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Association between Mental Health Literacy and Workplace Well-Being of Chinese Grassroots Civil Servants: The Chain Mediating Effects of Regulatory Emotional Self-Efficacy and Resilience

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ABSTRACT

This study aimed to investigate the relationship between mental health literacy (MHL) and workplace well-being (WWB) of Chinese grassroots civil servants, with regulatory emotional self-efficacy (RESE) and resilience as mediating variables. A questionnaire survey was conducted among Chinese grassroots civil servants, with a valid sample size of 2673 after excluding missing values and conducting relevant data processing. The PROCESS was used to examine the relationship between MHL, RESE, resilience, and WWB. The study found that MHL among grassroots civil servants was positively and significantly correlated with WWB ($r = 0.73, p < 0.01$). RESE partially mediated the relationship between MHL and WWB ($\beta = 0.25, 95\% \text{ CI } [0.22, 0.28]$). Resilience partially mediated the relationship between MHL and WWB ($\beta = 0.22, 95\% \text{ CI } [0.19, 0.26]$). MHL had a positive effect on WWB through the chain mediating effect of RESE and resilience ($\beta = 0.05, 95\% \text{ CI } [0.03, 0.07]$). There is a close relationship between MHL and WWB, where Chinese grassroots civil servants with higher levels of MHL can develop stronger RESE and resilience, leading to higher WWB. The results of this study remind organizational institutions of Chinese grassroots civil servants that enhancing MHL, RESE, and resilience is an important pathway to promoting their WWB.

KEYWORDS

Mental health literacy; workplace well-being; regulatory emotional self-efficacy; resilience; Chinese grassroots civil servants

Introduction

The promotion of Mental Health Literacy (MHL) in improving mental health has been widely supported by international studies. Currently, multiple countries, such as Australia [1], Europe [2,3], etc., have been continuously carrying out socialization projects to enhance public MHL.

The results indicate that the MHL program can have a positive impact on the mental health promotion behaviors of community members. For example, survey participants in four European regions who were aware of the intervention program were more willing to seek professional help compared to those who were not aware of the intervention program [2]. MHL was first introduced by Jorm as



“knowledge and beliefs about recognizing, managing, and preventing mental disorders.” [4]. It was viewed as the ability of an individual to use acquired mental health information to promote their own mental health and well-being [5]. With the increasing attention to MHL in research and educational practices worldwide, existing studies on MHL, on the one hand, focus on the theoretical discourse on the connotations of MHL [6,7], and on the other hand, empirical studies have been conducted to explore how the existing structure of MHL could affect the mental health of individuals [8–10]. In recent years, the relationship between MHL and well-being has received more attention from researchers. Brijnath and colleagues conducted a meta-analysis of 14 intervention studies on MHL from 2000 to 2015 and found that enhancing MHL improves mental health conditions [11]. Studies on student populations have found a positive correlation between MHL and well-being [12,13]. For example, Yang studied 1002 junior middle school students and found that there was a significant positive correlation ($r = 0.225$, $p < 0.01$) between structural MHL and general well-being, and resilience plays a partial mediating role between structural MHL and general well-being [13].

In China, promoting MHL is considered one of the most fundamental, economical, and effective measures to improve public mental health. In 2019, the State Council of China issued the “Healthy China Initiative (2019–2030)” and established the Healthy China Initiative Promotion Committee [14], responsible for coordinating the organization, implementation, monitoring, and evaluation of the “Healthy China Initiative (2019–2030)”. In this government document, the MHL level was listed as the first outcome indicator of the “Mental Health Promotion Initiative”. Driven by these policies, researchers have paid much attention to MHL in various groups, such as college students [15], urban and rural residents [16], elderly groups [17], and so on. Chinese grassroots civil servants are the specific implementing force of China’s national development strategy to improve the MHL of the whole population. Both the Chinese government and researchers are very concerned about the MHL of the civil service. For example, the government has specially issued documents proposing to implement knowledge learning and training for Chinese grassroots civil servants’ mental health. Mental health courses are required as an important part of vocational training for civil service. Knowledge learning and training are considered important measures of MHL intervention [10,18]. Researchers have conducted extensive research on the mental health [19,20] and workplace well-being (WWB) [21,22] of Chinese grassroots civil servants. We believe that improving the MHL level of Chinese grassroots civil servants can not only enhance their confidence in maintaining mental health, but also help them achieve mental health promotion. More importantly, it helps Chinese grassroots civil servants to have sufficient theoretical and practical experience reserved for completing the important government work goal, that is, promoting public MHL. As an important work resource, MHL can better help Chinese grassroots civil servants match job

