

# An Empirical Study on the Relationship Between Organisational Support and Unethical Pro-Organisational Behaviour of Medical Staff: The Mediation of Organisational Identification

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**Background:** Due to the particularity of the services provided by the medical industry, medical staff need to not only be proficient in their professional skills, but also pay attention to the cultivation of ethical qualities. However, at present, the performance-oriented management system of medical institutions, imbalanced allocation of medical resources, and other problems are likely to cause unethical pro-organisational behaviour (UPB) among medical staff.

**Objective:** To explore the causes of pro-organizational unethical behaviors among health care workers from the perspective of employee-organizational relationships and to investigate the mechanism of organizational support perception on pro-organizational unethical behaviors.

**Methods:** A multi-stage sampling method was used to assess 322 health care workers from several tertiary and above public hospitals in China, using the Sense of Organizational Support Scale, the Organizational Identity Scale and the Pro-Organizational Unethical Behavior Scale.

**Results:** All dimensions of perceived organisational support (job support, concerns about employee interests, and value identification) significantly positively predicted organisational identification and UPB ( $p < 0.05$ ). Organisational identification significantly positively predicted UPB ( $p < 0.05$ ), and partially mediated the relationship between all three dimensions of perceived organisational support and UPB.

**Conclusion:** Medical institutions in China could positively guide medical staff through professional training to effectively avoid their UPB. Digital technologies, such as internet platforms, can also be used to increase job support for medical staff from outside the organisation. The recognition of the contributions of medical staff could be strengthened to enhance their sense of social identity and social responsibility, which may help effectively reduce their UPB.

**Keywords:** medical staff, unethical pro-organisational behaviour, perceived organisational support, organisational identification, value identification

## Introduction

Chinese medical staff generally experience high work pressure, emotional exhaustion, high performance pressure, and excessive work burden. Therefore, medical institutions have introduced a performance-oriented management system to meet the internal needs and to enhance the motivation of medical staff through economic means, such as material rewards and remuneration systems. Although these tools improve healthcare workers' team efficacy,<sup>1</sup> the emphasis on economic performance triggers competition within the organisation, neglecting how healthcare organisations provide social benefits and mass value orientation.<sup>2</sup> This can lead to unethical behaviours, such as excessive medical costs, bribery by

pharmaceutical companies, and the sale and purchase of high-priced clinics. Nevertheless, a high level of organisational support enhances members' emotional commitment to the organisation and feelings of obligation to give back through positive work or other collectivist behaviours;<sup>3</sup> this deepens the reciprocal relationship between these two parties and reinforces organisational identity in the behavioural process.<sup>4</sup>

Researchers define organisational identification as the sense of identity and belonging employees have toward an organisation, and the psychological connection and bond between the two.<sup>4</sup> Organisational identification can promote collaboration among employees and strengthen their understanding of organisational goals.<sup>5</sup> However, regardless of this description, prior research has found that under the social exchange theory medical staff may ignore ethics, and react and behave unethically when they experience conflicting interests.<sup>6</sup> For example, they may exhibit unethical pro-organisational behaviour (UPB) to satisfy their psychological need to "give back" to the organisation. UPB has been described as the behaviour of employees that violates social ethics and codes of conduct to safeguard the organisation's core interests.<sup>7,8</sup> The existence of UPB in medical institutions not only affects society's trust in them, but also hinders the rational allocation of medical resources. Although these behaviours may be profitable in the short term, they may lead to negative long-term outcomes.

Since medical work relates to the life and health of the general public, the long-term outcomes of UPB influence public interests and harm the long-term development of the medical institution. Therefore, considering medical staff, this study examines the role of perceived organisational support on staff's UPB, exploring the mediating effect of organisational identification on this association. Specifically, this study endeavours to apply evidence pertaining to UPB from enterprises to the medical institution setting.

Research on the role of perceived organisational support on medical staff's UPB from the perspective of individuals in the organisation is scarce. This study introduces organisational identification as a conducive factor to improve the factor model exploring the influence of perceived organisational support on UPB from a cognitive perspective. This is an innovation and exploration in current research on medical and health management in China. This study also provides suggestions for hospital human resource management and institutional arrangements, which have innovative value in optimizing hospital management and improving the psychology of medical workers. Our research findings can help provide constructive suggestions on regulating medical staff's behaviours from the perspectives of human resource management and organisational behaviour. Additionally, it can help improve the efficiency of hospital management by using the specific value of medical staff's perceived organisational support, while simultaneously promoting a harmonious healthcare system through organisational management and institutional changes.

## Theoretical Framework and Research Hypotheses

### Theoretical Framework

Tajfel and Turner proposed that when individuals have a sense of belonging to a particular group, they identify with the traits, values, and emotional resources of the group;<sup>9</sup> they show a clear in-group preference, subjectively distinguishing their group from other groups and members.<sup>10</sup> Social identity theory suggests that the process of associating with a social identity can be divided into three parts: group categorisation, identity comparison, and effective differentiation. Group categorisation refers to the differentiation of individuals based on certain types of distinctive characteristics, and to strengthening the differences between in-group and out-group members. Identity comparison refers to comparing one's own group and its identity with other groups, in terms of social status, influence, and other evaluations based on distinctive characteristic differences. This strengthens the effect of group classification and makes individuals identify more with their group. Effective differentiation concerns how individuals improve their group's position in society through efforts or avoidance after comparisons, forming in-group preferences and out-group prejudices. The social identity theory explains how close intergroup relationships exist in social groups by integrating self-identification with social identities. This study posits that in-group preferences for hospitals among medical staff tend to form identities, leading to UPB. Changes in attitudes toward behaviours are due to the role played by organisational identification.<sup>11</sup>

