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Study on the Impact of Intergroup Emotions on Doctor-Patient Relationship and Intervention Strategies from the Perspective of Social Work

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Abstract

One of the core objectives of the Healthy China 2030 Planning Outline is to build a harmonious doctor-patient relationship, and the key element in exploring the factors affecting this relationship lies in intergroup emotions. However, current research on such issues remains incomplete. Therefore, this study adopts the basic concept of social work-"individuals exist in a specific environment"-to investigate how intergroup emotions influence the ways of doctor-patient communication and response. First, relevant literature was reviewed to synthesize domestic and international research findings. Then, empirical data were used to illustrate how intergroup emotions affect and reshape the doctor-patient relationship through two approaches: passive adaptation and active construction. Additionally, this study analyzed how these emotions further expand their influence via four channels: online public opinion, self-sustaining positive cycles, story reshaping, and environmental impact. Second, corresponding solutions were proposed based on the needs of relevant groups and the roles of social organizations, covering aspects such as emotional competence cultivation and regulation, improvement of intergroup communication skills, and optimization of medical service environments. Furthermore, a diversified cooperation mechanism was put forward to resolve conflicts and related issues. Finally, this study aims to provide deeper insights for the research on intergroup emotion theory, promote studies on doctor-patient relationships in the medical industry, improve the quality of medical services, and reduce the occurrence of doctor-patient conflicts.

Keywords

Social Work; Intergroup Emotions; Doctor-Patient Relationship; Intervention Strategies; Emotional Communication.

1. Introduction

Building a harmonious doctor-patient relationship is a critical issue in the high-quality development of China's medical service system and one of the key tasks emphasized in the Healthy China 2030 strategic goals. Currently, China is at a pivotal milestone in the transformation of public health policies during the "14th Five-Year Plan" period. The quality of doctor-patient relationships not only directly affects the health benefits of the public but also significantly impacts the efficiency of medical service allocation.

Data from the Institute of Development Planning and Population Health of the National Health Commission shows that a 1% improvement in patient satisfaction can extend patients' average life expectancy by 0.23 years and reduce the pressure of medical insurance expenditure by 1.7%. A medical anthropology study points out that the quality of positive doctor-patient

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relationships is closely associated with basic medical service outcomes, and this impact can even reach 27% of the effectiveness of drug treatment[1].

However, contradictions in China's doctor-patient relationships persist. For instance, the imbalance between supply and demand caused by the irrational distribution of medical resources, the high work pressure and workplace burnout of medical staff, the growing demand for medical services from patients, and the society's high sensitivity to negative medical public opinion all lead to a lack of trust between patients and medical staff. According to a global survey conducted by a Harvard University research team led by Professor Blendon in 2017, a 10% decrease in trust between doctors and patients results in a 28% drop in patients' medication adherence and a 19% decline in vaccination rates.

Long-term tracking data on China's medical services shows that the trust of urban residents in tertiary medical institutions has decreased from 81.7% in 2016 to 69.3% in 2020, which is closely related to the reduced effectiveness of the hierarchical medical system. More alarmingly, the deterioration of doctor-patient relationships has become a double-edged sword for medical staff. The 2022 U.S. Physician Health Survey reveals that doctors who have experienced doctor-patient conflicts have a 3.1-fold increase in depression levels, and their job burnout rate rises by 35% annually.

A survey found that patients with medical anxiety disorders account for 42% of the total population, 4.8 percentage points higher than that of the general population. Meanwhile, the study indicates a positive correlation between emotional tension among patients and doctors, leading to a vicious cycle of "emotional confrontation → relationship deterioration → mental harm".

Existing research on doctor-patient relationships primarily focuses on improving medical systems, enhancing communication quality between doctors and patients, and refining legal norms for medical disputes. There is a lack of studies on emotional exchange from a collective perspective, especially comprehensive and systematic attempts from the lens of intergroup emotions. Chinese scholars first proposed the intergroup emotion theory, which elaborates the relationship among "group identity → intergroup emotion → intergroup action" based on social identity theory, providing a robust theoretical framework for explaining the process of intergroup conflicts[2]. However, its current application is limited to analyzing relationships among the general population and has not been extended to specific medical scenarios.