requirements and obtain higher job satisfaction. From this perspective, the MHL level of Chinese grassroots civil servants will directly affect their WWB to a certain extent. Therefore, the main purpose of this study is to use empirical research methods to examine the specific mechanisms of how structural MHL affects WWB.

MHL within WWB

From a management perspective, employee well-being can reduce job burnout and increase work efficiency [23,24]. WWB is one of the dimensions of employee well-being, which includes life well-being, WWB, and psychological well-being [25]. Existing research has shown that providing employees with some training related to mental health self-help behaviors, such as mindfulness training [26,27], group psychological training [28] and so on, can significantly improve their WWB. According to the theoretical viewpoints of MHL, strategies for mental health self-help, such as “Engage in exercise or physical activity”, “Reward yourself for reaching a small goal”, “Learn relaxation methods” are also important contents of MHL [8]. The above results suggest that adopting some approaches to improve employees’ mental health knowledge or skills can enable employees to have higher WWB. We believe that if the organization improves employees’ MHL through some mental health service projects, this will not only help them obtain methods to maintain mental health, but more importantly, it will make them feel the organization’s care beyond their work performance. Research has found that the organizational support perceived by employees enhances their positive feelings and behavior [29,30]. Conversely, if organizations do not provide employees with mental health service resources, leaving them lacking the necessary MHL to cope with emotional problems or stress caused by work difficulties/stress, it is easy for employees to lose their sense of belonging and reduce their well-being at work. In summary, we propose the following hypothesis: H1: There is a significant positive correlation between MHL and WWB.

The potential mediating effect of regulatory emotional self-efficacy (RESE)

RESE refers to an individual’s confidence in their ability to effectively manage their own emotional states and is a type of self-efficacy. It includes the ability to recognize one’s own emotional state, understand others’ emotional experiences, and express positive emotions while managing negative emotions [31,32]. This ability can affect an individual’s actual emotional regulation effectiveness and emotional state [33]. Research has shown that RESE can mitigate emotional tension, maintain emotional regulation, help regulate emotional impulses, and promote mental health [31,34,35]. The self-efficacy to manage positive and negative emotions can enable individuals to experience more positive emotions and happiness, while the self-efficacy to manage anger and frustration and the self-efficacy to manage sadness and pain are significantly negatively correlated with negative emotions and significantly positively correlated with life satisfaction [36–38]. Researchers believe that emotional regulation skills are an important factor in MHL, which

affects the mental health status of individuals [39]. Research shows that MHL can affect the self-efficacy of pre-service teachers [40]. RESE is a direct predictor of subjective well-being [41,42] or an mediating variable affecting well-being [43,44]. Based on the literature cited above, we propose the following hypothesis: H2: RESE mediates the relationship between MHL and WWB.

The potential mediating effect of resilience

Resilience is a relatively stable positive psychological trait of individuals that enables them to cope with adversity and stress, and maintain and promote their health and well-being [45]. MHL is considered an important predictive factor for resilience [46]. As a positive psychological resource for coping with stress, resilience can effectively mitigate the negative effects of stressful situations and has broad positive impacts on individuals' physical and mental health and social adaptation [47,48]. Resilience is present in all individuals, but it is not a fixed attribute and can be improved through training [49]. Resilience also has a significant positive predictive effect on individuals' well-being [50,51]. Studies have shown that resilience not only promotes well-being in individuals under severe stress but also plays a positive role in maintaining well-being in daily life situations [52]. Based on the findings cited above, we propose the following hypothesis: H3: Resilience plays a mediating role in the relationship between MHL and WWB.