Exchange is a social behaviour based on limited resources. The social exchange theory believes that two interested parties start exchanging by obtaining the desired return from each other and paying the cost for it;<sup>12</sup> it is essentially

a reciprocal behaviour of pursuing rational interest maximisation. However, this exchange is not limited to material rewards; it also includes spiritual incentives, improving self-efficacy, and self-seeking behaviour, with corresponding costs including money, time, and opportunity costs. In this reciprocal relationship, both parties behave in accordance with the “rational person’s” pursuit of maximum reward and minimum cost.<sup>13</sup> The parties maintain and develop an exchange-based feedback loop through this reciprocal norm.<sup>14</sup> Consequently, social exchange theory is often used to analyse organisation factors that influence employees’ work inputs and outputs. When organisations consistently offer their employees adequate support, employees develop a sense of responsibility and give back to the organisations, helping them build a high-quality team within the workplace. Simultaneously, employees recognise that in this process, organisations can provide resources to meet their needs. Thus, they work actively to maintain this resource exchange in return for their labour.<sup>15</sup> The perceived organisational support proposed in this study uses the exchange relationship that exists between hospitals and medical staff.

The theory of planned behaviour proposed in the late 20th century states that specific attitudes cause specific behaviours. Behavioural attitudes, subjective norms, and intuitive behaviours are three crucial dimensions that determine an individual’s intentions and influence an individual’s emotions and cognition.<sup>16</sup> Simultaneously, external factors, such as economic, cultural, and social environments, can influence individual cognition and attitudes by affecting individuals’ subjective norms and intuitions, thus, indirectly influencing individual behaviour. Under the conditions of imbalance between medical resources supply and demand, medical staff are overwhelmed with work pressure and find it difficult to understand and sympathise with patients. Nevertheless, they can obtain positive feedback from the hospital as well as from the medical staff group. This reality subliminally influences the perceptions of medical staff, where they form a relatively positive assessment to defend the hospital’s interests and form strong pro-organisational intentions. Unethical behaviour is usually characterised by bullying, and the targets of such behaviour are usually groups that are vulnerable. As the primary vehicles that maintain hospital operations, medical staff have considerable control over medical affairs, which leads them to believe that they can achieve low-risk pro-organisational goals through unethical behaviour.

## Research Hypotheses

### Perceived Organisational Support and Organisational Identification

The concept of perceived organisational support was first proposed by Eisenberger,<sup>17</sup> an American psychologist who defined it as the extent to which employees perceive the organisation as attaching importance to their contributions and paying attention to their personal interests. This forms employees’ perception of the support the organisation provides for their work. Through surveys and interviews with employees in Chinese enterprises, Ling et al divided perceived organisational support into three dimensions: job support, value identification, and concerns about employee interests, at both work and personal levels.<sup>18</sup> Job support refers to the ability of the organisation to satisfy the needs of employees based on working conditions, and to provide appropriate professional assistance to enable them to reach their full potential. Value identification refers to companies respecting and recognising employees’ contributions to the organisation, and employees feeling honoured for their achievements. Concerns about employee interests refers to caring for the employees’ living conditions, helping them with problems in their lives, and considering the interests of employees in company decision making. Perceived organisational support determines employees’ attitudes toward the organisation.<sup>19</sup> When employees perceive that they receive strong support from the organisation, they usually form an emotional connection with the firm that ultimately strengthens their sense of belonging and identity regarding the organisation.

Specifically, when organisations provide employees with high levels of job support, such as fair procedures and stable and controlled work environments,<sup>20,21</sup> employees’ comfort and experience at work and expectations for their future in the workplace are likely to improve. This may, in turn, deepen their identification with the organisation. The organisation’s concern for employees’ interests, such as recognition, salary increases and rewards, can also engender employees’ positive attitude toward the organisation, further developing their sense of identity.<sup>22</sup> Additionally, if the organisation cares for the interests of employees, helps them when they encounter difficulties, and protects their right to development, it would strengthen employees’ sense of identity.<sup>23</sup> However, if employees perceive that they are treated unfairly or that their interests are compromised, they may become dissatisfied with the organisation, which would reduce their sense of

organisational identification.<sup>24</sup> Additionally, employees can develop a sense of satisfaction if their contributions and achievements are recognised, and this can strengthen their identity with the organisation and sense of belonging.<sup>25</sup>

Medical environments have high physical and mental demands, which require rigorous professional conduct regarding patients' medical conditions, and are characterised by high levels of mental competition. Medical staff usually value organisational support across all aspects, and such support may affect their work motivation. Therefore, we propose the following hypotheses:

Hypothesis 1: Perceived organisational support has a positive effect on the organisational identification of medical staff.

Hypothesis 1a: Job support has a positive effect on the organisational identification of medical staff.

Hypothesis 1b: Concerns about employee interests have a positive effect on the organisational identification of medical staff.

Hypothesis 1c: Value identification has a positive effect on the organisational identification of medical staff.

### Perceived Organisational Support and UPB

The ethical dilemmas related to UPB lie in the employees' trade-offs between ethics and the organisation's interests. UPBs, motivated by the intention of defending organisational, rather than personal, interests can occur when employees' level of protecting organisational interests exceeds their self-restraint regarding ethical norms.<sup>26</sup> Generally, for many organisations, UPB is directed toward external stakeholders;<sup>27</sup> that is, employees with high organisational awareness often engage in behaviours that promote their organisation at the expense of other stakeholders.<sup>28</sup> Luo and Xu pointed out that when employees have a strong sense of organisational support, they are more closely connected to the organisation, and organisational interests are more likely to affect own development.<sup>29</sup> This encourages employees to exhibit UPB in an attempt to maintain their organisation's integrity.