In addition, social work emphasizes adjusting interpersonal relationships and solving problems, with a focus on humanistic care and socialization. It pays attention to individuals' emotions in specific contexts and requires realization through clients' self-development, collaboration, and socialization. Nevertheless, these advantages have not been fully demonstrated. Existing research on medical service-patient relationships remains short-sighted. Although the "doctor-patient shared decision-making" model advocated by Veatch (1972) is regarded as an effective way to alleviate tense doctor-patient relationships, most doctor-patient relationships in China are still "authoritative" in nature. Moreover, most influential studies are based on a medical perspective and lack support from social sciences and psychology.

Furthermore, while some studies have explored the role of emotional integration and group interaction in doctor-patient relationships, there is still a lack of a comprehensive theoretical framework covering "group emotion influence mechanism → information transmission chain → intervention measures".

This study holds significant academic and practical value with a clear purpose. Academically, it expands the application scope of intergroup emotion theory-from general group relationship research to specific medical scenarios-filling the research gap of the "group emotion perspective" in the field of doctor-patient relationships. It also promotes collaboration between sociology and social psychology, contributing to the development of localized research on

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doctor-patient relationships in China. Practically, the findings of this study can serve as a basis for identifying whether the root cause of doctor-patient conflicts is a social psychological issue and for solving such problems. It also provides strategies for hospitals and relevant organizations to improve doctor-patient relationships and reduce psychological harm to both parties.

Therefore, based on a comprehensive investigation of the existence and mechanism of intergroup emotions affecting doctor-patient relationships, this study identifies the key factors of intergroup emotions in doctor-patient relationships and their transmission paths, and proposes hierarchical solutions from the perspective of social work to construct a healthy doctor-patient relationship model.

2. Definition of Core Concepts

2.1. Social Work

From the perspective of the historical development of social work, social work originated from the activities of charitable institutions and non-governmental social organizations in Britain and the United States in the 19th century[3]. It is defined as "a practice that addresses the social adaptation issues of individuals and groups through professional methods under the guidance of social work's professional values."

In a medical context, the functions of social work not only include anticipating patients' needs but also evaluating the outcomes during and after treatment. The professional attitude of "respect, acceptance, and individualization" and the application of techniques such as "case management, group work, and community work" can alleviate the tense relationship between doctors and patients, thereby promoting the sound development of their interaction.

2.2. Intergroup Emotions

The definition of intergroup emotions refers to "the emotions an individual develops toward their own group and other external groups when they enter a group, form an identity with it, and thus perceive the group's emotions as their own."Compared with individual emotions, intergroup emotions have three core characteristics:

(1)Strong group belonging: There is a positive correlation between group identity and emotional responses;

(2)Transmissibility: Emotions can be transmitted from one individual to another within or across groups;

(3)Behavioral guidance: Intergroup emotions directly influence an individual's attitude and behavior toward other groups.

In the medical field, specific intergroup emotions manifest as two-way emotional communication, such as "anxiety and trust of patient groups toward medical staff groups" and "fatigue or compassion of medical staff groups toward patient groups".

2.3. Doctor-Patient Relationship

The fundamental contradiction behind doctor-patient disputes is not simply a "conflict between individuals", but rooted in the medical process: under the existing medical culture and model, the traditional "doctor-centric" approach, one-way medical decision-making dominated by the treating physician, and the "paternalistic" doctor-patient model remain prevalent[4]. However, patients' right to information and right to participation have not been fully realized, leading to the intensification of resentment among groups.

Trust is the "connection point" of the doctor-patient relationship. Once this connection is broken, dissatisfaction among groups tends to develop in a negative direction, triggering doctor-patient disputes[5].

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3. The Influence Mechanism of Intergroup Emotions on Doctor-Patient Relationship

3.1. Unconscious Synchronization of Emotions

In doctor-patient relationships, there is a typical integration of individuals' emotions, largely driven by the imitative mechanism of the mirror neuron system. Individuals unconsciously observe the emotional expressions of other groups, which triggers similar emotions in themselves and ultimately forms emotional consistency.

