An Interprofessional Education Project to Address Veterans' Healthcare Needs

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Abstract

Background/Objective: The number of veterans and their families seeking healthcare and support within civilian communities is increasing worldwide. There is a need for healthcare providers to provide sensitive, comprehensive care for veterans with both physical and behavioral health conditions. Many civilian providers are unfamiliar with veterans' issues and need training on military culture and combat experiences in order to provide compassionate, high quality care. An interprofessional (IPE) course to increase health professional students' understanding of military culture and the associated health problems of veterans was implemented and evaluated.

Methods: An 8-week IPE immersion course was offered for students with clinical experience at a Veterans' Health primary care clinic and a didactic component. The class content included military culture, behavioral and physical health disorders common among veterans, and the related behavioral and pharmacological treatments. Faculty-led discussions with students in IPE teams used veteran-focused case studies and standardized patients to prepare students to work in IPE teams in the clinical care of veterans.

Results: This educational project was evaluated using quantitative surveys and qualitative reflection questions and focus groups. Students scored high for readiness for interprofessional learning pre-course. Post-course students reported valuing the team approach to veterans care and students engaged in high levels of communication and collaboration within the team. Students' knowledge scores increased related to understanding of military culture and their patient advocate role.

Conclusions: Students learned about military culture and the provision of humanistic, high quality care for military veterans in this clinical and didactic immersion IPE course.

Keywords: Interprofessional education, Military culture, Student teams, Veteran's health

1. Background and Significance

War has a devastating effect on the health and well-being of people and their countries worldwide (Murthy & Lakshminarayana, 2006). The ravages of war cause more morbidity, disability, and mortality than any disease (Murthy & Lakshminarayana, 2006). In addition to physical injuries associated with military conflicts, psychological consequences have been recognized following all the major wars in the world (Jones et al., 2002). Military organizations in several nations strived to identify barriers to mental care, especially in delineating the potential stigma and cultural differences between Armed Forces (Gould et al., 2010). Findings indicate that military personnel across all nations underreport mental health issues due to the stigma associated with psychological problems (Gould et al., 2010). Mental illness is perceived to be contradictory to military culture and core military values (Gould et al., 2010) which mandate strength, courage, honor and leadership. Therefore, health providers must learn to understand and be sensitive to the psychological and physical problems of military veterans.

In recent years an increasing number of veterans and their families have sought healthcare within civilian facilities (Luby, 2009). The number of United States [US] veterans utilizing national Veterans Health Administration [VHA] services has decreased from 76% to 65% between 2001 and 2014 (Bagalman, 2014) and most receive the majority of their healthcare in community settings (Auerbach, Weeks, & Brantley, 2013). In the United Kingdom [UK], primary care is the first level of care for veterans needing healthcare (Pinder, Fear, Wessely, Reid, & Greenberg, 2010). Yet, many civilian healthcare providers are unfamiliar with veterans' issues and need specific training on military culture and the combat experiences of veterans and their families in order to provide compassionate, high quality care (Coll, Weiss, & Yarvis, 2011). Veterans' care in the future will require all healthcare providers be adequately prepared to provide sensitive, comprehensive care for veterans, particularly those who may be experiencing multiple chronic physical and behavioral health problems related to their military service. This paper presents an interprofessional education (IPE) training project designed to increase health professional students' understanding of military culture and the associated health problems of veterans. The goal of this project was to prepare healthcare providers that are capable of functioning in interprofessional clinical practice (IPCP) teams to provide compassionate, high quality care for veterans and military families.

1.1 Military Culture

The military is a distinct cultural group with its own language, structure, and belief system (Gould et al., 2010; Kuehner, 2013; Reger, Etherage, Reger, & Gahm, 2008), and military culture has a strong influence on a veteran's thinking and life extending beyond their military service. These influences play a pivotal role in the successful transitioning from active military service to civilian life that can result in a sense of "culture shock," as if immigrants in their own country (Coll, Weiss, & Yarvis, 2011). A challenge for many military personnel returning home is often a state of hyper-alertness, once crucial in a warzone, now viewed as compulsive and controlling (Danish & Antonides, 2013). Other typical behaviors veterans may exhibit include aggression and a lack of emotional stability during re-integration into civilian life (Danish & Antonides, 2013). To develop trusting provider-patient relationships and to provide optimal care for veterans and their families, healthcare providers will need to understand the complexities of military culture (Williams & Jackson, 2015), particularly the military ethos and core values of the military (Kuehner, 2013), such as honor and loyalty, as dishonor and misconduct charges can result for infractions that do not adhere to military standards (Kuehner, 2013). There is also a shared military language that critically aids verbal and nonverbal communication (Strom et al., 2012). Health providers must learn to transcend judgements and barriers related to military culture and commit to the required compassion, time, and resources needed to optimize the mental and physical healthcare of veterans.

