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Original Research

Spiritual Fitness, Spiritual Readiness, and Depressive Symptoms in Reserve Officers' Training Corps Cadets

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Context: Over the past decade, the United States military has taken an interest in addressing soldiers' spiritual fitness and readiness to help improve their mental health and resiliency. Similar efforts have not been applied within the Reserve Officers' Training Corps (ROTC) population despite the mental health challenges these college students experience.

Objective: To examine spiritual readiness, spiritual fitness, and depressive symptoms in ROTC cadets.

Design: Cross-sectional study.

Setting: Web-based survey.

Patients or Other Participants: We recruited ROTC cadets from 1 large southeastern university (n = 91 of 315, 28.9% response rate). The ROTC cadets (age = 21 ± 3 years; men = 68, 74.7%; women = 22, 24.2%; missing = 1, 1.1%) were mainly classified as juniors (n = 30, 33.0%) and in Army ROTC (ROTC branch: Army = 69, Air Force = 20, Navy = 2).

Main Outcome Measure(s): The survey contained 3 validated instruments used to assess spiritual fitness (the Spiritual Fitness Inventory [SFI]), spiritual readiness (Spiritual Wellbeing Scale [SWBS]), and mental health via depressive symptoms (Patient Health Questionnaire [PHQ-9]). Results were analyzed using descriptive statistics and nonparametric Mann-Whitney *U* tests to compare belief in God or gods with the dependent measures. A Pearson correlation was calculated to assess the relationship between the SWBS score and PHQ-9 data.

Results: In total, 85.7% (n = 78/91) of ROTC cadets stated that they believed in God or gods. Overall, the cadets were considered to have average spiritual fitness (mean = 75.04 ± 14.89) and moderate spiritual well-being (mean = 90.46 ± 18.09). The average PHQ-9 score was 4.22 ± 5.25. Individuals who believed in God or gods had higher spiritual readiness (believer = 94.44 ± 16.10, nonbeliever = 67.00 ± 9.35; $P \leq .01$). No statistically significant differences were noted for symptoms of depression (believer = 3.38 ± 4.90, nonbeliever = 6.60 ± 6.90; $P = .143$) or spiritual fitness (believer = 76.12 ± 14.78, nonbeliever = 64.40 ± 12.68; $P = .054$) in ROTC cadets based on belief status.

Conclusions: Overall, the ROTC cadets had moderate to average spiritual fitness and readiness, with typical depressive symptoms scores. Spiritual readiness was different for those who believed in God or gods, and existential well-being was significantly correlated with depressive symptoms.

Key Words: mental health, religion, military

Key Points

- Spiritual fitness and readiness help individuals develop personal qualities to persevere during stressful times and tragedy.
- These cadets were considered to have average spiritual fitness and moderate spiritual well-being. Those who believed in God or gods had higher spiritual readiness.
- Medical personnel, such as athletic trainers, should encourage cadets to increase their spiritual or religious practices to help improve their readiness, fitness, and mental health.

Over the past decade, the US military has implemented assessments and interventions to improve its service members' mental health and resiliency outcomes.[1,2] A literature review of 211 psychological health and resilience programs used by the US Department of Defense identified a lack of centralized efforts within and across the military branches in developing and implementing these programs.[3] This led to significant duplication of efforts and a limited unified evidence base.[3] Although the investment of time, money, and other resources could be improved, it has led to an influx of different avenues to enhance mental health and resiliency in soldiers.

One avenue that has gained traction and attention is the concept of spiritual fitness and readiness. In 2012, the US Army developed the *FM 7-22 Holistic Health and Fitness* (H2F) field manual, highlighting spiritual readiness as 1 of 5 key components that lead to total soldier readiness.[4] The H2F field manual defines *readiness* as soldiers' physical and mental ability to sustain and meet the demands of their military occupational specialties, duty assignments, and combat-specific tasks.[4] *Fitness* is often used to describe one's capability to carry out a task. *Readiness* implies that one has the fitness abilities to carry out a task and the well-being to sustain this task. With this in mind, *spiritual fitness*

is a term used to capture a person's overall spiritual health and reflects how spirituality may help one to cope with and enjoy life.[5,6] *Spiritual readiness* is the development of the personal qualities needed to sustain an individual in times of stress, hardship, and tragedy.[4] These qualities come from religious, philosophical, or human values and form the basis for character, disposition, decision-making, and integrity.[4]

With a culture shift comes new tasks and responsibilities for leaders. If the H2F program is to succeed, a team of qualified individuals needs to work collaboratively to manage soldiers' well-being. The same is true for Reserve Officers' Training Corps (ROTC) cadets. The H2F program is supported by an interprofessional performance team structure that includes athletic trainers (ATs), psychologists, occupational and physical therapists, cognitive enhancement specialists, embedded behavioral health experts, the unit ministry team, strength and conditioning specialists, and registered dietitians. The holistic approach to health aligns well with ATs' scope of practice, including the risk reduction, wellness, and health literacy tasks such as "optimizing wellness (eg, social, emotional, spiritual, environmental, occupational, intellectual, physical) for individuals and groups."[7] Previous researchers have identified that 90% of ATs stated they had a respectful attitude toward their patient's spiritual views.[8] This embodies the nature of patient-centered care in which a provider is respectful of and responsive to the patient's beliefs, needs, and specific social determinants. Diversity is often considered the act of including people of different races and ethnicities, yet it also encompasses other factors, such as diversity of religion. Athletic training educators have focused on the need to improve diversity and consider its effect on clinical practice by informing the provider of the patient's values.[9] Therefore, spirituality should be integrated into screening and clinical care decisions.

