obtained by clicking. Considering the privacy of the respondents, all data were anonymized before being used for subsequent statistical analysis.

Data Analysis

All statistical analyses were performed using IBM SPSS Statistics 26.0 and R software. Descriptive statistics were calculated for all variables: continuous variables were presented as median and

interquartile range (IQR), and categorical variables as frequencies and percentages. Differences in job competency across demographic and professional characteristics were examined using univariate linear regression, followed by multiple linear regression to identify independent associated factors. Spearman correlation analysis was used to assess relationships among perceived organizational support, job satisfaction, self-efficacy, and job competency.

A multiple mediation model was tested using structural equation modeling in lavaan. Model fit was evaluated using the comparative fit index (CFI), Tucker–Lewis index (TLI), normed fit index (NFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). RMSEA < 0.08 and CFI/TLI > 0.90 indicated acceptable fit. The initial model included a direct path from perceived organizational support to self-efficacy; however, this path was not significant ($\beta = 0.004$, $p = 0.902$) and was therefore removed to achieve a more parsimonious final model. The final model included four paths: perceived organizational support → job satisfaction, job satisfaction → self-efficacy, job satisfaction → job competency, and self-efficacy → job competency. Indirect effects were estimated using 5,000 bootstrap resamples with bias-corrected 95% confidence intervals. All 5,000 bootstrap resamples converged. Common method bias was assessed using Harman's single-factor test, in which all scale items were entered into an unrotated exploratory factor analysis with a fixed number of one factor. A two-tailed p-value < 0.05 was considered statistically significant.

Results

Characteristic of Participants

A total of 3,809 public health personnel from all 249 community health service centers across the 16 districts of Shanghai were included in the demographic and professional characteristics analysis. Among them, 3,177 (83.4%) were female and 632 (16.6%) were male. The largest age group was 36–50 years (45.8%), and 3,098 (81.3%) were married or in a stable relationship. Most participants (72.0%) held a bachelor's degree. Regarding professional characteristics, 2.4% held a senior professional title, 43.7% worked as public health physicians, and 35.0% reported public health as their highest education major. More than half of the participants reported occasionally working overtime, with an average of 1–2 overtime days per week.

Factors Associated with Job Competency

Univariate linear regression was first conducted with job competency score as the dependent variable. Variables included gender, educational attainment, public health practitioner certificate, professional title, job position, highest education major, frequency of public health training over the past two years, overtime work, smoking, alcohol consumption, exercise routines, and sleep duration. Table 1 presents the background characteristics and competency scores of the study participants.

The multiple linear regression model identified several significant factors associated with job competency. Male participants had significantly higher competency scores than females ($t = 3.653$, $p <$

0.001). Higher educational attainment was positively associated with competency ($t = 2.735$, $p = 0.006$). Participants holding associate senior or senior professional titles scored significantly higher than those without such titles ($t = 4.937$, $p < 0.001$). Engaging in public health-related training ten or more times in the past two years was associated with higher competency scores compared with no training ($t = 6.046$, $p < 0.001$). Regular exercise was also positively associated with competency ($t = 5.223$, $p < 0.001$). Participants who reported adequate daily sleep (≥ 7 hours) had significantly higher competency scores than those sleeping less than 7 hours ($t = 4.394$, $p < 0.001$). Variance inflation factor (VIF) values for all predictors ranged from 1.013 to 2.706, indicating no substantial multicollinearity. Age was not retained in the final multiple regression model.

Table 1
Background characteristics and competency scores of public health personnel in Shanghai Community Health Service Centers (N = 3809)

Variables	Characteristic	Count	Competency score	Simple linear regression	Multiple linear regression
		N (%)	Medium (IQR)	t (P value)	t (P value)
Total		3809 (100)	150 (38)		
Gender	Female	3177 (83.4)	147 (38)	4.671 (< 0.001)	3.653 (< 0.001)
	Male	632 (16.6)	157 (34.75)		
Age	18–35 years old	1729 (45.4)	150 (40)	1.880 (0.060)	/
	36–50 years old	1745 (45.8)	151 (36)		
	> 50 years old	335 (8.8)	152 (33)		
Marriage	Single	575 (15.1)	149 (40)	1.640 (0.101)	/
	Married or in a stable relationship	3098 (81.3)	151 (37)		
	Divorce/Widow	136 (3.6)	152.5 (35.75)		
Educational attainment	Junior college or below	986 (25.9)	146.5 (40)	4.051 (< 0.001)	2.735 (0.006)
	Undergraduate college	2743 (72.0)	152 (36)		
	Master's degree or above	80 (2.1)	158.5 (30.75)		
Public health practitioner certificate	No	2511 (65.9)	149 (39)	4.310 (< 0.001)	0.777 (0.437)
	Yes	1298 (34.1)	154 (35)		
Professional title	None	387 (10.2)	146 (42)	5.188 (< 0.001)	4.937 (< 0.001)

Note. Age was not retained in the final multiple linear regression model.

