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## Yoga therapy for military personnel and veterans: Qualitative perspectives of yoga students and instructors

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### ABSTRACT

**Objective:** Millions of military personnel and veterans live with chronic mental and physical health conditions that often do not respond well to pharmacological treatments. Serious side effects and lack of treatment response have led to widespread efforts to study and promote non-pharmacological and behavioral health treatments for many chronic health conditions. Yoga is an increasingly popular mind-body intervention that has growing research support for its efficacy and safety. Our objective was to explore the attitudes, perspectives, and preferences of military personnel and veterans toward yoga as a therapeutic modality, thus providing needed information for designing and promoting yoga interventions for this population.

**Methods:** Participants included 24 individuals with yoga experience and current or past military service and 12 instructors who have taught yoga for military personnel and/or veterans. A semi-structured set of questions guided interviews with each participant.

**Results:** Five themes emerged from the interviews: (1) mental health benefits experienced from yoga practice; (2) physical health benefits experienced from yoga practice; (3) important yoga elements and conditions that support effective practice; (4) facilitators for engaging military in yoga practice; and (5) challenges and barriers to yoga practice for military.

**Conclusions:** The study highlights consistent reports of mental and physical benefits of yoga practice, ongoing stigma resulting in the need for combatting and demystifying yoga and other complementary and integrative health (CIH) practices, the importance of designing interventions to address the unique mental health issues and perspectives of this population, and the importance of efforts by military leadership to bring CIH to military personnel and veterans. Rigorous research addressing these findings, along with further research on the efficacy and effectiveness of yoga interventions for treating various conditions are needed.

### 1. Introduction

In recent U.S. military operations in Iraq and Afghanistan, approximately 2 million individuals have been deployed.<sup>1</sup> As a result, there are notable recent increases in the numbers of military personnel and veterans suffering from post-traumatic stress disorder, traumatic brain injury, and pain conditions, creating large increases in needs for specialized services.<sup>2</sup> These increases are in addition to even larger cohorts of veterans from previous conflicts, many of which are living with chronic pain and mental health issues after service.<sup>3</sup> High rates of

co-morbidity exist among pain and psychiatric conditions such as Post Traumatic Stress Disorder (PTSD), Traumatic Brain Injury (TBI), substance use disorder, and depression,<sup>4</sup> and such comorbid conditions are associated with poorer response to treatment and somatic amplification of symptoms.<sup>5</sup> Medication has frequently been the primary treatment approach for chronic pain. In turn, chronic pain patients with comorbid mental health disorders are more likely to initiate and continue opioid therapy, to misuse medication, and to benefit less from analgesics.<sup>6</sup> Guidelines now advise caution with opioid medication use and more proactively recommend non-pharmacological approaches.<sup>7–9</sup>

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Due to the substantial and growing problem of mental health issues, chronic pain, and other chronic conditions in military personnel and veterans, the Department of Defense (DoD) and the Department of Veterans Affairs (VA) are increasingly incorporating complementary and integrative health (CIH) approaches into their patient-centered plans of care, a development that promises to more comprehensively address these growing problems.<sup>10-12</sup> While this expansion provides a great opportunity to demonstrate the usefulness of integrative health at a healthcare system level, there is variability in the evidence supporting CIH services for different health conditions. Much more research is needed to ensure that integrative modalities are included in ways that maximize their effectiveness.

Yoga is an example of an integrative approach that may be ideally suited for co-occurring conditions including chronic pain and mental health symptoms. Yoga is multidimensional and combines physical, mental, and, often, spiritual aspects of treatment. The benefits of yoga have been demonstrated among non-veteran<sup>13,14</sup> and veteran populations<sup>15,16</sup> with chronic low back pain, and promising results have been found for other conditions experienced by military personnel and veterans, including combat stress<sup>17</sup> and PTSD.<sup>18,19</sup> Other recent studies of yoga for PTSD remain quite small,<sup>20,21</sup> but many researchers await the results of a full-scale VA-funded randomized controlled trial, which are expected in 2018.<sup>22</sup> However, further study of yoga as a treatment option for veterans and military personnel with mental health and chronic pain disorders is needed.

