

Escape Rooms in Nursing: A Systematic Review and Meta-Analysis

Carla Sílvia Fernandes, RN, PhD, MSc, RGN, CRRN; Maria Teresa Moreira, RN, PhD, MSc, RGN, RMN; Maria Salomé Ferreira, RN, PhD, MSc, RGN, CRRN; and Andreia Maria Novo Lima, RN, PhD, MSc, RGN, CRRN, RMN

abstract

Background: Escape rooms, spaces where teams collaborate to uncover clues, solve puzzles, and complete tasks, are increasingly prevalent in nursing education. This review describes a systematic review and meta-analysis on the effectiveness of escape rooms in nursing. **Method:** Searches were conducted across multiple databases, including MEDLINE, CINAHL, SCOPUS, Psychology & Behavioral Sciences Collection, Academic Search Complete, MedicLatina, Teacher Reference Center, SciELO, and Cochrane. **Results:** The analysis encompassed nine studies published between 2020 and 2024. The findings showed a significant enhancement in technical knowledge in pre- and postintervention comparisons. The effects on teamwork skills showed high heterogeneity, indicating variability in outcomes across the studies. **Conclusion:** Escape rooms have proven effective in enhancing nursing knowledge, validating their use as an innovative and efficient pedagogical tool. Future research should focus on standardizing interventions and long-term evaluation to better determine the sustained efficacy of escape rooms as a learning method. [*J Contin Educ Nurs.* 2025;56(5):175-182.]

Initially developed for entertainment purposes (Quek et al., 2024), escape rooms have gained momentum among industry professionals and academic instructors because of their educational benefits (Anderson et al., 2021; Eukel & Morrell, 2021). The evolution of escape rooms from recreational activity to educational tool is likely because of their ability to provide immersive, prob-

lem-solving-based learning environments, making them a valuable strategy in health education (Burbage & Pace, 2025; Makri et al., 2021; Nowbuth & Parmar, 2024; Reinkemeyer et al., 2022). This technique is now widely used in a variety of professional and academic settings (Anderson et al., 2021), notably in nursing (Reinkemeyer et al., 2022). The exact origin of the first escape room is not clearly defined, but it likely emerged from a mix of various activities that share common elements, such as treasure hunts, point-and-click adventure games, or even adventure films (Alejandre et al., 2022; Nicholson, 2018). The first escape room appeared in Japan in 2007, and the concept quickly expanded globally (Makri et al., 2021).

Escape rooms, originally developed in physical formats and later digitalized (Makri et al., 2021; Rodríguez-Ferrer, Manzano-León, Fernández-Jiménez, et al., 2022), are playful environments where teams solve puzzles under time limits to escape (Eukel & Morrell, 2021; Quek et al., 2024). In education, they foster engaging learning experiences by promoting collaboration and reflection and by

From the Porto Higher School of Nursing, Center for Health Technology and Services Research (HealthRISE) (CSF), the Pessoa Higher School of Health, Center for Health Technology and Services Research (CINTESIS@RISE), the Institute of Research, Innovation and Development Fernando Pessoa Foundation (FP-I3ID, FP-BHS), Porto (MTM), the Health Sciences Research Unit: Nursing (UICISA:E) (MSF), and the Faculty of Medicine of the University of Porto, Center for Health Technology and Services Research (CINTESIS@RISE), School of Health, Polytechnic Institute of Viana do Castelo, Viana do Castelo (AMNL), Portugal.

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Address correspondence to Carla Sílvia Fernandes, RN, PhD, MSc, RGN, CRRN, Porto Higher School of Nursing, Center for Health Technology and Services Research, Rua Dr. António Bernardino de Almeida 830, Porto, Portugal 4200-072; email: carlafernandes@esenf.pt.

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enhancing communication and teamwork skills (Kim et al., 2024; Repetto et al., 2023; Veldkamp et al., 2022). Participants consider them more beneficial and engaging than traditional classroom settings (Cain, 2019).

Under time constraints, participants are encouraged to solve a variety of puzzles and challenges, including group tasks involving cognitive activities that enhance skills such as logic, creativity, critical thinking, communication, and problem-solving (Eukel et al., 2017; Fraguas-Sánchez et al., 2022; Nicholson, 2018). The game mechanics, such as time constraints and puzzles, enhance engagement, whereas pedagogical approaches focus on learning objectives. Educational escape rooms integrate both features, ensuring that problem-solving and teamwork foster collaboration and communication among players (Makri et al., 2021; Nicholson, 2018).