As mentioned above, medical staff work under great pressure and risk infection on a daily basis, which causes physical, mental and other types of stress. Hence, perceived organisational support may be important for the realisation of their personal values, as well as organisational stability and collective interests.<sup>30,31</sup> Therefore, we propose the following hypotheses:

Hypothesis 2: Perceived organisational support has a positive impact on the UPB of medical staff.

Hypothesis 2a: Job support has a positive impact on the UPB of medical staff.

Hypothesis 2b: Concerns about employee interests have a positive impact on the UPB of medical staff.

Hypothesis 2c: Value identification has a positive impact on the UPB of medical staff.

### Organisational Identification and UPB

Organisational identification refers to employees' subjective willingness regarding their level of dependence on and belonging and loyalty to an organisation; this usually occurs in positive and reciprocal social relationships.<sup>32</sup> Furthermore, organisational identification is a positive factor that may lead employees to engage in UPB.<sup>33</sup> Researchers show that frequent interaction with the organisation facilitates a sense of dependence on the organisation and strengthens employee's subjective feelings toward it.<sup>34</sup> Concomitantly, employees' satisfaction regarding their organisational identity may strengthen their level of identification with the organisation, and employees with high job satisfaction may be more likely to engage in UPB.<sup>35</sup> Such identification may enable the development of a strong employee-organisation link, making employees regard the rise and decline of the organisation as their own. Scholars have also shown that employees with high organisational identification engage in UPB to demonstrate a higher sense of belonging to the organisation.<sup>36</sup> By conducting a study on leader-employee relationships, Su and Lin proposed that

employees' willingness to protect the organisation can be stimulated by establishing organisational identification and strengthening their motivation to adopt behaviours that benefit the organisation.<sup>37</sup>

In hospitals, problems, such as physician–patient conflicts and irrational drug use, are frequently reported in China. On the one hand, this may happen because employees spontaneously identify with the interests of the organisation and set out to protect them; on the other, there may be a consensus between the organisation and employees regarding unethical behaviour, creating a complicity that causes organisational identification to produce unethical behaviours, including UPB. Therefore, we propose the following hypothesis:

Hypothesis 3: Organisational identification has a positive impact on UPB of medical staff.

### The Mediation of Organisational Identification

This study argues that although perceived organisational support can cause employees to exhibit UPB, this influencing mechanism is not necessarily direct. It can be indirect and through the mediation of organisational identification; specifically, the latter may reinforce the tendency of employees to adopt pro-organisational behaviours.<sup>38</sup> Perceived organisational support contributes to the development of employees' sense of belonging and responsibility to the organisation, making them more emotionally dependent on the organisation.<sup>39</sup> A high level of perceived organisational support can satisfy employees' socio-emotional needs, thereby strengthening their relationship with the organisation and enhancing their organisational identification.<sup>40–42</sup> However, if employees develop too strong a sense of identification with their organisation, they may form a mutual "honour and loss mentality", which may lead them to adopt high-risk behaviours for their organisation.<sup>43</sup>

Specifically, when medical staff obtains job support from the hospital, they are likely to develop a higher sense of belonging and satisfaction due to the comfortable working environment, which leads to the formation of identity at the level of working conditions.<sup>44</sup> Employees are more likely to adopt UPB to ensure a stable work environment to maintain the satisfaction and identification.<sup>45</sup> Additionally, when medical staff perceives that the hospital makes decisions considering and with concern for the employees' interests, they are likely to develop a sense of identification at the interest level because of the expected opportunities for future development.<sup>46</sup> Similarly, it is possible that medical staff takes improper actions to protect and maintain the common development of themselves and the organisation.<sup>36</sup> Furthermore, when medical staff obtains value identification in medical institutions, they may perceive their social identities as being consistent with the goals and directions of the organisation. Thus, they form the perception of sharing honour and shame with the organisation, engaging in a series of unethical behaviours, if needed, to maintain the image of the organisation and preserve their social identities.<sup>47</sup> Therefore, we propose the following hypotheses:

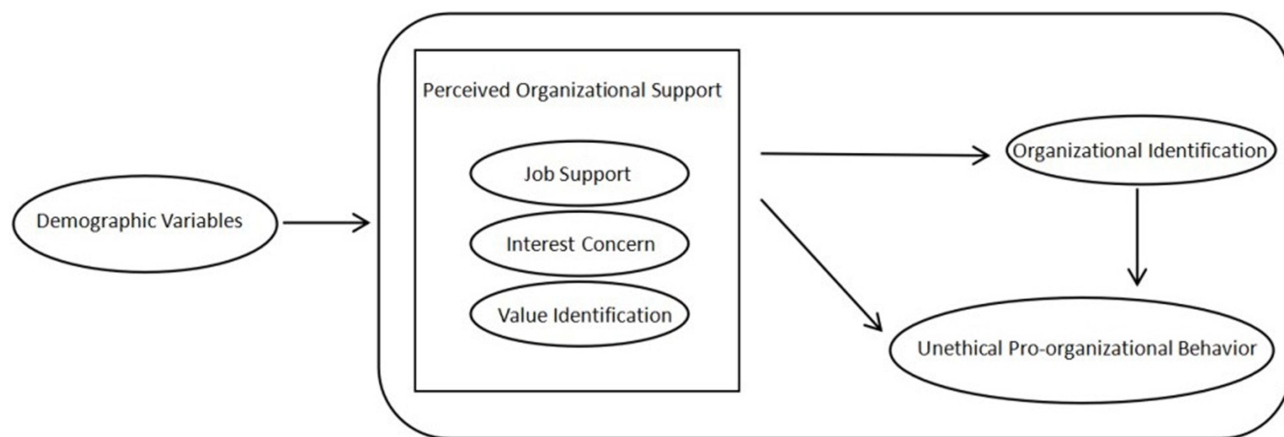
Hypothesis 4: The effect of perceived organisational support on UPB among medical staff is mediated by organisational identification.

