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Complete List of Authors:	Jia, Xue-Li; Second Affiliated Hospital of Anhui Medical University, The First Department of Critical Care Medicine Ren, Shuang-Shuang ; Second Affiliated Hospital of Anhui Medical University, The First Department of Critical Care Medicine Huang , Yang-Yang; Second Affiliated Hospital of Anhui Medical University, The First Department of Critical Care Medicine Shi, Pei-Li; Second Affiliated Hospital of Anhui Medical University, The First Department of Urology Mi , Yu; Second Affiliated Hospital of Anhui Medical University, The Second Department of Orthopedics Zhang, Miao; Second Affiliated Hospital of Anhui Medical University, Department of nursing Zhu, Gui-yue; Second Affiliated Hospital of Anhui Medical University, The First Department of Critical Care Medicine
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Transition shock among nursing students during clinical practice: a scoping review protocol

Xue-Li Jia†[1], Shuang-Shuang Ren†[1], Yang-Yang Huang†[1], Pei-Li Shi[2], Yu Mi[3], Miao Zhang*[4], Gui-Yue Zhu*[1]

1. The First Department of Critical Care Medicine, The Second Affiliated Hospital of Anhui Medical University, Hefei, Anhui, China.
2. The First Department of Urology, The Second Affiliated Hospital of Anhui Medical University, Hefei, Anhui, China
3. The Second Department of Orthopedics, The Second Affiliated Hospital of Anhui Medical University, Hefei, Anhui, China
4. Department of nursing, The Second Affiliated Hospital of Anhui Medical University, Hefei, Anhui, China

***Correspondence to:** zhuguiyueahmu@126.com (GZ), mm20070317@126.com (MZ)

† These authors contributed equally to this work.

ABSTRACT

Introduction Transition shock is a very common negative clinical practice experience for nursing students, which not only makes the adaptation to clinical practice difficult, but also influences the smooth transition from nursing students to registered nurses, and eventually could lead them to leave the nursing field. Therefore, transition shock of nursing students deserves attention. Recently, there has been a notable increase in research dedicated to transition shock experienced by nursing students. However, the overview of research done on this topic remains unclear. Therefore, we will conduct a scoping review to summarise assessment tools, influencing factors, the impacts and intervention strategies of transition shock among nursing students, and identify knowledge gaps in this field to guide further research.

Methods and analysis We will use the Joanna Briggs Institute (JBI) scoping review guidelines as the methodological guidance for this scoping review. A comprehensive search will be conducted through eleven databases and grey literature sources. The search period will be restricted from May 2009 to December 2024, and this review will

only incorporate publications in Chinese or English. Two researchers will independently screen the literature according to inclusion criteria, and then conduct data extraction. Any differences arising between the two researchers will be addressed by engaging in discussion with a third researcher. We will collate, summarize and analyze the extracted data, and subsequently present the results by means of figures, tables and descriptive narratives. This review will be reported in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) reporting checklist.

Ethics and dissemination as this review does not involve patients or public, there is no need for ethical approval. The results of this scoping review will be spread by means of conference presentations and publication in a peer-reviewed academic journal.

Registration The scoping review protocol is registered in the Open Science Framework (OSF; https://osf.io/2r6jn/).

Keywords nursing research; psychological stress; protocols & guidelines.

Strengths and Limitations

Based on our current understanding, this scoping review appears to be the first to focus on the transition shock of nursing students during clinical practice. It will provide a comprehensive overview of the research in this area, and identify knowledge gaps to guide further research. We will use methodology of JBI scoping review to conduct this scoping review, which enhance methodological rigor. In order to ensure that we can retrieve as much evidence as possible, we systematically and comprehensively search electronic databases and grey literature sources. However, due to limited translation resources, we will only include literature written in Chinese or English, which may lead to the exclusion of related literature in other languages. In addition, critical quality appraisal for included studies will not be conducted, which may lead to the inclusion of some studies with poor quality.

INTRODUCTION

Clinical practice is a crucial aspect of nursing education[1]. During the clinical practice period, nursing students engage in a hospital environment to apply their knowledge and skills to clinical nursing, guided by experienced practitioners[2]. This is a crucial period

for preparing nursing students for the role of registered nurses[3]. However, due to insufficient knowledge and skills，as well as the complexity in clinical practice period, nursing students often experienced a series of emotional and interpersonal fluctuations when they first entered clinical practice[4]. This may lead to the occurrence of transition shock. The concept of "Transition Shock" refers to a series of psychological and emotional responses when transitioning from a familiar role to a relatively unfamiliar one, which was initially used to describe conflict experiences that newly graduated nurses encountered during their adaptation to the professional nursing role[5]. Nevertheless, recent studies have indicated that nursing students also undergo transition shock when moving from the academic environment of school to the clinical environment [6]. This negative clinical practice experience not only makes the adaptation to clinical practice difficult, but also influences the smooth transition from nursing students to registered nurses, and eventually could lead them to leave the nursing profession[7 8]. Thus, identifying the factors that have impacts on transition shock among nursing students and developing strategies to help them cope with it are crucial for ensuring a successful transition into the nursing roles. Previous literature have shown that the influencing factors of transition shock include individual factors[9], organizational factors[10], educational factors[11], and so on. In addition, transition shock negatively affected professional identity[12], quality of nursing care[13], patient outcomes[14], and so on. Intervention strategies to reduce transition shock involve peer or mentor support[15], psychological interventions[16], transition programs[17], and so on. However, these studies mainly focus on newly graduated nurses. Due to the differences in job content and level of responsibility between nurses and nursing interns, the assessment, influencing factors, and intervention strategies of transition shock among nursing students may differ from those for newly graduated nurses. Recently, there has been a notable increase in research dedicated to transition shock among nursing students. *Kim and Shin* modified the Transition Shock Scale for newly graduated nurses and validated its validity and reliability among nursing students[18]. The modified scale has been widely used to assess transition shock of nursing students[19 20]. *Zhao et al's* study indicated that nursing students experienced a moderate extent of transition shock in clinical placement;

patient safety attitudes, professional identity, and climate of caring were negatively correlated with transition shock[2]. *Kim et al's* study indicated that higher levels of incivility, lower levels of psychological capital were significantly associated with increased levels of transition shock among nursing students[21]. Despite the attention given to transition shock among nursing students during clinical practice, the overview of research done on this topic remains unclear. The scoping review methodology is widely recognized as an effective approach for synthesizing existing evidence. Therefore, we will conduct a scoping review to systematically review the literature about transition shock among nursing students during their clinical practice, synthesize existing evidence, and identify knowledge gaps to guide further research.

OBJECTIVES

The purpose of this scoping review is to map the literature on assessment tools, influencing factors, the impacts and intervention strategies of transition shock among nursing students and identify knowledge gaps to guide further research.

REVIEW QUESTIONS

In accordance with the objectives of this scoping review, the primary research questions are as follows: (1) What assessment tools have been used to measure transition shock of nursing students? (2) What are the factors that affected transition shock among nursing students? (3) What impact does transition shock during clinical practice have on nursing students? (4) What intervention strategies are available to reduce transition shock among nursing students?

METHODS

We will use the Joanna Briggs Institute (JBI) scoping review guidelines as the methodological guidance for this scoping review[22]. This review will be reported in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) reporting checklist[23]. This protocol is registered in the Open Science Framework (OSF; https://osf.io/2r6jn/).

Eligibility criteria

The inclusion criteria are formulated in accordance with the elements of PCC (population, concept, context) and the types of evidence sources.

Population

The population were nursing students who are currently undergoing clinical practice. Newly graduated nursing students are not included.

Concept

This scoping review will focus on studies regarding assessment tools, influencing factors, the impacts and intervention strategies of transition shock among nursing students.

Context

Various Stages of Nursing Students' clinical practice

Types of study design

The type of included studies are quantitative primary studies, including analytical observational studies, experimental and quasi-experimental studies, and so on. In addition, for mixed-methods studies, only the quantitative studies component will be included. Reviews, conference abstracts, protocols, or commentaries will not be considered.

