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Treating Active-Duty Military Members: Best Practices for Common Mental Health Diagnoses Across the DoD

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ABSTRACT

Due to varying service experiences, active-duty service members endure military related stressors in addition to everyday life stressors. As a result, their risk of mental illness onset increases. Considering that many of the stressors and events are unique to military personnel, it is important to identify best-practice interventions for working with this population opposed to employing civilian best practices. The purpose of this study was to determine what treatment interventions are best-practice when working with active-duty military members diagnosed with the three most common mental disorders (e.g., adjustment disorder, depressive disorders, anxiety disorders) across the Department of Defense (DoD). This study employed a narrative systematic review methodology. Selected studies were assessed by the Quality of Study Rating Form (QSRF). Based on the QSRF and the findings of the selected research, this study draws conclusions pertaining to what are or may be considered best-practice interventions for the treatment of the diagnoses under study. Ultimately, after searching through multiple databases with varying search term combinations and with the assistance of an experienced published researcher Dr. Alan Lipps, zero eligible studies were identified. This finding implies that no researchers have conducted a treatment focused study with active-duty military members diagnosed with any of the DoD's three most prevalent mental illnesses in the last eleven years. This finding is highly troubling and potentially problematic for the military mental health system. Mental health professionals should turn their attention to

the active-duty population and conduct treatment focused literature on these prevalent disorders to better serve the mental health needs of active-duty service members.

Treating Active-Duty Military Members: Best Practices for Common Mental Health
Diagnoses Across the DoD

A Thesis

Presented to

The Faculty of the School of Social Work

Abilene Christian University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science in Social Work

By

Leah Lawson

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This thesis, directed and approved by the committee for the thesis candidate Leah Lawson, has been accepted by the Office of Graduate Programs of Abilene Christian University in partial fulfillment of the requirements for the degree

Master of Science in Social Work



Assistant Provost for Residential Graduate Programs

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This thesis is dedicated to my husband, Alexander, who has been an incredibly patient and supportive partner throughout this process. Thank you for raising our son and sacrificing your freedoms to serve in our Nations United States Air Force. To my son, Lucas, who came into this world in the middle of the composition of this study. May this be proof that no matter what major changes occur in life, anything is possible when you give yourself grace, utilize your supports, and persevere.

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CHAPTER I

INTRODUCTION

As a student obtaining a Master of Science in Social Work degree and an active-duty military spouse interested in the mental health of those who serve in the United States (U.S) Armed Forces, I turned to the literature regarding active-duty mental health services. In 2019, 8.4% of active-duty military service members received a mental health diagnosis. When comparing the sexes, the Department of Defense (DoD) found that women were more likely to receive a mental health diagnosis (13.3%) than men (7.4%). Of the four active branches, the DoD found that the Marine Corps had the lowest percent of members with mental health disorders (6.8%), and the Army had the highest (10%) (Department of Defense, 2019b).

Next to physical injury, mental health is one of the leading causes of morbidity in the U.S Military (Department of Defense, 2018b, 2019b). Annual Suicide Reports (ASR) issued by the DoD (2018a, 2019a, 2020) indicate that suicide rates within the active-duty military population continue to steadily climb. In 2020, the Armed Forces saw a record-breaking high suicide rate of 28.7 suicides per 100,000 active-duty military members. While the COVID-19 pandemic was discussed as a possible influence on the increasing rates of suicide and mental disorders, the 2020 ASR did not pinpoint any particular factors or events influencing the increase. Suicide rates from past publications of the DoD Health of the Forces Studies can be found in Table 1 (Department of Defense, 2018a, 2019a, 2020).

Table 1

Annual Suicide Rates per 100K Service Members by Branch

Branch of Service	CY 2016	CY 2017	CY 2018	CY 2019	CY 2020
Army	27.4	24.3	29.9	30.7	36.4
Marine Corps	20.1	23.4	30.8	25.3	33.9
Navy	15.9	20.1	20.7	22.1	19.3
Air Force	19.4	19.6	18.5	24.8	24.3
Average	21.5	21.9	24.9	26.3	28.7

Problem

Exacerbation of a diagnosis or the onset of suicidal ideation can be prevented or combated through varying protective factors, one of which is access to mental health treatment (Center for Disease Control and Prevention, 2021). When treating a client, evidence-based practices (EBP) should be employed for favorable long-term outcomes to be achieved. The National Association of Social Workers (NASW) proposes there are many definitions for the term *evidence-based practice* as it is often used interchangeably with *evidence-based treatment*, *evidence-based interventions*, and *evidence-informed interventions*. However, the NASW website (n.d) provides the following blanket definition to cover all of these terms: “EBP is a process in which the practitioner combines well-researched interventions with clinical experience, ethics, client preferences, and culture to guide and inform the delivery of treatments and services.” EBPs are identified by researchers who conduct varying methodological research. Some believe clinical controlled trials to be the “gold standard” for determining effectiveness; however, others argue a more “inclusive view” should be employed when determining what constitutes evidence (Regehr et al., 2007). When enough literature that sought to discover the efficacy of the interventions has been completed, the collection of findings

may lead to the identification of evidence-based best-practice treatment interventions. If best-practice treatment interventions are not identified, a multitude of problems can arise. For example, if an ineffective treatment is employed, perpetuation of a treatable diagnoses may lead to harmful effects which negatively impact the client. While efficacious best-practice treatment intervention literature is plentiful with civilian samples, a problem I have identified is comparable literature is not as readily available when it comes to active-duty samples.