Numerous studies have documented the effectiveness of implementing escape rooms in health care professional training (Fraguas-Sánchez et al., 2022; He et al., 2024; Hintze et al., 2023; Quek et al., 2024), across secondary and higher education programs, and in professional development (He et al., 2024; Sanchez & Plumettaz-Sieber, 2019). In recent years, there has been a notable increase in the use of escape rooms in nursing education (Bonauduce, 2024; Gómez-Urquiza et al., 2019), where they are cited as facilitators of knowledge acquisition and development of professional skills, teamwork, and problem-solving (Acebo-Seguín et al., 2024; Anguas-Gracia et al., 2021; Reinkemeyer et al., 2022). Given the limited rigorous research evaluating the actual effectiveness of this educational method in nursing education, it is essential to broaden understanding of these methods. Recognizing this gap, the goal was to conduct a systematic review and meta-analysis of the effectiveness of escape rooms in nursing.

METHOD

Study Design

A systematic review and meta-analysis was conducted according to the guidelines set by the Joanna Briggs Institute (Aromataris et al., 2024). The current study was designed based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses checklist (PRISMA) (Page et al., 2021). The research was registered at the following link (OSF registration 0.17605/OSF.IO/VAZQ3). Previously, we performed an initial exploratory study that included a general mapping of the types of escape rooms existing in nursing education (Fernandes et al., 2025).

Search Strategy

The electronic search spanned multiple databases, including MEDLINE, CINAHL, SCOPUS, Psychology &

Behavioral Sciences Collection, Academic Search Complete, MedicLatina, Teacher Reference Center, SciELO, and Cochrane, looking for studies published in Spanish, English, or Portuguese, with no time restrictions until June 1, 2024. The search terms employed included *nurses*, *nursing students*, *escape room*, and *escape game*. These terms were selected to enable the exploration of all possible learning objectives in nursing education using escape rooms, including technical knowledge, interprofessional skills, and student satisfaction. Gray literature sources were also explored. To find additional studies, a backward citation search was conducted by reviewing the reference lists of all publications chosen for analysis (Figure A, available in the online version of this article).

Inclusion and Exclusion Criteria

As inclusion criteria, this review encompassed all studies that discussed the use of escape rooms involving nurses or nursing students. The escape rooms described in the studies could be of any type, including physical, virtual, and hybrid formats. The review included studies with experimental designs. Exclusion criteria considered studies that included strategies other than escape rooms.

Review Process

The results of each search were uploaded to Rayyan® (Qatar Computing Research Institute) to assist in the systematic review process (Ouzzani et al., 2016). During the screening process, two researchers reviewed titles, key words, and abstracts to identify studies to be included. Discrepancies were resolved by consensus among other authors to confirm the eligibility of the publications. Subsequently, full-text studies were assessed to determine whether they met the inclusion criteria, including the population, research design, and reported data. Studies that did not include a control group in their design were excluded. At all stages, discrepancies were resolved through consensus among the authors to confirm the eligibility of the publications.

Data Extraction

Figure 1 shows the process of identifying and including studies as outlined by PRISMA. Two reviewers independently collected data on authors, country, year, study goal, method, number of participants, inclusion of nurses, inclusion of nursing students, type of escape room, theme of escape room, time, instruments, and results. Discrepancies during the extraction process were discussed with a third reviewer. When there was uncertainty about the data from the studies, efforts were made to acquire additional information by contacting the authors.