Researchers have observed that having strong spiritual beliefs positively affected an individual's life, specifically when it comes to mental health and resiliency.[10–13] Previous investigators have attributed this relationship to the benefits of having certainty in a belief that leads to better emotional stability and life satisfaction.[10] Other authors demonstrated a negative correlation between an active religious or spiritual life (specifically spiritual meaning, religious coping, and belief in God) and depression in college students attending religious and nonreligious institutions.[11] They suggested that some irreducible qualities could be grounded in a divine being influencing the relationship.[11] College students with more robust spiritual well-being had a better sense of community at Christian-affiliated colleges.[14] Gathering as a community for religious services was also a way to increase gratitude, which is a protective factor against depressive symptoms.[15] Therefore, community within spiritual groups may be another vital contributor to this relationship.[15] Negative correlations between spiritual beliefs and adverse mental health outcomes have been noted throughout various populations, including physically active populations such as the military.[15,16] For the US military to continue improving mental health and resiliency among its members, working with future soldiers on their spirituality is essential.

The ROTC is a voluntary military education program for college and university students that prepares them to be commissioned as officers in the US armed forces.[17] Similar to commissioned officers, these cadets face several stressors to their physical, mental, and emotional health,[18–20] including intensive training regimens in addition to the usual stresses of being college students. Having high spiritual fitness and readiness may benefit the ROTC cadets' health and well-being.

Although physical and mental health risk factors have been assessed in the ROTC population,[18–21] examinations of spiritual fitness and readiness are lacking. Calling on an AT within the ROTC population could help cadre leaders and other personnel by assisting with body, mind, and spirit exercises. When practicing whole-person health care and holistic wellness, health care providers should consider exploring the religions of the individuals they are treating, regardless of whether they are in the military, ROTC, or any other sporting population. As ATs, taking the time to acknowledge and recognize one's religion aids in the delivery of relationship-centered compassionate care.[22] Previous researchers have supported a call to action that health care providers use validated clinical tools to screen and assess spirituality as a method to better integrate spiritual care in clinical practice.[22] In 2011, 82% of ATs surveyed agreed that exploring spiritual concerns may improve therapeutic outcomes for their patients.[8] To accomplish this goal, ATs must be aware of the current spiritual fitness and readiness and the mental health of ROTC cadets.

Therefore, the primary purpose of our study was to explore spiritual readiness, spiritual fitness, and depressive symptoms in ROTC cadets. The secondary aims were to determine if a difference existed between an ROTC cadet's belief in God or gods and spiritual readiness, fitness, and mental health outcomes and whether a relationship existed between spiritual readiness and depressive symptoms.

METHODS

Participants

In this cross-sectional survey study, we evaluated the spiritual readiness, spiritual fitness, and presence of depression in ROTC cadets. The independent variable was their belief in God or gods. The dependent variables were scores on the outcome measures for spiritual fitness, spiritual readiness, and mental health assessed through depressive symptoms. Participants were recruited from the University of South Carolina, a public institution without religious affiliation. Individuals were included in this study if they were college students 18 years or older enrolled in an ROTC program of any of the military's 3 major branches (Army, Air Force, or Navy). Excluded from the study were cadre leaders for the ROTC, commissioned officers, active-duty military members, and college students not enrolled in an ROTC program. We collected demographic information, including age, gender, race or ethnicity, the branch of the military, year in the ROTC program, and student classification. The study procedures were deemed exempt by the university's institutional review board.

A power analysis conducted with G*POWER 3.1 determined that 45 participants were needed for a power of 0.95, with an effect size of 0.5 and $\alpha = .05$. In total, 91 participants were recruited, representing 28.9% (91/315) of the total ROTC cadets at the institution, exceeding the number of participants needed according to the power analysis. Most participants were from the Army ROTC (69, 75.8%), followed by Air Force ROTC (20, 22.0%) and Navy ROTC (2, 2.2%).

Instruments

The web-based survey (Qualtrics, Inc) consisted of 3 validated and reliable instruments focused on spiritual fitness, readiness, and depressive symptoms. All participants were asked to respond to a general question: "Do you believe in God or god(s)?" with options of *yes* or *no*.