1.2 Healthcare Needs of Veterans

Some veterans perceive that seeking treatment for any physical or psychological condition is a sign of weakness (Murphy & Fairbank, 2013). Many veterans return from service with newfound physical disabilities and behavioral health issues (O'Toole, Catts, Outram, Pierse, & Cockburn, 2009). The emotional needs that stem from perceived life-threatening events during combat, responses to trauma, and the support received during and after the traumatic event (Ozer, Best, Lipsey, & Weiss, 2008; Findley, Shen, & Sambamoorthi, 2011; Pinder, Fear, Wessely, Reid, & Greenberg, 2010), is common among all veterans. Emotional and physical trauma can lead to post-traumatic stress disorder (PTSD) among veterans (Ozer, Best, Lipsey, & Weiss, 2008), and the vast majority of veterans manage an on-going physical disorder (Findley, Shen, & Sambamoorthi, 2011). In a study that sampled veterans with diabetes, heart disease, or hypertension, findings indicate some veterans had a comorbid behavioral disorder such as PTSD (5%), substance use disorder (SUD) (14%), or anxiety (7%) (Findley, Shen, & Sambamoorthi, 2011). Combat veterans are among the highest at risk for behavioral health disorders, including depression and anxiety and demonstrate a higher prevalence of PTSD as compared to civilians (Taal, Vermetten, van Schaik, & Leenstra, 2014; Hougsnæs, Bøe, Dahl, & Reichelt, 2016; U.S. Department of Veterans Affairs, National Center for PTSD, 2016; Murdoch, Polusny, Hodges, & O'Brien, 2004).

Behavioral health disorders affect 31% of Vietnam, 10% of Gulf War (Desert Storm), 12-20% of Afghanistan and Iraq US veterans (Murdoch, Polusny, Hodges, & O'Brien, 2004). Half of Australian Vietnam veterans take medications for mood disorders (O'Toole, Catts, Outram, Pierse, & Cockburn, 2009). Approximately 71% of female US veterans report military sexual trauma (Murdoch, Polusny, Hodges, & O'Brien, 2004), which is associated with higher rates of PTSD in military women as compared to military men. Substance use disorders are also higher among veterans; 22-40% of veterans from the most recent wars report alcohol misuse, with 10% receiving care at a US-VHA facility and are diagnosed with an alcohol use disorder (Seal, et al., 2011). Accurately identifying and managing behavioral and physical problems among military personnel and veterans is crucial in providing competent

patient-centered care. However, many veterans do not seek treatment for health problems, especially mental health issues. Therefore, it is particularly important that all healthcare providers are cognizant of the potential health challenges facing veterans (Gunn & Blount, 2009) and understand not only military culture and the experiences of veterans, but also the tools available for managing mental health conditions common among veterans (Parker, Galkowski, & Hayes, 2015).

1.3 Interprofessional Education

Interprofessional Education (IPE) has been proposed as one method to promote safe, high quality healthcare (World Health Organization, 2010), and has been gradually implemented by health professional schools worldwide. IPE for students may be particularly useful in improving the care for veterans where an interdisciplinary approach to the complex and multifaceted health problems of this population is critical. Studies have shown improved clinical decision-making skills (Nango & Tanaka, 2010), and knowledge scores among medical students after IPE as compared to a control group not receiving IPE (Anderson, Thorpe, Heney, & Petersen, 2009). In recent years, veterans' facilities have been used to support IPE training for health professional students (Shunk, Dulay, Chou, Janson, & O'Brien, 2009; Swenty, Schaar, & Butler, 2014). Although, limited findings are related to the effectiveness of IPE with veterans or in veterans' facilities, the challenges and lessons learned from previous IPE projects have been identified.

In one previous project, a collaborative IPE partnership between an academic setting and a US-VHA Center, health professional students cared for veterans as members of interactive teams and received training on providing healthcare for veterans (Swenty, Schaar, & Butler, 2014). IPE teams of students met with the veterans to "hear their story" prior to collaboratively developing a plan of care for the patient. Course faculty perceived this as a valuable learning experience, but challenges were identified including trouble coordinating students' schedules, difficulty acquiring authorization for clinical placement of students, and problems establishing and maintaining effective partnerships with the facility (Heinemann, Schmitt, Farrell, & Brallier, 1999). Despite the challenges, it is imperative that health professional students are empowered to provide competent, collaborative care for military service members and veterans with the utmost dignity and respect.

