

# Veteran Care in Undergraduate Medical Education: A Systematic Review

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## Introduction

- Veterans have unique social determinants of health, including but not limited to military exposures, mental health disorders, PTSD, depression, anxiety, smoking/drug use, traumatic injuries, chronic pain, and homelessness.<sup>[1,2]</sup>
- An increasing number of veterans are receiving healthcare through civilian institutions, aided by the MISSION Act.<sup>[3-5]</sup>
- Most providers have limited knowledge, comfort, or cultural training on topics of military/veteran-related healthcare.<sup>[6-9]</sup>
- Through standard 7.6, the Liaison Committee on Medical Education (LCME) expects adequate veteran care education in medical school curriculum.<sup>[10]</sup>
- A curriculum inventory done by AAMC on veteran care instructional methods showed majority were mandatory and lecture-based. Outcome measures were not analyzed.<sup>[11]</sup>

## Aims and Objectives

- To identify and examine what educational interventions were implemented in medical schools
- To investigate how these interventions were evaluated
- To determine what impact these interventions had on medical students with regard to veteran health care.

## Methods

### Search Strategy

- **Databases:** PubMed, Embase, PsychINFO, and Web of Science
- **Keywords:** “veterans health,” “veterans,” “veterans health services,” “medical students,” “undergraduate medical education,” and “medical schools.”

### Screening

- 2-step approach performed through Covidence platform
  1. Title and abstract screening
  2. Full-text article selection
- The PRISMA flow diagram was used to complete the screening process, as depicted in figure 1.<sup>[12]</sup>

### Inclusion Criteria

- Articles on interventions and approaches to integrating veteran health into the curriculum in undergraduate medical education

### Exclusion Criteria

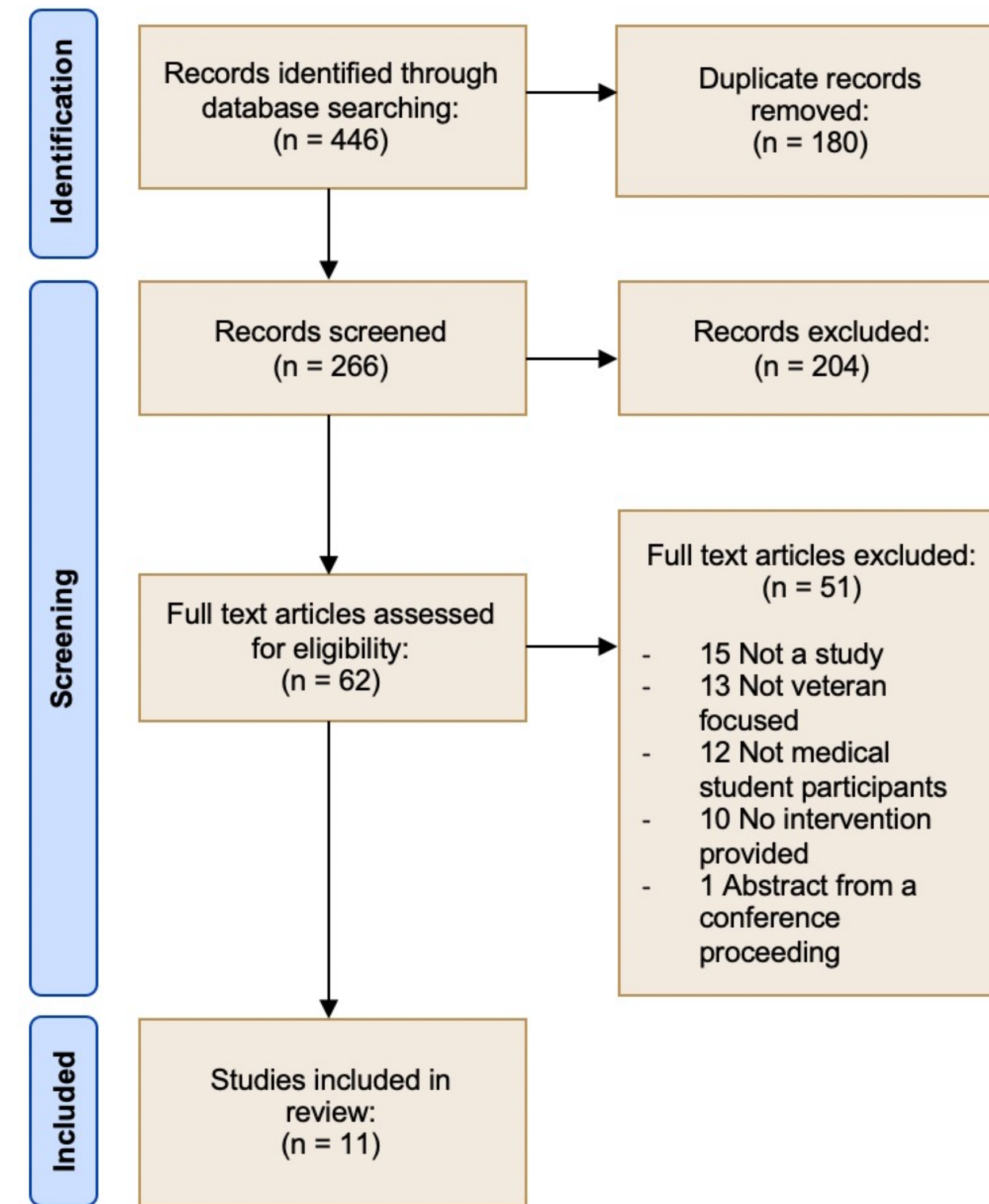
- Not a study, not related to undergraduate medical education, and not covering interventions pertaining to veterans in medical education

