ORIGINAL ARTICLE

Coping and growing in dilemma: Clinical work experience of front-line nurses in Wuhan during the early stage of COVID-19 epidemic

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Abstract

Aim: To deeply explore the experience of front-line nurses who participated in rescuing Wuhan during the early stage of coronavirus disease 2019 (COVID-19) epidemic.

Methods: Using a descriptive qualitative design, individual semi-structured interviews were conducted between February 25 and March 5, 2020. A conventional content analysis method was used in data analysis to extract themes and sub-themes.

Results: Six themes emerged after data analysis: (a) worries and stress during rescue; (b) difficulties encountered during rescue; (c) experience of team work; (d) experience of interaction with COVID-19 patients; (e) experience of logistic support and widespread concern; and (f) value and significance of the experience.

Conclusions: Nurses took on difficult missions in the rescue and played an irreplaceable role. They experienced remarkable psychological changes over the intensive work. It was necessary to understand the feelings and problems of the nurses so as to establish a healthcare system that can protect medical staff effectively in future disasters.

KEYWORDS
COVID-19, experience, nurses, qualitative research, rescue Wuhan

1 | INTRODUCTION

Coronavirus disease 2019 (COVID-19) was initially reported in Wuhan City, Hubei Province, China in the end of December 2019 and it spread rapidly worldwide after that (Cucinotta & Vanelli, 2020). COVID-19 was highly contagious and Wuhan became the epicenter in China. The entire Chinese healthcare system has stressed out by this rapidly evolving epidemic. General wards were quickly modified into isolation wards, and healthcare professionals, including physicians and nurses, from all over the country were sent to Hubei to fight against COVID-19.

Medical workers, particularly nurses, were at a high risk of being infected because of close contact with patients. Their health was not only crucial for ensuring continuous patient care but also to not transmit the virus (Chang, Xu, Rebaza, Sharma, & Dela Cruz, 2020). Current quantitative studies have already shown that healthcare professionals were stressed due to the COVID-19 pandemic (Kang et al., 2020; Temsah et al., 2020). It is necessary to gain insights into their experience. How did

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they feel when they were far away from home to face a strange environment and unknown virus? What experience did they have when they treated COVID-19 patients? What challenges and difficulties did they experience when they were in Wuhan? What effect did the rescue have on them?

Therefore, qualitative research design is recommended to gain a deeper understanding of such experiences. Therefore, a descriptive qualitative design was adopted (Majid & Vanstone, 2018). In this study, we aimed to collect the experience and views of those frontline nurses in the early stages of the COVID-19 outbreak.

2 | METHODS

2.1 | Study design

We conducted a descriptive qualitative study to explore the following research question: "What is it like for frontline nurses to experience in the early stage of the COVID-19 outbreak?" Semi-structured individual interviews were conducted at a time convenient for the participants between February 25 and March 5, 2020; this was a peak period of the outbreak. The Consolidated Criteria for Reporting Qualitative Research (COREQ) were used to report the method used and findings obtained (Tong, Sainsbury, & Craig, 2007).

2.2 | Selection of participants

A purposeful sampling method combined with the maximum variation strategy (for instance, gender, age, years of work experience and original work department) was used to recruit eligible participants in the two largest hospitals in Wuhan which had been transformed to treat COVID-19 patients (each hospital had more than 3,000 beds). The sample size was determined by data saturation, that is, we stopped data collection at the point where no new themes from participants were emerging (Bowen, 2008).

Both hospitals were designated to treat severe patients with COVID-19, including patients who needed to be on ventilators. The participants in the study were all frontline nurses who voluntarily signed up and were then selected to go to Wuhan to take care of patients with COVID-19. They were all from Zhejiang, a province located in East China.

We sent text messages by smartphone to recruit participants. Because of the inconvenience of face-to-face communication, the researcher set up an appointment and conducted the interview through video call after obtaining the participants' consent.

2.3 | Data collection

The researcher explained the objectives and procedures of the study before starting the interview. Open-ended questions were used to obtain detailed descriptions. The main questions were as follows. (a) What kind of memorable experiences did you have during the period of rescuing Wuhan? (b) How did you feel when you faced the strange environment and unknown virus? (c) What experience did you have when you treated COVID-19 patients? (d) What challenges and difficulties did you experience when you were in Wuhan? (e) What was your psychological change during the period in Wuhan? (f) What impact do you think this rescue has had on you?