Purpose of Study

Best practices in mental health treatment are crucial because they promote positive long-term outcomes. When selecting treatment interventions for clients, practitioners should not only be selecting evidence-based interventions but should also keep their client in mind (Regehr et al., 2007). Civilian clients come to mental health practitioners with varying needs, abilities, preferences, and cultures. This holds true with active-duty military members as well; however, in addition to the previously listed factors, this population is coming into treatment with unique military related experiences (Fielden, 2012; Lovering et al., 2013). Some observed and publicly known factors are loss of autonomy, deployment, combat exposure, extended periods away from loved ones, and stigma associate with the military culture. To better serve those who serve, this study aims to review existing treatment focused literature for five of the DoD's most prevalent mental health disorders identified by the most recent Health of the Forces studies (Department of Defense, 2018b, 2019b). The disorders identified were adjustment disorder, depressive disorders, and anxiety disorders, post-traumatic stress disorder (PTSD), and alcohol-related disorders. My overall goal is to determine what treatment

interventions are best practice when working with active-duty military members diagnosed with these prevalent mental disorders.

Significance of Study

Due to varying service experiences, active-duty men and women endure military-related stressors. Therefore, their risk of mental illness onset may increase (Dworkin et al., 2018; Fielden, 2012; Lovering et al., 2013). Because the stressors and events are unique to military personnel, it is important to identify best-practice interventions for working with this population instead of employing civilian best practices. The present study is important because current best-practice intervention literature is lacking for the top five diagnosed disorders across the DoD. This study hopes to identify what the best-practice interventions are for this population, where more research is needed, and literature gaps. This study is only interested in current literature due to the ever changing and growing nature of the mental health field. Keeping literature current will ensure that the recommended treatment interventions are not outdated.

Definitions of Terms

The following terms will be utilized throughout this thesis:

- Across the DoD: Encompasses the entirety of the active components of the Army, Navy, Marine Corps, and Air Force.
- Active-duty: A military member actively serving full-time in the Army, Navy, Marine Corps, or Air Force
- Anxiety Disorders: All anxiety disorders in the *DSM-5*
- Civilian: An individual that is not serving in any of the U.S military branches.
- Depressive Disorders: All depressive disorders in the *DSM-5*