Search strategy

We will conduct a three-step search strategy to identify relevant studies in the topic area. In the initial step, a preliminary search will be conducted in PubMed to identify text words and the index terms. Subsequently, we will employ the identified keywords and index terms conduct systematic searches across all included databases, to ensure the comprehensive identification of relevant literature. These databases include: PubMed, CINAHL (Plus with Full Text), Scopus, ProQuest, EMBASE, PsychINFO, Web of Science, Cochrane library, CNKI (China National Knowledge Infrastructure), Wan Fang, SinoMed. In addition, grey literature will be searched through Google Scholar, OpenGrey. The preliminary search strategy for PubMed is detailed in the online supplemental table 1. Finally, we will hand-search the reference lists of all selected studies to uncover any additional studies that may have been missed. The search period will be restricted from May 2009 to December 2024, as the concept of transition shock was initially described by Duchscher in 2009[24]. Due to lack of translation resources, this review will only include papers written in Chinese or English.

Study selection

The search results will be imported into reference manager software EndNote 20 for deduplication. Following the removal of duplicate records, two researchers (PS and YM) will independently conduct a preliminary screening of the titles and abstracts of the included studies, and then proceed to full-texts screening based on the inclusion criteria. Any discrepancies arising between the two reviewers during the screening process will be resolved through consultation with a third reviewer (GZ). Before initiating the formal literature screening process, we will conduct a pilot-test on 5% of the randomly selected references to verify the reliability of the screening process[25]. Two researchers will independently conduct the literature screening based on predetermined inclusion criteria. Then, we will use the percentage agreement calculation method to evaluate the consistency level of the two researchers in the literature screening process[26]. Only when the consistency between the two researchers reaches 75% or higher we will initiate the formal literature screening[27]. The results of literature search and the screening process will be depicted in a PRISMA-ScR flow diagram, as shown in Figure 1[23]. The selection of study will be conducted between January 2025 and March 2025.

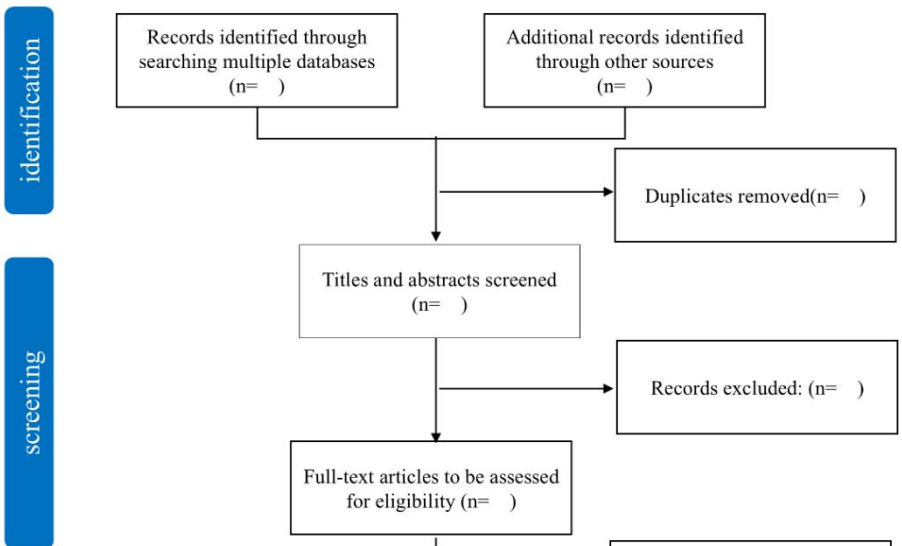

Figure 1 Flowchart for literature screening

Data extraction

Our research team will develop a data extraction form based on research objectives to capture relevant information, which will be recorded on Microsoft Excel. The extracted data will include author(s), title, publication year, country of origin, aim, study design, settings, population and sample size, assessment tools, influencing factors, outcomes, intervention strategies and key findings. To ensure the feasibility of the data extraction form, two researchers (PS and YM) will pilot the form independently on a randomly selected 10% sample of the included studies. If necessary, the draft of data extracting form will be adjusted or revised. The final form will be presented in the scoping review report. The draft of data extracting form is presented in online supplemental table 2. During the data extraction process, two researchers (PS and YM) will independently perform data extraction from each included study using the form. Any discrepancies arising between the two reviewers will be resolved through consultation with a third reviewer (GZ). Critical quality appraisal of the included studies will not be performed, as the purpose of this scoping review is to provide a broad overview of the existing body of literature. Data extraction will be conducted between March 2025 and July 2025.

Data analysis and presentation

We will use both qualitative and quantitative methods for data synthesis. First, we will use frequency distribution and descriptive statistics to summary characteristics of the included studies. Second, regarding research questions, qualitative inductive methods will be used to classify the assessment tools, influencing factors, the impacts, intervention strategies of transition shock among nursing students. The results of this scoping review will be presented using tables, figures and descriptive narrative to demonstrate how the findings related to the review objectives. Data analysis will be conducted between July 2025 and November 2025.

Patient and public involvement

No patients or the public are involved in this review.

Ethics and dissemination

As this review does not involve patients or the public, there is no need for ethical approval. The results of this scoping review will be spread by means of conference

presentations and publication in a peer-reviewed academic journal.

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Contributions GZ and MZ conceptualised the manuscript idea. XJ, SR and YH designed the protocol and drafted the manuscript. All the authors contributed to the improvement of the study design as well as to the editing and revision of this protocol.

Competing interests statement None declared

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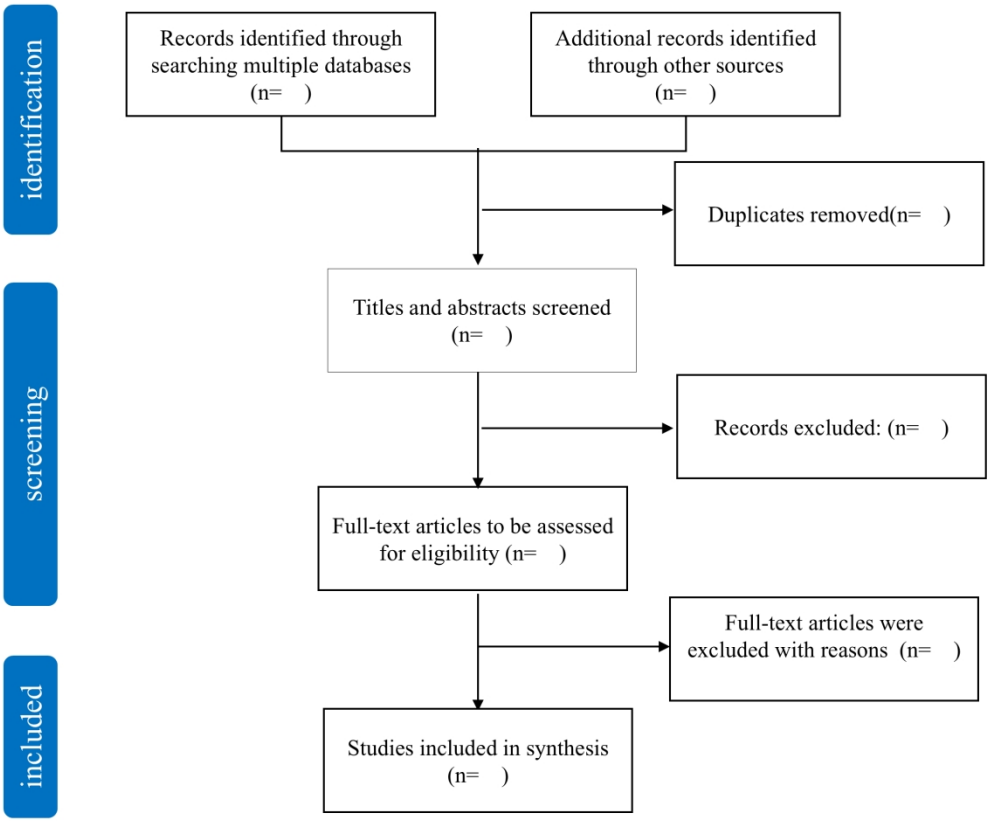