The majority of veterans are managing unique physical and psychological disorders (Findley, Shen, & Sambamoorthi, 2011) that may be best managed by interprofessional teams. In 2010, the US Veterans facilities began transforming the primary care services into Patient-Aligned Care Teams (PACT) to address the mental and physical health of veterans during a primary care visit (Reid & Wagner, 2014). An interprofessional "huddle-coaching" program for medical residents and nurse practitioner students was structured to build team relationships, communicate effectively in huddle teams, and learn skills to lead PACTs within the veteran's facility (Shunk, Dulay, Chou, Janson, & O'Brien, 2014). Participants evaluated the training sessions and team-building activities positively, valued team members, and indicated the quality of patient care improved because of development of team collaboration (Dulay, Chou, Janson, & O'Brien, 2014). Transitioning to a team-based, medical home model to provide care for veterans is designed to improve the coordination of mental and physical healthcare within a primary care visit.

The goal of the IPE project presented in this paper is to assist health professional students in learning to function in interprofessional PACT teams while providing mental and physical health services for veterans. Strategies used in implementing this IPE project include fostering students' understanding of military culture, their experiences with learning to practice in collaborative healthcare teams, and provision of high quality, patient-centered care for veterans.

2. Methods

2.1 Procedures

This IPE training project with a clinical practicum experience within a US-VHA healthcare facility was evaluated using surveys, reflection questions, and focus group sessions with the participating students. These evaluation methodologies were approved by a university Institutional Review Board. Students were read a verbal consent script prior to beginning the course. Surveys were administered in person on the first and last days of the 8-week course and were voluntary and anonymous. Students generated a personal code on their surveys to match pre- and post-course surveys. Students were read a verbal consent script prior to participating in the end-of-course focus groups, which were audio-recorded and transcribed for analysis.

2.2 Designing an IPE Curriculum

The purpose of this IPE project was to facilitate IPCP among students from four health professions schools to improve health care delivery to medically underserved veterans, with a primary focus on military culture and the common behavioral and physical problems of veterans. Advanced practice nursing, pharmacy, clinical psychology and social work students at a US Midwestern university engaged in an 8-week interprofessional classroom and clinical practice experience providing care to veterans at a US-VHA primary care clinic.

Strategies used in developing the curriculum for the course were the IPE competencies, including values/ethics, roles/responsibilities, interprofessional communication, and teams/teamwork (Interprofessional Education Collaborative Expert Panel, 2011). These strategies, grounded in the humanities and behavioral sciences, included a five-pronged approach: 1) reflective and narrative practice for understanding the patients' story and for improving active listening and thoughtful response; 2) intentional looking using visual art images to improve focus during patient encounters and to develop recognition of nuance; 3) interpersonal communication to increase respectful, empathetic listening and to explore best practices for resolving issues of ambivalence in providing patient-centered care; 4) interprofessional communication to improve team function in care delivery; and 5) value-centered care for working with veterans and their families. Values inform the practitioner, patient, and caregiver, and are expressed through behaviors.

The IPE course was offered as an eight-week immersion experience with clinical practice occurring simultaneously. Using a hybrid approach of didactic and on-line modules, details of the course content included: 1) military cultural taught by military/veterans consultants; 2) veterans and a veterans panel presenting specifics of military experiences and health issues; 3) multiple chronic conditions and use of the Chronic Care Model; 4) common behavioral health disorders among veterans such as PTSD, substance use disorders, anxiety and depression presented by a veterans' clinical psychologist with cases focused on psychosocial and pharmacological treatment options; 5) hypertension and other chronic diseases in relationship to co-morbid behavioral disorders; 6) military sexual trauma and moral distress/ethical issues among military personnel and veterans presented by experts on the topics; 7) patient/caregiver roles that impact the management of chronic conditions; and 8) psychopharmacology, pain management, and treatment modalities specifically focused on behavioral and physical health disorders common among veterans. (See Table 1). Discussion groups using case studies were infused throughout the 8-week session to allow students the opportunity to interact and apply course content to patient cases while functioning as interprofessional teams. During the last session, students practiced lessons learned using case scenarios and working as interprofessional clinical teams with standardized patients. Project faculty served as observers, providing 360 feedback to the student teams.

Table 1. Course Curriculum

Week	Content	Instructional Method	Purpose
1	Military Culture & Civilian Life	Lecture from military consultant with facilitated group discussion	To develop an understanding and appreciation for the challenges facing military personnel and their families
2	IPE Core Competencies	Interactive small and full group exercises and discussion on IPE care delivery	Team formation and trust-building in the delivery of care to veterans
	PACT Team and VA Orientation	Facilitated discussion with VA clinical preceptor	To prepare students for clinical rotation
	Veterans Panel	Q&A panel with veterans discussing lived experience	Learning through the patient's voice
3	Prevalent Veterans' Psychosocial Issues	IPE team discussion using case scenarios	Building knowledge of veterans' psychosocial issues through interprofessional interaction
4	Behavioral Health Disorders	IPE team discussion focused on suicide and pain management using case scenarios	Building knowledge of suicide and pain management through interprofessional interaction
5	Multiple Chronic Conditions (MCC); Hypertension	Lecture from NP faculty; IPE teams interacting with standardized patients using case scenarios	To familiarize student teams of the primary MCC impacting veterans; increase experience working in interprofessional teams
6	Medication Management and Pharmacotherapy	Lecture from Pharmacy faculty; IPE discussion using case scenario on bipolar disorder	Building knowledge of pharmacotherapy for behavioral health disorders through interprofessional interaction
7	Ethics related to veterans; Military Sexual Trauma (MST)	Full-class discussion with MST expert	To assist student IPE teams in ethical and moral reasoning and respectful care delivery
8	IPE Practicing Lessons Learned	IPE teams assessing and recommending treatment plans for veteran health issues with standardized patients; faculty assessment of teams and group debrief	To develop team communication with patient and team members to reduce fragmentation in delivery of care