The researcher encouraged the participants to express their truest psychological feelings. Probing questions were used to enhance the depth of discussion. The researcher transcribed the interview and paid attention to the non-verbal utterances such as silence, frowns, laughter and sighs, and took notes. The duration of interviews lasted from 35 to 60 min. The audio recordings were transcribed verbatim by two researchers within 24 h of the interviews to ensure the accuracy of the information.

2.4 | Data analysis

Data analysis occurred concurrently with data collection. A conventional content analysis was adopted for data analysis. In this approach, researchers avoid using preconceived categories, instead, they immerse themselves in the data to enable new insights to emerge that provide a richer understanding of the experience (Majid & Vanstone, 2018).

Coders (FX and JPT) first read the entire transcripts of each participant's interview several times to gain a sense of the whole of the participant's experiences. After that, codes, sub-themes and themes were discussed in the team, then identified and subsequently refined to avoid redundancy and guarantee accuracy via a cyclical analytical process. The two coders discussed their coding of individual transcripts and reached agreement on codes, sub-themes and themes.

Chinese was used for the initial coding and codes, and they were subsequently translated into English for further comparison by a peer reviewer

(YXZ) and for writing the report (Saldaña, 2014; Squires, 2009).

2.5 | Rigor

In this study, rigor was maintained via two recognized techniques. First, credibility was established through peer debriefing, in which the researchers consulted with one another to address any ambiguities or disagreement on methodological issues or data analysis. No major changes to the analysis arose from this debriefing. Second, the themes and sub-themes extracted from the collected data were returned to the participants to ensure the findings were comprehensible and had resonance. Participants consented to the proposed results. Four participants were involved in the member checking process.

2.6 | Ethical considerations

Ethical approval for this study was obtained from the ethics committee of Hangzhou Third Hospital (written permission with approval number Y-KL2020032), and written informed consent (electronic form) was obtained from each participant. In order to make interviewees express freely, we selected nurses from different wards when recruiting. Moreover, because they were isolated in different rooms of the hotel after work, the privacy of the interview environment was guaranteed. All participants were informed about the purposes of this study. They were also informed that they had the right of refusal and that this right could be exercised at any time without having any negative impacts on the services delivered to them. We also guaranteed the confidentiality of their personal information. We used numbers instead of names (N1, N2, etc.) and removing identifying information from

the transcripts. All audio recordings and transcripts were saved on a password-protected computer.

3 | RESULTS

Nine nurses participated in the study, including three men and six women. Table 1 shows the characteristics of the participants. Their average age was 34.3 (2.5) years, and their mean work experience was 11.2 (2.4) years.

According to the nurses' experiences during the early stage of the epidemic during rescuing Wuhan, data analysis identified six major themes: (a) worries and stress during rescue; (b) difficulties encountered during rescue; (c) experience of team work; (d) experience of interaction with COVID-19 patients; (e) the experience of logistic support and widespread concern; and (f) value and significance of the experience.

3.1 | Worries and stress during rescue

3.1.1 | Unfamiliar with a new work environment and procedures

They started intensive training as soon as they arrived in Wuhan. They did not have enough time to become familiar with the new work environment and process. Thus, they felt scared and stressed. "At that time, the workflow did not come out, and I dragged myself for four hours. I was really scared on my first day at work." (N1) "The pressure is that we need to learn new computer systems, including nursing records and medical treatment order processing system, which are different from the ones we used before." (N4) "We are unfamiliar with the environment. That was my first contact with the isolation ward. I was flustered." (N8).

TABLE 1 Characteristics of participants

No.	Profession	Age, years	Gender	Marital status	Work experience, years	Original department	Education
N1	Nurse	35	Female	Married	12	Nephrology	Bachelor
N2	Nurse	38	Female	Married	14	Gastroenterology	Bachelor
N3	Nurse	32	Female	Married	9	Respiratory	Bachelor
N4	Nurse	35	Female	Married	12	Respiratory	Bachelor
N5	Nurse	37	Female	Married	13	ICU	Bachelor
N6	Nurse	30	Female	Single	7	Cardiology	Bachelor
N7	Nurse	33	Male	Married	10	ICU	Bachelor
N8	Nurse	33	Male	Married	10	ICU	Bachelor
N9	Nurse	36	Male	Married	14	ICU	Bachelor

Abbreviations: ICU, intensive care unit.