Variables	Characteristic	Count	Competency score	Simple linear regression	Multiple linear regression
		N (%)	Medium (IQR)	t (P value)	t (P value)
	Primary	1561 (41.0)	148 (39)		
	Intermediate	1770 (46.5)	152 (35)		
	Associate senior or senior	91 (2.4)	166 (28)		
Job position	Public health physician	1664 (43.7)	153 (35)	-4.231 (< 0.001)	-1.131 (0.258)
	General practitioner	298 (7.8)	149 (37)		
	Nursing	1565 (41.1)	148 (40)		
	Others	282 (7.4)	144 (39)		
Highest education major	Public Health	1333 (35.0)	154 (36)	-3.571 (< 0.001)	0.827 (0.408)
	Clinical medicine	520 (13.7)	149.5 (34.75)		
	Nursing	1726 (45.3)	149 (40)		
	Others	230 (6.0)	145 (36)		
Engaged in public health work	≤ 10 years	2122 (55.7)	150 (38)	0.842 (0.400)	/
	>10 years	1687 (44.3)	151 (37)		
Frequency of participation in public health training over the past two years	0 time	144 (3.8)	144 (38.75)	7.111 (< 0.001)	6.046 (< 0.001)
	1–3 times	1292 (33.9)	145 (41)		
	4–6 times	879 (23.1)	150 (35)		

Note. Age was not retained in the final multiple linear regression model.

Variables	Characteristic	Count	Competency score	Simple linear regression	Multiple linear regression
		N (%)	Medium (IQR)	t (P value)	t (P value)
	7–9 times	337 (8.8)	152 (34)		
	≥ 10 times	1157 (30.4)	156 (32)		
Overtime work	Frequently (with an average of more than 3 days per week)	1398 (36.7)	152 (39)	-0.957 (0.339)	/
	Occasionally (1–2 days per week on average)	2016 (52.9)	149 (37)		
	Almost none (less than 1 day per week on average)	395 (10.4)	150 (33)		
Smoking	No	3621 (95.1)	150 (38)	1.965 (0.049)	-0.481 (0.631)
	Yes	188 (4.9)	156 (36.5)		
Alcohol consumption	No	3540 (92.9)	150 (38)	2.080 (0.038)	0.875 (0.382)
	Yes	269 (7.1)	154 (35)		
Exercise routines	No	1933 (50.7)	146 (40)	6.088 (< 0.001)	5.223 (< 0.001)
	Yes	1876 (49.3)	154 (33)		
Sleep duration	< 7 hours per day	2041 (53.6)	149 (40)	4.410 (< 0.001)	4.394 (< 0.001)
	≥ 7 hours per day	1768 (46.4)	152 (35)		

Note. Age was not retained in the final multiple linear regression model.

Correlation Analysis

Descriptive statistics and Spearman correlation coefficients for the four core variables are presented in Table 2. Perceived organizational support, job satisfaction, self-efficacy, and job competency were all

significantly and positively correlated with each other, with correlation coefficients ranging from 0.257 to 0.747 ($p < 0.001$).

Table 2
Descriptive statistics and Spearman correlation analysis of core variables (N = 3809)

Variables	Median (IQR)	1	2	3
1. Perceived Organizational Support	39 (10)	1		
2. Job Satisfaction	64 (10)	0.747***	1	
3. Self-Efficacy	29 (5)	0.257***	0.341***	1
4. Job Competency	150 (38)	0.282***	0.353***	0.508***
Note. IQR = interquartile range. ***p < 0.001.				

Path analysis

The final mediation model demonstrated good fit: $\chi^2 = 5.383$, $p = 0.068$, CFI = 0.999, TLI = 0.998, NFI = 0.999, RMSEA = 0.021, SRMR = 0.007. The final model is shown in Fig. 1. All paths were significant ($p < 0.001$): perceived organizational support → job satisfaction ($\beta = 0.747$), job satisfaction → self-efficacy ($\beta = 0.341$), job satisfaction → job competency ($\beta = 0.200$), and self-efficacy → job competency ($\beta = 0.441$) (Table 3).