The potential chain mediating role of RESE and resilience

This study proposes that RESE and resilience act as mediating factors in the relationship between MHL and WWB. Additionally, there is a mutual influence between emotional regulation and resilience. Positive and effective emotional regulation strategies are regarded as important protective factors in the development of resilience. Individuals could adopt positive emotional regulation strategies to help themselves maintain good emotional states, promote the development of internal resources, and enhance resilience in the face of stress [53–55]. In contrast, poor emotional regulation strategies are negative predictors of resilience and hinder its development [56]. According to the perspective of broaden and build theory of positive emotions, positive emotions serve to broaden individuals' resilience that catalyze upward spirals of well-being [57]. Thus, emotional regulation ability is considered a protective factor for resilience [58]. Previous studies have shown that individuals who experience more positive emotions can promote their own resilience [59], and there is a significant positive correlation between RESE and resilience [60]. Researchers have found that RESE and resilience play a chain mediating role in the relationship between perceived stress and anxiety [41]. Therefore, analyzing the role of a single mediating variable or constructing a single-step multiple mediation model may not fully explain the mechanism by which MHL affects WWB. Based on these findings, we propose a chain mediating model in which MHL improves WWB through RESE and resilience, and the following hypothesis is proposed: H4: RESE and resilience play a chain mediating role between MHL and WWB.

According to previous studies, a theoretical hypothesis model is presented in Fig. 1 and four hypotheses are proposed as follows: (1) MHL can positively predict the WWB. (2) MHL can indirectly predict WWB through the mediating role of RESE. (3) MHL can indirectly predict WWB through the mediating role of resilience. (4) MHL can indirectly predict WWB of employees through the chain mediation of RESE and resilience.

Materials and Methods

Participants

The participants in this study were Chinese grassroots civil servants who were receiving job training at the Institute of Administration. They are working in government offices across 40 districts and counties in China, representing different departments. In China, Chinese grassroots civil servants need to receive regular theoretical and competency training at the Institute of Administration. To ensure the representativeness of the training objectives and that the effectiveness of the training does not change significantly due to the time difference in participation in the training, the organizing institutions responsible for the training have formulated strict selection procedures to determine which Chinese grassroots civil servants will attend the training. The selection procedures are equivalent to longitudinal and lateral stratified random sampling of civil servants in the region based on the total sample. Based on this practice, we believe that this study, by taking advantage of the existing training mechanism in the Institute of Administration, can effectively avoid the sampling bias of the survey that may exist in general questionnaire surveys, and ensure good representativeness of the survey constructs. As mentioned above, the Chinese grassroots civil servants receiving job training in the Institute of Administration came from different regions and departments. Combining existing research on Chinese grassroots civil servants [57,58], the samples in this study are civil servants working in district and county departments, township governments, and town street offices, with administrative ranks at the division level and below.

When designing the questionnaire, this study adopted the method of balancing the order of items to reduce the guessing of the purpose of the test by the participants, thereby reducing the impact of common method biases. The current study conducted on-site paper-and-pencil questionnaire surveys. First, the study was approved by

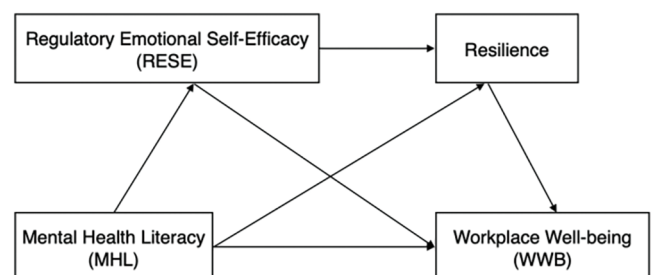


FIGURE 1. Hypothesized conceptual model.

Chongqing Academy of Governance, and all participants provided written informed consent. According to the survey management system, it should promise that the survey is completely anonymous, does not involve content unrelated to the research topic, and does not contain content that will cause serious discomfort to the respondents. Secondly, in the questionnaire, the research team informed the participants through instructions that the research is an anonymous survey, there are no right or wrong answers for the options, it is only for research purposes, and does not involve any requirements unrelated to research.