Spiritual Fitness. The Spiritual Fitness Inventory (SFI) was developed and is used by the US Army as an assessment tool for soldiers.[23] The first question asks how often they participate in wholesome activities such as attending worship services and family events, playing team sports, and volunteering in the community. The second question asks how often they engage in activities that build the human spirit, such as listening to music, enjoying nature, and journaling. For questions 1 and 2, the answer options (and point values) are as follows: *never* (1), *less than once each year* (2), *4 times each year* (3), *6 times each year* (4), *once each month* (5), *2–3 times each month* (6), *once each week* (7), *2–3 times each week* (8), *once each day* (9), and *several times each day* (10). Questions 3–9 ask about beliefs and values and are assessed on a scale of 0 through 10 (0 = *not at all*, 10 = *a lot*). The final question asks if the participant has been changed by a profound experience and is measured on a 10-point Likert scale (1 = *never*, 10 = *many times*). The SFI is divided into 3 categories: spiritual practices (questions 1–3), spiritual beliefs (questions 4–6), and transcendence (questions 7–10). The survey offers insights into the possible interpretation based on the category score.[23] Summing the response values for the corresponding category questions indicates the spiritual fitness specific to each category. The SFI scores are determined by summing the numeric value of each question. Higher scores signal better spiritual fitness. As the SFI is currently used as a personal reflection tool, we applied a previously published chaplain review of the tool to categorize our participants' scores.[24] The categories were *needs improvement* (0%–59%), *below average* (60%–69%), *average* (70%–79%), *above average* (80%–89%), and *excellent* (90%–100%). This review set the score range of 70 through 79 as average, as in most standardized testing; the Army requires a score of 70% or higher to pass.[24]

Spiritual Readiness. The Spiritual Wellbeing Scale (SWBS) was administered to assess spiritual readiness.[25] This tool was developed to measure spiritual well-being systematically. The tool is a 20-question survey scored on a 6-point Likert scale. Overall, this scale had high reliability (test-retest reliability coefficient = 0.93) and internal consistency (coefficient $\alpha = .89$).[25]

Items are scored from 1 to 6, with a higher number indicating more well-being. Reverse scoring is used for negatively worded items. Odd-numbered questions evaluate *religious well-being* (RWB; one's well-being in the religious sense), and even-numbered questions evaluate *existential well-being* (EWB; one's sense of life purpose and life satisfaction). The SWBS scores are calculated by summing the numeric values associated with each answer in the survey. Scores for the SWBS range from 20 through 120, with high scores indicating greater spiritual well-being or readiness. The scores are categorized into 3 groups: *low overall spiritual well-being* (20–40), *moderate spiritual well-being* (41–99), and *high spiritual well-being* (100–120).[26]

Two subscales for this tool (RWB and EWB) are each scored from 10 to 60. Each subscale is then further categorized into 3 groups as well. The RWB subscale scoring groups are *unsatisfactory relationship with God* (10–20), *moderate sense of religious well-being* (21–49), and *positive view of one's relationship with God* (50–60). For EWB, the categories are *low satisfaction with one's life and possible lack of clarity about one's purpose in life* (10–20), *moderate level of life satisfaction and purpose* (21–49), and *high level of life satisfaction with one's life and a clear sense of purpose* (50–60).[26]

Depressive Symptoms. Lastly, we used the Patient Health Questionaire-9 (PHQ-9) to measure the participant's level of depression.[27] The tool measures the individual's level of depression using a 9-item, self-reported questionnaire that is scored on a 4-point Likert scale (0 = *not at all*, 1 = *several days*, 2 = *more than half the days*, or 3 = *nearly every day*) with combined scores ranging from 27 (*most severe depression*) to 0 (*not depressed*). The final survey question asks the respondent how difficult the problems listed in questions 1–9 have made activities of daily living. For the PHQ-9, we summed the scores for questions 1–9 to calculate the overall score. Participants were then categorized into *no depression* (0–4), *mild* (5–9), *moderate* (10–14), *moderately severe* (15–19), and *severe* (20–27) groups. The PHQ-9 has good internal reliability (Cronbach $\alpha = 0.89$) and good test-retest reliability.[27] Based on these findings, we deemed it reliable for assessing a patient's depression status.

Procedures

The research team sent recruitment emails with the survey link to cadre leaders, administrative assistants, ATs, and other ROTC personnel, asking them to forward the survey link to the cadets at the University of South Carolina. In addition, when feasible, we directly provided ROTC cadets with a handout containing a QR code to the survey link. Snowball sampling has been used before to capture responses from participants who did not have an easily identified database of contact information.[28] The recruitment process occurred from August 2022 to October 2022. After accessing the survey link, the ROTC student was presented with an electronic informed consent. The participant was free to skip any questions and to discontinue the study at any time by closing the browser.