The total indirect effect from perceived organizational support to job competency was 0.747 (95% CI [0.662, 0.834]). Specifically, the indirect effect via job satisfaction was 0.426 (95% CI [0.350, 0.511]), and the sequential indirect effect via job satisfaction and self-efficacy was 0.320 (95% CI [0.270, 0.372]) (Table 4). Because no direct path from perceived organizational support to job competency was specified, the total effect equaled the total indirect effect (0.747, 95% CI [0.662, 0.834]). These results indicate that job satisfaction and self-efficacy fully mediated the association between perceived organizational support and job competency.

Harman's single-factor test showed that the first unrotated factor explained 32.14% of the total variance, indicating that common method bias was not a serious concern.

Table 3
Path coefficients of the final mediation model (N = 3809)

Path	Unstandardized B	S.E.	z	p	Standardized β
Perceived organizational support → Job satisfaction	0.975	0.019	51.153	< 0.001	0.747
Job satisfaction → Self-efficacy	0.13	0.008	16.204	< 0.001	0.341
Job satisfaction → Job competency	0.437	0.042	10.321	< 0.001	0.200
Self-efficacy → Job competency	2.53	0.114	22.149	< 0.001	0.441

Note. B = unstandardized coefficient; β = standardized coefficient. Model fit: χ^2= 5.383, df = 2, p = 0.068, CFI = 0.999, TLI = 0.998, NFI = 0.999, RMSEA = 0.021, SRMR = 0.007.

Table 4
Indirect effects of perceived organizational support on job competency through job satisfaction and self-efficacy (N = 3809)

Paths	Unstandardized B	S.E.	95% Bootstrap CI	Proportion of Total Effect (%)	P-value
Perceived Organizational Support → Job Satisfaction → Competency	0.426	0.041	[0.350, 0.511]	57.0%	< 0.001
Sequential indirect path (Perceived Organizational Support → Job Satisfaction → Self-Efficacy → Competency)	0.320	0.026	[0.270, 0.372]	42.8%	< 0.001
Total indirect effect	0.747	0.044	[0.662, 0.834]	100%	< 0.001
Total effect	0.747	0.044	[0.662, 0.834]	100%	< 0.001

Note. Because the final model was fully mediated (no direct path from perceived organizational support to job competency), the total effect equals the total indirect effect. Percentages may not sum to 100% due to rounding.

Discussion

This study surveyed 3,809 public health personnel from 249 community health service centers in Shanghai to examine the factors associated with job competency and to test a mediation model linking perceived organizational support, job satisfaction, self-efficacy, and job competency. The final model showed that perceived organizational support was associated with job competency entirely through job satisfaction and self-efficacy, with no significant direct path from perceived organizational support to job

competency. Specifically, job satisfaction mediated the relationship between perceived organizational support and job competency, and job satisfaction and self-efficacy sequentially mediated this relationship. These findings provide policy-relevant evidence for strengthening the community public health workforce.

Male public health personnel exhibited significantly higher competency scores than females, consistent with previous competency assessments among other health professional groups[10]. These gender disparities may reflect historical and socio-structural factors, including disproportionate family responsibilities and persistent gender stereotypes that affect women's career advancement. Higher competency scores were also associated with advanced educational attainment, senior professional titles, and more frequent participation in public health training. This pattern likely reflects the cumulative benefits of specialized knowledge acquisition, enhanced professional communication, and expanded learning opportunities. Systematic training programs appear to be a vital mechanism for improving the competency of public health personnel. For community health service centers in Shanghai, implementing structured education and training aimed at advancing academic qualifications, professional titles, and practical skills may strengthen the alignment between job requirements and individual capabilities.

Regular physical exercise and adequate sleep were also positively associated with job competency. Previous research has shown that regular physical activity is associated with improved well-being and lower burnout among physicians, potentially by alleviating occupational stress and mitigating work-related fatigue[29]. Similarly, sufficient sleep duration (≥ 7 hours per day) was associated with higher competency scores, consistent with evidence that poor sleep quality aggravates occupational fatigue and impairs job performance among healthcare workers[30]. A study further indicated that poor sleep quality aggravated occupational fatigue and subsequently impaired job performance among healthcare workers, suggesting that adequate sleep serves as a critical prerequisite to maintain work competency for grassroots public health practitioners[31]. These findings suggest that promoting healthy lifestyle behaviors among public health personnel may indirectly support workforce competency.