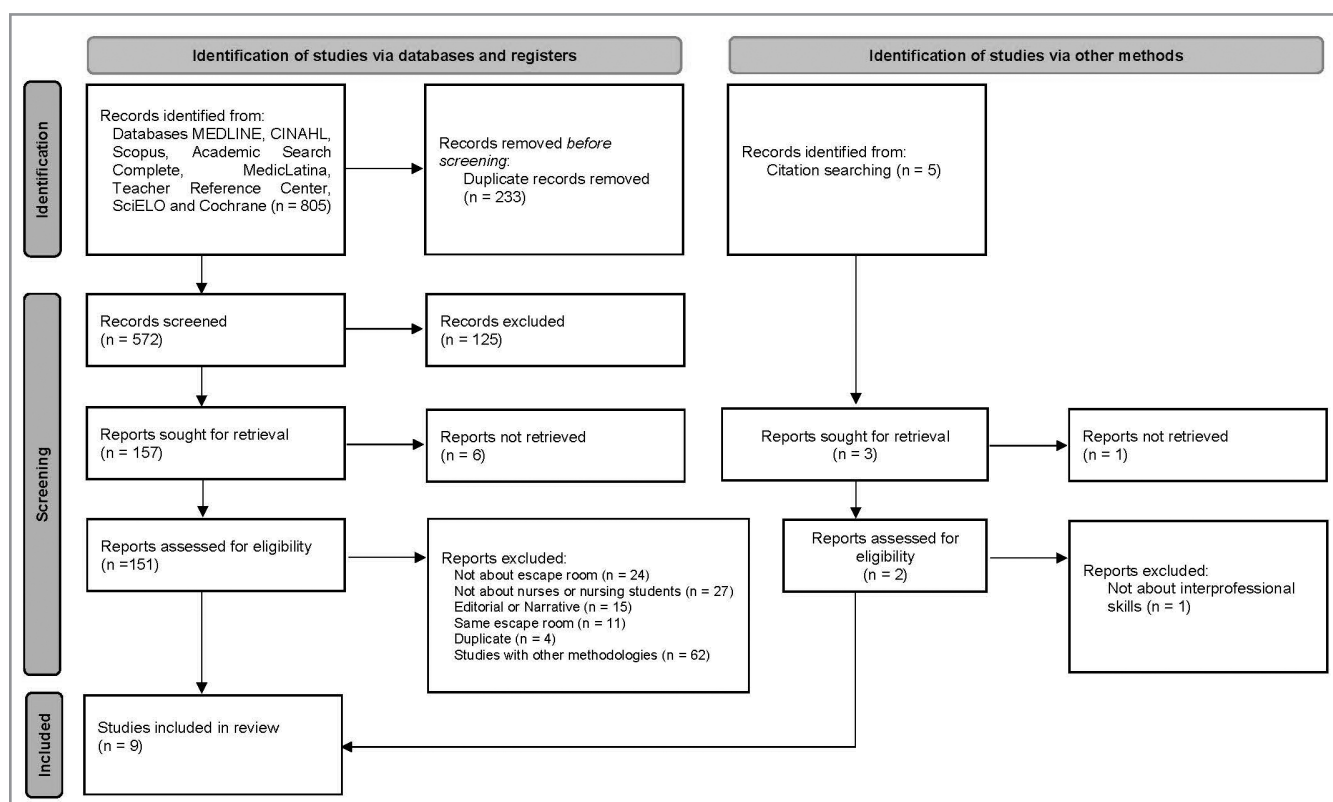


Figure 1: Article identification and inclusion process—Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) diagram flow.

Quality Appraisal and Risk of Bias

The methodological quality of the included studies was evaluated with processes and criteria from the *Cochrane Handbook for Systematic Reviews of Interventions* (Higgins et al., 2023), with Risk of Bias scoring with the Risk of Bias 2 tool (RoB 2), developed by the Cochrane Collaboration. This tool is an updated and more detailed version of the original Risk of Bias tool. The evaluation covered various areas: D1, the randomization process; D2, deviations from the intended interventions; D3, missing outcome data; D4, measurement of the outcome; and D5, selection of the reported result.

RESULTS

After the final selection of studies, nine studies were included (Table A, available in the online version of this article). The aggregated results of the use of escape rooms in nursing education are summarized in Table 1. The meta-analysis required the conversion of effect sizes from each study to a common scale, Cohen's *d*, which standardizes differences by the variability of the data, as recommended by Higgins et al. (2023). This procedure was specifically applied to the outcome knowledge. For interprofessional socialization, the data reported directly

by the authors through the Interprofessional Socialization and Valuing Scale (ISVS-21) were used. Statistical analysis was conducted with SPSS, version 29.0 (IBM). Because of variability in interventions across studies, a random effects model was chosen, and effect sizes and 95% confidence intervals were calculated. Heterogeneity among the studies was determined with the I^2 index, and values of 50% or greater were considered indicative of high heterogeneity (Santos et al., 2022).