The study mainly commissioned class managers to distribute questionnaires to participants and conduct surveys. They are all long-term workers in charge of class management. In their work, they often participate in scientific research surveys on different topics, so they have rich experience in conducting questionnaire surveys and can conduct research surveys proficiently. The research team also explained the purpose of this study to them and communicated the survey procedures before the survey and listened to their suggestions about the survey process. During the on-site questionnaire survey, after the class manager explained the survey requirements to the participants, they would leave the scene for the participants to fill out the questionnaire alone to avoid the participants feeling pressured by someone supervising the questionnaire completion. After filling out the questionnaire, the participant would fold it and put it back into a designated large envelope. Generally, participants are given one day to complete the questionnaire; that is, they have the opportunity to answer the questionnaire in an environment where they feel no burden at all. Finally, the class managers would collect all the questionnaires uniformly and return them to the research team.

A total of 3217 questionnaires were distributed, with 2673 valid responses obtained after excluding incomplete questionnaires. The valid response rate was 83.09%. Our criteria for deleting data included: giving the same rating to all items, it can be clearly seen that there is a regularity in scoring items (such as 3333/55555/3333/55555, etc.), there are many missing scores (such as failing to score more than 1/5 of the items in a scale), or individual scale scores exceeded two standard deviations from the mean.

The sample distribution was as follows: 70.80% male, 29.20% female; 15.10% aged 25 or below, 26.60% aged 26-35, 22.80% aged 36-45, and 35.50% aged 46 or above; and 48.40% with a bachelor's degree or below, and 51.60% with a master's degree or above. Those who have worked for less than or equal to 5 years account for 38.30%, and those who have worked for more than 5 years account for 61.70%. In terms of administrative rank, division-level accounts for 40.90%, and section-level or below accounts for 59.10%; In terms of work location, those working in towns and streets account for 42.30%, those working in district and county departments account for 57.70%.

Measures

MHL

This study adopted the MHL Questionnaire (MHLQ) compiled by Epps et al. [61] and revised by Yang [13]. The

revised scale includes 20 questions categorized in six sub-domains: belief in value and capabilities of mental health, belief in rights of mental health, knowledge/understanding of mental health, functional behaviors of mental health, critical behaviors of mental health, communication behaviors of mental health. Participants were asked to rate to what extent they agreed with the items' description of mental health related knowledge and behavior based on their experience. An example item reads, "I know how to seek and choose the help I need if I have a mental health problem". Each item is rated on a 5-point Likert-scale ranging from Strongly Disagree to Strongly Agree. There are no reverse-scored items in the scale. In this study, the average score of the subjects in all the items of the scale was used as the level of MHL. Therefore, the subjects' MHL level ranges from 1 to 5, where a larger score represents a higher level of MHL. The MHL level of the subjects in this study is 4.26 ($SD = 0.48$). The Cronbach's alpha coefficient for this scale was 0.94 in this study.

WWB

We used the WWB scale developed by Zheng et al. [25] with a total of 6 items. Participants were asked to rate to what extent they agreed with the items' description of job satisfaction and work-related effects based on their job experience. Each of the items was rated on a 5-point Likert scale ("1" means "strongly disagree", "5" means "strongly agree"). An example item reads, "My work is very interesting". There are no reverse-scored items in the scale. The average score of the subjects in all the items is used as the WWB level in this paper. Therefore, the WWB level of the subjects ranges from 1 to 5, where the larger the score represents a higher WWB level. The WWB level of the subjects in this study is 4.11 ($SD = 0.56$). The Cronbach's alpha coefficient for this scale was 0.88 in this study.

RESE

The RESE scale developed by Capara et al. [34] was utilized in this study, which comprised 12 items. The participants were asked to rate how well they performed based on what the items described. An example item from this scale was, "Express joy when good things happen to you". Responses were rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). There are no reverse-scored items in the scale. In this paper, the average score of the subjects in all the items is used as the RESE level. Therefore, the RESE level of the subjects ranges from 1 to 5, where a larger score represents a higher RESE level. The RESE level of the subjects in this study is 3.03 ($SD = 0.48$). The scale has demonstrated good reliability and validity when used in Chinese populations [62]. The Cronbach's alpha coefficient for this scale in the study was 0.83 in this study.