3.1.2 | Worry about lack of professional knowledge and experience

Five of the interviewees came from general wards, who were worried about their lack of treatment experience of COVID-19. "I am afraid I don't have practical experience with endotracheal intubation." (N3) "Because the diseases of critical patients are also very complicated, some patients, for example, have leukemia, we don't know how to do with it." (N4).

3.1.3 | Fear of being infected

At the beginning, they poorly understood about COVID-19. Therefore, they had to be careful in receiving patients. The basic principle was less contact and keeping a distance with the COVID-19 patients. "When we went to the ward first time, we were afraid to enter the room to contact patients, only standing in the corridor." (N1) Some interviewees were worried about self-protection. "The most worrying thing is the lack of protective materials." (N4) "What kind of protective measures are effective? Are they effective? Those are my biggest fear." (N5) Some interviewees said there was a risk of COVID-19 infection at work. "One of my colleagues unconsciously removed the mask because of discomfort, and the respiratory tract was directly exposed. This is very serious. Then she was quarantined for 14 days." (N3) "Someone else found a small hole in my protective suit. It's difficult to detect such thing by myself. We don't know when the risk of infection has increased." (N2) In addition, they were worried that if they were infected it would involve the whole team. "If one person is infected, the whole group could be infected. Our group may not be able to continue the rescue. It's a big loss for those patients." (N2) "If no one else is infected except me, I will bring shame to the group." (N9).

3.2 | Difficulties encountered during rescue

3.2.1 | Inadequate staff and more work

The situation of a large number of COVID-19 patients limited medical staff and tools, caused high work intensity. "There are more than 50 beds. But only two staff are on duty at night."(N3) "There are no nurse's aides yet. Nursing and taking care of a patient's daily life are both our work." (N6).

3.2.2 | Physical discomfort under protective conditions

Most of the medical staff need to wear a variety of protection, including eyewear, face masks, protective suit, gloves and so on, which makes it inconvenient to movement and operation. "After I measured two patients' oxygen saturations, I felt dizzy. I measured my heart rate was over 120 beats (per minute). Breathing became more rapid and sweating all the time. I wanted to cry, but I knew I couldn't." (N3) "After wearing the protective mask, I feel very stuffy, like dying." (N5) "After drawing blood twice, my whole eyewear misted. I feel breathless and have to breathe with my mouth." (N6).

3.3 | Experience of team work

3.3.1 | The running-in of work habits

The team was established temporarily. The medical staff in a ward came from different hospitals or even different cities. Everyone has different working habits and there was a need to run-in at work. "All doctors and nurses came from different hospitals and they had their own work habits. For example, the intensive care doctors didn't take into account the shortage of nursing staff when they gave orders." (N7) "A new group of nurses has been transferred in so that we can take turns off. However, their major is different from us. The cooperation is not very smooth, sometimes messy." (N8).

3.3.2 | Poor coordination of auxiliary departments

The epidemic was sudden. Many hospitals in Wuhan were not fully prepared. There are problems in coordination between auxiliary departments and medical departments. "They admitted more than 40 new patients the night before, but the computer system didn't work." (N1) "The departments of laboratory, radiology and pharmacy cannot follow with clinical steps. We cannot improve our efficiency." (N9).

3.4 | Experience of interaction with COVID-19 patients

3.4.1 | Sympathy, guilt and powerlessness toward patients

The interviewees expressed strong sympathy for COVID-19 patients. They felt guilty and powerless for their failed

lifesaving. "It is powerless. I have no personal ability to save them." (N1) "I think human beings are really vulnerable. Science is advanced nowadays; however, such little virus can destroy a family." (N2) "I ran to the roof of our hotel and cried when the patient died." (N8).

3.4.2 | Facing the death of patients rationally

Many interviewees chose rational response to the miserable experience of patients. "Don't think too much. All what I can do is just do it instead of thinking." (N1) "I don't want my emotions to be affected, I tried not to inquire about their encounters." (N6) "In order to adjust the psychological pressure, we need to forget such things in a short time." (N9).