Statistical Analysis

After data collection, we downloaded the data for analysis. To answer the primary purpose of this study, we calculated descriptive statistics (mean, median, and mode with SD) for each of the 3 dependent measures (SFI, SWBS, and PHQ-9) using SPSS (version 28; IBM Corp). For further analysis, participants were categorized based on their responses to their belief in a God or gods (yes or no). An initial assessment of the normality of data was performed using the 1-sample Kolmogorov-Smirnov test with Lilliefors correction. Two of the 3 dependent variables violated the assumption of normality (SFI sum score: $D[54] = 0.145$, $P = .006$; PHQ-9 sum score: $D[73] = 0.212$, $P \leq .001$), whereas the SWBS data followed a normal distribution ($D[69] = 0.80$, $P = .200$). However, the SWBS

Table 1. Demographics

Variable	No. (%)
Student classification	
First-year student	13 (13.3)
Sophomore	15 (16.7)
Junior	30 (33.3)
Senior	28 (31.1)
Graduate student	4 (4.4)
Years in Reserve Officers' Training Corps	
<1	22 (24.4)
1	10 (11.1)
2	18 (20.0)
3	22 (24.4)
4	15 (16.7)
5	1 (1.1)
Did not answer	2 (2.2)
Race or ethnicity	
American Indian or Alaska Native	1 (1.1)
Asian	2 (2.2)
Biracial or multiracial	2 (2.2)
Black or African American	20 (22.2)
Hispanic, Latinx, or Spanish	6 (6.7)
Middle Eastern or North African	1 (1.1)
Native Hawaiian or other Pacific Islander	0 (0)
White or Caucasian	57 (63.3)
Did not answer	1 (1.1)

violated the Levene test ($P = .011$). Therefore, we conducted nonparametric Mann-Whitney U tests to explore group differences in the SFI, SWBS, and PHQ-9 sum scores. We were also interested in the subscale components of the SWBS tool for EWB and RWB. Previous authors have explored these subscale components, regardless of a belief in God or gods, with respect to mental health outcomes. As a result, we calculated 2 Pearson correlation coefficients to examine the relationship between spiritual well-being and depressive symptoms for the ROTC cadets. Significance was set a priori at $P < .05$.

RESULTS

Overall, the participants were 21 ± 3 years old and mostly identified as male (68, 75.7%; female = 22, 24.2%; did not report = 1, 1.1%). Most individuals described themselves as White or Caucasian (57, 63.3%) and juniors (30, 33.3%) with a varied number of years enrolled in ROTC (<1–5 years; Table 1). The most common religious affiliation was Protestant (43, 47.8%), including denominations such as Baptist, Methodist, Lutheran, Presbyterian, or any combination (Table 2).

Spiritual Fitness

The ROTC cadets were considered to have average spiritual fitness (mean = 75.04 ± 14.89). They had average spiritual practices (mean = 22.59 ± 4.99 of 30), spiritual beliefs (mean = 23.16 ± 5.31 of 30), and self-awareness and transcendence (mean = 28.33 ± 6.97 of 40). To categorize each SFI subcategory, we calculated a percentage using the average score for each subcategory: spiritual practice (75.3%), spiritual beliefs (77.2%), and self-awareness and transcendence (70.8%; Table 3).

Table 2. Religious Affiliation

Affiliation	No. (%)
Agnostic	6 (6.7)
Atheist	4 (4.4)
Buddhist	0 (0)
Hindu	0 (0)
Jehovah's Witness	0 (0)
Jewish	2 (2.2)
Latter-Day Saints	2 (2.2)
Muslim	1 (1.1)
Nonreligious or nothing in particular	10 (11.1)
Orthodox	1 (1.1)
Protestant	43 (47.8)
Roman Catholic	15 (16.7)
Unitarian	0 (0)
Did not answer	4 (4.4)

Spiritual Readiness

The participants displayed moderate spiritual readiness (mean = 90.46 ± 18.09 of 120). Spiritual readiness was higher for EWB (mean = 46.79 ± 8.38 of 60) than for RWB (mean = 43.81 ± 12.23 of 60). The average scores of EWB and RWB characterized a moderate level of life satisfaction and purpose and a moderate sense of spiritual well-being, respectively (Table 4).

Depressive Symptoms

The average score on the PHQ-9 for the ROTC cadets was 4.22 ± 5.25. The percentage of ROTC cadets with no depressive symptoms (PHQ-9 score = 0) was 23.1% (n = 21). The prevalence rates of depressive symptoms according to the recommended cutoff points were as follows: minimal depression, 29.7% (n = 27); mild depression, 16.5% (n = 15); moderate depression, 6.6% (n = 6); moderately severe depression, 3.3% (n = 3); and severe depression, 1.1% (n = 1; Table 5). Of the 73 participants who answered questions in the PHQ-9 section, 86.3% had no to mild depressive symptoms. The findings are encouraging, as they suggest that many ROTC cadets have the resources or interpersonal capability to remain in a healthy mental state. However, 10 respondents (13.7%) had moderate to severe depression.