Resilience

This study employed the 10-item Conner-Davidson Resilience Scale (CD-RISC-10), which was developed by Campbell-Sills [63] as a simplified version of the 25-item resilience scale compiled by Connor [45]. This single-dimension scale has concise items and good stability. The participants were asked to rate the extent to which they had been able to behave as described by the items in the previous three

months. An example item is “Able to adapt to change,” with respondents rating items on a scale ranging from 0 (not true at all) to 4 (true nearly all the time). There are no reverse-scored items in the scale. The average score of the subjects in all the items is used as the resilience level in the paper. Therefore, the resilience level of the subjects ranges from 0 to 4, where a larger score represents a higher resilience level. The resilience level of the subjects in this study is 2.94 ($SD = 0.69$). The CD-RISC-10 has been shown to have good reliability and validity when used with Chinese populations [64,65]. The Cronbach’s alpha coefficient for this scale in the study was 0.92 in this study.

Control variables

In this study, gender, age, education level, work position, years of working, and work location were included as control variables in the model to better reflect the relationships among the variables.

Statistical analysis

This study used AMOS 24.0, SPSS 25.0, and PROCESS macro to analyze the data. SPSS 25.0 was used to conduct reliability and validity tests, as well as correlation analyses on four scales. AMOS 24.0 was utilized for confirmatory factor analysis of the proposed model. The PROCESS macro developed by Hayes was employed to test for the presence of mediating effects between variables and whether these mediating effects reached the required statistical significance level. The macro included various models, each designed to test different mediating relationship. Specifically, Model 4 was used to test for simple mediating effects, while Model 6 was used to examine chain mediating effects. Based on the research hypotheses, this study utilized Models 4 and Models 6 to investigate the mediating effect between the variables. Bootstrapping with bias-corrected confidence intervals (CIs) was used to calculate indirect effects. If the 95% CI does not include 0, it indicates a significant mediating effect [66]. A $p < 0.05$ was considered statistically significant.

Results

Test for common method bias

To avoid the potential issue of common method bias arising from collecting multiple variable data through self-report, the Harman’s single factor test was conducted [67]. The first factor extracted accounted for 42.13% of the variance, which did not exceed the standard of 50% under the unrotated

factor condition, indicating that the common method bias in the questionnaire was acceptable. In addition, the fit indices of the single-factor model were not satisfactory ($\chi^2/df = 16.27$, $CFI = 0.77$, $NFI = 0.77$, $TLI = 0.74$, $RMSEA = 0.16$), indicating that the data did not suffer from serious method bias.

Confirmatory factor analysis

Confirmatory Factor Analysis (CFA) was conducted using AMOS 24.0 to test the overall fit of the model. First, a balanced approach based on factor loading size was adopted to parcel the concepts, with each concept containing 3–4 items [68]. Secondly, a four-factor model was constructed and compared with competing three-factor and two-factor models. The results showed that the 4-factor model had a good fit ($\chi^2/df = 16.27$, $CFI = 0.95$, $NFI = 0.94$, $TLI = 0.94$, $RMSEA = 0.07$), and was significantly better than the other competing models, as shown in Table 1. This suggests that the variables in the model have good discriminant validity. The composite reliabilities (CR) of MHL, RESE, resilience, and WWB were 0.96, 0.90, 0.97, and 0.90, respectively: all greater than 0.6. The average variance extracted (AVE) values were 0.80, 0.71, 0.91, and 0.60, respectively: all greater than 0.5, indicating good convergent validity of the scale.

Correlations between overall variables

The means, standard deviations, and bivariate correlations among the main study variables are presented in Table 2. MHL, RESE, resilience, and WWB were positively correlated with each other (all $p < 0.01$). The above results have provided preliminary support for validating the research hypothesis.