3.4.3 | Win the patient's understanding, respect and gratitude

During the treatment, the interviewees deeply felt the understanding, respect and gratitude of the patients. "It's really boring to wear a protective suit for a long time. I feel tired when talking. Several times when patients asked me questions, they asked me to take a break first." (N7) "They are all very kind. No matter what we do, they will keep saying "thank you" to us." (N4) "I felt that they thanked us from the bottom of their heart. Some patients cried when they discharged from hospital. Some family members kneeled down to express their thanks when they picked the patients up." (N9).

3.4.4 | Moved by the patients' behavior and character

Apart from the patients' gratitude, the behavior and character of the patients also moved the nurses. "When we went to check blood pressure, they stretched their arms out very straight and told us to keep a distance from them to avoid us being infected." (N1) "Because of the protective suit, we all look the same. But he can recognize me by my voice." (N7).

3.5 | Experience of logistic support and widespread concern

3.5.1 | Many people stand by us

They received a strong logistic support from their own province when fighting for the epidemic. "The logistics of

Zhejiang province are really awesome, which give us a lot of psychological comfort." (N1) "There are still so many people on our back who care about us after we come here. We are not alone." (N4).

3.5.2 | Caused widespread concern

The interviewees mentioned they had attracted too much attention from society. "Too much attention was paid to us. I will feel sorry for others if my work in Wuhan is not satisfactory." (N1) "My friends knew I was in Wuhan. They all concerned with me and felt it was great. Personally, I don't think it's special." (N7).

Most interviewees felt they were just ordinary people and doing ordinary things. "I don't think I'm a hero. I'm just an ordinary person." (N3).

At the same time, due to widespread concerns, the performance competition between the teams has also brought a certain amount of pressure to the staff. "(Because we come from different provinces or cities) Provincial leaders are comparing the mortality rate and discharge rate. We came here with a mission. But so many medical teams, we are worried about not doing well as others." (N2).

Some interviewees also thought they should treat this kind of concern rationally. "We have received so many compliments in this special period. We will return to the work and life of an ordinary person after this period." (N9).

3.6 | Value and significance of the experience

3.6.1 | Feeling the value of profession

The rescue of Wuhan made medical staff feel the sense of mission and pride in their profession. "I think I have done a great thing." (N3) "I think in the face of this epidemic outbreak, our medical staff have shown great bravery." (N8) Some interviewees also mentioned that the rescue was a rare accumulation of experience for them and could be prepared for a similar response in the future. "If I encounter a similar situation in the future, I think I have no problem to solve it. I will not worry about it." (N7).

3.6.2 | Enriched life experience

The rescue had brought them rich life experience. In particular, the cohesion of the whole nation made them feel deeply. "I think our whole country is very united in

coping with the epidemic." (N8) Some interviewees also believed that this was a good life experience for a nursing career. "It is good for me to have such experience in my nursing career, and I believe that it is also a positive education for my children." (N4).

3.6.3 | Personal growth

(a) A sense of contentment: compared with those who experienced the disaster, the interviewees felt lucky. Some interviewees mentioned that they should find more positive aspects of things. "It's nice to be alive. Everything else is unimportant." (N1) "I will become more grateful. Without these experiences, I may not know how lucky and happy I am." (N6) (b) Pay more attention to family relations: After the disaster, the interviewees felt they did not accompany their families enough in the past. "After seeing the sudden death and loss, I should have cared more about my family." (N9).

4 | DISCUSSION

4.1 | Cultivate the ability to deal with public health emergencies, ensure the continuous and dynamic support and supplementation

In the early stage of COVID-19 outbreak, the etiology and transmission route were unknown, which caused many people to panic and fear, including nurses themselves. Among the nine interviewees, one had the experience of participating in the rescue of Wenchuan earthquake and one participating in the rescue of avian influenza. According to the interview, those staff who experienced rescue before were less nervous, anxious and afraid than other interviewees. And many interviewees thought "fear comes from ignorance", although most of them have worked for many years. In China, medical staff obtain the basic knowledge of first aid and infectious disease prevention and treatment through courses such as emergency medicine, surgery, infectious diseases and so on. However, they feel they still lack systematic understanding of public health emergencies.