2.3 Course Participants

Faculty in the four programs recruited students to participate in this voluntary learning experience, which did not offer course credit. Forty two students (Table 2) volunteered to participate in the first three semesters of the course: 15 (35.7%) were nurse practitioner students, 9 (21.4%) were pharmacy students, 8 (19.0%) were clinical psychology students, and 10 (23.8%) were social work students. The majority of students were white (69.0%) and female (88.1%). The mean age was 29.4 and ages ranged from 23 to 44. All 42 students completed pre- and post-course surveys (100% follow-up rate) and participated in focus groups.

Table 2. Student Demographics

	% (n)
Race/Ethnicity (select all that apply)	
Alaska Native	0% (0)
American Indian	4.8% (2)
Asian	21.4% (9)
Black or African American	7.1% (3)
Hispanic	2.4% (1)
Native Hawaiian or other Pacific Islander	0% (0)
White	69% (29)
Gender	
Female	88.1% (37)
Male	11.9% (5)
Age	
20-29	66.7% (28)
30-39	19.0% (8)
40-49	14.3% (6)

2.4 Evaluation

This educational evaluation included three components: surveys, reflection questions, and focus groups. The pre-post educational assessment was designed to evaluate the effectiveness of the course curriculum and students' knowledge and attitude change through quantitative and qualitative methods.

2.5 Survey Instruments

Surveys were administered at the beginning and end of the 8-week course and contained a number of instruments. The Readiness for Interprofessional Learning Scale (McFadyen, Webster, & Maclaren, 2006; Parsell & Bligh, 1999), measures readiness for and attitudes toward interprofessional education. It has 19 items scored on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The instrument is scored (summed) using a 3-factor structure that includes Teamwork and Collaboration (9 items, possible range of 9-45, $\alpha = .874$), which assesses perceived benefits of working in an interprofessional team; Professional Identity (7 items, possible range of 7-35, $\alpha = .783$), which assesses perceived benefits of shared learning; and Professional Roles and Responsibilities (3 items, possible range of 3-15, $\alpha = .754$), which assesses perceived roles of different professionals on the team. The scale was administered pre-course.

Additionally, the Knowledge Assessment was developed by course faculty to assess students' knowledge of course curriculum. Interprofessional faculty collaborated to develop the 10-item, multiple choice knowledge assessment to cover core aspects of the curriculum, including core competencies of IPCP, military culture, psychopharmacology, behavioral health, and management of multiple chronic conditions (Table 3 contains Knowledge Assessment items). The Knowledge Assessment was administered pre- and post-course.

Table 3. Knowledge Assessment Items: Percent Correct Pre- to Post-Course

	Pre-Course % Correct	Post-Course % Correct	*P*
1. Core competencies of Interprofessional Collaborative Practice (ICP) include all of the following, except:	97.6%	97.6%	1.00
a. Roles/responsibilities			
b. Professional hierarchy			
c. Values/ethics			
d. Interprofessional communication			