Test of the mediating effect

The regression model between MHL and WWB was tested and showed a significant relationship ($R^2 = 0.60$, $F = 419.26$, $p < 0.001$). The regression coefficient of MHL on WWB was also significant ($\beta = 0.87$, $p < 0.001$), indicating that MHL positively promotes WWB. Thus, Hypothesis 1 is supported. Additionally, the regression coefficient of MHL on RESE ($\beta = 0.70$, $p < 0.001$), as well as on resilience ($\beta = 1.03$, $p < 0.001$) was significant.

Further, RESE was added to the regression equation of MHL and WWB, and the results showed that RESE had a significant effect on WWB ($\beta = 0.36$, $p < 0.001$), and MHL also had a significant effect on WWB ($\beta = 0.61$, $p < 0.001$), indicating that MHL indirectly affects employees’ WWB

TABLE 1

Descriptive statistics of participants’ demographic information

Demographic information	Gender		Age				Education		Administrative rank		Work experience		Work location	
	Male	Female	≤25	26~35	36~45	≥46	BoB	MoA	DL	SLoB	≤5 years	>5 years	TS	DCD
Account	70.80%	29.20%	15.10%	26.60%	22.80%	35.50%	48.40%	51.60%	40.90%	59.10%	38.30%	61.70%	42.30%	57.70%

Note: BoB is bachelor’s degree or below, MoA is master’s degree or above, DL is division-level, SLoB is section-level or below, TS is towns and streets, DCD is district and county departments.

TABLE 2

Results of confirmatory factor analysis

Model	χ^2	df	χ^2/df	CFI	NFI	TLI	RMSEA
4-factor model (X, M1, M2, Y)	2375.20	146	16.27	0.95	0.94	0.94	0.07
3-factor model (X, M+M2, Y)	4185.36	149	28.08	0.91	0.90	0.89	0.10
2-factor model (X+M1+M2, Y)	8914.13	151	59.03	0.80	0.80	0.77	0.15
1-factor model (X+M1+M2+Y)	10255.46	152	67.27	0.77	0.77	0.74	0.16

Note: X = MHL; M1 = RESE; M2 = Resilience; Y = WWB.

through RESE. The PROCESS model 4 analysis showed that the mediation effect fit well ($R^2 = 0.60$, $F = 463.28$, $df_1 = 7$, $df_2 = 1931$, $p < 0.001$). The total effect ($\beta = 0.87$, $p < 0.001$, 95% CI [0.83, 0.90]) and direct effect ($\beta = 0.61$, $p < 0.001$, 95% CI [0.57, 0.66]) of MHL on WWB were significant. RESE played a significant partial mediating role between MHL and WWB ($\beta = 0.25$, 95% CI [0.22, 0.28]). H2 is supported.

Moreover, resilience was added to the regression equation of MHL and WWB, and the results showed that resilience had a significant effect on WWB ($\beta = 0.22$, $p < 0.001$), and MHL also had a significant effect on WWB ($\beta = 0.65$, $p < 0.001$), indicating that employees' MHL indirectly affects their WWB through resilience. The PROCESS model 4 analysis showed that the mediation effect fit well ($R^2 = 0.55$, $F = 336.04$, $df_1 = 7$, $df_2 = 1931$, $p < 0.001$). The total effect ($\beta = 0.87$, $p < 0.001$, 95% CI [0.83, 0.90]) and direct effect ($\beta = 0.65$, $p < 0.001$, 95% CI [0.60, 0.69]) of MHL on WWB were significant. Resilience played a significant partial mediating role between MHL and WWB ($\beta = 0.22$, 95% CI [0.19, 0.26]). H3 is supported.

Table 3 presents the results of Model 6 in the PROCESS, which tests the chain mediating effect of RESE and resilience on the relationship between MHL and WWB. The fit of the chain mediating model was good ($R^2 = 0.60$, $F = 419.26$, $df_1 = 7$, $df_2 = 1931$, $p < 0.001$). The total effect of MHL on WWB ($\beta = 0.87$, $p < 0.001$, 95% CI [0.83, 0.90]) and the direct effect of MHL on WWB ($\beta = 0.57$, $p < 0.001$, 95% CI [0.52, 0.61]) were both significant. The indirect effects of