The subscales of the SWBS (EWB and RWB) provided interesting insights relative to depressive symptoms on the PHQ-9. The PHQ-9 and EWB subscale scores had a moderate, statistically significant negative correlation ($r[67] = -0.355$, $P = .003$). We did not identify any relationship between RWB and PHQ-9 scores ($r[71] = -0.052$, $P = .664$).

Belief in God or Gods

In total, 85.7% (n = 78/91) believed in God or gods. We did not observe a difference between belief status and spiritual fitness (believer = 76.12 ± 14.78, nonbeliever = 64.40 ± 12.68; $U = 58.0$, $Z = -1.926$, $P = .054$) in ROTC cadets. However, belief in God or gods differed with the SWBS score ($U = 39.0$, $Z = -4.365$, $P \leq .01$), whereby those who believed in God (believer = 94.44 ± 16.10) had higher spiritual readiness than those who did not (nonbeliever = 67.00 ± 9.35). Finally, we did not demonstrate a difference between belief status and symptoms of depression ($U = 225.0$, $Z = 2241.0$, $P = .143$);

Table 3. Spiritual Fitness Inventory Results[23]

Question	Subcategory	Mean ± SD	Mode
(1) How often do you get together with other people in wholesome activities outside of work?	Spiritual practices (1–3)	6.26 ± 2.33	8
(2) How often do you engage in activities that build the human spirit?		8.15 ± 2.64	10
(3) How much do these kinds of activities help refresh you?		7.71 ± 1.85	7
(4) Life brings big questions. (Who am I? Why am I here? What is my purpose in life? What happens after I die? Why is there evil and suffering?) How helpful are your core beliefs or values in giving meaning and purpose to your life?	Spiritual beliefs (4–6)	7.56 ± 2.13	10
(5) How much do your core beliefs or values provide you support in times of stress?		7.60 ± 2.12	10
(6) How much do your core beliefs or values influence your moral and ethical decision-making?		8.00 ± 1.96	10
(7) How much do your core beliefs or values encourage you to stop and think about who you are and who you are becoming?	Spiritual awareness and transcendence (7–10)	7.28 ± 2.19	8
(8) How much do your core beliefs or values build within you an allegiance to anyone or anything outside of yourself? (This could be God, nature, country, Corps, community, family, humanity, the greater good.)		7.01 ± 2.38	7[a]
(9) How much do your core beliefs or values encourage you to be caring, forgiving, patient, gentle, generous, selfless, kind?		7.89 ± 2.03	10
(10) Have you ever been changed by an unusual or profound experience? (You might call this a spiritual crisis, conversion experience, mystical experience, exceptional human experience, sense of enlightenment, or a near-death experience.)		6.00 ± 2.77	5[a]

[a] Multiple modes exist. The smallest value is shown.

nonetheless, the group differences would have clinical importance, placing the believers (mean = 3.38 ± 4.90) in the no-depression group and the nonbelievers (mean = 6.60 ± 6.90) in the mild-depression group.

DISCUSSION

The primary purpose of our study was to examine spiritual readiness, spiritual fitness, and depressive symptoms in ROTC cadets. The participants displayed average spiritual fitness and moderate spiritual readiness, with most reporting no to mild depressive symptoms. The data suggested that believing in a God or gods leads to greater spiritual readiness. In previous research, collegiate student-athletes indicated that they believed addressing spirituality could result in positive outcomes and that ATs should have basic skills to identify spiritual needs.[29] A multidisciplinary approach, including the AT, to exploring spirituality in ROTC cadets may assist in providing compassionate care and addressing mental health concerns.

Table 4. Spiritual Wellbeing Scale Results[25]

Item	Question Skew	Subcategory	Mean ± SD	Mode
(1) I don't find much satisfaction in private prayer with God.	Negative	RWB	4.22 ± 1.69	6
(2) I don't know who I am, where I came from, or where I'm going.	Negative	EWB	4.68 ± 1.30	6
(3) I believe that God loves me and cares about me.	Positive	RWB	4.68 ± 1.55	6
(4) I feel that life is a positive experience.	Positive	EWB	4.86 ± 1.10	6
(5) I believe that God is impersonal and not interested in my daily situations.	Negative	RWB	4.25 ± 1.69	6
(6) I feel unsettled about my future.	Negative	EWB	4.03 ± 1.40	4
(7) I have a personally meaningful relationship with God.	Positive	RWB	4.31 ± 1.52	6
(8) I feel very fulfilled and satisfied with life.	Positive	EWB	4.72 ± 1.04	4
(9) I don't get much personal strength and support from my God.	Negative	RWB	4.37 ± 1.60	6
(10) I feel a sense of wellbeing about the direction my life is headed in.	Positive	EWB	4.76 ± 0.97	4
(11) I believe that God is concerned about my problems.	Positive	RWB	4.53 ± 1.51	6
(12) I don't enjoy much about life.	Negative	EWB	4.82 ± 1.45	6
(13) I don't have a personally satisfying relationship with God.	Negative	RWB	4.30 ± 1.61	6
(14) I feel good about my future.	Positive	EWB	4.95 ± 0.94	6
(15) My relationship with God helps me not to feel lonely.	Positive	RWB	4.22 ± 1.54	6
(16) I feel that life is full of conflict and unhappiness.	Negative	EWB	3.83 ± 1.52	3
(17) I feel most fulfilled when I'm in close communion with God.	Positive	RWB	4.28 ± 1.51	4[a]
(18) Life doesn't have much meaning.	Negative	EWB	4.89 ± 1.38	6
(19) My relationship with God contributes to my sense of well-being.	Positive	RWB	4.37 ± 1.52	6
(20) I believe there is some real purpose for my life.	Positive	EWB	4.97 ± 1.18	6

