


The Impact of an Educational Program on Medical Students' Knowledge and Awareness of Elder Abuse

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ABSTRACT

OBJECTIVE: Approximately 1 in 6 adults 60 and older have experienced a form of abuse in the past year. Many cases remain under-reported due to lack of knowledge and awareness. This study created an educational program on elder abuse for medical students to determine if participation would increase knowledge and awareness of elder abuse.

METHODS: This study used a pre and post survey methodology to evaluate students' knowledge and awareness of elder abuse before and after participating in this educational program. Sixty first and second year osteopathic medical students at the Edward Via College of Osteopathic Medicine, Carolinas Campus participated in this study. Students were emailed a pre-survey to evaluate their pre-existing knowledge and awareness. The survey was, previously created by the Student Training on Preventing Domestic Violence (STOP-DV) team using validated measures. Participants then attended educational events about various forms of elder abuse and recognizing its associated signs, and afterward completed the post-survey. The results were compared using t-tests to determine if there was a significant difference.

RESULTS: First and second year students differed significantly in pre-survey results of knowledge but not post-survey results. The results showed a significant difference in overall mean knowledge (P -value < .001) and awareness scores (P -value < .001) in all students.

CONCLUSION: These results suggest education on elder abuse can enable future physicians to better recognize, understand, and support older adults regarding elder maltreatment.

KEYWORDS: Elder abuse, geriatric medical education, elder abuse prevention, domestic violence

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Introduction

Elder abuse is defined as “an intentional act, or failure to act, by a caregiver or another person in a relationship involving an expectation of trust that causes or creates a risk of harm to an older adult.”¹ Elder abuse encompasses the subtypes of neglect, abandonment and physical, financial, emotional and sexual abuse. It is estimated that 1 in 6 adults 60 years and older have experienced 1 form of abuse in the community over the past year.² Although the rate of elder abuse is escalating, it remains under-reported.³ Elder abuse is under-reported both because of a lack of knowledge and awareness among medical professionals on how to recognize and confidently identify neglect and the warning signs of elder abuse and because of low levels of reporting by the affected elders themselves.^{3,4} The reporting among elders remains low as often the abused are physically disabled, functionally dependent, cognitively impaired, or of a lower socioeconomic status that may make reporting more challenging.⁴ Even when these victims may be questioned about potential abuse, they can be fearful their reporting may anger their abuser that could potentially worsen the abuse and further endanger their lives and well-being. Additionally, these

victims may also depend on their abuser as their caregiver and may remain silent about possible abuse due to concern that reporting may result in losing their caregiver.⁴ Self-neglect refers to “behavior of an elderly person that threatens his/her own health and safety” and “generally manifests itself in an older person as a refusal or failure to provide himself/herself with adequate food, water, clothing, shelter, personal hygiene, medication (when indicated) and safety precautions.”⁵ Self-neglect excludes mentally competent older individuals capable of understanding their decisions, but yet still voluntarily engage in acts that could threaten their health and safety.^{5,6} This is the most common form of abuse reported to Adult Protective Services (APS). Risk factors of physical dependency, cognitive impairment, higher levels of psychological distress, and lower numbers of social relationships are common contributors to self-neglect.⁶ In the healthcare community, there is little to no education provided to medical caregivers, including physicians, nurses, nursing aides, emergency medical personnel, and medical students, about the signs of elder abuse, the appropriate steps to report it, and the best way to support victims.⁷⁻¹¹ Studies have shown other roadblocks exist for reporting elder



abuse. According to Gonzalez et al, emergency medical technicians admitted to not reporting abuse due to concerns over false alarms, the potential negative impact on the victim's life, and time restrictions.⁹ Kennedy, 2005 showed that physicians repeatedly forget to ask about mistreatment and feel that they cannot prove the elder abuse when it is occurring.³ Consequently, physicians only report 2% of all reported elder abuse cases.¹²

This low reporting by physicians may be a result of the lack of elder abuse education in healthcare curriculum.^{13,14} One study showed there is a discrepancy in students' ability to recognize elder abuse when compared to non-abusive care of older individuals.¹² Another simulation showed that some students completely disregarded potential abuse and did not include it in the differential diagnosis.¹⁵ Other students recognized the abuse, but were uncomfortable with how to ask the appropriate questions and handle the situation.¹⁶ Adding educational material to healthcare students' curriculums would be beneficial to equip tomorrow's physicians with skills for recognizing and reporting elder abuse.¹³

Studies have investigated which approaches to teaching geriatric medicine are best in providing long-term knowledge and recall of information. In a group of health and social service staff, face-to-face seminars were more effective in facilitating long-term retention compared to printed materials.¹⁷ Simulations were also effective in improving knowledge of geriatric medicine in a group of physicians and healthcare professionals.¹⁰ Quantitative analysis of pre and post course questionnaires showed a significant improvement in self-reported confidence in managing geriatric scenarios.¹⁸ Additionally, there was an improvement in "non-technical" skills that participants felt could only be gained from simulations.¹⁹ One study implemented elder abuse simulations in nursing curriculum that resulted in a qualitative satisfaction with this method of learning.²⁰