Hypothesis 4a: The effect of job support on UPB among medical staff is mediated by organisational identification.

Hypothesis 4b: The effect of concerns about employee interests on UPB among medical staff is mediated by organisational identification.

Hypothesis 4c: The effect of value identification on UPB among medical staff is mediated by organisational identification.

By combining social identity theory, social exchange theory, and the theory of planned behaviour, this study focuses on the predisposing factors of UPB among medical staff. It investigates how their perceived organisational support affects UPB. Based on prior research and the evidence on the interrelationships among the variables of interest for this study, we construct a theoretical model of the relationship between perceived organisational support and UPB, mediated by organisational identification (Figure 1).



**Figure 1** The theoretical model of this research.

## Methods

### Research Objects

This study adopted a multi-stage random sampling method. Firstly, we fully considered the economic and cultural differences among different regions in China and divided them into five cluster regions: East China, West China, North China, South China, and Central China. These five regions have become the first level units for our sampling. By analogy, we will select hospitals in the corresponding areas for random sampling based on certain requirements. We contacted tertiary public hospitals in Nanjing, Shanghai, Chengdu, Beijing, Guangzhou, Xiangtan, Yancheng, and Suzhou in China. We distributed questionnaires to medical staff through online platforms and traditional paper questionnaires with the assistance of relevant departments, in January and February 2022. Before the beginning of the questionnaire, respondents could check the survey's aims and received information describing and guaranteeing that the data obtained would be used only for academic purposes. All participants voluntarily participated in this study and provided their informed consent prior to study onset. The final sample comprised 322 valid questionnaires, with an effective response rate of 90.4%. The experimental protocol was established, according to the ethical guidelines of the latest revision of the Declaration of Helsinki and was approved by the Human Ethics Committee of Nanjing University of Chinese Medicine. Written informed consent was obtained from individual.

Female medical staff accounted for 57.8% of the final valid sample. Regarding age, the groups of 31–40 and 41–50 years together accounted for 59.3% of the total. Most participants (71.1%) were married and had a bachelor's or a master's degree (82.3%). Some had a doctorate (17.1%) or an associate degree (0.6%). Regarding professional title, those with intermediate or deputy high titles accounted for 64.3%. Pertaining to working years, most had 11–20 and 21–30 years of experience (56.6%). Regarding department, 79.5% of the participants were from medical and surgical departments. Most participants were physicians and nurses, with 54.0% of them being nurses; few were medical technicians (4.7%). The composition of the sample is consistent with the current staff distribution in tertiary hospitals (Table 1).

### Research Tools: Self-Administered General Sociodemographic Scale

The questionnaire contained a scale pertaining to participants' general sociodemographic characteristics, including age, gender, marital status, educational background, position, working years, department, and professional title.

### Perceived Organisational Support Scale

To assess perceived organisational support, this study used the 17-item Perceived Organisational Support Scale developed by Ling et al,<sup>18</sup> which accounts for the characteristics of Chinese employees and has been empirically tested in the Chinese context. It comprises three dimensions: job support (eg "The hospital adopts my rationalised suggestions for improving working conditions"), concerns about employee interests (eg "The hospital raises the salary of efficient staff"), and value identification (eg "The hospital is proud of my accomplishments"). The items were rated on

**Table 1** Statistics of Demographic Factors of the Medical Staff Surveyed

Demographic Variables	Category	Percentage
Gender	Male	42.2
	Female	57.8
Working years	Within 10 years	27.0
	11–20 years	28.3
	21–30 years	28.3
	More than 30 years	16.5
Professional title	Junior	27.0
	Intermediate	36.0
	Deputy high	28.3
	Senior	8.7
Job category	Doctors	41.3
	Nurses	54.0
	Medical technicians	4.7

a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly approve*). The Cronbach's  $\alpha$  for the three-subcales were 0.902, 0.916, and 0.885, respectively (Table 2).

### Organisational Identification Scale

We used Mael and Ashforth's six-item Organizational Identification Scale, which is widely recognised in the related research fields.<sup>48</sup> In our questionnaire, the organisation was a "hospital" (eg "I am very interested in what others think about my hospital"). The items were rated on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly approve*). The Cronbach's  $\alpha$  coefficient for the scale was 0.873.

### UPB Scale

We used the six-item UPB scale developed by Umphress,<sup>7</sup> which has been applied in research across various industries. In our questionnaire, the organisation was a "hospital" (eg "I would do whatever it takes to help my hospital"). The items were rated on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly approve*) was used. The Cronbach's  $\alpha$  for this scale was 0.896.