A study that continuously monitored the emotions of 200 patients in the waiting rooms of 3 tertiary hospitals for 4 hours confirmed this pattern. Data showed that patients' anxiety levels increased by 12.7% daily, and this emotional consistency intensified with the extension of waiting time[6].

Emotional integration is more likely to occur when medical work is in a high-pressure state[7]. A study on the changes in biomarkers of emergency department doctors and patients' family members found that when doctors perform emergency rescue tasks, the coupling degree of their cortisol changes reaches 0.81. This indicates that doctors' work stress can affect patients' family members through physiological pathways; conversely, the stress of family members may also increase doctors' psychological tension, resulting in a two-way "physiology-emotion" interaction that further reduces the effectiveness and efficiency of communication between doctors and patients.

3.2. Formation of Group Cognition under Information Asymmetry

Unlike the "ignorance" caused by passive information acceptance, the active construction process refers to the independent formation of attitudes and emotions toward other groups by patients and doctors through information acquisition and processing. Insufficient information is a major cause of group suspicion and conflict. When individuals lack sufficient information to understand a situation, they construct their own interpretations based on "group consistency", leading to collective emotional responses[8].

However, this study argues that this construction process can be redirected. Research has shown that adopting "imaginary intergroup communication" can alleviate tensions among medical staff: the intergroup anxiety level of experimental patients decreased by 34%, and their favorability toward both doctors and patients increased by 28%. Notably, this effect remained stable after three months[9]. This confirms that active information dissemination and positive thinking guidance can reshape the emotional interaction between doctors and patients, breaking the vicious cycle of "information asymmetry → group suspicion → emotional confrontation".

4. The Influence of the Transmission Paths of Intergroup Emotions on Doctor-Patient Relationship

4.1. The Accelerating Role of Social Media

Internet social platforms are not only a key channel for doctor-patient communication but also possess the characteristics of "instantaneity" and "anonymity", enabling the rapid spread of negative emotions[10]. An analysis of 10 doctor-patient conflict cases in China from 2021 to 2022 found that for every 10% increase in online negative emotions toward medical institutions, the communication ability between doctors and patients in the involved conflicts decreased by 21%.

This negative impact also has a spillover effect: the public's trust in other medical institutions unrelated to the conflicts decreased by an average of 5.3%. A survey of medical students revealed that negative emotions on social media are highly negatively correlated with their

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sense of professional pride and professional identity. Specifically, the longer medical students are exposed to "doctor-patient dispute" information, the more their compassion decreases (by 29%), and the lower their willingness to engage in clinical work (a 35% decline). This indicates that in addition to affecting existing doctor-patient relationships, negative emotions on social media will also have a sustained negative impact on the future medical talent pool.

4.2. The Vicious Cycle of Doctor-Patient Defensive Psychology

The so-called "closed-loop reinforcement effect" refers to the mutual stimulation of defensive psychology between medical staff and patients, leading to a cycle of "emotional confrontation → defensive actions → heightened hostility". This effect has been verified: after patients take self-protective measures such as "doubting treatment plans" or "frequently recording videos", doctors tend to adopt more assertive attitudes, and the average communication time per patient increases by approximately 17 minutes[11]. However, such defensive responses only intensify patients' suspicion and discomfort, further strengthening their self-protective behaviors.

The core of this closed-loop reinforcement is the "polarization of group identity": doctors and patients perceive each other as opposing groups rather than teams collaborating to combat diseases. The study found that in this process, the "in-group preference" score of medical teams is 42% higher than that of the general population, and the "out-group aversion" score is 38% higher-effectively cutting off emotional empathy and effective communication.

4.3. The Reshaping of the Doctor-Patient Relationship Framework by Group Cognition

Dominant narrative refers to the mainstream public understanding of the "doctor-patient relationship in the medical field". Changes in this understanding directly affect the emotional development trend between doctor and patient groups. The interaction between the medical and health sector and patients during the peak of the COVID-19 epidemic in Wuhan provides both positive and negative examples:

In mobile cabin hospitals, researchers established a positive dominant narrative of "doctors and patients jointly fighting the epidemic" by organizing activities such as "daily group exercises" and "shared recovery stories between medical staff and patients". As a result, patients' compliance with medical advice increased by 39%, and the burnout rate of both doctors and patients decreased by 27%[12].