Characteristics of the Included Studies

Of the nine studies on escape rooms in health education that were analyzed, the United States leads, with three U.S. studies (Table A). For year of publication, Table A and Table 1 show a concentration of publications in the most recent years (2021-2024), given that the research was conducted without time limits. Although experimental or quasi-experimental studies with controlled groups, with pre- and posttests, were selected, numerous methodological gaps are evident (Figure B, available in the online version of this article). The items with the most gaps in the studies analyzed are masking of participants and personnel and masking of outcome assessment, indicating frequent risks of performance and detection bias. In addition to

TABLE 1
SUMMARY OF RESULTS

Study	Scale	Group (n)	Pretest mean (SD)	Posttest mean (SD)	Change ^a	p
Chen et al. (2023)	Learning attitude scale	Intervention (41)	60.93 (2.33)	73.17 (1.67)	12.24	< .001
		Control (43)	61.51 (2.32)	61.63 (2.66)	0.12	
Foltz-Ramos et al. (2025)	Game flow experience	Intervention (41)	63.27 (2.48)	81.29 (2.49)	18.02	< .001
		Control (41)	63.27 (2.48)	81.29 (2.49)	18.02	< .001
	ISVS-21	Intervention (120)	5.3 (0.92)	6.02 (0.72)	0.72	.49
		Control (113)	5.26 (1.0)	5.9 (0.8)	0.64	
Frederick & Reed (2021)	Observed interprofessional collaboration scale	Intervention (120)	53 (49-56) ^b	55 (53-56) ^b	2.0	< .01
		Control (113)				
		Control (113)				
Gutiérrez-Puertas et al. (2020)	Periop 101 Final Exam	Intervention (4)		84 (7.4)		NR
		Control (18)		79.7 (6.9)		
Gutiérrez-Puertas et al. (2020)	Final assessment of students	Intervention (117)		9.59 (0.36)		< .05
		Control (120)		7.46 (1.36)		
	GAMEX enjoyment	Intervention (117)		27.60 (3.02)		
	GAMEX absorption	Intervention (117)		22.74 (4.88)		
	GAMEX creative thinking	Intervention (117)		15.55 (3.23)		
	GAMEX activation	Intervention (117)		16.09 (2.98)		
	GAMEX absence of negative effects	Intervention (117)		4.66 (2.32)		
	GAMEX dominance	Intervention (117)		13.52 (3.12)		
	Ad hoc satisfaction survey	Intervention only (117)		3.66 (0.54)		
Hsiao et al. (2024)	Disaster preparedness scale	Intervention (55)	78.93 (1.0)	91.8 (5.45)	12.87	< .001
		Control (60)	83.82 (2.45)	86.92 (4.38)	3.1	
	General self-efficacy scale	Intervention (55)	22.55 (4.45)	24.89 (8.27)	2.34	< .05
		Control (60)	22.27 (5.35)	23.43 (8.64)	1.16	
Molina-Torres et al. (2022)	Objective structured anatomical examination	Intervention (128)		8.94 (0.96)		.001
		Control (120)		7.70 (1.25)		
	Ad hoc satisfaction survey	Intervention only (117)		4.68 (0.54)		
Rodríguez-Ferrer, Manzano-León, Cangas, & Aguilar-Parra (2022)	Attributional questionnaire	Intervention (197)	47.57 (16.7)	30.83 (14.79)	16.74	< .001
		Control (109)	49.56 (16.03)	49.55 (16.02)	0.01	
	Motivation for cooperative playful learning strategies	Intervention only (197)		18.4 (3.16)		
Yang et al. (2023)	Knowledge survey	Intervention (21)		91.43 (9.64)		< .001
		Control (21)		68.70 (9.20)		
	Problem-solving scale	Intervention (21)		28.33		< .001
		Control (21)		14.67		
	Critical thinking questionnaire	Intervention (21)		31.76		< .001
		Control (21)		11.24		
Fusco et al. (2022)	ISVS-21	Intervention (133)	5.1 (0.92)	6.0 (0.77)	0.96	.51
		Control (129)	5.2 (0.97)	6.0 (0.82)	0.85	
	Knowledge survey	Intervention (133)	6.8 (1.9)	7.7 (1.5)	0.9	< .01
		Control (129)	6.7 (1.6)	6.9 (1.7)	0.2	

Note. GAMEX = gameful experience scale; ISVS-21 = interprofessional socialization and valuing scale; NR = not reported.

^aPretest to posttest.

^bInterquartile range.

the previously mentioned items, other items that show significant gaps include random sequence generation and allocation concealment, with several studies showing uncertainty or high risk in these criteria, pointing to potential selection biases.