### Data Extraction

- A standard data extraction form was created and piloted on two sample studies. Extraction of data was performed through Covidence software platform.
- Kirkpatrick Evaluation Model was used to categorize types of learning outcomes.
- A qualitative systematic review was conducted.

## Results

**Figure 1:** PRISMA flow diagram of article selection process



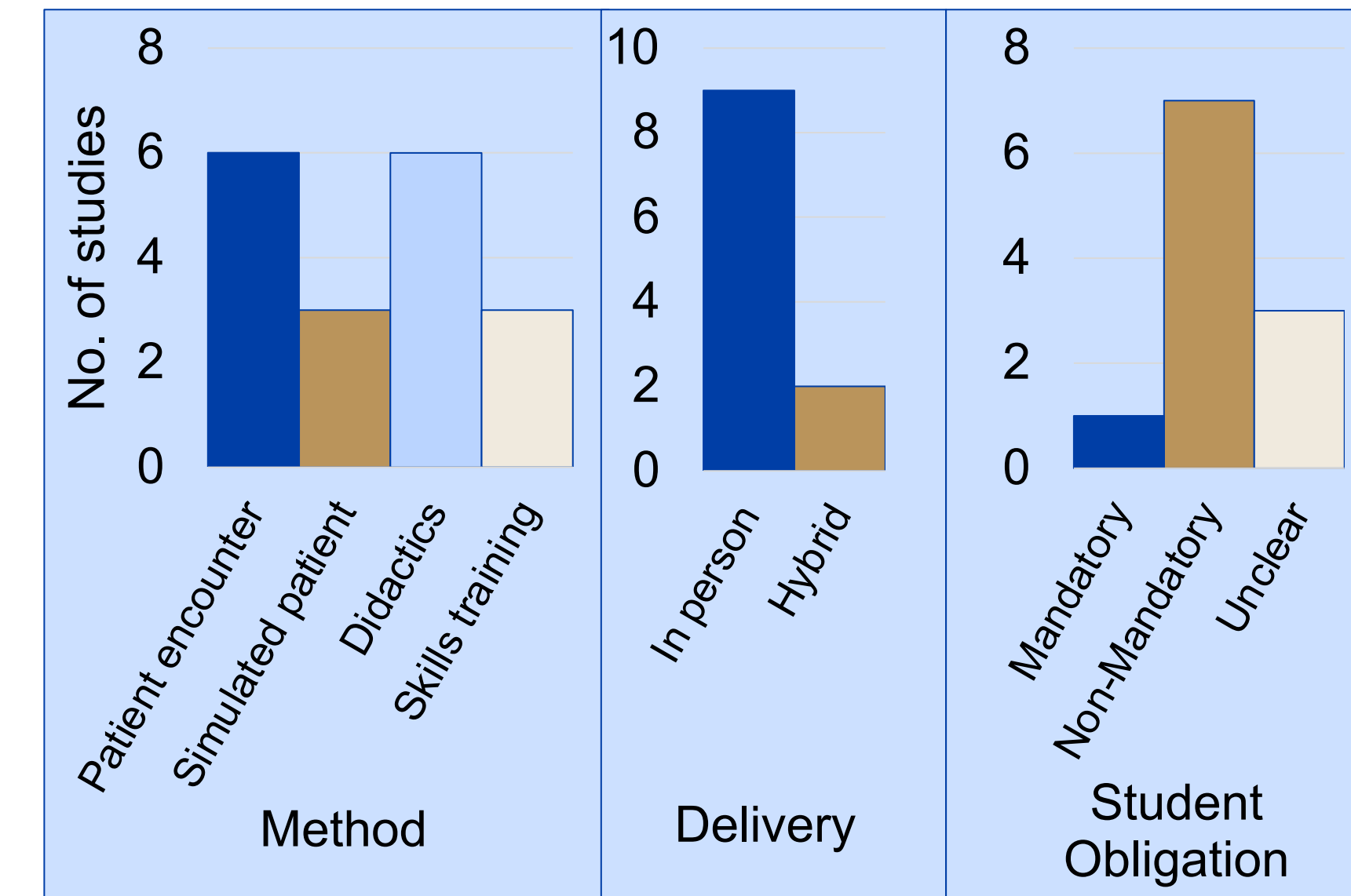
**Figure 2:** Reported study characteristics of identified articles