e. Teams and teamwork			
2. JB is a 24 year-old female veteran who presents to your clinic for evaluation of major depressive disorder. You note depressed mood for the past 3 weeks, low energy, reduced appetite, and a 10 pound weight loss in the last month, as well as periodic suicidal thoughts without a structured plan. You make the decision to initiate pharmacologic treatment. You note that JB's standard lab screens are all normal, she has no other medical or psychiatric conditions, no known drug allergies, and her only other medications are a multivitamin and oral contraception. Which of the following would be the most appropriate initiation of antidepressant therapy?	51.2%	58.6%	.262
a. Venlafaxine 75 mg po bid			
b. Fluoxetine 40 mg po q am			
c. Sertraline 50 mg po q am			
d. Imipramine 50 mg po q hs			
3. What are "multiple chronic conditions?"	85.4%	87.8%	.710
a. Diseases that last longer than one year			
b. Diseases that require regular medical attention			
c. Diseases that reduce a person's quality of life			
d. Diseases that necessitate skilled nursing care at home			
e. A, B, and C			
f. All of the above.			
4. You work in a primary care clinic setting within the VA. According to the SBIRT model of early detection and treatment for substance use disorders (SUDs), what types of patients that present to your clinic should be screened for SUDs?	97.6%	95.1%	.323
a. Individuals with a history of traumatic brain injury as the result of combat			
b. Men between the ages of 18-35 years			
c. All patients			
d. Females who have experienced sexual assault			
5. Which of the following does not fit with the Vietnam War era of military activity?	29.3%	47.3%	.051
a. Shipped by unit			
b. Lower social support			
c. Low level of desensitization			
d. Shipped out as individuals			
6. Which of these are considered critical reintegration challenges for returning military service members?	90.5%	92.9%	.710
a. Overcoming alienation			
b. Replacing war with another form of high			
c. Moving beyond war and finding meaning of life			
d. All of the above			
e. Both A and B			
7. Which of the following is considered an evidence-based intervention for	47.6%	81.0%	.000

the treatment of posttraumatic stress:			
a. Prolonged exposure			
b. Cognitive processing therapy			
c. Adlerian therapy			
d. Both A and B			
8. Interprofessional healthcare teams:	95.1%	95.1%	1.00
a. Deliver integrated services and make informed decisions			
b. Provide a broader range of knowledge			
c. Are only appropriate in certain health care settings			
d. Improve access to coordinated health services			
e. All of the Above			
f. A, B, and D			
9. Which of the following is not a key element of the Chronic Care Model?	0.0%	12.2%	.023
a. Self-management support			
b. Health Care Organization			
c. Improved outcomes			
d. Clinical information system			
e. Community resources			
10. RS is a 28 year-old male veteran who is being evaluated for post-traumatic stress disorder (PTSD). Upon examination you learn that during Operation Iraqi Freedom, RS was exposed to a number of direct hand-to-hand battles as well as witnessing the loss of several members of his platoon resulting from an improvised explosive device (IED) roadside explosion. You decide after careful examination that RS would benefit from both psychotherapy and medication. RS has no other known psychiatric or medical conditions, does not smoke, drinks alcohol socially, has no known drug allergies, and standard lab screens are all normal. RS takes no medications other than a daily multivitamin. Which of the following is the most appropriate initiation of medication therapy for PTSD in this patient?	38.1%	45.2%	.323
a. **Paroxetine 20 mg po q am**			
b. Fluoxetine 20 mg po q hs			
c. Alprazolam 0.25 mg pot id			
d. Imipramine 75 mg po q hs			
Total Score	62.1%	71.2%	.018

The Attitudes toward Health Care Teams Scale (Heinemann, Schmitt, Farrell, & Brallier, 1999; Kenaszchuk, Reeves, Nicholas, & Zwarenstein, 2010) measures attitudes toward interprofessional collaboration. It has 21 items scored on a 6-point Likert scale ranging from strongly disagree (1) to strongly agree (6). The instrument is scored (summed) using a 3-factor structure. One subscale showed acceptable reliability with this sample: Team Values (11 items, possible range of 11-66, $\alpha = .903$), which measures perceived benefits of the team approach to health care on patients and team members. The scale was administered pre- and post-course.

The Interprofessional Collaboration Scale (Sargeant, Hill, & Breau, 2010), measures interprofessional collaborative relationships of the respondent's current team. It has 14 items rated on a 4-point Likert scale of strongly disagree (1) to strongly agree (4). The instrument is scored using a 3-factor structure (summed). Two subscales showed acceptable reliability with this sample: Communication (5 items, possible range of 5-20, $\alpha = .710$), which measures how well team members share information and resolve disagreements; and Accommodation (5 items, possible range

of 5-20, α = .852), which measures cooperation and collaboration regarding differing ideas and perspectives and was given post-course.

The Interprofessional Facilitation Scale (Sanders, 2003), measures an instructor's skills in facilitating interprofessional education. It has 18 items rated on a 4-point Likert scale of poor (1) to excellent (4). The instrument is scored (means) using a 2-factor structure. One subscale showed acceptable reliability with this sample: contextualizing interprofessional education (3 items, possible range of 1-4, α = .844), which measures faculty's ability to illustrate the benefits of interprofessional collaboration. This scale was administered post-course.

2.6 Qualitative Data

Students were asked to respond to brief reflection questions after each week of participation in the course and clinical rotation. The questions asked them to reflect on their course and clinical rotation experiences with veteran patients and other professionals. The responses to the student reflection questions were gathered by a secure online data entry program (Survey Monkey). Students were also asked to complete a focus group at the end of the course. The semi-structured interview guide covered facilitators and barriers to IPE and collaborative practice, lessons learned from working with veteran patients, and feedback on the course.