Characteristics of the Study Participants

The nine studies analyzed included a total of 1,549 participants. Of these, two studies specifically identified a total of 137 nurses as direct participants. Additionally, nursing students were featured in five studies: first-year students were included in two studies, and second-year students participated in another study. However, four studies did not specify the academic year of the nursing students involved.

Characteristics of the Escape Rooms

In seven of the studies, escape rooms are described as being in a physical and in-person format, and two are conducted digitally. Escape rooms cover a wide range of topics in nursing education, including anatomy, perioperative knowledge, patient safety, interprofessional teamwork, and other specific clinical contexts. The mean duration of the sessions, excluding the room without a specified duration, was approximately 35 minutes, ranging from 15 to 60 minutes. The most common duration for escape room sessions was 30 minutes, as reported in three studies.

Outcome: Knowledge

Knowledge assessments showed significant improvements in the intervention groups. An objective structured anatomical examination (study S6) and the Periop 101 Final Exam (study S3) showed higher scores among participants who engaged in escape rooms, with statistically significant differences compared with control groups. Additionally, the knowledge surveys from studies S8 and S9 confirmed a substantial increase in knowledge retention ($p < .001$).

Outcome: Interprofessional Skills

Regarding interprofessional skills, the studies examined collaboration ability between nurses and other health care disciplines. The ISVS-21 was used in studies S2 and S9; however, the results were inconsistent. In the study by Foltz-Ramos et al. (2025), both the intervention group, which recorded an increase of 0.72 points ($p = .49$), and the control group, with an increase of 0.64 points, showed minor improvements, but without statistical significance. A similar outcome was observed in the study by Fusco et al. (2022), where changes were not statistically significant ($p = .51$). In contrast, the observed interprofessional collaboration scale, used in study S2, showed a significant improvement in the intervention group ($p < .01$).

Outcome: Satisfaction

Experience and student satisfaction were assessed with different scales, showing high levels of engagement and satisfaction in the intervention groups. The Game Flow Experience Questionnaire (GFEQ) (study S1) indicated a significant increase in gaming experience ($p < .001$). Similarly, the Gameful Experience Scale highlighted high scores in enjoyment, absorption, creative thinking, and activation. Additionally, ad hoc satisfaction questionnaires (studies S4 and S6) showed high levels of satisfaction.

The distribution of effect sizes, confidence intervals, and heterogeneity of the included studies are summarized (Figure C, available in the online version of the article). This analysis was conducted only for the outcomes where meta-analysis was feasible, specifically for the knowledge outcome and for interprofessional socialization, using the ISVS-21.

Forest plots (Figure C) provide a comparative analysis of the impact of educational interventions on interprofessional socialization and valuation and on knowledge in health settings. In the first plot, which integrates two studies, an aggregated effect size near zero ($I^2 = 0\%$) is seen, indicating a null efficacy of interventions in improving interprofessional socialization, with an absence of heterogeneity among the studies. In the second forest plot, with six studies, the aggregated effect size was significantly positive for knowledge, although with high heterogeneity ($I^2 = 94\%$). This high level of variability suggests that contextual or methodological factors may be influencing the results.

DISCUSSION

This systematic review and meta-analysis assessed the impact of escape rooms on various learning objectives. Although this review did not establish temporal limits, the use of escape rooms in nursing education has been documented since 2020. However, early studies presented methodological limitations, particularly in design and assessment strategies (Reinkemeyer et al., 2022). Although escape rooms are also used in professional nursing training (Frederick & Reed, 2021; Hsiao et al., 2024), they have been more frequently applied in the initial training of nursing students, particularly in the early stages of their academic journey (Molina-Torres et al., 2022; Rodríguez-Ferrer, Manzano-León, Cangas, & Aguilar-Parra, 2022). These strategies actively engage participants (Anguas-Gracia et al., 2021; Gómez-Urquiza et al., 2019; He et al., 2024; Hintze et al., 2023; Quek et al., 2024), enhancing student satisfaction and the overall educational experience (Anguas-Gracia et al., 2021; He et al., 2024; Hintze et al., 2023).

Knowledge

Several studies evaluated the impact of escape rooms on participants' knowledge, although in some cases these results were only assessed ex post facto (Molina-Torres et al., 2022; Yang et al., 2023). These methodological gaps necessitate cautious interpretation of the results regarding their effectiveness. **Figure C** shows that effect sizes vary significantly among studies, with the majority showing substantial improvements in knowledge, as indicated by p values in various studies. However, the extremely high heterogeneity ($I^2 = 94\%$) suggests significant variability in results, which may be attributed to differences in interventions, studied populations, or educational contexts. The assessment tools used to measure knowledge outcomes may not have been sensitive enough to detect the specific impact of escape rooms on student learning. Some measures were based on self-reports, which are subject to social desirability bias, whereas other tools were not validated for this specific context. Finally, the studies focused on immediate outcomes and did not include long-term follow-up to assess long-term knowledge retention.