Abbreviations: EWB, existential well-being; RWB, religious well-being.
[a] Multiple modes exist. The smallest value is shown.

Table 5. Patient Health Questionnaire-9 Results[27]

Question	Mean ± SD	Mode
(1) Little interest or pleasure in doing things	0.46 ± 0.75	0
(2) Feeling down, depressed, or hopeless	0.36 ± 0.74	0
(3) Trouble falling or staying asleep or sleeping too much	0.60 ± 0.77	0
(4) Feeling tired or having little energy	0.86 ± 0.93	0
(5) Poor appetite or overeating	0.65 ± 0.93	0
(6) Feeling bad about yourself or that you are a failure or have let yourself or your family down	0.43 ± 0.79	0
(7) Trouble concentrating on things, such as reading the newspaper or watching television	0.46 ± 0.82	0
(8) Moving or speaking so slowly that other people could have noticed or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0.23 ± 0.61	0
(9) Thoughts that you would be better off dead or hurting yourself	0.14 ± 0.51	0
(10) If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	0.86 ± 0.81	1

Spiritual Fitness and Readiness

Human beings are unique in that they are body and spirit. The US Marine Corps acknowledges the importance of caring for both aspects by stating, "Marines develop strong mental, moral, spiritual, and ethical understanding because they are as important as physical skills when operating in the violence of combat."[30] The Marines go on to say that those who address spiritual, social, and mental factors can overcome challenges and recuperate faster than their counterparts who have not addressed these areas.[31] Spiritual fitness and spiritual readiness are 2 aspects that may lead to better overall resiliency.[12] Spiritual fitness refers to a person's overall spiritual health and reflects how spirituality may aid coping with and enjoying one's life.[5,6] Spiritual readiness focuses more on personal qualities needed to sustain an individual in times of stress, hardship, and tragedy.[4] Based on our results, both spiritual fitness and spiritual readiness in ROTC cadets could be improved. The comparison of spiritual fitness and readiness with a belief in God or gods was interesting. The spiritual readiness tool has specific components that ask about religion, which would suggest a possible connection. However, as noted in Table 3, spiritual fitness can be a nonreligious aspect, which may explain why the results did not differ between those with and those without a belief in God or gods.

The subcategory data for spiritual fitness from the ROTC cadets fell within the average range, with *self-awareness and transcendence* scoring lowest. This subcategory identifies the extent to which one's beliefs encourage self-awareness, commitment to a person or thing outside of the self, how good social behavior is valued over self-interest, and the extent of the effect of a profound experience.[5,23] This group of ROTC cadets may need to adopt a more selfless attitude of viewing themselves as "part of something greater" to improve their spiritual fitness.[5] Earlier investigators with the Hawaii Army National Guard analyzed SFI scores of the soldiers before and after voluntary spiritual training with their chaplain.[24] Our outcomes (Table 3) were comparable with the preintervention scores of the Hawaii Army National Guard soldiers. Also the average score for the self-awareness and transcendence category in the latter group increased 34% postintervention.[32] Thus, spiritual training may be helpful, and the ROTC cadet population could adopt a similar model to improve their scores.

The manual for the SWBS defines ranges to indicate the level of overall spiritual well-being and EWB and RWB.[26] According to these criteria, our participants demonstrated moderate overall spiritual well-being as well as moderate EWB and RWB. Similarly, these scores were comparable with the SWBS scores of the general college student population in other research.[32] Such similar results suggest that the ROTC cadets' spiritual well-being aligned with that of the average college student population. Despite being comparable with the average college student in spiritual well-being, military demands may mean that ROTC cadets need better spiritual well-being to prepare them for future success. Prior authors have found that service jobs in the military, such as the Air Force and National Guard, were connected with distress, leading to relationships with trauma-related conditions and depression.[33–35]

The current model addresses concerns in the military relating to mental health challenges and injury through a downstream approach, ie, reacting and treating the symptoms or concerns as they arise. We recommend that the US military take an upstream approach, similar to that in public health policy, by investing in ROTC cadets as their future leaders to help them improve their RWB and EWB.[36] The modeling of proactive, holistic health could encourage future basic trainees to pursue the same fitness behaviors as their cadre leaders. Investing sufficiently in cadets during training is critical to them as future soldiers in the US military. The US military wants to improve soldier readiness by incorporating a more holistic approach to training and care and so should promote these ideals now. Teaching cadets how to incorporate these ideals from the start will not only improve their resiliency and readiness but also allow them to pass on the values they learned as cadets to the next generation of soldiers.