Emergencies have the characteristics of suddenness, urgency, uncertainty and extensive destructive social impact; coping with emergencies is an important responsibility of medical rescue (Chew, Wei, Vasoo, Chua, & Sim, 2020). The outbreak exposed the inadequacy of medical and public health systems in response to public emergencies. For example, there was lack of protective measures and protective articles at the start of the epidemic. Many hospitals did not meet the requirements of infectious disease facilities, including the systems of heating, oxygen supply, and ventilation. And during the epidemic period, the auxiliary departments and clinical departments were out of touch. Many interviewees indicated they had not received systematic training before the rescue, thus creating a fear of being infected. Managers should strengthen the training of infectious disease prevention and control for medical staff, especially emergency response teams, which should be prepared for possible emergencies at any time. Also, humanized management, flexible scheduling are also needed. The government should strengthen the reinforcement and deployment of medical staff and materials to Wuhan, ensure enough rest and sleep of the staff, and give them adequate support and help, so as to ensure the work quality while maintaining their own physical and mental health. In addition, it is suggested that hospitals should establish and improve the emergency reserve systems, to ensure that the emergency materials are sufficient and in place in time after the occurrence of emergencies.

In addition, the sharing strategy of public health events has also been proposed (Chretien, Rivers, & Johansson, 2016; Dye, Bartolomeos, Moorthy, & Kieny, 2016). In the early stage of epidemic, timely sharing of experience and technology of various countries will help to alleviate the adverse consequences brought by the epidemic.

4.2 | Training of infection control and critical care specialists

Many interviewees showed they were worried about protection and were afraid of being infected, which were consistent with other studies (Liu et al., 2020; Zhang & Wei, 2020). From the zero infection rate (Information Office of the State Council, 2020) of the medical staff who participated in rescuing Wuhan, we can see that COVID-19 can be effectively prevented under good protective measures. Ya-hui Jiao, the supervisor of the Medical Administration Bureau of the National Health Commission, pointed out that nursing staff accounted for the vast majority of the rescue staff, with 26,530 nurses out of 38,632 (Jiao, 2020). However, the number of specialized nurses in the fields of intensive care and infectious diseases is still far from meeting the needs of fighting the epidemic. A large proportion of nurses came from other specialties, showing there is a shortage of infection control and specialized intensive care nurses in such an epidemic. Specialist nurses can play an active role in ensuring patient safety, reducing medical costs, promoting teamwork and improving

patient satisfaction (Cooper et al., 2019). Some developed countries began to train infection control nurses in the 1970s to 1990s (McNamra, Fealy, & Geraghty, 2013; Morikane, 2012). There is no unified qualification certification of infection control for nurses in mainland China. Some provincial nursing associations or Three-A hospitals would assess the nurses to verify their infection control qualification after the training course. However, some areas have not carried out such certification so far (Fan, Guo, Huang, & Li, 2017).

On the other hand, the ability of general nurses to deal with severe patients is insufficient. In this interview, only one of the nine interviewees had received professional extracorporeal membrane oxygenation training. Many interviewees came from general wards; they expressed their lack of confidence in their specialized knowledge, operation skills and protection skills, which were causes for their panic and bad moods. The state of COVID-19 changes quickly and develops rapidly, and first aid may be required at any time. The clinical reaction ability and professional level of medical staff play key roles in the rescue. Therefore, there is still a long way to go to strengthen the training of infectious disease control and intensive care professionals. We should summarize experience and lessons in time from the epidemic. And standard and homogenized treatments and nursing processes also need to be developed. We should plan ahead, so that general medical staff also have rules to follow when required.

4.3 | The cultivation of team consciousness

Rescue teams are usually set up temporarily. Rescuers come from different regions and departments, and have different work habits. Some interviewees said they took a while to "get it together", which brought difficulties and pressures to the rescue work due to different work habits. Some nurse interviewees also said that sometimes it was difficult to communicate with doctors. The study highlights that hierarchies within teams and differences in perceptions of teamwork behaviors can impact on relationships and performance within teams (Eddy, Jordan, & Stephenson, 2016). Temporary nursing staff and team instability could be risk factors for healthcare infections and other adverse events (Delory et al., 2015). Another study had shown that strategies to increase teamwork, such as staff education among patient care teams may positively influence job satisfaction and patient care on patient care units (Rochon, Heale, Hunt, & Parent, 2015). With the spread of the epidemic, in addition to supporting Hubei, Chinese medical teams had also gone to other regions and countries to provide assistance. This kind of international rescue team was more diversified and complicated. The coordination of cooperation directly affected the efficiency of the rescue. Therefore, medical staff should realize the importance of cooperation and establish a positive team culture in daily work. We encourage listening, reflection, respect for the differences in clinical work using scenario simulation, role reversal and other ways. And a safe and trusted cooperative environment can be established through the cultivation of collective consciousness and improvement of communication strategy.