In contrast, the social public opinion at that time portrayed the "service quality of primary health care institutions" in a negative light, leading to a 28% decline in the consultation rate of primary hospitals and a public trust score of only 52 for primary health care staff. This clearly highlights the guiding role of "dominant narrative" in doctor-patient relationships [13].

4.4. The Emotional Shaping Role of Space and Physical Environment

The physical environment acts as an "invisible shaper" of the psychology of medical teams and patients. Their relationship follows a "dose-effect" pattern: the greater the individual stress, the stronger the emotional isolation between groups. Based on a survey of emergency departments in 15 tertiary medical institutions in China, Liang et al. (2020) [14] found a significant positive correlation between high population density and the frequency of group violence: for each additional person per square meter, the incidence of patient quarrels and attacks on medical staff increased by 14%, and this trend was more pronounced during peak patient flow periods.

Color, as a key component of the physical environment, exerts a significant impact on the psychology of patients and medical staff within the environment. A study proved that compared with green warning signs, red warning signs induce 2.4 times more anxiety in patients. Additionally, the proportion of patients complaining about medical staff was 68% higher when

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exposed to red signs than green ones [15]. These data further confirm that optimizing the physical environment can reduce the negative emotional impact of the environment on medical staff and patients, creating conditions for "mitigating emotional reactions".

5. Intergroup Emotion Intervention Strategies from the Perspective of Social Work

5.1. Individual-Level Intervention

5.1.1. Emotion Cognition and Management Training

For medical staff, professional training on "group emotional guidance" should be conducted using social work methods:

(1)Through teaching methods such as case studies and scenario simulations, help doctors understand the transmission mode of group emotions and improve their ability to identify and respond to intergroup emotions in doctor-patient interactions;

(2)Teach practical coping strategies for dealing with patients' negative emotions, such as deep breathing and temporary pauses, to alleviate their own negative emotional responses and reduce the impact of patients' negative emotions.

For patients and their family members, "situation-oriented guidance" should be provided:

Distribute a pamphlet titled Emotional Guide for Medical Consultation when patients enter the hospital. This pamphlet focuses on common scenarios such as "waiting for consultation" and "treatment outcomes not meeting expectations", clarifies potential psychological emotions, and provides corresponding coping methods;

For patients with unstable emotions, conduct targeted psychological counseling, using techniques such as "emotion labeling" and "effective emotional release" to reduce the accumulation and spread of negative emotions.

5.1.2. Improvement of Intergroup Communication Ability

To enhance the communication skills of nursing staff, emphasis should be placed on cultivating empathetic dialogue:

Through simulated communication and role-playing, train nursing staff in language skills such as "concise expression" and "silent listening" to improve their communication abilities;

Further enhance their ability to understand non-verbal information from patients, enabling more targeted communication.

Social workers should organize "mutual aid group activities" for patients and their family members:

Through "experience sharing" and "role reversal exercises", teach patients to effectively communicate their needs, provide positive feedback, and reject ineffective information transmission;

Avoid emotional and behavioral disputes between groups caused by language communication barriers.

5.2. Organizational-Community-Level Intervention

5.2.1. Construction of Medical Environment and Community Support Network

Social workers should create a "friendly emotional environment" in hospitals:

Set up "mood relaxation areas" in waiting rooms to mitigate the adverse effects of high-density spaces;

Promote positive cases of "doctors and patients collaborating" through hospital bulletin boards, official WeChat accounts, and other channels to reshape the "core narrative" within the hospital environment.

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At the social level, social workers should establish a "doctor-patient mutual aid network":

(1)Organize community volunteers to regularly serve as "medical companions" in hospitals, helping doctors and patients address questions and providing emotional support, acting as a "bridge to break information barriers" between the two parties;

(2)Conduct community health education activities to enhance the public's understanding of medical institutions and reduce public resistance caused by "information misunderstandings".

5.2.2. Establishment and Operation of Multi-Party Coordination Mechanism

To address the interest conflict between hospitals and patients in "medical disputes", a "tripartite joint coordination team" should be established, consisting of social workers, medical staff, and lawyers. The team should intervene immediately when disputes arise, following a three-step process of "emotional guidance → fact clarification → demand negotiation" to prevent the deterioration of group emotions.