Figure 1 Flowchart for literature screening

187x155mm (300 x 300 DPI)

Table 1. Search strategy used for PubMed (searched on December16,2024)

Search	Query	Records retrieved
#1	student*[Title/Abstract] OR undergrad*[Title/Abstract] OR trainee*[Title/Abstract] OR [illegible]*[Title/Abstract] OR educat*[Title/Abstract] OR intern*[Title/Abstract] OR pre-registrat*[Title/Abstract] OR "pre registrat*"[Title/Abstract]	1,547,821
#2	nurs*[Title/Abstract]	285,475
#3	"Students, Nursing"[Mesh] OR "Education, Nursing"[Mesh]	37,027
#4	(#1 AND #2) OR #3	108,060
#5	"Clinical Clerkship"[Mesh] OR ("Hospitals"[Mesh]) OR "Preceptorship"[Mesh]	153,843
#6	"clinical practice"[Title/Abstract] OR "clinical training"[Title/Abstract] OR placement*[Title/Abstract] OR clerkship [Title/Abstract] OR preceptorship [Title/Abstract] OR rotation*[Title/Abstract] OR practicum*[Title/Abstract] OR internship[Title/Abstract] OR "clinical setting*"[Title/Abstract] OR "clinical environment"[Title/Abstract] OR "clinical education"[Title/Abstract] OR hospital*[Title/Abstract] OR "clinical context*"[Title/Abstract]	1,634,110
#7	#5 OR #6	1,666,724
#8	"transition shock"[Title/Abstract] OR "reality shock"[Title/Abstract] OR "emotional shock"[Title/Abstract] OR "culture shock"[Title/Abstract] OR "role adaptation"[Title/Abstract] OR "role transition"[Title/Abstract] OR "stressful transition"[Title/Abstract] OR "transitional challenges"[Title/Abstract] OR "real-world shock"[Title/Abstract] OR "maladaptive transitions"[Title/Abstract] OR "transition experience"[Title/Abstract] OR "transfer* shock"[Title/Abstract] OR "shock of reality"[Title/Abstract] OR "shock reaction"[Title/Abstract]	962
#9	#4 AND #7 AND #8	183

Table 2. Data Extraction Form

NO.	Author(s)	Year of publication	Country of origin	Aim	Study design	Settings	Population and sample size	Assessment tools	Influencing factors	outcomes	Intervention strategies	Key findings

Note:

(1) population and sample size included social demographic of the participants and sample size;

(2) interventions strategies were defined as measures or programs provided to reduce participants' transition shock;

(3) outcomes referred to the variables or items influenced by transition shock;

(4) assessment tools were specific tools or scales used to assess transition shock of nursing students;

(5) setting referred to the specific location where the study was conducted;

(6) country of origin referred to which country the study was conducted;

(7) key findings referred to other information related to the review questions and objectives.

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4. Department of nursing, The Second Affiliated Hospital of Anhui Medical University, Hefei, Anhui, China

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ABSTRACT

Introduction Transition shock is a very common negative clinical practice experience for nursing students, which not only makes the adaptation to clinical practice difficult, but also influences the smooth transition from nursing students to registered nurses, and eventually could lead them to leave the nursing field. Therefore, transition shock of nursing students deserves attention. Recently, there has been a notable increase in research dedicated to transition shock experienced by nursing students. However, the overview of research done on this topic remains unclear. Therefore, we will conduct a scoping review to summarise assessment tools, influencing factors, the impacts and intervention strategies of transition shock among nursing students, and identify knowledge gaps in this field to guide further research.

Methods and analysis We will use the Joanna Briggs Institute (JBI) scoping review guidelines as the methodological guidance for this scoping review. A comprehensive literature search will be conducted through twelve databases and grey literature sources.

The search period will be restricted from May 2009 to December 2024, and this review will only incorporate publications in Chinese or English. Two researchers will independently screen the literature according to inclusion criteria, and then conduct data extraction. Any differences arising between the two researchers will be addressed by engaging in discussion with a third researcher. We will collate, summarize and analyze the extracted data, and subsequently present the results by means of figures, tables and descriptive narratives. This review will be reported in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) reporting checklist.

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Keywords nursing research; psychological stress; protocols & guidelines.

STRENGTHS AND LIMITATIONS OF THIS STUDY

- The study will follow JBI scoping review guidelines to enhance methodological rigor.
- We will systematically and comprehensively search electronic databases and grey literature sources to ensure all available evidence is identified.
- This scoping review will be limited to included studies written in English or Chinese.
- Critical quality appraisal for included studies will not be conducted.

INTRODUCTION

Clinical practice is a crucial aspect of nursing education[1]. During the clinical practice period, nursing students engage in a hospital environment to apply their knowledge and skills to clinical nursing, guided by experienced practitioners[2]. This is an essential period for preparing nursing students for the role of registered nurses[3]. However, due to insufficient knowledge and skills, as well as the complexity during the clinical practice period, nursing students often experience a series of emotional and

interpersonal fluctuations when they first enter clinical practice[4]. This phenomenon is commonly referred to as "Transition Shock". The concept of "Transition Shock" refers to a series of psychological and emotional responses when transitioning from a familiar role to a relatively unfamiliar one, which was initially used to describe conflict experiences that newly graduated nurses encountered during their adaptation to the professional nursing role[5]. Nevertheless, recent studies have indicated that nursing students also undergo transition shock when moving from the academic environment of school to the clinical environment, describing their adaptation to clinical demands as similar to being thrown in the deep end [6 7]. This negative clinical practice experience not only makes the adaptation to clinical practice difficult, but also influences the smooth transition from nursing students to registered nurses, and eventually could lead them to leave the nursing profession[8 9]. Thus, identifying the factors that have impacts on transition shock among nursing students and developing strategies to help them cope with it are crucial for ensuring a successful transition into the nursing roles. Previous literature have shown that the influencing factors of transition shock include individual factors[10], organizational factors[11], educational factors, ~~and so on.~~[12]In addition, transition shock negatively affected professional identity[13], quality of nursing care[14], patient outcomes[15], ~~and so on.~~ Intervention strategies to reduce transition shock involve peer or mentor support[16], psychological interventions[17], transition programs[18],~~ and so on.~~ However, these studies mainly focus on newly graduated nurses. Due to the differences in job content and level of responsibility between nurses and nursing students, the assessment, influencing factors, and intervention strategies of transition shock among nursing students may differ from those for newly graduated nurses. Recently, there has been a notable increase in research dedicated to transition shock among nursing students. *Kim and Shin* modified the Transition Shock Scale for newly graduated nurses and verified the validity and reliability of this scale among nursing students[19]. The modified scale has been widely used to assess transition shock of nursing students[20 21]. *Zhao et al's* study indicated that nursing students experienced a moderate extent of transition shock in clinical placement; patient safety attitudes, professional identity, and climate of caring were negatively correlated with transition

shock[2]. *Kim et al's* study indicated that higher levels of incivility and lower levels of psychological capital were significantly associated with increased levels of transition shock among nursing students[22]. Despite the attention given to transition shock among nursing students during clinical practice, the overview of research done on this topic remains unclear. The scoping review methodology is widely recognized as an effective approach for synthesizing existing evidence. Therefore, we will conduct a scoping review to systematically review the literature about transition shock among nursing students during their clinical practice, synthesize existing evidence, and identify knowledge gaps to guide further research.

OBJECTIVES

The purpose of this scoping review is to map the literature on assessment tools, influencing factors, the impacts and intervention strategies of transition shock among nursing students and identify knowledge gaps to guide further research.

REVIEW QUESTIONS

In accordance with the objectives of this scoping review, the primary research questions are as follows: (1) What assessment tools have been used to measure transition shock of nursing students? (2) What are the factors that affected transition shock among nursing students? (3) What impact does transition shock among nursing students during clinical practice have? (4) What intervention strategies are available to reduce transition shock among nursing students?

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Eligibility criteria

The inclusion criteria are formulated in accordance with the elements of PCC (population, concept, context) and the types of evidence sources.

Population

Literature focusing on nursing students who are currently undergoing clinical practice or have already completed their clinical practice will be included, while those focusing on newly graduated nursing students will not be included.