2.7 Analysis

Data was entered into IBM SPSS Statistics version 22 and descriptive statistics were generated, including means (standard deviations) and counts (percentages). Paired samples *t*-tests were conducted to evaluate changes in attitudes and knowledge pre- and post-course. Colaizzi's process for phenomenological data analysis (Sanders, 2003; Speziale, Streubert, & Carpenter, 2011; Shosha, 2012), was used to analyze focus group data and student reflection questions. This entailed reading and re-reading transcripts, identifying significant statements, formulating meanings from significant statements, organizing significant statements into themes, and developing a description of the fundamental structure of the phenomenon by synthesizing themes (Shosha, 2012). Three project researchers independently completed the process then shared findings to reach consensus.

3. Results

3.1 Surveys

At baseline, students showed an overall high readiness for interprofessional learning, especially regarding the belief that working on interprofessional teams is beneficial (Teamwork and Collaboration subscale, sum [SD] = 41.52 [4.04]; Professional Identity subscale = 31.10 [3.65]; Professional Roles & Responsibilities subscale = 12.24 [2.09]).

From pre- to post-course, students showed a significant increase in knowledge of course curriculum (mean [SD] pre-course = 6.21 [1.24], post-course = 7.12 [1.13], p = .000). Students also showed a significant increase in their perceived value of a team approach to providing care rather than an individual approach (Team Values subscale, mean [SD] pre-course = 56.33 [6.94], post-course = 59.19 [6.13], p = .000).

Post-course, students reported high levels of communication (Communication subscale, mean [SD] post-course = 15.98 [2.27]) and cooperation and collaboration (Accommodation subscale, mean [SD] post-course = 16.19 [2.28]) among their team members. Students reported that faculty articulated the benefits of interprofessional education and collaboration and modeled interprofessional collaboration with other course faculty (Contextualize Interprofessional Education subscale, mean [SD] post-course = 3.56 [0.56]).

3.2 Qualitative Data

Five themes emerged from focus groups and reflection questions: Roles and Responsibilities, Teams/Teamwork, Cultural Understanding, Patient Advocacy, and IPE and Professional Education (Table 4).

Table 4. Qualitative Themes

Theme	Study Findings	Exemplars
1. Roles and Responsibilities	1. Increased understanding of each other's roles as health professionals 2. Importance of learning about respective professions and how each professional role affects ability to delivered patient-centered care 3. Gained understanding of roles and responsibilities through interprofessional interaction in course	*1. "I learned that we need to share time with other professions. One of the social work students told me that after nursing counsels on end of life care, the patient is usually overwhelmed, and won't listen to what the social worker has to say."* *2. "Pharmacy can really help nursing staff out. Although nurses administer, and are familiar with most medications, they may not know the dose they are administering is too high or low."*
2. Teams/ Teamwork	1. Working in teams increased comfort in interprofessional interactions 2. Working in teams increased self-confidence and confidence in delivery of care 3. Working on patient case studies as interprofessional team was course highlight 4. Working in teams was good career preparation	*1. "I feel comforted knowing inside of our academic institution we are learning to interact with one another so when we do get in our professional setting, we are more comfortable with it. It is an important part of giving patients the best care we can."* *2. "Doing the training made me more aware not to place a hierarchy among the disciplines. We all work hand and hand. And when I first started at the VA I thought, the doctors probably don't care what I have to say, but working there and coming here, I see we are on the same level in terms of finding the right care. It makes me realize we are all equal as one instead of the doctor taking the lead and making the final decision."* *3. "If the goal is to promote not only patient satisfaction, but better health outcomes, I think the collaborative approach is best. This was beneficial for us to learn in this fashion, the way we will be treating health care in the future."* *4. "I feel more confident knowing that I have a team of providers to back me up in their own specific way."* *5. "From a primary care perspective, we typically have limited time, so we rely a lot on other professionals to take the time we don't have to go over things. I hope when I am in practice that I have the resources. It is beneficial to know that while you don't have time, you can connect patients [sic] with people who do."* *6. "If we as providers feel comforted and we have a team, then the patient must also feel that way. As long as everyone has a collaborative approach, I am happy with the way that healthcare may be going."*