The central contribution of this study is the identification of a sequential mediation pathway from perceived organizational support to job competency through job satisfaction and self-efficacy. Drawing on social exchange theory, when employees perceive that their organization values their contributions and cares about their well-being, they tend to reciprocate with higher job satisfaction and greater confidence in their abilities, which in turn enhances their job competency. In our final model, perceived organizational support was strongly associated with job satisfaction ($\beta = 0.747$), which was in turn associated with self-efficacy ($\beta = 0.341$) and job competency ($\beta = 0.200$). Self-efficacy was also positively associated with job competency ($\beta = 0.441$). The total indirect effect from perceived organizational support to job competency was 0.747, with 57.0% transmitted through job satisfaction alone and 42.8% through the sequential pathway via job satisfaction and self-efficacy. These results suggest that job satisfaction is a critical proximal mediator, while self-efficacy functions as an additional mechanism that amplifies the effect of organizational support on competency.

These findings extend previous research that has examined bivariate relationships among organizational support, job satisfaction, self-efficacy, and job competency. Prior studies have shown that perceived organizational support is positively correlated with job satisfaction[32] and that self-efficacy mediates the relationship between organizational support and various work outcomes[33]. Our study integrates these variables into a single mediation model and demonstrates that the effect of perceived organizational support on job competency is fully mediated by job satisfaction and self-efficacy. This suggests that organizational support alone may not directly improve competency; rather, it operates by enhancing employees' satisfaction with their work and their confidence in their professional abilities[34–36].

From a practical perspective, community health service centers should prioritize building a supportive organizational environment. This includes providing recognition, timely encouragement, and a sense of belonging, as well as instrumental support such as targeted training, optimized work environments, and sufficient resources. Managers should also monitor job satisfaction and implement strategies to improve it, given its central mediating role. In addition, interventions designed to strengthen self-efficacy —such as skills training, mentoring, and feedback mechanisms—may further enhance the impact of organizational support on job competency. By investing in these areas, community health service centers can improve the quality and efficiency of public health services.

This study also has some limitations. First, as a cross-sectional study, it cannot fully establish causal relationships among the variables. Longitudinal or experimental designs are needed to verify the dynamic mechanisms identified here. Second, all variables were collected through self-reported scales, which may introduce common method bias, although Harman's single-factor test indicated that this was not a serious concern. Third, the sample was drawn from community public health practitioners in Shanghai, which may limit generalizability to other regions. Future studies should expand the sample to different cities and regions to improve the universality of the findings.

Conclusion

This study empirically validated that perceived organizational support is associated with job competency among community public health personnel through job satisfaction and self-efficacy. When public health practitioners perceive that their organization values their career development and provides necessary support, they report higher job satisfaction and stronger self-efficacy, which in turn are associated with greater job competency. These findings provide actionable evidence for community health service centers to optimize multidimensional support systems for frontline public health staff. Strengthening organizational support, monitoring job satisfaction, and implementing self-efficacy training may help improve workforce competency and ultimately enhance grassroots public health service delivery.

Abbreviations

ACGME
Accreditation Council for Graduate Medical Education

ABMS
American Board of Medical Specialties
MSQ
Minnesota Satisfaction Questionnaire
GSES
General Self-Efficacy Scale
CFI
Comparative Fit Index
TLI
Tucker-Lewis Index
NFI
Normed Fit Index
RMSEA
Root Mean Square Error of Approximation
SRMR
Standardized Root Mean Square Residual
VIF
Variance Inflation Factor
IQR
Interquartile Range
CI
Confidence Interval

Declarations

Ethics and Consent to Participate

This study was approved by the Ethics Review Committee of the School of Public Health, Shanghai Jiao Tong University School of Medicine (Approval No. SJUPN-202108) and complied with the principles of the Declaration of Helsinki. All participants were fully informed of the study purpose, procedures, confidentiality protection, and voluntary participation rights before survey completion. Considering the privacy protection of participants, the questionnaire was fully anonymous, and no identifiable personal information was collected. Submission of the completed questionnaire represented voluntary informed consent.

Consent for publication

Not applicable

Clinical trial number

Not applicable.

Competing interests

The authors declare no commercial or financial relationships that could be considered as a potential conflict of interest in conducting this research.

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Author Contribution

RC and BW contributed to the conceptualization, investigation, data curation, formal analysis, and writing of the original draft. RC and SX participated in the investigation, methodology, formal analysis, validation, and writing of the original draft. LX, SX, QT, and YW took part in the investigation, validation, and data curation. QZ and YC were involved in the investigation, methodology, and data curation. SX and HH contributed to the conceptualization, supervision, and writing of the review and editing. SX and HH were responsible for the conceptualization, funding acquisition, supervision, and writing of the review and editing. All authors made contributions to the article and approved the submitted version.

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Data Availability

Upon reasonable request, the raw data that support the findings of this article will be furnished by the corresponding authors.

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Figures



Figure 1

Analysis of composite intermediary model (N=3809)