MHL on WWB were also significant: (1) the indirect effect of MHL on WWB through RESE ($\beta = 0.21$, 95% CI [0.17, 0.24]); (2) the indirect effect of MHL on WWB through resilience ($\beta = 0.05$, 95% CI [0.03, 0.07]); and (3) the chain mediating effect of MHL on WWB through RESE and resilience ($\beta = 0.05$, 95% CI [0.03, 0.07]). These findings suggest that RESE and resilience partially mediate the relationship between MHL and WWB through four paths: (a) MHL \rightarrow WWB; (b) MHL \rightarrow RESE \rightarrow WWB; (c) MHL \rightarrow resilience \rightarrow WWB; (d) MHL \rightarrow RESE \rightarrow resilience \rightarrow WWB. These results support H4 (Table 4).

Discussion

The aim of this study was to explore the underlying mechanism by which MHL affects WWB among Chinese grassroots civil servants. The results showed that: (1) MHL was positively and significantly correlated with WWB; (2) RESE partially mediated the relationship between MHL and WWB; (3) resilience partially mediated the relationship between MHL and WWB; (4) MHL had a positive effect on WWB through the chain mediating effect of RESE and resilience.

Theoretical and practical implications

First, we found that MHL was positively and significantly related to WWB among Chinese grassroots civil servants, which is consistent with previous research [12,13]. WWB is

TABLE 3

Descriptive statistics and correlations among variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. Gender	1.29	0.45	1									
2. Age	2.78	1.08	-0.23**	1								
3. Education	1.51	0.49	0.02	-0.18**	1							
4. Rank	1.59	0.49	-0.19**	0.86**	-0.28**	1						
5. Work experience	1.61	0.48	-0.21**	0.85**	-0.28**	0.94**	1					
6. Work location	1.57	0.49	-0.06**	0.42**	0.18**	0.25**	0.21**	1				
7. MHL	4.26	0.48	-0.03**	-0.01	-0.07**	0.01	0.02	0.02	1			
8. RESE	3.03	0.48	0.01	0.08**	-0.05**	0.05**	0.07**	0.07**	0.70**	1		
9. Resilience	2.94	0.69	-0.05**	0.01	-0.01	-0.03	-0.04*	0.06**	0.72**	0.74**	1	
10. WWB	4.11	0.56	-0.10**	0.24**	-0.07**	0.23**	0.22**	0.13**	0.73**	0.66**	0.64**	1

Note: M is mean value, SD is standard deviation, * $p < 0.05$, ** $p < 0.01$.

TABLE 4

Test results of specific mediating effect based on Bootstrapping

Route	Effect value	95% confidence interval		VAF	
		Lower limit	Higher limit		
Direct effect	MHL → WWB	0.57***	0.52	0.61	65.51%
Indirect effect	MHL → RESE → WWB	0.20	0.17	0.24	66.67%
	MHL → Resilience → WWB	0.05	0.03	0.07	16.66%
	MHL → RESE → Resilience → WWB	0.05	0.03	0.07	16.66%
	Total indirect effect	0.30***	0.23	0.29	34.48%

Note: *** $p < 0.001$.

the subjective experience of employees' job satisfaction, which can enhance their work motivation [69], help eliminate the fear of facing setbacks, and stimulate innovation [70]. We believe that MHL is an important work resource for employees to achieve their work goals successfully. When employees face significant work adversity/stress and challenges, those with higher levels of MHL are capable of using their knowledge, skills, and resources on mental health to reduce the potential harm and thereby experience higher levels of WWB. Therefore, from the perspective of promoting WWB by improving MHL, this study has important theoretical and practical value for organizational management. The results of this study suggest that providing MHL promoting program is an important method to improve WWB among Chinese grassroots civil servants. In recent years, the Chinese government has attached great importance to the mental health of the civil servants and proposed to implement mental health education in Institute of Administration and institutions at all levels. Existing research has shown that the effect of a short MHL intervention had positive effects [10,18,71]. For example, a study showed that a 45-min standardized curriculum intervention for students can significantly improve students' mental health knowledge level, ability to identify mental health status, attitudes towards seeking help and helping peers, and the intervention effect can last for 3 months [18]. Another program consisting of two 50-min sessions given one week apart had a significant effect on the improvement of MHL in secondary school students [71]. These findings suggest that the organization carrying out standardized short MHL program for Chinese grassroots civil servants every quarter can have sustained, positive effects. For example, Institute of Administration at different levels should develop a short MHL course (e.g., one or two sessions a month) for targeting Chinese grassroots civil servants. The main contents of the program should include, at a minimum, knowledge about mental health/illness, recognition of mental health state, recognition of the necessity to seek help, methods to prevent or reduce various psychological and behavioral problems, and so on.