3. Cultural Understanding	1. Improved understanding of veteran health needs and impact of military culture on service delivery 2. Increased understanding of critical topics for working with veterans (e.g., diversity among service eras; not making assumptions about veterans' military experiences, views of the VA, and perceptions of behavioral health needs) 3. Increased understanding of VA health care system 4. Desire for more experience working with veteran patients to feel culturally competent in interactions	1. *"I was provided more exposure to their lives, what they go through, and their history."* 2. *"When discussing treatment for social anxiety, military culture was a factor during this interaction because his [veteran patient's] anxiety was due to the culture of the military and 'don't ask don't tell.' He feared that others would think he was weird or different because he is gay."* 3. *"I hadn't considered that a veteran might want a structured care plan or very specific instructions as to what they need to do to get better. Basically giving them an order for their healthcare or very specific guidelines."* 4. *"I learned all the questions that we think are uncomfortable, are not that uncomfortable for the veterans themselves to answer. Especially at the VA, they love it when you talk to them. I learned not to be so reserved. To be more open. They love talking, so let conversations flow."* 5. *"An example where I felt competent in a situation when interacting with a Veteran patient was when I was able to discuss their trauma and how it impacted their ability to serve."* 6. *"While not r/t [related to] military culture per se, rotating at the VA has provided insight into how certain health concerns are addressed in the VA vs civilian primary care setting."* 7. *"The case study provided an example of how emotional trauma from being sexually assaulted in the military with no support to report the action, in addition how serving as a solider [sic] and killing someone could cause moral injury. Multiple challenging interactions that may occur while serving may cause moral injury. I felt confident in being able to identify causes of moral injury and that the IPE team could be able to help address these concerns."* 8. *"Continue to just observe the provider and veteran relationship during visits, need more experience questioning the vet [sic] about MST, PTSD, depression to become more adept in assessing a veteran."* 9. *"I started at my center for veterans this week and had the opportunity to use military language, such as 'sir,' 'MOS,' 'Army Post,' when communicating with the appropriate audience. I felt confident and comfortable, but it is still a learning process. I really took the time to listen to them. I had the fortune to meet veterans from an organization in town, and I made an effort to be more aware of myself, my body language, my vocabulary and simply using my active listening skills. We all have stories, but I love listening to veterans tell theirs. It is an incomparable, humble, moving experience."* 10. *"I still need to work on their lingo. That is going to be one of the biggest barriers to care for me."*

4. Advocating for Patients	1. Importance of advocating on behalf of veteran patients 2. Applying coursework and learning through clinical experience to understand how the VA system works 3. Assisting patients in navigating complex VA system	1. *"Learning from them that they struggle so much at the VA for their care, because of all the hoops they have to go through, as a professional that makes me more driven to help them get what they need."* 2. *"Try to be an advocate for them. Make sure they understand that they are our priority. I got the sense that they had frustration about the same things I had frustration about in the clinic. Like, administrative tail-chasing, or the right hand not communicating with the left. Let them know that you are trying to navigate it along with them, and that they are important to me, and I understand there are barriers, but we will work together."* 3. *"Rotating at the VA has provided insight into how certain health concerns are addressed in the VA vs. civilian primary care setting."* 4. *"There was one interaction with a patient who was very distressed with his military history and the trauma he experienced. One of his frustrations was the lack of knowledge of military culture he experienced with providers. I used reflective listening to provide a supportive environment for him to communicate his frustrations."*
5. IPE and Professional Education	1. Perceived benefit of team approach, but skepticism of its practicality in "real world" 2. Emergence of team leader and tendency to defer to primary care provider 3. Negative patient perceptions of team approach 4. Decreased efficiency due to increased length of patient interactions with team approach	1. "*I think the hardest part is that I work in a hospital, but the way the system exists, this is not a reality. The patients are not prepared for it to be the reality in health care, either. I think it is nice that I can focus on my expertise vs. knowing everything about everything, which is the reality in the clinics."* 2. *"I know in our standardized patient activity, I interacted differently with the patient then when I go in by myself. I ask more of the questions. Whereas in a team, it is great that we can all communicate together, but it is difficult because I'm trying not to step on toes. We are all trying to be a team, but there is always an unspoken leader. Then what does that do to everyone else? Is the patient only listening to who they feel is the leader of the team? Is it feasible for everyone to go in at one time, does this prolong the visit for the patient?"*

3.2.1 Theme 1: Roles and Responsibilities

Students expressed an increased understanding of each other's roles as health professionals. Students described the importance of learning about team members' respective professions and how each professional role impacts their ability to deliver patient-centered care. Through interprofessional interaction during coursework, students were able to articulate what their respective professions did and learned more about the expertise of different professions and influence of each profession to increase the quality and efficiency of care.

3.2.2 Theme 2: Teams/Teamwork

Learning to interact with one another as professionals helped students increase their comfort in interprofessional interactions, confidence in themselves, and in the delivery of care. Students reported increased comfort in not being expected to manage all facets of patient care. Working on patient case studies in interprofessional groups was considered a course strength and several students shared that this activity allowed them to improve their assertiveness and confidence in interacting with other professionals. Students reported that building their interprofessional team experience would better prepare them for collaborative practice in their future careers.