Concept

This scoping review will focus on studies regarding assessment tools, influencing factors, the impacts and intervention strategies of transition shock among nursing students.

Context

Various stages of nursing students' clinical practice

Types of study design

Given that this scoping review focuses on primary research to identify gaps, we will include primary studies that employ a variety of research designs, including quantitative, qualitative, and mixed-methods. Reviews will not be included. Nevertheless, their reference lists will still be searched to ensure relevant articles are retained. Conference abstracts, research protocols, or commentaries will not be considered either, as they do not provide sufficient information to answer the research questions.

Search strategy

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Our research team will develop a data extraction form based on research objectives to capture relevant information, which will be recorded on Microsoft Excel. The extracted data will include author(s), title, publication year, country of origin, aim, study design, settings, population and sample size, assessment tools, influencing factors, outcomes, intervention strategies and key findings. To ensure the feasibility of the data extraction form, two researchers (PS and YM) will pilot the form independently on a randomly selected 10% sample of the included studies. If necessary, the draft of data extracting

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Figure legends

Figure 1 Flowchart for literature screening

Contributions GZ and MZ conceptualised the manuscript idea. XJ, SR and YH designed the protocol and drafted the manuscript. All the authors contributed to the improvement of the study design as well as to the editing and revision of this protocol. GZ is responsible for the overall content as guarantor.

Competing interests statement None declared

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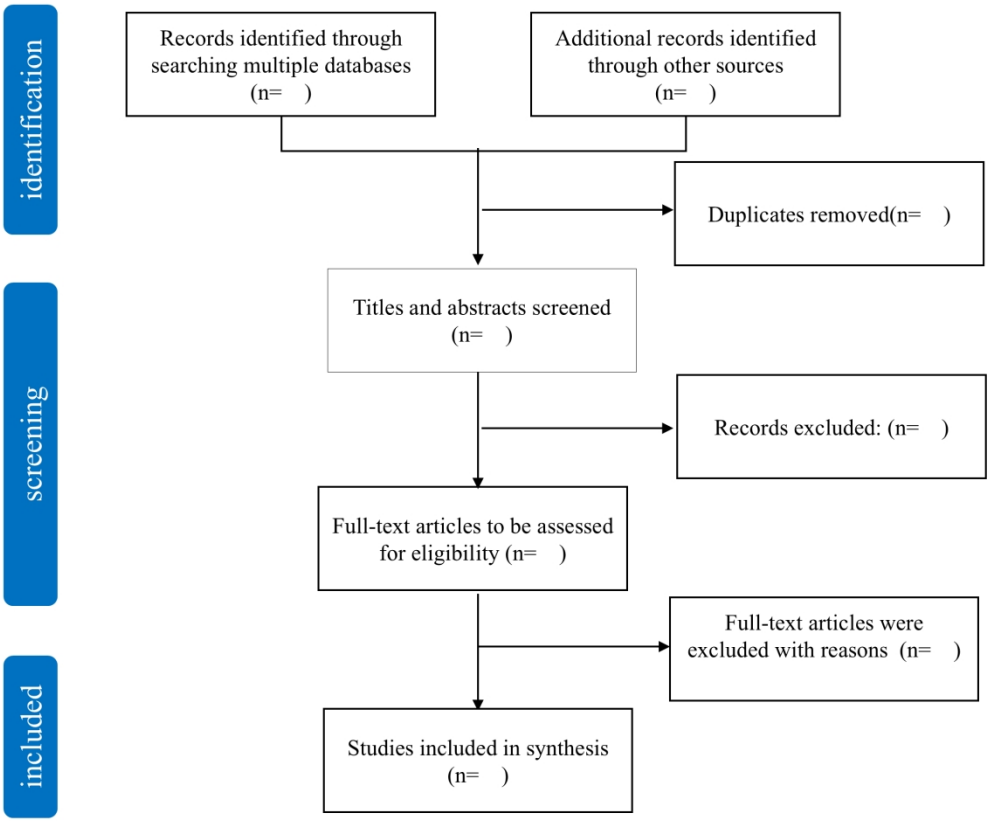

Figure 1 Flowchart for literature screening

187x155mm (300 x 300 DPI)

Table 1. Search strategy used for PubMed (searched on December16,2024)

Search	Query	Records retrieved
#1	student*[Title/Abstract] OR undergrad*[Title/Abstract] OR trainee*[Title/Abstract] OR educat*[Title/Abstract] OR intern*[Title/Abstract] OR pre-registrat*[Title/Abstract] OR "pre registrat*"[Title/Abstract]	1,547,821
#2	nurs*[Title/Abstract]	285,475
#3	"Students, Nursing"[Mesh] OR "Education, Nursing"[Mesh]	37,027
#4	(#1 AND #2) OR #3	108,060
#5	"Clinical Clerkship"[Mesh] OR ("Hospitals"[Mesh]) OR "Preceptorship"[Mesh]	153,843
#6	"clinical practice"[Title/Abstract] OR "clinical training"[Title/Abstract] OR placement*[Title/Abstract] OR clerkship [Title/Abstract] OR preceptorship [Title/Abstract] OR rotation*[Title/Abstract] OR practicum*[Title/Abstract] OR internship[Title/Abstract] OR "clinical setting*"[Title/Abstract] OR "clinical environment"[Title/Abstract] OR "clinical education"[Title/Abstract] OR hospital*[Title/Abstract] OR "clinical context*"[Title/Abstract]	1,634,110
#7	#5 OR #6	1,666,724
#8	"transition shock"[Title/Abstract] OR "reality shock"[Title/Abstract] OR "emotional shock"[Title/Abstract] OR "culture shock"[Title/Abstract] OR "role adaptation"[Title/Abstract] OR "role transition"[Title/Abstract] OR "stressful transition"[Title/Abstract] OR "transitional challenges"[Title/Abstract] OR "real-world shock"[Title/Abstract] OR "maladaptive transitions"[Title/Abstract] OR "transition experience"[Title/Abstract] OR "transfer* shock"[Title/Abstract] OR "shock of reality"[Title/Abstract] OR "shock reaction"[Title/Abstract]	962
#9	#4 AND #7 AND #8	183

Table 2. Data Extraction Form

NO.	Author(s)	Year of publication	Country of origin	Aim	Study design	Settings	Population and sample size	Assessment tools	Influencing factors	Outcomes	Intervention strategies	Key findings

Note:

(1) population and sample size included social demographic of the participants and sample size;

(2) intervention strategies were defined as measures or programs provided to reduce participants' transition shock;

(3) outcomes referred to the variables or items influenced by transition shock;

(4) assessment tools were specific tools or scales used to assess transition shock of nursing students;

(5) setting referred to the specific location where the study was conducted;

(6) country of origin referred to which country the study was conducted;

(7) key findings referred to other information related to the review questions and objectives.

(8) Influencing factors referred to the variables or items that affected transition shock of nursing students.

BMJ Open

Transition shock among nursing students during clinical practice: a scoping review protocol

Journal:	*BMJ Open*
Manuscript ID	bmjopen-2024-098112.R2
Article Type:	Protocol
Date Submitted by the Author:	15-Feb-2025
Complete List of Authors:	Jia, Xue-Li; Second Affiliated Hospital of Anhui Medical University, The First Department of Critical Care Medicine Ren, Shuang-Shuang ; Second Affiliated Hospital of Anhui Medical University, The First Department of Critical Care Medicine Huang , Yang-Yang; Second Affiliated Hospital of Anhui Medical University, The First Department of Critical Care Medicine Shi, Pei-Li; Second Affiliated Hospital of Anhui Medical University, The First Department of Urology Mi , Yu; Second Affiliated Hospital of Anhui Medical University, The Second Department of Orthopedics Zhang, Miao; Second Affiliated Hospital of Anhui Medical University, Department of nursing Zhu, Gui-yue; Second Affiliated Hospital of Anhui Medical University, The First Department of Critical Care Medicine
Primary Subject Heading:	Nursing
Secondary Subject Heading:	Nursing
Keywords:	Nursing research, Protocols & guidelines < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Psychological Stress < Stress, Psychological

Transition shock among nursing students during clinical practice: a scoping review protocol

Xue-Li Jia†[1], Shuang-Shuang Ren†[1], Yang-Yang Huang†[1], Pei-Li Shi[2], Yu Mi[3], Miao Zhang*[4], Gui-Yue Zhu*[1]

1. The First Department of Critical Care Medicine, The Second Affiliated Hospital of Anhui Medical University, Hefei, Anhui, China.
2. The First Department of Urology, The Second Affiliated Hospital of Anhui Medical University, Hefei, Anhui, China
3. The Second Department of Orthopedics, The Second Affiliated Hospital of Anhui Medical University, Hefei, Anhui, China
4. Department of nursing, The Second Affiliated Hospital of Anhui Medical University, Hefei, Anhui, China

***Correspondence to:** zhuguiyueahmu@126.com (GZ), mm20070317@126.com (MZ)

† These authors contributed equally to this work.