Second, this study found that RESE plays a mediating role in the relationship between MHL and WWB. This finding is consistent with previous researches [13,39]. Previous research has proposed that emotional regulation skills are an important factor through which MHL affects individuals' well-being [39]. We suggest that MHL can

provide individuals with important emotional regulation information and resources. As employees' MHL levels increase, they have more access to emotional regulation information and resources, which leads to stronger emotional regulation skills and self-efficacy, thus inducing more subjective well-being [72,73]. Therefore, organizations can enhance employees' WWB by increasing knowledge and skills training on emotional regulation techniques and strategies in their MHL promotion programs.

Third, our results show that MHL affects WWB through the mediating role of resilience, which is consistent with previous findings [13]. Resilience plays a partial and significant mediating role in MHL and WWB, which shows that resilience is a key factor in understanding the relationship between MHL and WWB. According to social learning theory, individuals' self-awareness of their own abilities, that is, their expectations of themselves in interacting with their environment, can enhance their effective coping with stress/adversities [74]. According to this perspective, according to this perspective, when a person's work may reduce his mental health, improving his or her self-awareness of mental health maintenance capabilities is an effective way to help him solve the problem. In other words, when individuals realize what behaviors, they do at work that will help them maintain their mental health and create greater well-being, they are more likely to transform these behaviors into stable stress coping methods. This process of developing self-awareness of abilities into actual stress coping methods is also a training process for individuals to improve their resilience. Increased resilience can promote WWB [50,51]. This finding suggests that organizations can promote WWB by enhancing MHL as an important way to improve Chinese grassroots civil servants' resilience. Future MHL improvement projects for grassroots civil servants should focus on resilience training.

Fourth, this study found that MHL indirectly affects employees' WWB through a chain mediation that involves RESE and resilience. The results showed that MHL had a significant positive predictive effect on emotional RESE, confirming the close relationship between MHL and self-efficacy [40]. If employees possess higher levels of MHL, they will increase their confidence in emotional regulation in work situations. Therefore, organizations should provide employees with opportunities for psychological education and employee assistance programs, to increase their

emotional RESE by improving their MHL. The results of this study also indicate that the stronger employees' emotional RESE is, the higher their resilience will be, which is consistent with previous literature [75]. We believe that employees with high emotional RESE are more confident in their ability to regulate their emotions when facing work adversity/stress and individuals who believe they have the ability to regulate emotions are more likely to choose effective emotion regulation strategies, avoid emotional distress, experience more positive emotions, and promote their resilience [59].

Limitations and future research

Although this paper presents some novel perspectives on methods and strategies to enhance the WWB of Chinese grassroots civil servants, there are still some limitations: Firstly, this study adopted a cross-sectional research design, making it difficult to determine causal relationships between variables. Future research could employ longitudinal studies to obtain more explanatory results. Secondly, the study only focused on Chinese grassroots civil servants, potentially limiting the ecological validity of the research findings. Further exploration is needed to determine whether the conclusions of this study have generalizability to employees from other backgrounds, such as those in enterprises or schools. Thirdly, this study only addressed WWB, which is just one dimension of employee well-being. Future research could further investigate the impact mechanisms of MHL on the multidimensional well-being of employees.

Conclusions

In general, we constructed an integrated theoretical framework to explain the relationship between MHL and WWB. Our findings highlight the ways in which MHL predicts WWB. The results of this study demonstrate that not only will employees' MHL directly affect WWB, but it will also indirectly affect WWB through the chain mediation effect of RESE and resilience. Therefore, we recommend that organizations continually adjust their management strategies based on employees' level of MHL.

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