## Procedures and Analysis

The scales used in this study were either developed by foreign scholars or for staff in other industries. Therefore, to ensure that our questionnaire was compliant with the setting of this study, was of quality, and considered the professional characteristics of Chinese medical staff, we conducted a pilot survey before the formal investigation. Based on its results, we revised the questionnaire items. Specifically, we contacted the nursing and medical departments of the relevant hospitals and asked them to randomly issue an electronic or paper questionnaire to the medical staff at the institution. Similar to the process of formal investigation, we informed the respondents of the pilot study that the questionnaire data would be used only for research purposes and that personal information would be kept confidential. The medical staff

**Table 2** Results of Reliability and Validity Analysis of the Scale

Potential Variables	Cronbach's $\alpha$	CR	AVE
Job support	0.902	0.903	0.650
Concerns about employee interests	0.916	0.917	0.689
Value identification	0.885	0.887	0.613
Organisational identification	0.873	0.875	0.540
Unethical pro-organisational behaviour	0.896	0.898	0.597

were asked to complete the questionnaires truthfully based on their working conditions; the questionnaires were directly handed to the researcher. Data were not shared with the hospital and the questionnaire response rate was 100%.

Based on a literature review, we constructed a theoretical framework and a structural equation model between the independent variables (ie perceived organisational support and the mediator of organisational identification) and the dependent variable (ie UPB). SPSS software (version 26.0) was used to conduct descriptive analysis of participants' sociodemographic characteristics, and analysis of variance was used to test individual differences in each variable dimension. Moreover, AMOS (version 24.0) software was used to construct a structural equation model and explore the relationship between perceived organisational support, organisational identification, and UPB. To study the mediating effect of organisational identification on the relationship of perceived organisational support and UPB, the bootstrap method was used. We also determined whether the variable was related to a partial or complete intermediary role in the studied relationships.

## Results

### Analysis of Differences Based on Sociodemographic Variables

T-tests and analysis of variance were used to test the differences between medical staff with different characteristics for each variable. The results (Table 3) revealed significant differences for the subscale of job support by sex, age, marital

**Table 3** Differential Analysis of the Effects of Sociodemographic Characteristics on Each Variable of Interest

Sociodemographic Variables	Category	Perceived Organisational Support						Organisational Identification		Unethical Pro-Organisational Behaviour	
		Job Support		Concerns About Employee Interests		Value Identification		M±SD	T/F	M±SD	T/F
		M±SD	T/F	M±SD	T/F	M±SD	T/F				
Sex	Male	3.23±1.01	-2.129**	3.58±1.02	-0.822	3.30±1.50	-1.425	3.72±0.92	-1.867	3.48±1.00	-2.011**
	Female	3.48±0.99		3.68±1.01		3.47±1.00		3.90±0.73		3.69±0.85	
Age(years)	≤ 30	3.10±0.96	3.091**	3.37±1.05	2.254	3.19±1.09	1.485	3.60±0.89	4.777**	3.40±0.97	2.233
	31–40	3.42±1.06		3.74±0.97		3.39±0.98		3.86±0.78		3.67±0.90	
	41–50	3.34±1.12		3.72±1.05		3.44±1.06		3.79±0.88		3.56±0.97	
	51–60	3.72±0.87		3.70±0.91		3.62±0.98		4.16±0.51		3.83±0.73	
	> 60	2.80±2.63		2.60±1.98		3.10±1.84		2.75±1.77		2.92±1.77	
Marital status	Unmarried	3.13±1.11	3.754**	3.53±1.05	0.744	3.30±1.10	1.223	3.66±0.94	3.004	3.34±1.04	5.414**
	Married	3.47±1.01		3.68±1.01		3.44±0.99		3.90±0.76		3.71±0.85	
	Divorced	2.80±0.28		3.50±0.99		2.60±0.85		2.50±0		3.17±0.24	
Educational background	Junior college	3.20±1.08	0.823	3.50±1.08	0.648	3.01±1.05	4.243**	3.53±0.98	3.767**	3.53±1.08	0.293
	Undergraduate	3.43±1.03		3.69±0.98		3.51±1.00		3.90±0.76		3.61±0.87	
	Master	3.32±1.04		3.57±1.09		3.35±1.01		3.83±0.79		3.60±0.96	
	Doctor	3.70±1.27		3.70±1.14		4.40±0.28		4.75±0.35		4.08±0.82	
Professional title	Junior	3.43±1.01	0.441	3.54±1.09	2.503	3.25±0.97	3.305**	3.85±0.79	2.073	3.61±0.96	0.867
	Intermediate	3.41±0.99		3.78±0.90		3.49±1.04		3.85±0.71		3.68±0.83	
	Deputy high	3.27±1.08		3.47±1.08		3.27±1.04		3.68±0.90		3.48±0.97	
	Senior	3.37±1.22		3.89±0.91		3.86±0.89		4.11±1.00		3.67±1.01	
Working years	≤ 10 years	3.26±1.09	1.773	3.50±1.10	1.594	3.16±1.11	4.033**	3.77±0.92	1.724	3.45±0.93	5.121**
	11–20 years	3.34±1.03		3.66±0.93		3.44±0.99		3.95±0.76		3.58±0.88	
	21–30 years	3.35±1.03		3.60±1.01		3.36±1.04		3.71±0.86		3.52±0.99	
	More than 30 years	3.66±0.99		3.88±1.01		3.77±0.76		3.91±0.64		4.03±0.71	
Department	Internal medicine	3.45±0.99	4.260**	3.71±0.93	0.746	3.49±0.99	2.552	3.90±0.73	2.075	3.66±0.87	2.661
	Surgery	3.47±1.04		3.58±1.10		3.42±1.01		3.83±0.76		3.66±0.89	
	Medical laboratory	3.03±1.12		3.56±1.06		3.15±1.09		3.65±1.08		3.36±1.04	
Position	Doctor	3.39±1.04	1.761	3.67±1.02	0.564	3.37±1.01	0.867	3.84±0.81	5.474**	3.61±0.90	2.406
	Nurse	3.40±1.01		3.63±1.01		3.44±1.01		3.87±0.77		3.64±0.89	
	Medical technicians	2.88±1.36		3.37±1.12		3.09±1.25		3.16±1.22		3.10±1.28	