Design	Time of Interventions	Setting
<ul style="list-style-type: none"> <li>• Qualitative (n=2)</li> <li>• Quantitative (n=4)</li> <li>• Mixed Method (n=5)</li> </ul>	<ul style="list-style-type: none"> <li>• M1 Year (n=3)</li> <li>• M2 Year (n=4)</li> <li>• M3 Year (n=6)</li> <li>• M4 Year (n=3)</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical (n=7)</li> <li>• Preclinical (n=2)</li> <li>• Longitudinal (n=2)</li> <li>• Non-curricular (n=2)</li> </ul>

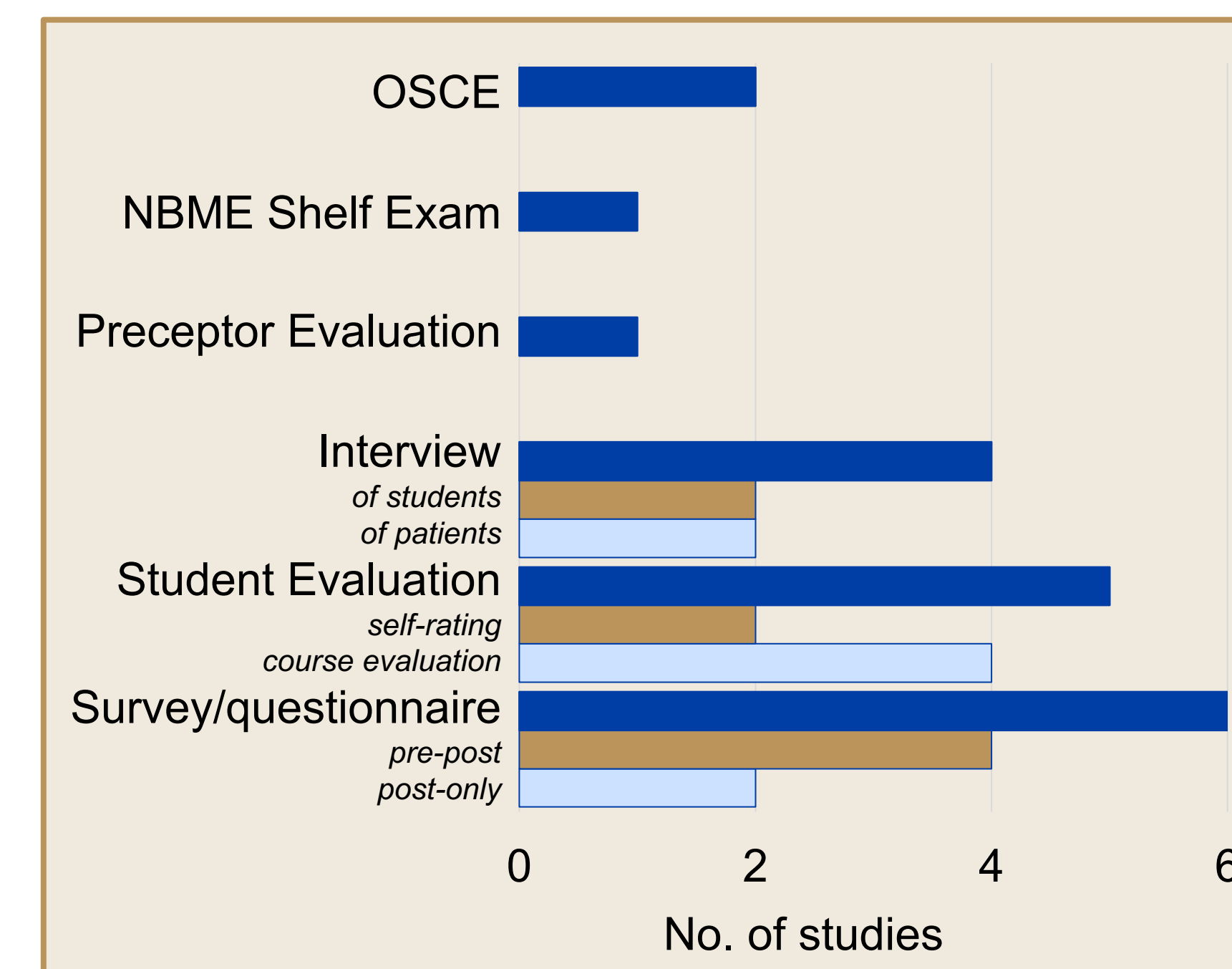
**Table 1:** Categorization of intervention outcomes with the Kirkpatrick Evaluation Model