To the best of our knowledge, few studies have focused on educational programs about elder abuse for medical students. Student Training on Preventing Domestic Violence (STOP-DV) is an educational research program at the Edward Via College of Osteopathic Medicine (VCOM) that focuses on teaching medical students about different forms of abuse. To further enhance students' training in domestic violence, this study focused on elder abuse. The purpose of this study was to construct and assess an educational program including a patient encounter simulation and seminars for medical students. This study sought to investigate if participation in this program increased medical students' awareness and knowledge of how to approach and manage elder abuse. Our hypothesis was that students' awareness and knowledge of how to approach and deal with elder abuse would increase.

Methods

This pilot study used a convenience sample approach. The study was found to involve no more than minimal risk to participants and was approved as exempt by the Edward Via College of Osteopathic Medicine Institutional Review Board.

The subject population included VCOM Carolinas first and second year medical students. The source population includes a male to female ratio of about 1:1, average age of 26, and most students are from the Appalachian or Southeast region of the United States. There are 162 students in the Class of 2022 and 164 students in the Class of 2023.

All students were invited to voluntarily participate in the study. During the first month of the research project, an email was sent to all first and second year VCOM medical students inviting them to participate in the study and complete the pre-survey. The formal informed consent process was waived by the Edward Via College of Osteopathic Medicine Institutional Review Board. Instead, there was a consent statement for participants to read at the beginning of the survey, and consent was implied once students completed the survey. Questions consisted of validated measures and in-house constructed multiple choice, true and false, and short answer questions. These survey questions were based off of those used in a previously completed STOP-DV research study and were found to be true, validated measures for evaluating our outcome variables using a pre and post-survey methodology. The questions were revised to meet the needs of this study. Questions were created to describe the demographics of the population and to identify and compare the 2 areas of students' knowledge and awareness before and after completion of this study. Awareness questions asked students to rate how confident they were in approaching a scenario of elder abuse. Students rated each question on a scale of 1-4, 1 having no confidence and 4 being very confident. Questions that focused on students' knowledge were asked as a series of true and false questions. Each question in this section received 1 point for correct answers and zero points for incorrect answers. The short answer questions were open ended, but each correct response received 1 point. The pre-survey measured the students' base knowledge and awareness which was then compared to their answers in the post-survey. Each month thereafter, for 5 months, 1 event was hosted that focused on different aspects of elder abuse. These events were created to be able to offer students a general introduction to elder abuse and then further expand on the areas of physical, emotional, financial, and sexual abuse. Each event occurred in the evenings on students' own time. Students were emailed the pre-survey approximately 2 weeks prior to the first event in mid-August. The last event was late-November, and students were allowed an additional 2 to 3 weeks following this final event to complete the post-survey. The post-survey was emailed to students immediately after this last event so participants could complete the survey while the information from these events could easily be recalled. The time frame was approximately 5 months to include time for survey completion and scheduling availability of guest speakers.

The first event was a local hospice physician who shared her experiences of elder abuse. She provided a mock simulation of an elder abuse situation to teach the participants how to approach and deal with an elder abuse encounter

in the medical setting. A member of FiftyUpstate, (a local community for individuals age 50 and over in Spartanburg, South Carolina), spoke at the second event. She informed the participants of the various forms of elder abuse. The third event was a PowerPoint presentation given by a local geriatrician that focused on financial abuse. The fourth event was a seminar with a hospice social worker who provided her experiences of elder abuse and how to recognize the red flags. Lastly, a multimedia link was provided as the fifth event. This video focused on the issues of elder abuse. After watching the video, students wrote a reflection on the video. The reflection incorporated both a summary of the video and the students' personal opinion. At the end of 5 months, an email was sent out to all students who participated in the research project to complete the post-survey. Paired *t*-test was used to compare the pre and post mean knowledge and awareness scores between the class of 2022 and the class of 2023. A two independent sample *t*-test was also used to compare the difference in pre and post mean knowledge and awareness scores of first year and second year students. The pre and post-survey awareness questions were broken down to compare the pre-survey answer to the post-survey answer. Fisher's exact test was used to analyze whether there was a difference in answer levels from the pre to post-survey. Although there was a small sample size in this pilot study, paired *t*-test did show a significant difference when comparing the student pre and post-survey knowledge and awareness of elder abuse. These results could be used on a larger sample size in future STOP-DV projects to further expand on this research topic.

Results

There was approximately a 1:1 ratio of male to female participants (32 males and 28 females) with a majority (82%) who identified as White. Most of the students were between 20 and 25 years of age (82%) and 77% were first year medical students graduating in 2023 (Table 1). There were 60 participants whose information was used for the results of this study as 27 students were lost to follow-up between the time of completing the pre-survey and the post-survey. A significant difference was found in the awareness of elder abuse between pre and post training

(*P*-value < .001) (Table 3). There was a significant difference between mean scores of pre and post surveys of medical students' knowledge of elder abuse (*P*-value < .001) (Table 3). Comparing survey results between the Classes of 2022 and 2023, first and second year students differed significantly in pre-survey result of knowledge (*P*-value < .041) but not in the post-survey (Table 2).