Notes: N = 322. \*\* p < 0.05.

status, and department ( $p < 0.05$ ). Regarding the subscale of concerns about employee interests, there were no significant differences by sociodemographic variables ( $p > 0.05$ ). Regarding the subscale of value identification, differences were significant by educational background, professional title, and working years ( $p < 0.05$ ). For organisational identification, the differences were significant by age, educational background, and professional level ( $p < 0.05$ ). For UPB, there were significant differences by sex, marital status, and working years ( $p < 0.05$ ).

## Correlation Analysis of the Variables

Table 4 shows the correlations between the variables. The results of the correlation analysis showed positive relationships between job support and organisational identification ( $r=0.464$ ,  $p<0.01$ ), between concerns about employee interests and organisational identification ( $r=0.513$ ,  $p<0.01$ ), and between value identification and organisational identification ( $r=0.536$ ,  $p<0.01$ ); between job support and UPB ( $r=0.542$ ,  $p<0.01$ ), concerns about employee interests and UPB ( $r=0.650$ ,  $p<0.01$ ), value identification and UPB ( $r=0.597$ ,  $p<0.01$ ) were all positively correlated; and organisational identification and UPB were positively correlated ( $r=0.591$ ,  $p<0.01$ ).

## Path Analysis

As shown in Figure 2, the model we proposed included the independent variables of perceived organisational support (job support, concerns about employee interests, and value identification), the mediating variable of organisational identification, and the outcome variable of UPB. The results (Table 5) of confirmatory factor analysis showed that  $\chi^2/df = 1.686$ , less than 2; CFI=0.961, TLI=0.957, IFI=0.962, all above 0.9; GFI=0.894, AGFI=0.873, all above 0.8; RMSEA=0.046, less than 0.05. Each fit index of the model met the statistical criteria and reached satisfactory values; the model was a good fit.

Path analysis was performed by structural equation modelling and the results are shown in Table 6. The results showed that job support (path coefficient = 0.201,  $p = 0.004$ ), concerns about employee interests (path coefficient = 0.195,  $p = 0.013$ ), and value identification (path coefficient = 0.357,  $p < 0.001$ ) significantly positively influenced organisational identification. Thus, Hypothesis 1 was supported. Furthermore, job support (path coefficient = 0.147,  $p = 0.011$ ), concerns about employee interests (path coefficient = 0.346,  $p < 0.001$ ), and value identification (path coefficient = 0.168,  $p = 0.016$ ) had significant positive effects on UPB, thus supporting Hypothesis 2. Organisational identification also had a significant positive effect on UPB (path coefficient = 0.285,  $p < 0.001$ ), thereby supporting Hypothesis 3.

## Mediation Effect Test

As reported, we used bootstrapping to test the significance of the mediating effect of organisational identification. The results are presented in Table 7. In path 1, the indirect effect of job support on UPB was significant ( $\beta = 0.057$ ,  $p < 0.05$ ), as was the direct effect ( $\beta = 0.147$ ,  $p < 0.05$ ), indicating that organisational identification partially mediated the relationship between job support and UPB.

**Table 4** Correlation Analysis of the Variables

	Job Support	Concerns About Employee Interests	Value Identification	Organisational Identification	Unethical Pro-Organisational Behaviour
Job support	I				
Concerns about employee interests	0.541***	I			
Value identification	0.519***	0.623***	I		
Organisational identification	0.464***	0.513***	0.536***	I	
Unethical pro-organisational behaviour	0.542***	0.650***	0.597***	0.591***	I

Note: \*\*\*  $p < 0.01$ .