Interprofessional Skills

Regarding the effectiveness of escape rooms in improving interprofessional socialization and valuation, significant results were not shown in the studies by Foltz-Ramos et al. (2025) and Fusco et al. (2022), with p values of .49 and .51, respectively ($p = .47$ for the global effect test). However, different results have been reported by other authors and publications with other populations (He et al. 2024; Veldkamp et al., 2020).

Satisfaction

Another outcome explored was satisfaction, which was measured in various studies using ad hoc satisfaction scales or debriefing. Gutiérrez-Puertas et al. (2020) and Molina-Torres et al. (2022) used ad hoc satisfaction questionnaires to assess participants' responses to interventions with escape rooms. Meanwhile, Frederick and Reed (2021) used debriefing. Findings from previous reviews on the use of escape rooms in the education of health care professionals indicate that most studies assessed participants' perceptions, which were largely positive (Hintze et al., 2023; Jaspers et al., 2024; Quek et al., 2024). However, although participants' perceptions and satisfaction are relevant, they should not be confused with indicators of effective learning or the development of professional skills (Hintze et al., 2023).

Implications for Future Studies

Several authors have pointed out limitations related to the methodological aspects of research, particularly in

terms of study design, sampling techniques, and the choice of assessment instruments, factors that can significantly affect the generalizability of results (Friedrich et al., 2019; Hintze et al., 2023; Quek et al., 2024; Rodríguez-Ferrer, Manzano-León, Cangas, & Aguilar-Parra, 2022). Further, future studies should investigate the long-term retention of the knowledge and skills acquired (Quek et al., 2024; Rodríguez-Ferrer, Manzano-León, Cangas, & Aguilar-Parra, 2022). Larger studies, without relying on convenience samples, are essential to strengthen the evidence on the use of escape rooms in nursing education (Gutiérrez-Puertas et al., 2020; Reinkemeyer et al., 2022). Given the increasing integration of innovative teaching strategies in nursing education, professionals focused on nursing professional development should consider the structured implementation of escape rooms to enhance knowledge, interprofessional collaboration, and participant satisfaction.

Limitations

Despite efforts, this study has some limitations that may affect the validity and generalization of the results obtained. The variability in interventions, including differences in theme, duration, and complexity, whether in physical or digital formats, may represent a significant bias. Other limitations were the reliance on convenience samples and the awareness of the participants and evaluators of the study's objectives. These factors could have introduced a bias in the results, as participants aware of the intervention's goals might alter their behavior to produce positive outcomes. On the other hand, the statistical analysis also presented restrictions, with less robust techniques for adjusting variables.

CONCLUSION

The findings suggest that although escape rooms were effective in improving participants' knowledge, the efficacy in promoting teamwork skills was not consistently demonstrated across the studies analyzed. Methodological limitations of the primary studies restrict the ability to generalize the results. It is recommended that future research adopt more rigorous experimental designs, with random and representative sampling to control potential biases. It is essential that these studies include longitudinal evaluations to determine whether the skills and knowledge acquired are sustained over time and are applicable in the clinical environment.

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MEDLINE

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Psychology & Behavioral Sciences Collection

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Teacher Reference Center

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SciELO

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Figure A. Search terms. DE = descriptor; MH = MeSH heading; MM = major MeSH topic.