ABSTRACT

Introduction Transition shock is a very common negative clinical practice experience for nursing students, which not only makes the adaptation to clinical practice difficult, but also influences the smooth transition from nursing students to registered nurses, and eventually could lead them to leave the nursing field. Therefore, transition shock of nursing students deserves attention. Recently, there has been a notable increase in research dedicated to transition shock experienced by nursing students. However, the overview of research done on this topic remains unclear. Therefore, we will conduct a scoping review to summarise assessment tools, influencing factors, the impacts and intervention strategies of transition shock among nursing students, and identify knowledge gaps in this field to guide further research.

Methods and analysis We will follow the Joanna Briggs Institute (JBI) scoping review guidelines to conduct this scoping review. A comprehensive literature search will be conducted through twelve databases and grey literature sources. The search period will

be restricted from May 2009 to December 2024, and this review will only incorporate publications in Chinese or English. Two researchers will independently screen the literature according to inclusion criteria, and then conduct data extraction. Any differences arising between the two researchers will be addressed by engaging in discussion with a third researcher. We will collate, summarize and analyze the extracted data, and subsequently present the results by means of figures, tables and descriptive narratives. This review will be reported in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) reporting checklist.

Ethics and dissemination As this review does not involve patients or public, there is no need for ethical approval. The results of this scoping review will be disseminated by means of conference presentations and publication in a peer-reviewed academic journal.

Registration The scoping review protocol is registered in the Open Science Framework (OSF; https://osf.io/2r6jn/).

Keywords nursing research; psychological stress; protocols & guidelines.

STRENGTHS AND LIMITATIONS OF THIS STUDY

- The study will follow JBI scoping review guidelines to enhance methodological rigor.
- We will systematically and comprehensively search electronic databases and grey literature sources to ensure all available evidence is identified.
- This scoping review will be limited to included studies written in English or Chinese.
- Critical quality appraisal for included studies will not be conducted.

INTRODUCTION

Clinical practice is a crucial aspect of nursing education. [1]During the clinical practice period, nursing students engage in a hospital environment to apply their knowledge and skills to clinical nursing, guided by experienced practitioners.[2] This is an essential period for preparing nursing students for the role of registered nurses.[3] However, due to insufficient knowledge and skills, as well as the complexity during the clinical practice period, nursing students often experience a series of emotional and

interpersonal fluctuations when they first enter clinical practice.[4] This phenomenon is commonly referred to as "Transition Shock". The concept of "Transition Shock" refers to a series of psychological and emotional responses when transitioning from a familiar role to a relatively unfamiliar one, which was initially used to describe conflict experiences that newly graduated nurses encountered during their adaptation to the professional nursing role.[5] Nevertheless, recent studies have indicated that nursing students also undergo transition shock when moving from the academic environment of school to the clinical environment, describing their adaptation to clinical demands as similar to "being thrown in the deep end". [6 7] This negative clinical practice experience not only makes the adaptation to clinical practice difficult, but also influences the smooth transition from nursing students to registered nurses, and eventually could lead them to leave the nursing profession.[8 9] Thus, identifying the factors that have impacts on transition shock among nursing students and developing strategies to help them cope with it are crucial for ensuring a successful transition into the nursing roles. Previous literature have shown that the influencing factors of transition shock include individual factors[10], organizational factors[11], educational factors[12]. In addition, transition shock negatively affected professional identity,[13] quality of nursing care,[14] patient outcomes.[15] Intervention strategies to reduce transition shock involve peer or mentor support[16], psychological interventions,[17] transition programs.[18] However, these studies mainly focus on newly graduated nurses. Due to the differences in job content and level of responsibility between nurses and nursing students, the assessment, influencing factors, and intervention strategies of transition shock among nursing students may differ from those for newly graduated nurses. Recently, there has been a notable increase in research dedicated to transition shock among nursing students. *Kim and Shin* modified the Transition Shock Scale for newly graduated nurses and verified the validity and reliability of this scale among nursing students.[19] The modified scale has been widely used to assess transition shock of nursing students.[20 21] *Zhao et al's* study indicated that nursing students experienced a moderate extent of transition shock in clinical placement; patient safety attitudes, professional identity, and climate of caring were negatively correlated with transition shock.[2] *Kim et al's* study indicated that higher levels of

incivility and lower levels of psychological capital were significantly associated with increased levels of transition shock among nursing students.[22] Despite the attention given to transition shock among nursing students during clinical practice, the overview of research done on this topic remains unclear. The scoping review methodology is widely recognized as an effective approach for synthesizing existing evidence. Therefore, we will conduct a scoping review to systematically review the literature about transition shock among nursing students during their clinical practice, synthesize existing evidence, and identify knowledge gaps to guide further research.

OBJECTIVES

The purpose of this scoping review is to map the literature on assessment tools, influencing factors, the impacts and intervention strategies of transition shock among nursing students and identify knowledge gaps to guide further research.

REVIEW QUESTIONS

In accordance with the objectives of this scoping review, the primary research questions are as follows: (1) What assessment tools have been used to measure transition shock of nursing students? (2) What are the factors that affected transition shock among nursing students? (3) What impact does transition shock among nursing students during clinical practice have? (4) What intervention strategies are available to reduce transition shock among nursing students?

METHODS

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Eligibility criteria

The inclusion criteria are formulated in accordance with the elements of PCC (population, concept, context) and the types of evidence sources.

Population

Literature focusing on nursing students who are currently undergoing clinical practice

or have already completed their clinical practice will be included, while those focusing on newly graduated nursing students will not be included.

Concept

This scoping review will focus on studies regarding assessment tools, influencing factors, the impacts and intervention strategies of transition shock among nursing students.

Context

Various stages of nursing students' clinical practice

Types of study design

Given that this scoping review focuses on primary research to identify gaps, we will include primary studies that employ a variety of research designs, including quantitative, qualitative, and mixed-methods. Reviews will not be included. Nevertheless, their reference lists will still be searched to ensure relevant articles are retained. Conference abstracts, research protocols, or commentaries will not be considered either, as they do not provide sufficient information to answer the research questions.

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Figure legends

Figure 1 Flowchart for literature screening

Contributions GZ and MZ conceptualised the manuscript idea. XJ, SR and YH designed the protocol and drafted the manuscript. All the authors contributed to the improvement of the study design as well as to the editing and revision of this protocol. GZ is responsible for the overall content as guarantor.