In this epidemic, the heroic anti-epidemic behavior of a large number of nurses improved their social status. Many interviewees said that social status can make them feel the value of their career and promote them to work better. The hospital should continue the professional and irreplaceable positive publicity of nursing, so as to enhance the social status of nurses.

4.4 | Pay attention to the personal psychological problems before and after the rescue

A study about the long-term effect of SARS patient care reported that healthcare providers felt high levels of post-traumatic stress even after 13-26 months (Maunder et al., 2006). The word "stress" has been mentioned in many studies on infectious disease outbreaks. Some studies have found the experience of nurses who treated a new infectious disease indicated that nurses who cared for SARS and H1N1 patients lacked exact information, guidelines for patient care, and individual protection equipment; they experienced a high level of stress (Khalid, Khalid, Qabajah, Barnard, & Qushmaq, 2016; Kim & Lee, 2016). This is consistent with our study.

Some studies have also found that nurses felt ethical pressure when facing MERS-CoV because they were obligated to provide care despite the threat to their safety (Kim, 2018). Nurses' responsibilities as healthcare providers conflict with the demand for safety as a human, which increased their stress (Kim & Lee, 2016).

The difference of this study is that all the behaviors of rescue are voluntary behaviors, the nurses were not forced to rescue. Through in-depth interviews, it was found that their adaptation to the new environment, high work intensity, fear of being infected and overcoming physical discomfort at work brought physical and mental burdens to them. Besides these, treatment effectivity rates, competition among different teams and widespread attention of society also bring them pressure. But they needed to be isolated in the hotel room when they are off

duty or resting, and had few communications with the outside world. Eight out of nine interviewees needed sleeping pills to help them sleep, and had psychological problems such as anxiety and fear. Although there was logistic support, no professional psychological help was provided, especially when they face death. Some interviewees said they could only "run to the top of the building and cry alone" after seeing patients' deaths.

The epidemic caused psychological trauma to rescue workers, resulting in fatigue and post-traumatic stress disorder. Another study also showed similar results, and the author believes that we should pay attention to the psychological problems of rescuers during and after rescue, and psychological support before rescue is especially important for rescuers (Huang, Han, Luo, Ren, & Zhou, 2020).

Medical institutions should strengthen the psychological endurance training of medical staff, so that medical personnel can rationally face external pressure and have better adjustment and adapt abilities. Psychological and personal support and counseling for staff during emergency situations is recommended (Camargo, Maluf Neto, Colman, & CiteroVde, 2015). To know their psychological status via psychological assessment, psychological counseling can be conducted through video or telephone during the quarantine.

4.5 | Limitations

Some limitations remain to be discussed. First, the interview adopts video interview instead of face-to-face, which may lose some non-verbal information. Second, this study is aimed at the early stage of COVID-19 epidemic, whereas no further study has been done on the later stage or after the rescue. Third, this study is only aimed at front-line nurses, and the investigation of other personnel such as doctors and logistic support personnel can be further investigated.

4.6 | Conclusion

This study identified the experience of nurses who cared for COVID-19 patients. They were from different provinces and cities and went to Wuhan at the risk of their lives to undertake the arduous tasks, and played an irreplaceable role in the rescue. During the rescue, they experienced physical difficulties and complicated psychological changes over the intensive work. It is necessary to deeply understand the feelings and needs of the nurses and other medical staff, strengthen the training of health emergency rescue, develop infection control professionals, improve protective equipment and psychological intervention for medical staff, in case of future public health emergencies. And our results could be used as fundamental data for establishing a staff healthcare system.

CONFLICT OF INTERESTS
The authors have no funding or conflicts of interest to disclose.

AUTHORS' CONTRIBUTION
Study design: Fen Xu, Yun-xian Zhou. Data collection: Fen Xu, Ju-ping Tang, Sha Lu, Hong-wei Fang. Data analysis: Fen Xu, Ju-ping Tang, Sha Lu. Study supervision: Yun-xian Zhou. Manuscript writing: Fen Xu, Ju-ping Tang, Sha Lu, Lili Dong. Critical revisions for important intellectual content: Yun-xian Zhou.

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