The ROTC cadets must increase their engagement with and practice spiritual or religious acts to enhance spiritual fitness and readiness. *Spirituality* is defined as the quality or condition about or affecting the spirit or soul, especially from a religious aspect.[5] In contrast, *religion* refers to spiritual institutions and their specific beliefs.[5] We determined that believing in God or gods was associated with greater spiritual readiness. On US college campuses, many resources from different religions are available for students, as college is a time when many people seek answers regarding faith and spirituality.[37] This may be an appropriate way for the ROTC leadership to encourage cadets to improve their spiritual fitness and readiness with no additional cost or resources needed from the military. The military cannot and should not force or practice matters of religion and spirituality. However, spiritual practices may help increase spiritual fitness and spiritual readiness without religious aspects. In 2000, researchers showed that most ATs were unaware of the positive links between spirituality and health.[38] Athletic trainers should be able to recognize the differences between promoting

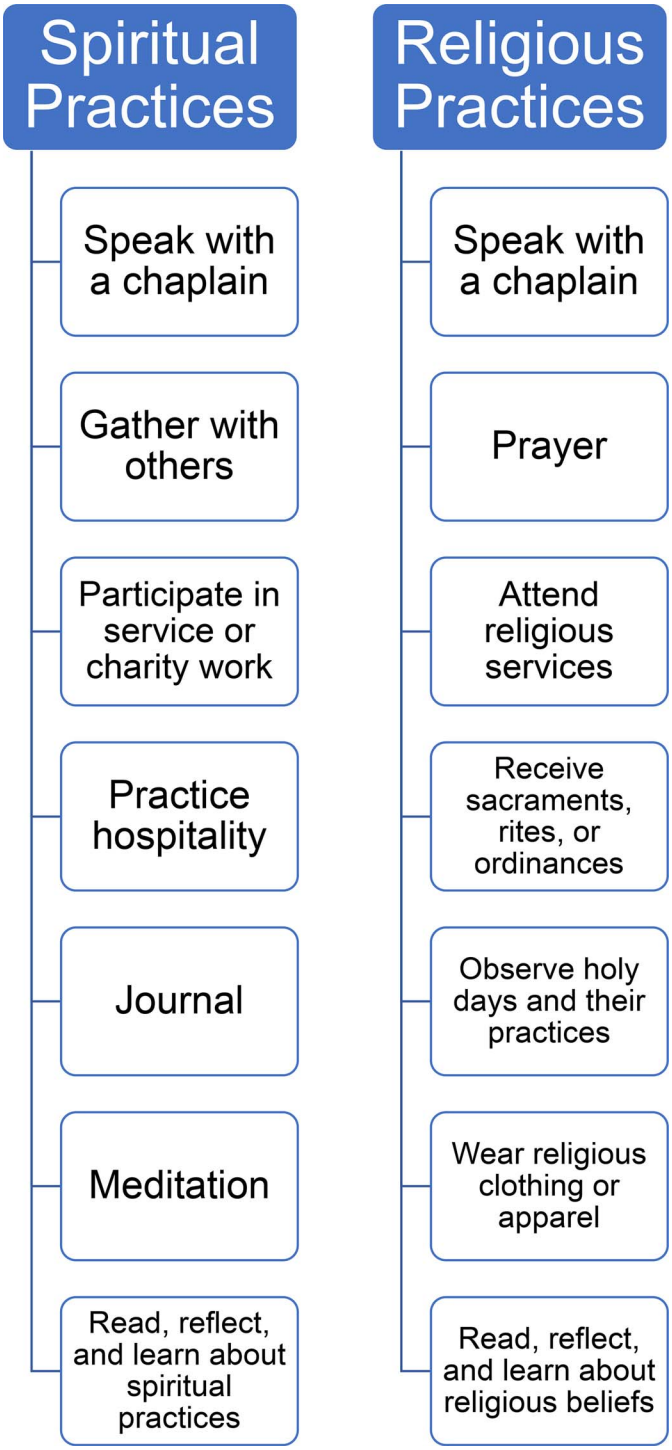

Figure. Examples of spiritual and religious practices to improve spiritual readiness.[4]

religious beliefs and improving one's spirituality. In the Figure, we provide an overview of various trainings or practices that ATs could suggest ROTC cadets consider engaging in, in much the same way they participate in physical activity, to promote spiritual and mental health behaviors.