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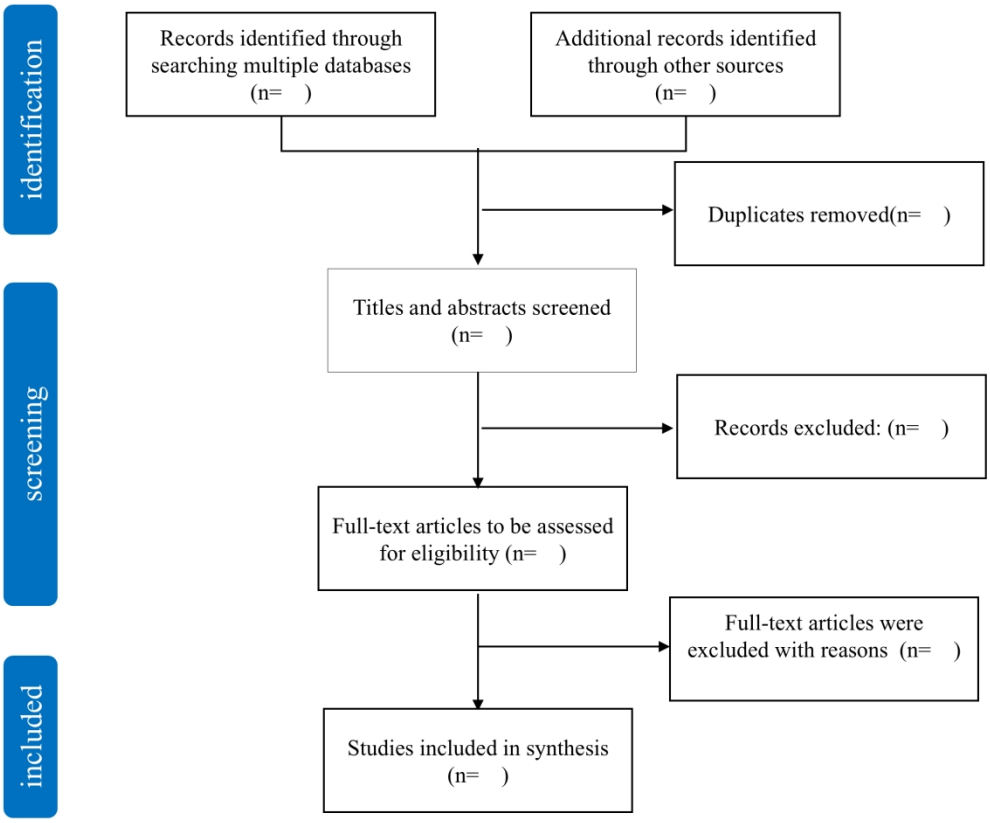

Figure 1 Flowchart for literature screening

187x155mm (300 x 300 DPI)

Table 1 Search strategies for databases

1.Database: PubMed **Number of results:146** **Date of Update Search: February 10th, 2025**		
Search limit: a. Publication Dates: 2009-05-01 - 2024-12-31 b. Humans or Animal: Human c. Language: English, Chinese		
NO.	Search strategies	Results
#1	student*[Title/Abstract] OR undergrad*[Title/Abstract] OR trainee*[Title/Abstract] OR p[illegible] [Title/Abstract] OR educat*[Title/Abstract] OR intern*[Title/Abstract] OR pre-registrat*[Title/Abstract] OR "pre registrat*" [Title/Abstract]	2,372,640
#2	nurs*[Title/Abstract]	573,734
#3	"Students, Nursing"[Mesh] OR "Education, Nursing"[Mesh]	105,296
#4	(#1 AND #2) OR #3	208,941
#5	"Clinical Clerkship"[Mesh] OR ("Hospitals"[Mesh]) OR "Preceptorship"[Mesh]	343,415
#6	"Clinical practice"[Title/Abstract] OR "clinical training"[Title/Abstract] OR placement*[Title/Abstract] OR clerkship[Title/Abstract] OR preceptorship[Title/Abstract] OR rotation*[Title/Abstract] OR practicum*[Title/Abstract] OR internship[Title/Abstract] OR "clinical setting*"[Title/Abstract] OR "clinical environment"[Title/Abstract] OR "clinical education"[Title/Abstract] OR hospital*[Title/Abstract] OR "clinical context*"[Title/Abstract]	2,487,153
#7	#5 OR #6	2,595,302
#8	"transition shock"[Title/Abstract] OR "reality shock"[Title/Abstract] OR "emotional shock"[Title/Abstract] OR "culture shock"[Title/Abstract] OR "role adaptation"[Title/Abstract] OR "role transition"[Title/Abstract] OR "stressful transition"[Title/Abstract] OR "transitional challenges"[Title/Abstract] OR "real-world shock"[Title/Abstract] OR "maladaptive transitions"[Title/Abstract] OR "transition experience"[Title/Abstract] OR "transfer* shock"[Title/Abstract] OR "shock of reality"[Title/Abstract] OR "shock reaction"[Title/Abstract]	1,473
#9	(#4 AND #7 AND #8) AND (2009/5/1:2024/12/31[pdat]) AND (chinese[Filter] OR english[Filter]) AND	146

	(humans[Filter])	
2.Database: Scopus Number of results:287 Date of Update Search: February 10th, 2025		
Search limit: a. Publication Years: 2009-2024 b. Language: English, Chinese		
NO.	Search strategies	Results
#1	TITLE-ABS-KEY(student*) OR TITLE-ABS-KEY(undergrad*) OR TITLE-ABS-KEY(graduate*) OR TITLE-ABS-KEY(pupil*) OR TITLE-ABS-KEY(educat*) OR TITLE-ABS-KEY(intern*) OR TITLE-ABS-KEY(pre-registrat*) OR TITLE-ABS-KEY("pre registrat*")	9,042,349
#2	TITLE-ABS-KEY (nurs*)	1,050,651
#3	#1 AND #2	343,327
#4	TITLE-ABS-KEY("clinical practice") OR TITLE-ABS-KEY("clinical training") OR TITLE-ABS-KEY(placement*) OR TITLE-ABS-KEY(clerkship) OR TITLE-ABS-KEY(preceptorship) OR TITLE-ABS-KEY (rotation*) OR TITLE-ABS-KEY(practicum*) OR TITLE-ABS-KEY(internship) OR TITLE-ABS-KEY("clinical setting*") OR TITLE-ABS-KEY("clinical environment") OR TITLE-ABS-KEY("clinical education") OR TITLE-ABS-KEY (hospital*) OR TITLE-ABS-KEY ("clinical context*")	4,978,153
#5	TITLE-ABS-KEY("transition shock") OR TITLE-ABS-KEY("reality shock") OR TITLE-ABS-KEY ("emotional shock") OR TITLE-ABS-KEY("culture shock") OR TITLE-ABS-KEY("role adaptation") OR TITLE-ABS-KEY ("role transition") OR TITLE-ABS-KEY("stressful transition") OR TITLE-ABS-KEY("transitional challenges") OR TITLE-ABS-KEY("real-world shock") OR TITLE-ABS-KEY("maladaptive transitions") OR TITLE-ABS-KEY("transition experience") OR TITLE-ABS-KEY("transfer* shock") OR TITLE-ABS-KEY("shock of reality") OR TITLE-ABS-KEY("shock reaction")	4,969
#6	(#3 AND #4 AND #5) AND (PUBYEAR > 2008 AND PUBYEAR < 2025) AND (LIMIT-TO (LANGUAGE, "English") OR LIMIT-TO (LANGUAGE, "Chinese"))	287
3.Database: Web of Science Number of results:355 Date of Update Search: February 10th, 2025		
Search limit: a. Publication Years: 2009-2024 b. Language: English, Chinese		

NO.	Search strategies	Results
#1	TS=(student*) OR TS=(undergrad*) OR TS=(trainee*) OR TS=(pupil*) OR TS=(educat*) OR TS=(intern*) OR TS=(pre-registrat*) OR TS=(“pre registrat*”)	12,945,834
#2	TS=(nurs*)	1,460,253
#3	#1 AND #2	430,919
#4	TS=("Clinical practice") OR TS=("clinical training") OR TS=(placement*) OR TS=(clerkship) OR TS=(preceptorship) OR TS=(rotation*) OR TS=(practicum*) OR TS=(internship) OR TS=("clinical setting*") OR TS=("clinical environment") OR TS=("clinical education") OR TS=(hospital*) OR TS=("clinical context*")	7,481,724
#5	TS=("transition shock") OR TS=("reality shock") OR TS=("emotional shock") OR TS=("culture shock") OR TS=("role adaptation") OR TS=("role transition") OR TS=("stressful transition") OR TS=("transitional challenges") OR TS=("real-world shock") OR TS=("maladaptive transitions") OR TS=("transition experience") OR TS=("transfer* shock") OR TS=("shock of reality") OR TS=("shock reaction")	5,651
#6	#3 AND #4 AND #5	510
#7	#6 AND (2009 OR 2010 OR 2011 OR 2012 OR 2013 OR 2014 OR 2015 OR 2016 OR 2017 OR 2018 OR 2019 OR 2020 OR 2021 OR 2022 OR 2023 OR 2024) (Publication Years)	379
#8	#7 AND (English or Chinese) (Languages)	355
4.Database: Cochrane Library Number of results:7 Date of Update Search: February 10th, 2025		
Search limit: a. Publication Dates: 2009-05-01 - 2024-12-31		
NO.	Search strategies	Results
#1	(student*):ti,ab,kw OR (undergrad*):ti,ab,kw OR (trainee*):ti,ab,kw OR (pupil*):ti,ab,kw OR (educat*):ti,ab,kw OR (intern*):ti,ab,kw OR (pre-registrat*):ti,ab,kw OR (pre NEXT registrat*):ti,ab,kw	260,666
#2	(nurs*):ti,ab,kw	61,966
#3	#1 AND #2	21,120
#4	MeSH descriptor: [Students, Nursing] explode all trees	920