Level	Description	No. (%) of studies
1	Reaction: notes participants' thoughts/feelings about the intervention	4 (36%)
2	Learning: measures change in knowledge, skills, or attitude due to intervention	5 (45%)
3	Behavior/Transfer: assesses application of learning in everyday environment	0 (0%)
4	Results: evaluates contributions/ impacts of program, notably patient outcomes or career paths/ preferences	2 (18%)

**Figure 3:** Summary of intervention attributes of included studies



**Figure 4:** Summary of outcome measures of included studies



### Key Results

#### Study characteristics<sup>[13-23]</sup>

- Study Design: most commonly mixed method (n = 5)
- Participants: majority 3<sup>rd</sup> year medical students (n = 6)
- Setting: most occurred within a clinical setting (n = 7) (Figure 2)

#### Interventions<sup>[13-23]</sup>

- Ranged from 15 minutes to 16 months in duration
- Mostly in-person and non-mandatory
- Involvement of direct patient encounters and/or didactic sessions most common (Figure 3)
- More learning outcomes of “Reaction” (n = 4) and “Learning” (n = 5) (Table 1)

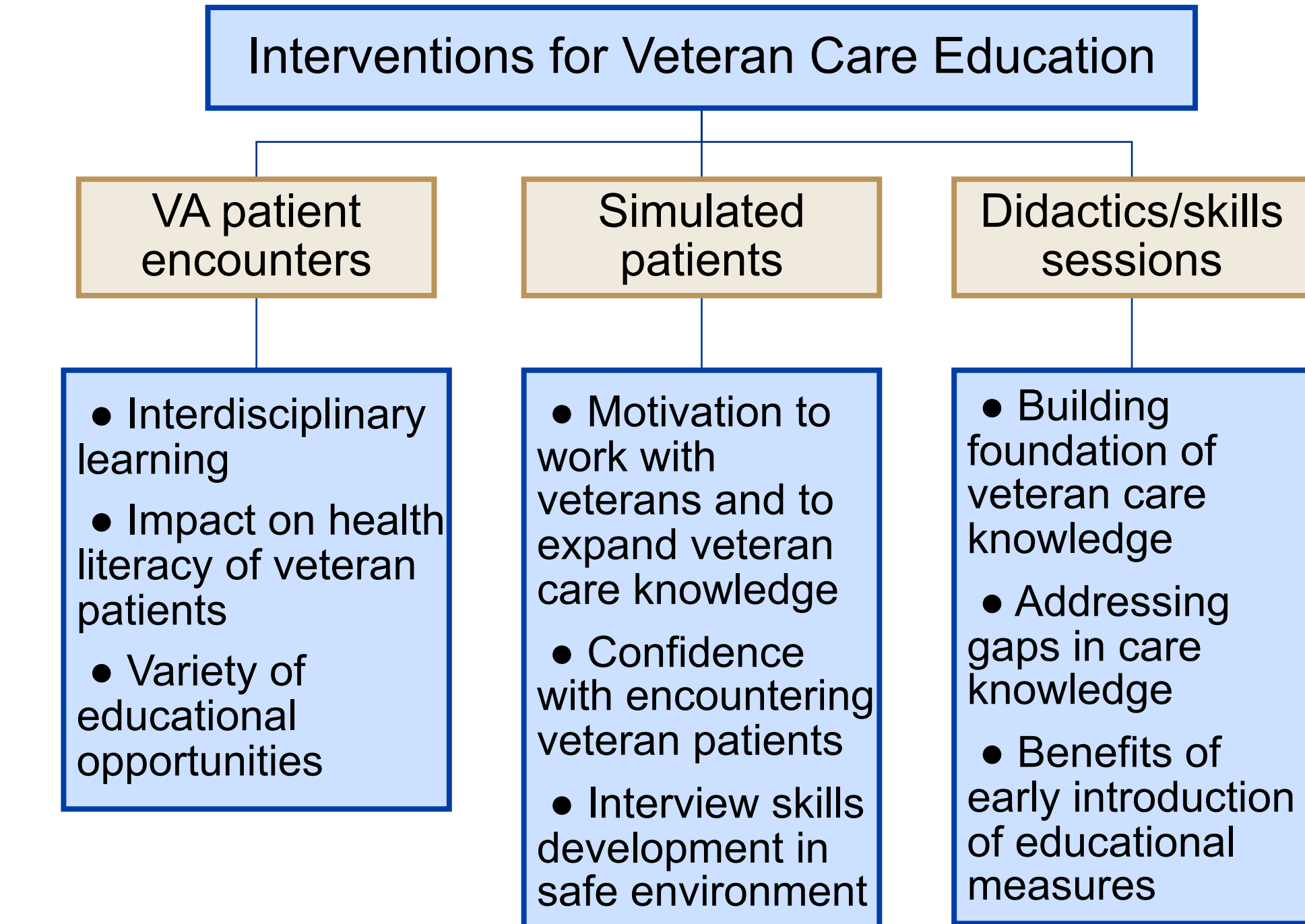
#### Outcome Measures<sup>[13-23]</sup>

- Surveys (n = 6) and student evaluations (n = 5) were most utilized. (Figure 4)

## Discussions

### Impacts

**Figure 5:** Synthesized findings of the implications of interventions pertaining to veteran care education



### Limitations

- Lack of outcome measures in behavioral change in studies
- Study selection restricted to settings of LCME accredited medical schools
- No studies considered from countries outside the United States

### Future Directions

- Additional research into non-LCME accredited medical schools and ACGME-accredited residency programs, along with further primary research, is encouraged to expand the scope of veteran care education and discover new ways in which interventions affect medical students and the community.

## Conclusions

- The majority of interventions on veteran care can be categorized as VA patient encounters, simulated/standardized patient (SP) experiences, or didactics/skills sessions.
- Most intervention outcomes were measured through surveys and student evaluations, which primarily addressed student reaction and learning outcomes.
- Each intervention had a unique subset of implications which should be considered before implementation into curricula.
- Overall, veteran care educational methods appeared to have positive effects on students and veteran patients.