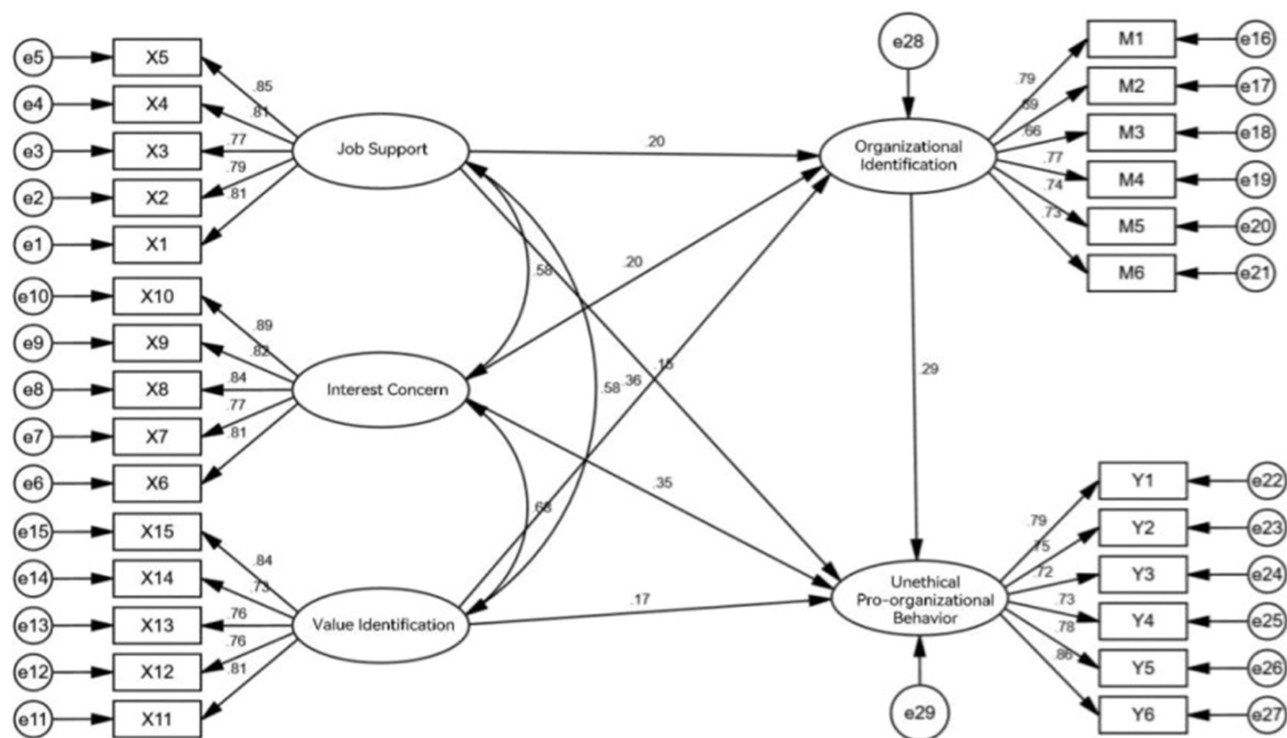


Figure 2 Structural equation model.

In path 2, both the indirect ( $\beta = 0.056$ ,  $p < 0.05$ ) and the direct effects ( $\beta = 0.346$ ,  $p < 0.05$ ) of concerns about employee interests on UPB were significant, indicating that organisational identification played a partial mediating role on the link between concerns about employee interests and UPB.

Table 5 Model Construction Fitting Index (n=322)

Fitness Indexes	$\chi^2/df$	CFI	TLI	GFI	IFI	AGFI	RMSEA
Statistical values	1.686	0.961	0.957	0.894	0.962	0.873	0.046
Standard values	$\leq 2.00$	$\geq 0.90$	$\geq 0.90$	$\geq 0.80$	$\geq 0.90$	$\geq 0.80$	$\leq 0.05$

Table 6 Structural Equation Model Path Coefficients

Path	Standard Path Coefficient	Standard Error	T-value	P-value	For the Hypothesis
Organisational identification <— Job support	0.201	0.060	2.909	0.004	Supported H1a
Organisational identification <— Concerns about employee interests	0.195	0.070	2.492	0.013	Supported H1b
Organisational identification <— Value identification	0.357	0.070	4.394	<0.001	Supported H1c
Unethical pro-organisational behaviour <— Job support	0.147	0.053	2.531	0.011	Supported H2a
Unethical pro-organisational behaviour <— Concerns about employee interests	0.346	0.063	5.088	<0.001	Supported H2b
Unethical pro-organisational behaviour <— Value identification	0.168	0.063	2.407	0.016	Supported H2c
Unethical pro-organisational behaviour <— Organisational identification	0.285	0.065	4.611	<0.001	Supported H3

**Table 7** Bootstrap Analysis of the Mediating Effect

Path (Standard)	Effect	Point Estimation $\beta$	Standard Error	P-value	Bootstrap 5000 Times, 95% CI
Path 1	Indirect effect	0.057	0.028	0.016	(0.009, 0.117)
	Direct effect	0.147	0.066	0.029	(0.017, 0.275)
Path 2	Indirect effect	0.056	0.029	0.017	(0.008, 0.121)
	Direct effect	0.346	0.073	<0.001	(0.202, 0.484)
Path 3	Indirect effect	0.102	0.034	<0.001	(0.043, 0.179)
	Direct effect	0.168	0.073	0.024	(0.024, 0.312)

**Notes:** Path 1: Job support—organisational identification—unethical pro-organisational behaviour. Path 2: Interest concern—organisational identification—unethical pro-organisational behaviour. Path 3: Value identification—organisational identification—unethical pro-organisational behaviour.

In path 3, both the indirect ( $\beta = 0.102$ ,  $p < 0.05$ ) and direct effects ( $\beta = 0.168$ ,  $p < 0.05$ ) of value identification on UPB were significant, indicating that organisational identification partially mediated the association between value identification and UPB. Therefore, Hypothesis 4 was supported.

## Discussion

This paper proposed a framework to examine whether and how the perceived organisational support influences medical staff's UPB through organisational identification. It aimed to identify the association between the UPB exhibited by medical staff and the support provided by the organisation; it also explored what factors play a bridging role in this association.

Our findings show that the perceived organisational support positively impacted UPB, consistent with the findings of Zhang and Wang et al<sup>49,50</sup> Perceived organisational support significantly impacted employees' attitudes and behaviours.<sup>51,52</sup> When medical staff perceived job support from the organisation, they put in more effort to maintain the organisation.<sup>53</sup> For instance, if the sense of loss caused by the decline in working conditions due to impaired organisational development outweighed the sense of moral self-condemnation, medical staff engaged in unethical behaviour to preserve the organisation and ensure uncompromised working conditions.<sup>54</sup> Additionally, the interest received by medical staff from the organisation not only formed their expectations for future development, but also developed in them a sense of gratitude.<sup>55</sup> With the combined effect of these two factors, medical staff may choose to behave unethically to reciprocate the hospital's support and preserve their future development.<sup>56–58</sup> Moreover, value identification may pressure medical staff to solve dilemmas by using improper measures, such as UPB to maintain the a psychological community of interest with the hospital they have created.<sup>7</sup>

Our results show that there is a positive effect of organisational support on organisational identification, consistent with the conclusion of previous studies that “high levels of organisational support lead to higher levels of organisational identification”.<sup>59,60</sup> For medical staff, job support is an important aspect to survive and achieve self-transcendence, as well as to serve the organisation. The higher the perceived job support, the more willing employees are to remain in the organisation, and form organisational identification based on career development. Additionally, organisational interest concern is closely related to the degree of employee value.