#5	MeSH descriptor: [Education, Nursing] explode all trees	1,314
#6	#3 OR #4 OR #5	21,120
#7	("Clinical practice"):ti,ab,kw OR ("clinical training"):ti,ab,kw OR (placement*):ti,ab,kw OR (clerkship):ti,ab,kw OR (preceptorship):ti,ab,kw OR (rotation*):ti,ab,kw OR (practicum*):ti,ab,kw OR (internship):ti,ab,kw OR (clinical NEXT setting*):ti,ab,kw OR ("clinical environment"):ti,ab,kw OR ("clinical education"):ti,ab,kw OR (hospital*):ti,ab,kw OR (clinical NEXT context*):ti,ab,kw	320,646
#8	MeSH descriptor: [Clinical Clerkship] explode all trees	213
#9	MeSH descriptor: [Preceptorship] explode all trees	52
#10	MeSH descriptor: [Hospitals] explode all trees	5,967
#11	#7 OR #8 OR #9 OR #10	321,014
#12	("transition shock"):ti,ab,kw OR ("reality shock"):ti,ab,kw OR ("emotional shock"):ti,ab,kw OR ("culture shock"):ti,ab,kw OR ("role adaptation"):ti,ab,kw OR ("role transition"):ti,ab,kw OR ("stressful transition"):ti,ab,kw OR ("transitional challenges"):ti,ab,kw OR ("real-world shock"):ti,ab,kw OR ("maladaptive transitions"):ti,ab,kw OR ("transition experience"):ti,ab,kw OR (transfer* NEXT shock):ti,ab,kw OR ("shock of reality"):ti,ab,kw OR ("shock reaction"):ti,ab,kw	72
#13	#6 AND #11 AND #12 with Cochrane Library publication date Between May 2009 and Dec 2024	7
5.Database: ScienceDirect	**Number of results:11**	**Date of Update Search: February 11th, 2025**
Search limit: a. Publication Years: 2009-2024		
NO.	Search strategies	Results
#1	Title, abstract, keywords:(“nursing students” OR “nursing interns” OR “Pupil Nurses”) AND (“clinical practice” OR “clinical placement” OR “clinical practicum”) AND (“transition shock” OR “reality shock” OR “transition experience”) Max 8 Boolean connectors	11

	Wildcards not supported	
6.Database: Embase Number of results:181		
Search limit: a. Publication Years: 2009-2024 b. Humans or Animal: Human c. Language: English, Chinese		
NO.	Search strategies	Results
#1	'nursing student'/exp	36,537
#2	'nursing education'/exp	101,752
#3	student*:ti,ab,kw OR undergrad*:ti,ab,kw OR trainee*:ti,ab,kw OR pupil*:ti,ab,kw OR edu*:ti,ab,kw OR intern*:ti,ab,kw OR 'pre registrat*':ti,ab,kw	3,226,975
#4	nurs*:ti,ab,kw	689,402
#5	#3 AND #4	198,770
#6	#1 OR #2 OR #5	257,318
#7	'clinical practice':ti,ab,kw OR 'clinical training':ti,ab,kw OR placement*:ti,ab,kw OR clerkship:ti,ab,kw OR preceptorship:ti,ab,kw OR rotation*:ti,ab,kw OR practicum*:ti,ab,kw OR internship:ti,ab,kw OR 'clinical setting*':ti,ab,kw OR 'clinical environment':ti,ab,kw OR 'clinical education':ti,ab,kw OR hospital*:ti,ab,kw OR 'clinical context*':ti,ab,kw	3,737,457
#8	'clinical education'/exp	18,319
#9	'hospital'/exp	1,592,843
#10	#7 OR #8 OR #9	4,424,643
#11	'transition shock':ti,ab,kw OR 'reality shock':ti,ab,kw OR 'emotional shock':ti,ab,kw OR 'culture shock':ti,ab,kw OR 'role adaptation':ti,ab,kw OR 'role transition':ti,ab,kw OR 'stressful transition':ti,ab,kw OR 'transitional challenges':ti,ab,kw OR 'real-world shock':ti,ab,kw OR 'maladaptive transitions':ti,ab,kw OR 'transition experience':ti,ab,kw OR 'transfer* shock':ti,ab,kw OR 'shock of reality':ti,ab,kw OR 'shock reaction':ti,ab,kw	1,739
#12	#6 AND #10 AND #11	249
#13	#12 AND ([chinese]/lim OR [english]/lim) AND [humans]/lim AND [2009-2024]/py	181

7.Database: ProQuest	**Number of results:27**	**Date of Update Search: February 11th, 2025**
Search limit: a. Publication Dates: 2009-05-01 - 2024-12-31 b. Language: English, Chinese		
NO.	Search strategies	Results
#1	title (student* OR undergrad* OR trainee* OR pupil* OR educat* OR intern* OR pre-registrat* OR "pre registrat*") OR abstract (student* OR undergrad* OR trainee* OR pupil* OR educat* OR intern* OR pre-registrat* OR "pre registrat*")	773,204
#2	title(nurs*) OR abstract(nurs*)	67,252
#3	#1 AND #2	22,065
#4	title ("clinical practice" OR "clinical training" OR placement* OR clerkship OR preceptorship OR rotation* OR practicum* OR internship OR "clinical setting*" OR "clinical environment" OR "clinical education" OR hospital* OR "clinical context*") OR abstract ("clinical practice" OR "clinical training" OR placement* OR clerkship OR preceptorship OR rotation* OR practicum* OR internship OR "clinical setting*" OR "clinical environment" OR "clinical education" OR hospital* OR "clinical context*")	473,472
#5	title ("transition shock" OR "reality shock" OR "emotional shock" OR "culture shock" OR "role adaptation" OR "role transition" OR "stressful transition" OR "transitional challenges" OR "real-world shock" OR "maladaptive transitions" OR "transition experience" OR "transfer* shock" OR "shock of reality" OR "shock reaction") OR abstract ("transition shock" OR "reality shock" OR "emotional shock" OR "culture shock" OR "role adaptation" OR "role transition" OR "stressful transition" OR "transitional challenges" OR "real-world shock" OR "maladaptive transitions" OR "transition experience" OR "transfer* shock" OR "shock of reality" OR "shock reaction")	455
#6	#3 AND #4 AND #5	27
8.Database: PsycInfo	**Number of results:112**	**Date of Update Search: February 11th, 2025**