Table A. Summary of Studies

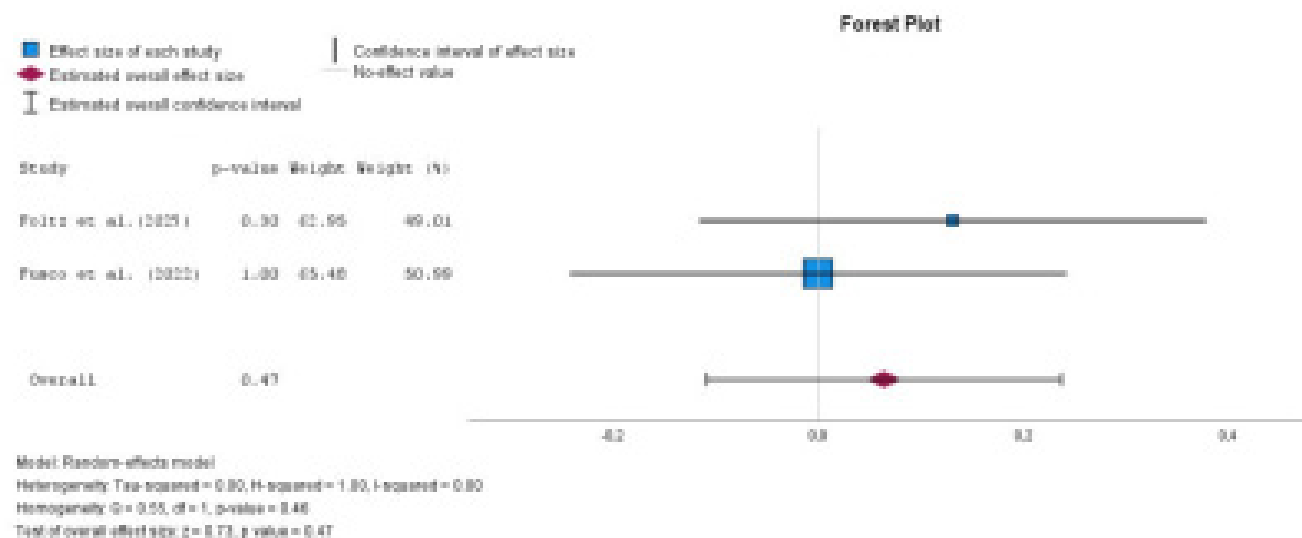
ID	Authors Year Country	Aim	Method	Participants N	Nurses	Nursing Students	Type of escape room	Escape Room Theme	Time	Assessment tool
S1	Chen et al. (2023) China	To investigate the effects of adding an escape room game-based learning activity on nursing students' learning attitudes in a gerontological nursing course	Quasi-experimental study with a pre/post-test with control group	84 second-year nursing students (41 in the test group and 43 in the control group)		√	Physical, in-person	Safe Medication Care for the Elderly	40 minutes	– Learning Attitude Scale (LAS) – Game Flow Experience Questionnaire (GFEQ)
S2	Foltz-Ramos et al. (2025) United States	To evaluate the effectiveness of an interprofessional escape room in improving teamwork and performance in simulation scenarios among health profession students	Quasi-experimental study with a pre/post-test with control group	233 students (118 nursing students and 115 pharmacy students)		√	Physical, in-person	Saving Patient X	30 minutes	– Interprofessional Socialization and Valuing Scale (ISVS-21) – Observed Interprofessional Collaboration (OIPC)
S3	Frederick & Reed (2021) United States	To enhance the learning experience and improve exam scores of nursing residents by introducing an interactive escape room as part of the perioperative exam review	Quasi-experimental study with a post-test with control group	22 nurses	√		Physical, in-person	Operation Outbreak	60 minutes	– Periop 101 Final Exam – Debriefing
S4	Gutiérrez-Puertas et al. (2020) Spain	To understand the gameful experience and satisfaction of nursing students in evaluating their clinical skills using an escape room, compared to traditional evaluation methods	Quasi-experimental study with a pre/post-test with control group	237 nursing students		√	Physical, in-person	Clinical skills evaluation	30 minutes	– Gameful Experience Scale (GAMEX) – ad hoc Satisfaction with the Game – Final assessment of students
S5	Hsiao et al. (2024) Taiwan	To develop and evaluate the effectiveness of an immersive cinematic escape room instructional approach in enhancing disaster preparedness and self-efficacy among nurses	Quasi-experimental study with a post-test with control group	115 nurses	√		Physical, in-person	Maternity Escape Room	Not specified	– Disaster Preparedness Scale (DPS) – General Self-Efficacy Scale (GSES)