Yoga interventions vary quite widely in the components that are emphasized and the setting in which they are conducted.<sup>23,24</sup> Thus, it is important to determine not only what types of yoga are best for specific health conditions, but also what barriers and facilitators may exist for greater uptake of yoga and other CIH modalities by specific populations, namely among military personnel and veterans. One recent study identified such barriers for non-pharmacological treatments more broadly, finding that patients were concerned about cost, transportation, and motivation to be active, while healthcare providers noted existing opioid use and patient skepticism as probable barriers.<sup>25</sup> Our objective in this qualitative study was to explore the attitudes and perspectives of military veterans and current military personnel toward yoga as a CIH therapeutic modality, in order to better plan for and support the provision of yoga to military populations.

## 2. Methods

### 2.1. Recruitment

Active duty military, reservists, and veterans who regularly practiced yoga were recruited for participation in a 45–50 min interview with a researcher to discuss their experiences with yoga. The study protocol was approved by the University of California San Diego Human Subjects Protection Program. Recruitment via flyers and word-of-mouth was conducted primarily through the Naval Medical Center San Diego and community partners that provided yoga classes specifically to military personnel and/or veterans. Potential participants called study staff and were screened by phone to ensure they met study inclusion criteria before they were invited to participate in the study. Volunteers received a \$50 gift card for their participation. Inclusion criteria were: 1) 18 years of age or older; 2) were currently or previously enlisted in a branch of the United States Armed Forces (or taught yoga specifically to groups of active duty military or veterans); and 3) have taken (or taught) 5 or more yoga classes in the last 2 months. Those who met the inclusion criteria were scheduled for the qualitative interview at a university research office in a confidential setting. Research staff provided information about the study and the goals of the interview. After participants provided consent for the interview, the research staff person exited and the qualitative interview expert entered and conducted the interview in private. Measures were taken to ensure the comfort of the participants that might be trauma

sensitive, such as having the choice of which chair to sit in (facing the door or facing the window) and whether they preferred to have the door open or shut during the interview.

### 2.2. Qualitative interviews

Qualitative interviews were carried out between June and September 2015. All procedures for data collection and analysis were reviewed and approved by a university Institutional Review Board. Informed consent was secured from every participant prior to the interview process. A total of 36 interviews were completed, which included two subsamples: a) yoga students (N = 24), including active duty, veterans and reserve participants; and b) yoga instructors (N = 12) who taught yoga for active duty or veterans. Interview guides were designed in a semi-structured open-ended format<sup>26,27</sup> to increase potential for exploring different participant viewpoints and personal experiences with yoga practice in the military or as a veteran. Qualitative interview guides were developed to be used with yoga students and instructors. Both instruments presented similar questions focusing on observed or experienced involvement in yoga practice and the resulting types of benefits or challenges. Study interviews were conducted by two trained research staff members. All interviews were digitally audio-recorded and professionally transcribed in preparation for content analysis. The lead qualitative data analyst reviewed recordings for accuracy and in case the meaning of the transcription was unclear. Most interviews lasted 40–50 min including time for the consenting process. The minimum and maximum interview lengths were 16 and 55 min, respectively.

### 2.3. Data analysis

A conventional content analysis approach<sup>28</sup> was employed to with attention to the aims of the supplemental grant and interview questions. A qualitative research expert began preliminary cycles of open and focused coding with approximately 20% of the total transcripts. The initial development of the codebook made use of the structured interview guide to identify contextualized segments of data that corresponded to targeted questions.<sup>29</sup> Transcript data that could not be categorized using the question-based coding approach were assigned novel codes reflective of important descriptive information that emerged in the text. In some cases, the addition of codes also resulted in expanding a subcategory of an already existing exemplar.<sup>30</sup> To further increase the validity of the coding schema, the lead analyst reviewed the codebook with an additional member of the research staff who had additional expertise on yoga and on working with military personnel. This joint review provided a deeper, multidisciplinary reflection on the coding and was designed to resolve any potential disagreements about the code assignments.<sup>31</sup>

After the final coding schema was determined, all interview transcripts and the codebook were uploaded to a standardized web-based qualitative analysis program known as Dedoose (Version 6.1.18).<sup>32</sup> The Dedoose system stores, organizes and reconfigures the data to enable more efficient human analytic reflection. The lead and secondary analyst conducted the final cycle of coding, using Dedoose and all of the data, which facilitated arrangement and rearrangement of the most salient of the coded excerpts into essential concepts. A visualization scaffold of the findings was then created using the software program FreeMind.<sup>33</sup> Freemind is a display tool that assists researchers with conceptualizing patterns and relationships in the data that overlap and intersect.<sup>34</sup> These visual maps help researchers to explore shared meaning between categories to refine and highlight themes from the data findings.<sup>35</sup>

## 3. Results

A total of 52 people contacted study coordinators with interest in

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