Discussion

Overall this study showed that an educational program is effective in improving medical students' knowledge and awareness of elder abuse. From these results, we believe that the educational program provided sufficient material about elder abuse for the 2 classes to enhance their knowledge and awareness. Our research is an addition to the literature in demonstrating the effectiveness of an educational program for medical students. Similar to other studies, it was concluded that information about elder mistreatment, along with a curriculum of elder abuse, should be implemented in medical school education in order to prevent the growing number of unreported and missed

Table 1. Demographics of the study.

VARIABLES	LEVELS	COUNT (N)	PERCENT (%)
Gender	Male	32	53.33
	Female	28	46.67
Graduation year	2022	14	23.33
	2023	46	76.67
Age	20-25	49	81.67
	26-30	8	13.33
	30+	3	3.33
	Missing	1	1.67
Race	Asian	9	15.00
	Black or African American	1	1.67
	Caucasian	49	81.67
	Other	1	1.67

Table 2. Comparison of the awareness and knowledge score between the classes of 2022 and 2023.

TIME	CLASS	AWARENESS		KNOWLEDGE	
		MEAN SCORE (STANDARD DEVIATION)	<i>P</i> -VALUE ^a	MEAN SCORE (STANDARD DEVIATION)	<i>P</i> -VALUE ^a
Pre-training	Class of 2022	10.29 (3.47)	.29	24.14 (2.51)	.041
	Class of 2023	11.24 (2.76)		22.35 (2.89)	
Post-training	Class of 2022	15.00 (2.91)	.25	25.36 (2.82)	1.0
	Class of 2023	16.00 (2.76)		25.34 (2.19)	

^aTable 2 used paired *t*-test to analyze whether the mean awareness and knowledge score of Class 2022 is equal to Class 2023 in pre and post training.

Table 3. Difference in overall knowledge and awareness score between pre and post survey.

	PRE SURVEY MEAN SCORE (STANDARD DEVIATION)	POST SURVEY MEAN SCORE (STANDARD DEVIATION)	P-VALUE ^a
Knowledge score	22.77 (2.89)	25.35 (2.33)	<.001
Awareness score	11.02 (2.94)	15.77 (2.81)	<.001

^aTable 3 used paired *t*-test to analyze whether the mean knowledge and awareness scores of pre training are equal to post training.

elder abuse victims.^{3,13} As described in Taylor et al., healthcare professionals, specifically physicians, were found to not routinely screen their older patients for potential abuse and often struggled to recognize the physical, social, and behavioral risk factors for elder abuse.²¹ Additionally, being fearful of potential consequences of reporting, having empathy with the abused, not being completely certain that abuse is occurring, and not entirely understanding reporting guidelines contribute to the lack of health professional reporting.²² The use of programs such as ours in medical school curriculum is vital for future physicians to improve the detection rate of elder abuse. Providing a face-to-face opportunity in the setting of didactic training has shown to increase both self-assessed knowledge and confidence among physicians in regards to recognizing and reporting elder abuse.^{15,23} These face-to-face educational opportunities allow participants the chance to engage in discussion, ask questions, and learn from the experiences of others.²³ These opportunities are not only fundamental in educating health professionals but also equipping our community members with the needed tools to recognize potential elder abuse.

In this study, the limited exposure that the first year class had received in medical school curriculum may contribute to the significant difference between knowledge scores of both class years. Although the Class of 2022 received some information regarding elder abuse, the pre-survey questions that focused on awareness did not differ between classes. This suggests that although the second year class may have more elder abuse knowledge, their confidence when approaching elder abuse situations was the same as first year students. A limitation of this pilot study was the small sample size of participants. Further research could use a larger sample size to better exemplify the impact of the program and include a control group. In addition, 75% of the participants were from the Class of 2023. This higher percentage of participants from the Class of 2023 could have biased the results because this study may have been the first opportunity for these first year students to learn about elder abuse.

In closing, the results from this study showed a significant difference among the pre and post-survey knowledge and awareness scores among participants. Utilizing these findings can help in designing and incorporating elder abuse education into medical school curriculums as it is clinically important in helping future physicians understand, identify, and provide care and support to these most valuable members of our community.

Author Contributions

Dr. Fadel and Dr. Stoner helped in developing the study design for this research project and getting approval from VCOM's IRB and preparing the manuscript for submission. Biostatistician Dr. Cheng helped in finalizing and analyzing the data collected. Supervising physician Dr. Ford-Scales helped with organizing the guests and speakers that each shared during this study and finalizing the manuscript. Researchers Dr. Cawley, Dr. Crow, and West helped in designing the study survey, advertising the research to students, and gathering and analyzing the data collected.

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