## References

1. Olovick M, Flowers M, Diaz VJ. US veterans and their unique issues: enhancing health care professional awareness. *Adv Med Educ Pract*. 2015;6:834-839.
2. US Department of Veterans Affairs. *Military Experiences*. 2022. Available at: <https://www.va.gov/vetaffairs/>. Accessed February 28, 2023.
3. Huang G, Bergman MA, MPH Kim S, & Gattuso M. 2017 Survey of Veteran Educator Health Care of Health Care. *Health Res J*. 2018;1:1-10.
4. Blain V, Hendricks A, Wang F, Gardner J, Kozicki L. The impact of private insurance coverage on veterans' use of VA care: insurance and selection effects. *Health Serv Res*. 2008;43(1 Pt 1):287-296.
5. Office of Public and Human Resources Affairs. *VA Announces new health care options under MISSION Act*. 2018. Available at: <https://www.va.gov/opa/pressrel/20180426.asp>. Accessed on January 28, 2021.
6. Franks TR, Nakazawa M. Perceptions of physicians in civilian medical practice on veterans' issues related to health care. *J Am Geriatr Soc*. 2015;63:115-120.
7. Davis N. *MISSION Act: Improving VA Health Services and Treatment Access for Veterans and Their Families*. South Carolina: Medical University of South Carolina; 2018.
8. Kibonek DG, Best CL, Smith DW, Kuder H, Corbett-Green V. Saving Those Who Have Served: Educational Needs of Health-Care Providers Working with Military Members, Veterans, and Their Families. *South Carolina: Medical University of South Carolina*. Accessed on February 28, 2023.
9. LCME. *Functions and structure of a Medical School: Standards for Accreditation of Medical Education Programs Leading to the MD Degree*. 2022. Available at: <https://www.lcme.org/standards-and-requirements/>. Accessed on March 14, 2021.
10. AAMC. *Curriculum Reports*. U.S. Medical Schools Teaching Veteran Care by Instructional Method. n.d. Available at: <https://www.aamc.org/curriculum-reports/teaching-veteran-care-by-instructional-method>. Accessed on March 14, 2021.
11. Page MJ, McKenzie JE, Bossuyt P, et al. The PRISMA 2020 statement: reporting guidelines for reporting systematic reviews. *BMJ*. 2021;372:n71.
12. Blain V, Hendricks A, Wang F, Gardner J, Kozicki L. A qualitative study of the meaning of physical examination testing for patients. *J Gen Intern Med*. 2010;25(6):786-791.
13. Chinnay V, Chinnay V, Chinnay V, et al. *VA Announces new health care options under MISSION Act*. 2018. Available at: <https://www.va.gov/opa/pressrel/20180426.asp>. Accessed on January 28, 2021.
14. Franks TR, Nakazawa M. Perceptions of physicians in civilian medical practice on veterans' issues related to health care. *J Am Geriatr Soc*. 2015;63:115-120.
15. Carter DM, Carter DM, Carter DM, et al. *VA Announces new health care options under MISSION Act*. 2018. Available at: <https://www.va.gov/opa/pressrel/20180426.asp>. Accessed on January 28, 2021.
16. Dupont-Guillet J, Porter S, Quinn SC, et al. The Columbia-Brown VA ambulatory care: an effective, 12-week, integrated, longitudinal clinical experience. *Med Educ Online*. 2017;22(1):1501630.
17. Kibonek DG, Best CL, Smith DW, Kuder H, Corbett-Green V. Saving Those Who Have Served: Educational Needs of Health-Care Providers Working with Military Members, Veterans, and Their Families. *South Carolina: Medical University of South Carolina*. Accessed on February 28, 2023.
18. Kibonek DG, Best CL, Smith DW, Kuder H, Corbett-Green V. Saving Those Who Have Served: Educational Needs of Health-Care Providers Working with Military Members, Veterans, and Their Families. *South Carolina: Medical University of South Carolina*. Accessed on February 28, 2023.
19. Kibonek DG, Best CL, Smith DW, Kuder H, Corbett-Green V. Saving Those Who Have Served: Educational Needs of Health-Care Providers Working with Military Members, Veterans, and Their Families. *South Carolina: Medical University of South Carolina*. Accessed on February 28, 2023.
20. Lyson M, Ravitskaya D, Ross PT, et al. Veteran Intervention Cases to Residents Service (VICORS): Standardized Patient Assessment of Veteran-Centered Care. *MedEdPORTAL*. 2016;12:10326.
21. Peltier M, McCreary K, O'Leary C, et al. An Interdisciplinary Approach to Educating Medical Students About Chemical Assessment and Treatment Planning. *Top Psychiatry*. 2020;31(1):66-67.
22. Hirschfeld C, Soderstrom M, Sander C, Berman E, Fry C, Boring B. Educating medical students about military health: Perspectives from a multidisciplinary lecture series. *Eds Health J*. 2019;20(2):128-131.
23. Truher P, Shubin von Scholten M, Park E, Rueschmann E, Benjamin AB, Nease C. Medical student psychiatric evaluation performance in VA and non-VA settings. *Acad Psychiatry*. 2009;34(1):23-26.