Meanwhile, a "doctor-patient dispute case database" should be established to analyze and summarize the key causes of disputes, providing evidence-based suggestions for hospitals to make targeted improvements.

A "community-hospital-family" three-level interaction model should be constructed:

(1)Community social workers regularly collect the needs of patients' families and feed them back to the hospital;

(2)The hospital adjusts its services based on the feedback;

(3)Patients' families actively participate in community health education activities, forming a closed loop of "needs → services → feedback".

6. Discussion

Based on the core task of building a harmonious doctor-patient relationship in Healthy China 2030, this study addresses two key gaps in current doctor-patient relationship research: the lack of an intergroup emotion perspective and the underutilization of social work's professional advantages. From the social work perspective of "person-in-environment", it systematically explores the influence mechanism and intervention strategies of intergroup emotions on doctor-patient relationships, aiming to fill the research gap of the "group emotion perspective" in the field of doctor-patient relationships and provide a practical path for alleviating doctor-patient conflicts.

This study adopts a mixed-methods approach combining literature review and empirical data. It synthesizes domestic and international research findings on doctor-patient relationships and intergroup emotions, draws on intergroup emotion theory and social work theory, and conducts analysis using multiple sets of empirical survey data. The results show that intergroup emotions affect doctor-patient relationships through two mechanisms:

(1)Unconscious emotional synchronization: For example, Ramirez-Cano et al. (2023) found that the anxiety level of patients in tertiary hospitals increased by 12.7% daily, and Chen et al. (2021) observed a cortisol change coupling degree of 0.81 between doctors and patients in the emergency department-reflecting the two-way "physiology-emotion" interaction;

(2)Group cognition formation under information asymmetry: Sun Jingru's (2023) study showed that "imaginary intergroup communication" reduced patients' anxiety by 34%, confirming that active information guidance can break the confrontational cycle.

Intergroup emotions also expand their influence through four paths:

Social media (a 10% increase in negative emotions leads to a 21% decrease in doctor-patient communication ability);

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The cycle of doctor-patient defensive psychology (medical teams have a 42% higher in-group preference);

Group cognition reshaping (positive narratives in mobile cabin hospitals increased medical advice compliance by 39%);

Physical environment (each additional person per square meter increased violence rates by 14%, and red signs led to a 68% higher complaint rate).

Based on these findings, the study proposes intervention strategies at the individual level (emotion management training, communication ability improvement) and organizational-community level (medical environment optimization, multi-party coordination mechanism establishment).

Although this study expands the medical application scenario of intergroup emotion theory and provides theoretical and practical support for improving doctor-patient relationships, it has limitations: it mainly relies on literature research and lacks national-level empirical data, and personalized intervention programs are not yet mature.

Future research directions include:

(1)Expanding the sample size to conduct questionnaire surveys and in-depth interviews, and designing customized programs for different hospitals and disease types;

(2)Exploring digital social work models, such as developing a mini-program for intergroup emotion management;

(3)Tracking special patient groups (e.g., the elderly, children) to evaluate the long-term effectiveness of intervention strategies, providing more solid research support for the continuous optimization of doctor-patient relationships and the improvement of medical service quality.

7. Conclusion

This study explores the impact of intergroup emotions on doctor-patient relationships and corresponding intervention strategies from a social work perspective. The results confirm that intergroup emotions affect doctor-patient interactions through two core mechanisms-unconscious emotional synchronization and group cognition formation under information asymmetry-and expand their influence via four paths: social media acceleration, defensive psychology cycles, group cognition reshaping, and physical environment shaping. The proposed intervention strategies at the individual (emotion management, communication skill training) and organizational-community levels (environment optimization, multi-party coordination) provide practical solutions for alleviating doctor-patient conflicts. Academically, this study extends the application of intergroup emotion theory to medical scenarios, filling existing research gaps. Future research should expand sample sizes with national empirical data, develop digital social work models (e.g., intergroup emotion management mini-programs), and track special patient groups to refine personalized interventions, thereby further optimizing doctor-patient relationships and medical service quality.

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