Mental Health Outcomes

The PHQ-9 has a sensitivity of 88% for scores $\geq$10.[27] Therefore, the tool displays good accuracy in ruling out individuals for depressive disorders if they score $<$10. The 10 individuals scoring $\geq$10 on the PHQ-9 should be referred to a mental health professional for further evaluation. However, as this was an anonymous study, we were unable to identify or refer them. The 13.7% of cadets flagged for depressive symptoms was consistent with the literature on the prevalence of depression among college students.[39] Authors of a literature review found that, over time, 10% to 20% of college students experienced psychological problems such as depression, anxiety, and stress.[39] Although this percentage does not reflect the majority, it is consistent with the literature indicating that depression is a concern among college students, including ROTC cadets. These results suggest that, even though depressive symptoms may not have been a prevalent concern in this specific ROTC group, individuals should be assessed, screened, and treated as needed to prevent the risk of serious injury such as suicide, given that a depressive disorder is one of the strongest predictors of suicidal ideation.[40] Athletic trainers should be equipped to recognize through screening when a referral for a mental health concern is warranted. The referral process for mental health concerns should involve a psychiatrist for immediate needs, but spiritual care plays a role, including pastoral and clergy services for depression.[41] For the AT, it is critical to recognize how people can strengthen their spirituality through appropriate referrals to improve their mental health. Yet it is important to note the limitations in the scope of training for ATs, who should not deliver spiritual care itself even if the person identifies as religious.

The PHQ-9 scores did not differ based on a belief in God or gods, which may indicate that depressive symptoms can still affect those with a strong religious affiliation. The difference between religious wellness and existentialism is a critical component to consider. Previous authors described lower EWB on the spiritual readiness tool as related to a higher level of distress,[33] and conversely, that higher spiritual well-being was associated with fewer mental health symptoms.[35] In addition, we observed a negative correlation between EWB and depressive symptoms: those with higher EWB had a lower PHQ-9 score. We believe that the rationale for this outcome was that EWB focuses on the idea of purpose and meaning. Rather than being part of a religion, it is essential to ensure people feel loved and have a sense of meaning and purpose, hope, and gratitude, as each of these aspects is a known protective factor against depression.[2,15,40] Some may suggest religion can address these items and hold true to those practices; however, to achieve spiritual readiness, one must focus on EWB. Prior investigators also proposed that spiritual practices, which typically align with EWB, can serve as protective mitigators of depressive symptoms.[10–13,15,16] Future authors should explore the rationale of existentialism in the context of mental health among military members.

Clinical Implications

Although the Army and other branches of the US military have seen the value of holistic health and fitness, their manuals, such as the H2F, continue to focus primarily on the physical preparedness aspect of soldier readiness.[4] Physical preparedness is essential and can be a protective factor against depression; even so, all items in the holistic

health and fitness model need to be addressed and treated with equitable importance.[40] To accomplish this, a culture shift is needed. The emphasis on physical readiness must also be applied to spiritual and mental readiness. To achieve this, those in charge of physical training for cadets should remove barriers to engaging in spiritual or religious practices. This could mean being aware of the day and time of workouts to ensure they do not conflict with services or other practices.

Secondly, leadership should foster an environment in which the importance of spirituality and mental health as well as physical preparedness is openly talked about and emphasized. Creating an environment that promotes the discussion of spirituality will allow cadets the space to speak about their experiences. Talking to others about spirituality helps to build a community that further supports an individual and enhances spirituality.[5,14] One mechanism to aid ROTC cadets is to provide access to an AT on college campuses. Athletic trainers are generalist health care providers who assist in managing injuries through a holistic health care lens. The AT has been educated in many areas, including injury prevention and rehabilitation, nutrition, recognition of mental health concerns, referral, and emergency response to physical and mental injuries.[42] With mental health crises, obtaining rapid treatment is essential.[40]

Limitations and Future Considerations

This study was limited because data were collected from only 1 institution. Furthermore, we had to assume that responses to the survey were honest and trustworthy. We suggest that future research is conducted using similar methods at multiple institutions across ROTC branches and exploring these readiness factors in current Army soldiers. In addition, future investigators should examine the concepts of spiritual and religious practices with soldiers on military bases to assess their access and ability to engage with different methods.

CONCLUSIONS

In this study, we illustrated opportunities for ROTC programs to improve 3 main areas of interest: spiritual fitness, spiritual readiness, and mental health. As future service members in the US military, ROTC cadets should be provided resources and be encouraged to develop their spirituality and explore beliefs in God or gods, if such beliefs are not currently held. To help improve spiritual fitness and readiness, ROTC cadre leaders should offer encouragement, resources, and support to all ROTC cadets, regardless of religious denomination, to deepen their understanding and growth in this area to also potentially improve military readiness. Continued investment in spiritual fitness and readiness could help these future military leaders manage adversity, stress, and tragedy, which are risk factors for depression. Calling on ATs to help recognize risk factors for depression in cadets and assist in implementing activities to strengthen mental health and spirituality could also be beneficial.

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