

SUPPLEMENTARY MATERIALS

S1--Interview outline

1. What difficulties or challenges have you encountered in the process of moving from the drug dispensing office to clinical pharmacy services?

- 1.1 Difficulties and challenges in collaborating with physicians professionally
- 1.2 Difficulties and challenges in collaborating with nurses
- 1.3 Difficulties and challenges faced in the process of patient pharmacy services
- 1.4 Difficulties and challenges faced in collaboration with pharmacy pharmacists
- 1.5 Difficulties and challenges faced in self-adaptation to new positions

2. In response to the current problems in your work, what aspects of preparation or what measures do you think can solve these problems? The following questions were selected for in-depth interviews.

- 2.1 How to solve the difficulties and challenges of professional collaboration with physicians
- 2.2 How to solve the difficulties and challenges of collaborating with nurses
- 2.3 How to solve the difficulties and challenges faced by patients in the process of pharmacy services
- 2.4 How to solve the difficulties and challenges of collaboration with pharmacy pharmacists
- 2.5 How to solve the difficulties and challenges faced by self-adaptation to new positions

S2--COREQ for reporting qualitative studies

The checklist of the research

Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No Item	Guide questions/description	Answers
Domain 1: Research team and reflexivity		
Personal Characteristics		
1. Interviewer/facilitator	Which author/s conducted the interview or focus group?	Xuedong Jia and Zhao Yin
2. Credentials	What were the researcher's credentials? E.g. PhD, MD	MD (Zhao Yin) or MD (Xuedong Jia)
3. Occupation	What was their occupation at the time of the study?	Pharmacist
4. Gender	Was the researcher male or female?	Male (Xuedong Jia) and Male (Zhao Yin)
5. Experience and training	What experience or training did the researcher have?	Theoretical training and experience of conducting several qualitative studies with other groups.
Relationship with participants		
6. Relationship established	Was a relationship established prior to study commencement?	Yes
7. Participant knowledge of the interviewer	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	Reasons for doing the research
8. Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	Reasons and interests in the research topic
Domain 2: study design		
Theoretical framework		
9. Methodological orientation and Theory	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	Phenomenology.
Participant selection		
10. Sampling	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Purposive and convenience.
11. Method of approach	How were participants approached? e.g. face-to-face, telephone, mail, email	Face-to-face interview
12. Sample size	How many participants were in the study?	21
13. Non-participation	How many people refused to participate or dropped out? Reasons?	No
Setting		
14. Setting of data collection	Where was the data collected? e.g. home, clinic, workplace	Workplace.
15. Presence of non-participants	Was anyone else present besides the participants and researchers?	No
16. Description of sample	What are the important characteristics of the sample? e.g. demographic data, date	Yes, demographic data.
Data collection		

17. Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Yes
18. Repeat interviews	Were repeat interviews carried out? If yes, how many?	No
19. Audio/visual	Did the research use audio or visual recording to collect the data?	Audio recording
20. Field notes	Were field notes made during and/or after the interview or focus group?	Yes
21. Duration	What was the duration of the interviews or focus group?	Approximately 35 minutes
22. Data saturation	Was data saturation discussed?	Yes
23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	Yes
Domain 3: analysis and findingsz		
Data analysis		
24. Number of data coders	How many data coders coded the data?	Two
25. Description of the coding tree	Did authors provide a description of the coding tree?	No
26. Derivation of themes	Were themes identified in advance or derived from the data?	Yes
27. Software	What software, if applicable, was used to manage the data?	Not applicable
28. Participant checking	Did participants provide feedback on the findings?	Yes
Reporting		
29. Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g. participant number	Yes
30. Data and findings consistent	Was there consistency between the data presented and the findings?	Yes
31. Clarity of major themes	Were major themes clearly presented in the findings?	Yes
32. Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Yes

S3-- SPQR checklist

Item 1. Title: Concise description of the nature and topic of the study. Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended.

Answer: Yes. Stated in page 1, lines 1-3.

Item 2. Abstract: Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions.

Answer: Yes. Stated in pages 1, lines 13-27.

Item 3. Problem Formulation: Description and significance of the problem /phenomenon studied; review of relevant theory and empirical work; problem statement.

Answer: Yes. Stated in page 3, lines 70-76.

Item 4. Purpose or research question: Purpose of the study and specific objectives or questions.

Answer: Yes. Stated in page 4, lines 105-108.

Item 5. Qualitative approach and research paradigm: Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., post-positivist, constructivist/interpretivist) is also recommended; rationale

Answer: Yes. Stated in page 5, lines 132-134.

Item 6. Researcher characteristics and reflexivity: Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results and/or transferability.

Answer: None.

Item 7. Context: Setting/site and salient contextual factors; rationale.

Answer: Yes. Stated in page 3-4, lines 89-95.

Item 8. Sampling strategy: How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale.

Answer: Yes. Stated in page 4, lines 96-100.

Item 9. Ethical issues pertaining to human subjects: Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues.

Answer: Yes. Stated in page 5, lines 141-143.

Item 10. Data collection methods: Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process,

triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale.

Answer: Yes. Stated in page 3, lines 84-86.

Item 11. Data collection instruments and technologies: Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study.

Answer: Yes. Stated in page 4, lines 107-111.

Item 12. Units of study: Number and relevant characteristics of participants, documents, or events included in the study; level of participation.

Answer: Yes. Stated in page 6, lines 160-166. Detailed information of participants is shown in Table 1.

Item 13. Data processing: Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding and anonymization / de-identification of excerpts

Answer: Yes. Stated in page 5, lines 131-150.

Item 14. Data analysis: Process by which inferences, themes, etc. were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale.

Answer: Yes. Stated in page 5, lines 131-132.

Item 15. Techniques to enhance trustworthiness: Techniques to enhance trustworthiness and credibility of data analysis, (e.g., member checking, triangulation, audit trail); rationale

Answer: Yes. Stated in page 5-6, lines 142-153.

Item 16. Synthesis and interpretation: Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory.

Answer: None.

Item 17. Links to empirical data: Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings.

Answer: Yes. Stated in "Results" section.

Item 18. Integration with prior work, implications, transferability, and contribution(s) to the field: Short summary of main findings, explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field.

Answer: Yes. Stated in "Discussion" section.

Item 19. Limitations: Trustworthiness and limitations of findings

[Answer: Yes. Stated in page 12, lines 358-365.](#)

Item 20. Conflicts of interest: Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed.

[Answer: Yes. Stated in page 13, line 386.](#)

Item 21. Funding: Sources of funding and other support; role of funders in data collection, interpretation, and reporting.

[Answer: Yes. Stated in page 13, line 388-389.](#)