Some practical actions of the organisation, such as protecting individual rights and interests, tend to enhance individual identification with the organisation.<sup>61</sup> Lastly, medical staff, as a special group, generally possesses a positive self-identity,<sup>62</sup> and once their personal profile is combined with the hospital's image, the group is motivated to strengthen its organisational identification.

The findings of this study show that organisational identification positively influences UPB, which is consistent with previous research findings.<sup>63,64</sup> For medical staff, when organisational identification is shaped, there is a congruent match in values between them and the hospital. Medical and nursing staff acknowledge the benefits and values brought to them by the hospital in terms of salary, status, and self-fulfilment; in turn, they give feedback to the hospital. This reciprocal

relationship is relatively robust, prompting medical staff to take legitimate or illegitimate measures to safeguard this reciprocal relationship, resulting in UPB.

Furthermore, this study revealed the mediating mechanism of organisational identification between the perceived organisational support and UPB. Previous studies have shown the positive effect of perceived organisational support on organisational identification and the influence of organisational identification on UPB.<sup>63,65,66</sup> However, our study placed the three concepts under the same theoretical framework. The results showed that medical staff's perceived organisational support has an indirect effect on UPB through the effect of organisational identification. According to social identity theory, organisational identification can strengthen employees' sense of belonging to the organisation. Additionally, improving employees' organisational identification can motivate individuals to perform their functions in accordance with the organisation's values. Thus, when medical staff perceive a high level of support from the hospital, their willingness to defend their collective interests becomes higher due to organisational identification, increasing the likelihood of them engaging in unethical behaviour to preserve the reciprocal relationship. Notably, organisational identification plays only a partial mediating role; there may be other explanations for the effect of perceived organisational support on UPB.

## Limitations

This study has several limitations that should be tackled in future studies. First, only the dimensions of the perceived organisational support were subdivided; the structure of organisational identification and UPB were not explored in detail. Second, the study only explored the ideological elements, such as employees' perceived organisational support and organisational identification. Relatively few objective elements of non-ideological aspects were explored. Third, the overall research framework was mainly based on the medical staff's self-evaluation, which can be vulnerable to the implications of subjective consciousness. Fourth, this study only considered the situation of medical staff in Jiangsu province, where medical conditions are relatively high. It did not consider UPB that may occur among medical staff in areas with relatively poor medical conditions. Fifth, it did not investigate whether the study hypothesis holds true in private or community hospitals. Finally, this study was limited to cross-sectional analysis and did not explore the perceived organisational support, the degree of organisational identification formation, and the possibility of UPB based on life cycle theory, which posits a development cycle onto the healthcare industry and uses different stages of individual medical staff's career cycle as its theoretical orientation. Future studies should further analyse the influence of the time dimension on organisational-employee behaviours from a longitudinal perspective.

## Implications

This study focuses on the interrelationship between medical staff's perceived organisational support, organisational identification, and UPB. A specific discussion of how the three dimensions of organisational support have a direct impact on the formation of UPB and how they indirectly act on medical staff's UPB through the mediating mechanism of organisational identification was conducted. According to our results, the reason medical staff engage in UPBs may be due to their involvement in reciprocal relationships with medical institutions. Medical staff can obtain both material and spiritual satisfaction from medical institutions, implying that safeguarding the interests of the organisation is an optimal choice for individual development. This study provides the following implications based on these findings.

To avoid UPB triggered by organisational identification and perceived organisational support, medical institutions should provide professional quality training to positively guide medical staff to develop an ethical concept of employment. Additionally, they could try to make the maintenance of collective interests and a sense of mission as legitimate purposes of the organisation and, in turn, of the medical staff, which may help improve the social benefits of the medical industry, while considering the institutions' economic efficiency.

Moreover, digital technologies (eg internet-based platforms and artificial intelligence diagnosis) can be used to increase the job support that medical staff receive from outside the organisation. Such external support for medical staff could shift their over-reliance on the organisation to a dependence on emerging technologies, thereby helping avoid the professional motivations that lead to UPB. These technologies also have the potential to change the phenomena of

information asymmetry and mismatch in the medical industry, subsequently improving the efficiency of supervision of medical staff's UPBs.

Additionally, society in general should recognise and commend the contributions of medical staff, which could enhance their sense of social identity and social responsibility. This may encourage medical staff to remember or become aware of their social responsibility, prioritise the patients' life and health, help curb the occurrence of UPB, and help those engaging in UPB return to their original intentions of engaging in the medical industry.

## Abbreviation

UPB, Unethical Pro-organisational Behaviour.

## Data Sharing Statement

The original contributions presented in the study are included in the article. Further inquiries can be directed to the corresponding authors.

## Ethics Approval and Consent to Participate

The experimental protocol was established, according to the ethical guidelines of the latest revision of the Declaration of Helsinki and was approved by the Human Ethics Committee of Nanjing University of Chinese Medicine. Written informed consent was obtained from individual.

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## Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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## Disclosure

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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