Search limit: a. Publication Dates: 2009-05-01 - 2024-12-31 b. Humans or animal: Human c. Language: English, Chinese		
NO.	Search strategies	Results
#1	TX (student* OR undergrad* OR trainee* OR pupil* OR educat* OR intern* OR pre-registrat* OR "pre registrat*")	2,688,224
#2	TX nurs*	220,312
#3	#1 AND #2	121,035
#4	TX ("clinical practice" OR "clinical training" OR placement* OR clerkship OR preceptorship OR rotation* OR practicum* OR internship OR "clinical setting*" OR "clinical environment" OR "clinical education" OR hospital* OR "clinical context*")	719,872
#5	TX ("transition shock" OR "reality shock" OR "emotional shock" OR "culture shock" OR "role adaptation" OR "role transition" OR "stressful transition" OR "transitional challenges" OR "real-world shock" OR "maladaptive transitions" OR "transition experience" OR "transfer* shock" OR "shock of reality" OR "shock reaction")	1,863
#6	#3 AND #4 AND #5	112
9.Database: CINAHL Plus with Full Text Number of results:158 Date of Update Search: February 11th, 2025		
Search limit: a. Publication Dates: 2009-05-01 - 2024-12-31 b. Humans or animal: Human c. Language: English, Chinese		
NO.	Search strategies	Results
#1	MH "Students, Nursing"	38,325
#2	MH "Education, Nursing"	53,834
#3	TI (student* OR undergrad* OR trainee* OR pupil* OR educat* OR intern* OR pre-registrat* OR "pre	861,039

	registrat*") OR AB (student* OR undergrad* OR trainee* OR pupil* OR educat* OR intern* OR pre-registrat* OR "pre registrat*")	
#4	TI nurs* OR AB nurs*	600,397
#5	#3 AND #4	153,744
#6	#1 OR #2 OR #5	191,277
#7	MH "Education, Clinical"	12,826
#8	MH "Hospitals"	69,369
#9	MH "Preceptorship"	5,238
#10	TI ("clinical practice" OR "clinical training" OR placement* OR clerkship OR preceptorship OR rotation* OR practicum* OR internship OR "clinical setting*" OR "clinical environment" OR "clinical education" OR hospital* OR "clinical context*") OR AB ("clinical practice" OR "clinical training" OR placement* OR clerkship OR preceptorship OR rotation* OR practicum* OR internship OR "clinical setting*" OR "clinical environment" OR "clinical education" OR hospital* OR "clinical context*")	754,599
#11	#7 OR #8 OR #9 OR #10	790,843
#12	MH "Reality Shock"	245
#13	TI ("transition shock" OR "reality shock" OR "emotional shock" OR "culture shock" OR "role adaptation" OR "role transition" OR "stressful transition" OR "transitional challenges" OR "real-world shock" OR "maladaptive transitions" OR "transition experience" OR "transfer* shock" OR "shock of reality" OR "shock reaction") OR AB ("transition shock" OR "reality shock" OR "emotional shock" OR "culture shock" OR "role adaptation" OR "role transition" OR "stressful transition" OR "transitional challenges" OR "real-world shock" OR "maladaptive transitions" OR "transition experience" OR "transfer* shock" OR "shock of reality" OR "shock reaction")	1,279
#14	#12 OR #13	1,421
#15	#6 AND #11 AND #14	158
10.Database: Google Scholar	**Number of results:16,200**	**Date of Update Search: February 12th, 2025**

Search limit: a. Publication Years: 2009-2024		
NO.	Search strategies	Results
#1	((student* OR undergrad* OR trainee* OR pupil* OR educat* OR intern* OR pre-registrat* OR "pre registrat*") AND nurs*) AND ("clinical practice" OR "clinical training" OR placement* OR clerkship OR preceptorship OR rotation* OR practicum* OR internship OR "clinical setting*" OR "clinical environment" OR "clinical education" OR hospital* OR "clinical context*") AND ("transition shock" OR "reality shock" OR "emotional shock" OR "culture shock" OR "role adaptation" OR "role transition" OR "stressful transition" OR "transitional challenges" OR "real-world shock" OR "maladaptive transitions" OR "transition experience" OR "transfer* shock" OR "shock of reality" OR "shock reaction") Search limit:2009-2024	16,200 (limit to the first 20 pages)
11.Database: OpenGey Number of results:0 Date of Update Search: February 12th, 2025		
Search limit: None		
NO.	Search strategies	Results
#1	((student* OR undergrad* OR trainee* OR pupil* OR educat* OR intern* OR pre-registrat* OR "pre registrat*") AND nurs*) AND ("clinical practice" OR "clinical training" OR placement* OR clerkship OR preceptorship OR rotation* OR practicum* OR internship OR "clinical setting*" OR "clinical environment" OR "clinical education" OR hospital* OR "clinical context*") AND ("transition shock" OR "reality shock" OR "emotional shock" OR "culture shock" OR "role adaptation" OR "role transition" OR "stressful transition" OR "transitional challenges" OR "real-world shock" OR "maladaptive transitions" OR "transition experience" OR "transfer* shock" OR "shock of reality" OR "shock reaction")	0
12.Database: CNKI Number of results:72 Date of Update Search: February 12th, 2025		
Search limit: a. Publication Dates: 2009-05-01 - 2024-12-31		

NO.	Search strategies	Results
#1	TKA='护理学生' + '护理专业学生' + '护生' + '护理本科生' + '护理专业本科生' + '实习护士' + '护理专业实习生' + '护理实习生' AND TKA= '临床实习' + '实习' + '毕业实习' + '临床学习' + '临床实践' + '医院实习' AND TKA='转型冲击' + '现实冲击' + '角色适应' + '冲击体验' + '角色转型' + '文化休克'	72
13.Database: Wan Fang	**Number of results:89**	**Date of Update Search: February 12th, 2025**
Search limit: a. Publication Years: 2009-2024		
NO.	Search strategies	Results
#1	(主题:("护理学生" OR "护理专业学生" OR "护生" OR "护理本科生" OR "护理专业本科生" OR "实习护士" OR "护理专业实习生" OR "护理实习生") and 主题:("临床实习" OR "实习" OR "毕业实习" OR "临床学习" OR "临床实践" OR "医院实习") and 主题:("转型冲击" OR "现实冲击" OR "角色适应" OR "冲击体验" OR "角色转型" OR "文化休克")) and 发表时间:2009-2024	89
14.Database: SinoMed	**Number of results:73**	**Date of Update Search: February 12th, 2025**
Search limit: a. Publication Years: 2009-2024 b. Humans or Animal: Human		
NO.	Search strategies	Results
#1	"学生，护理"[不加权:扩展]	24,595
#2	"教育，护理"[不加权:扩展]	38,897

#3	"护理学生"[常用字段:智能] OR "护理专业学生"[常用字段:智能] OR "护生"[常用字段:智能] OR "护理本科生"[常用字段:智能] OR "护理专业本科生"[常用字段:智能] OR "实习护士"[常用字段:智能] OR "护理专业实习生"[常用字段:智能] OR "护理实习生"[常用字段:智能]	82,986
#4	#1 OR #2 OR #3	68,088
#5	"临床实习"[不加权:扩展]	29,864
#6	"导师制"[不加权:扩展]	8,944
#7	"医院"[不加权:扩展]	84,991
#8	"临床实习"[常用字段:智能] OR "实习"[常用字段:智能] OR "毕业实习"[常用字段:智能] OR "临床学习"[常用字段:智能] OR "临床实践"[常用字段:智能] OR "医院实习"[常用字段:智能]	230,991
#9	#5 OR #6 OR #7 OR #8	591,973
#10	"转型冲击"[常用字段:智能] OR "现实冲击"[常用字段:智能] OR "角色适应"[常用字段:智能] OR "冲击体验"[常用字段:智能] OR "角色转型"[常用字段:智能] OR "文化休克"[常用字段:智能]	1,162
#11	((#4) AND (#9) AND (#10)) AND (人类[特征词]) AND 2009-2024[日期]	73

Table 2 Data Extraction Form

NO.	Author(s)	Year of publication	Country of origin	Aim	Study design	Settings	Population and sample size	Assessment tools	Influencing factors	Outcomes	Intervention strategies	Key findings

Note:

(1) population and sample size included social demographic of the participants and sample size;

(2) intervention strategies were defined as measures or programs provided to reduce participants'transition shock;

(3) outcomes referred to the variables or items influenced by transition shock;

(4) assessment tools were specific tools or scales used to assess transition shock of nursing students;

(5) setting referred to the specific location where the study was conducted;

(6) country of origin referred to which country the study was conducted;

(7) key findings referred to other information related to the review questions and objectives;

(8) influencing factors referred to the variables or items that affected transition shock of nursing students.