S6	Molina-Torres et al. (2022) Spain	To evaluate the effectiveness of an escape room for enhancing anatomy-related knowledge retention in nursing students	Quasi-experimental study with a pre/post-test with control group	248 first-year nursing students		√	Physical, in-person	Anatomy	15 minutes	- Objective Structured Anatomical Examination - ad hoc Satisfaction with the Game
S7	Rodriguez-Ferrer, Manzano-León, Cangas, & Aguilar-Parra (2022) Spain	To evaluate the impact of a web-based escape room on raising awareness of severe mental illness among university students in health care	Quasi-experimental study with a pre/post-test with control group	306 first-year nursing students		√	Digital, online	Without Memories	60 minutes	- Attributional Questionnaire (AQ-14) - Motivation Questionnaire for Cooperative Playful Learning Strategies
S8	Yang et al. (2023) Taiwan	To identify the efficiency of escape room activities in enhancing nursing students' retention of maternity-related knowledge and their overall learning	Quasi-experimental study with a pre/post-test with control group	42 nursing students in total (21 in the experimental group and 21 in the control group)		√	Digital, online	Maternity Escape Room	50 minutes	- knowledge survey - Problem-Solving Scale - Critical Thinking Questionnaire
S9	Fusco et al. (2022) United States	To investigate the impact of escape room puzzle content on changes in students' immediate recall knowledge and interprofessional skills	Randomized controlled trial	262 nursing, pharmacy, and physical therapy students (133 in the intervention group and 129 in the control group)		√	Physical, in-person	Sepsis management for patients following total hip arthroplasty	30 minutes	- Interprofessional Socialization and Valuing Scale (ISVS-21) - knowledge survey

Study ID	D1a	D1b	D2	D3	D4	D5	Overall	
Chen et al.(2023)	!	!	-	+	+	+	-	+
Foltz-Ramos et al. (2025)	+	!	!	!	+	+	!	!
Frederick & Reed (2021)	!	!	!	!	+	+	!	-
Fusco et al. (2022)	+	!	!	!	+	+	!	
Gutiérrez-Puertas et al. (2020)	!	!	!	+	+	+	!	D1a Randomization process
Hsiao et al. (2024)	!	!	!	!	+	+	!	D1b Timing of identification or recruitment of participants
Molina-Torres et al. (2022)	!	!	+	!	+	+	!	D2 Deviations from the intended interventions
Rodríguez-Ferrer et al. (2022)	+	!	!	!	+	+	!	D3 Missing outcome data
Yang et al. (2023)	!	!	!	+	+	+	!	D4 Measurement of the outcome
								D5 Selection of the reported result

Figure B. Risk of bias scoring with the Cochrane Collaboration Risk of Bias 2 tool.

Interprofessional Socialization and Valuing Scale



knowledge

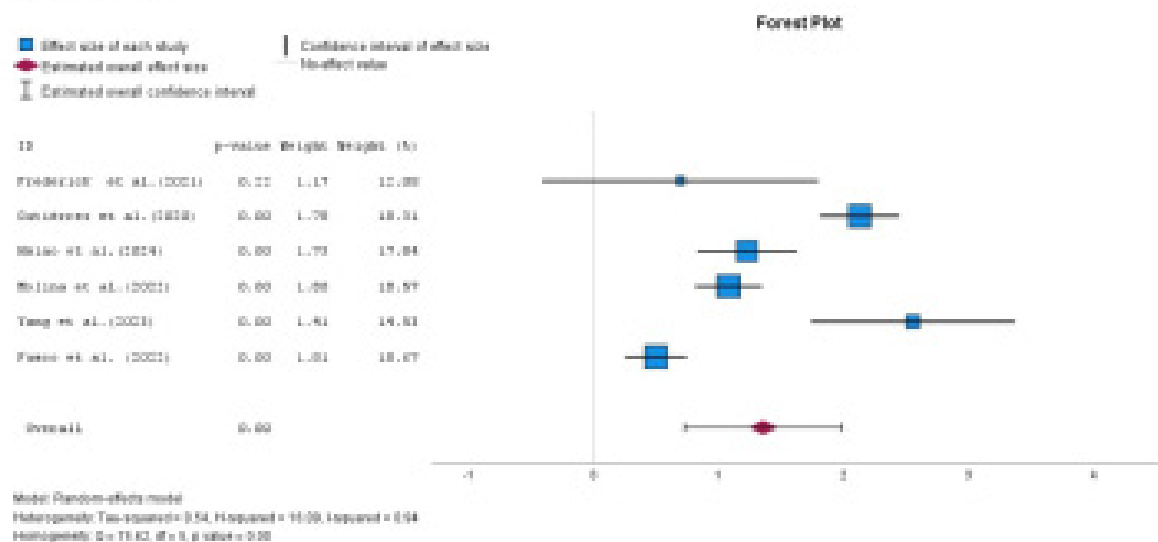


Figure C. Total effect size.