3.2.3 Theme 3: Cultural Understanding

Students reported an improved understanding of veteran health needs and the impact of military culture on service delivery to this patient population. The majority of students described having little knowledge of these topics prior to the course and clinical rotation. Some students had previous experience providing care to veterans, but said they would now alter their approach based on the knowledge they gained from the course. Following the course, students reported increased knowledge of prevalent veterans' health concerns and cultural considerations that could impact care. Students expressed the desire for more practice working with veteran patients before they felt culturally competent. Students reported an increased understanding of critical topics specific to quality care of veterans including the cultural diversity, differing needs of veterans based on service era, and to not make assumptions about veteran patients' military experiences, views of the military, and perceptions of behavioral health needs. Students expressed that the veterans' panel was an especially powerful component of the course and increased their motivation to serve this population. Students also reported an increased understanding of the veterans' health system and veterans' patterns of service utilization following the experience. Students stated that they left the course feeling more prepared to provide care to the veteran population.

3.2.4 Theme 4: Advocating for Patients

Students described an increased understanding of their own role in veteran care as an important part of advocating on behalf of the veteran. Reflection questions answered during the clinical experience reinforced focus group data with students revealing that they learned through their clinical rotations and applied coursework to better navigate the complex veterans' health system on behalf of their patients. Students described barriers to care and frustrations experienced by veterans in navigating the system and the role of healthcare providers to assist them.

3.2.5 Theme 5: IPE and Professional Education

A final theme was students' perceptions of the challenges of IPCP. While students expressed hope that team resources would be available to them when they become healthcare providers, a repetitive theme throughout the course is that what is learned in class is not always the reality in the clinical setting, nor is it a reality for patients. Perceived challenges voiced by students included an unfamiliarity with the specific structure of patient interactions as a team, the increased length of appointment times when using team collaborations, negative patient perceptions of the team approach, the preference of some patients to defer decisions to the primary care provider, and uncertainty about how IPCP works outside of the classroom in a "real world" clinical setting.

4. Discussion

The veteran population is increasing worldwide and many veterans seek care within civilian communities in addition to typical veterans care facilities. Health professional students must be competent in military culture and meeting the healthcare needs of veterans and their families. Given the consistent and rapid return of veterans from recent conflicts, it is important that veterans' health needs become a priority. Educational experiences can be enhanced to improve the care provided to veterans by teaching health professional students about military culture, physical and psychosocial health problems common to veterans, and collaboration in interprofessional teams.

IPE provides an opportunity to improve the health professional students' attitudes and desire to provide care for veterans and may enhance proficiency in working with the veteran population. The goal of this IPE project was to improve interprofessional communication and collaboration to provide a safe healthcare environment for veterans. Students in this course began with a high readiness for interprofessional learning across all three RIPLS subscales [33, 39], as compared to previous studies with interprofessional students (Wellmon, Gilin, Knauss, & Linn, 2012; Saini et al., 2011). This IPE project provided health professional students experiences that increased their learning, collaboration, and confidence in working in IPE teams. Learning about veterans in the classroom and experientially in a veterans' clinic improved students' understanding of military culture and the predominant health needs of veterans. The course and clinical experiences increased students' comfort in interprofessional interactions and communications, allowing them to advocate on behalf of veteran patients within complex healthcare systems. Evaluation findings suggest that infusing curriculum on veterans and working in interpofessional teams into health professions training could be valuable preparation to improve the provision of care to veterans both within and outside formal veterans' health systems.

Similar to other IPE projects in working with veterans, several challenges were encountered. Coordination of various health professional students' schedules so they can simultaneously attend class and clinical experiences is challenging (Gilman, Chokshi, Bowen, Rugen, & Cox, 2014; Swenty, Schaar, & Butler, 2016). Additionally, IPE student teams have different academic preparations and levels of clinical experience from being in their first clinical

course to nearing graduation (Gilman, Chokshi, Bowen, Rugen, & Cox, 2014). This variety of experiences seemed to enrich students' learning as all students contributed information and insights to facilitate team problem-solving during case scenarios or standardized patient experiences. Obtaining student feedback each semester has helped to improve the educational experiences and was the impetus for increasing time spent on collaboration solving hypothetical patient problems during class time. As with other previous IPE projects, obtaining authorization for students' access to the clinical setting is a rigorous and time-intensive process (Swenty, Schaar, & Butler, 2016). To solve this situation, assigning one key staff person to coordinate these efforts has facilitated the process. Also, regularly scheduled meetings with key veterans' facility personnel and preceptors has helped to foster and maintain a positive partnership.

IPE and team building has helped health professional students to value each other's contributions, communicate more effectively, and collaborate to improve the care provided to veterans. Students have learned about military culture and the impact it has on veterans' care, allowing for a humanistic and individualized approach. One limitation of this project is that patient outcomes were not evaluated but future directions include the evaluation of health outcomes of veterans served following implementation of an IPE course. Another limitation is that validity of the Knowledge Assessment, which was developed for this course, has not yet been established.

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