CHAPTER II

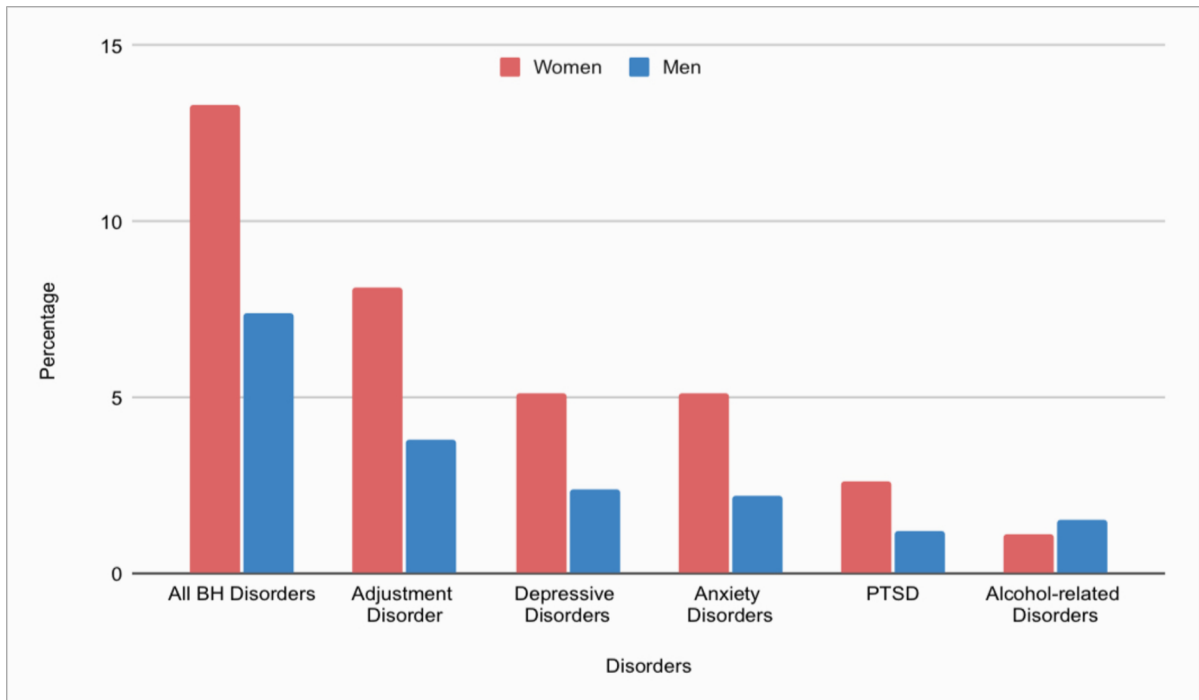
LITERATURE REVIEW

Prevalent Mental Disorders Across the DoD

The DoD's Health of the Forces Studies (2018b, 2019b) detail the health and well-being of the four active branches (Army, Navy, Marine Corps, and Air Force) in eight subject areas, one of which is "Behavioral Health." This subject area focuses on reporting the DoD's most prevalent mental disorders and correlated statistics. The data can also be found separated by branch and sex. Adjustment disorder was identified as the number one most diagnosed mental disorder across the DoD. Following adjustment disorder are depressive disorders, anxiety disorders, post-traumatic stress disorder, and alcohol related disorders. Figure 1 (below) provides prevalence statistics directly from the 2019 DoD's Health of the Forces Study.

Figure 1

Prevalence of Behavioral Health Disorders (CY 2019)



These disorders have led to many problems for the DoD in regards to mission readiness and military resources (Bajjani-Gebara et al., 2019; Brady et al., 2019; Bray et al., 2013; Fielden, 2012; Greenberg et al., 2012; Hawkins et al., 2012; Military Medicine, 2015; Morgan et al., 2021; Short et al., 2019; Walker et al., 2017). For example, in 2019, 13% of active-duty military members diagnosed with a mental disorder were hospitalized due to their diagnosis. This led to 171,254 bed days. Of these hospitalizations, depression and alcohol-related disorders were responsible for more than half of the total bed days. Depressive disorders accounted for the highest total number of beds days at 52,784 days, and alcohol-related disorders accounted for the second highest at 38,907 days (Department of Defense, 2019b). Adjustment disorder related hospitalizations resulted in 33,380 bed days, which cost the Military Health System \$60,375,910 in 2019 (Morgan et

al., 2021). Fully understanding these disorders, and providing effective treatment is crucial for bettering the wellbeing of active-duty military members.

Adjustment Disorder

In 1980, adjustment disorder was officially recognized as a mental disorder and given its own section in the third edition of *The Diagnostic and Statistical Manual of Mental Disorders (DSM-III)*; American Psychiatric Association [APA], 1980). Since then, it has been reevaluated and moved to the “Trauma and Stressor-Related Disorders” section of the *DSM-5*, which was published in May of 2013 (APA, 2013). An adjustment disorder can occur when an individual’s ability to cope and adapt to a stressful or life-altering event fails, leaving them to respond uncharacteristically for an extended period of time. The individual’s response to the stressor must begin within three months of the triggering event and would be considered maladaptive and disproportionate to the severity of the event. In addition to the base diagnostic criteria, which can be found in Appendix B, adjustment disorder has three specifiers that can occur individually or coupled together. These specifiers are depressed mood, anxiety, and disturbance of conduct. Some common events that may induce adjustment disorder are medical diagnoses or complications, death of a loved one, relationship issues, marriage, having a baby, financial problems, moving, work related stressors, etc. (APA, 2013; Cleveland Clinic, 2021; Fielden, 2012).

It is agreed upon by many that adjustment disorder is one of the most consistently diagnosed mental disorders in the military (Department of Defense 2018b, 2019b; Bajjani-Gebara et al., 2019; Fielden, 2012; Morgan et al., 2021). Although this disorder is highly prevalent, it has received criticism due to its diagnostic criteria, a general lack of

understanding, and the sparsity of published literature (Morgan et al., 2021). In 2018, Bajjani-Gebara et al. conducted a scoping review focusing on adjustment disorders in active-duty women between the years of 2000 and 2018. They claim that adjustment disorder in the military population has not yet been comprehensively reviewed, and only one civilian systematic review was found. Unfortunately, Bajjani-Gebara et al.'s (2019) study did not add much in regard to new information for this disorder in the military population. They found mixed reports on whether being female was a risk factor ultimately leaving them unable to definitively state whether it was a risk factor or not. As for treatment interventions, all that was found were expert opinion recommendations for the use of cognitive behavioral therapy when treating female active-duty military members.

The lack of comprehensive literature would imply treatment focused literature is lacking as well. Morgan et al.'s (2021) systematic analysis on adjustment disorder literature gaps corroborate this claim and report that establishing evidence-based interventions for the treatment of this disorder may be difficult until further research is published. A literature review conducted by Fielden (2012), a commissioned officer in the Army, also states that not only is there a need for treatment-focused research but research exploring the treatment differences in the military setting versus the civilian setting is necessary. Overall, a reoccurring theme in the already limited literature discussing adjustment disorder is the identification of research gaps.

Depressive Disorders

The APA (2020b) claims that depression can affect anyone at any time and that approximately one in six people (16.6%) will experience it in their lifetime. Depression

can be described as a persistent feeling of sadness, hopelessness, or apathy that significantly impacts one's ability to properly function in their day-to-day life. In some cases, individuals express a sense of worthlessness, which can lead to suicidal ideation. It is important to note that not all cases of depression look the same and that individuals can have varying sets of symptoms or ways their depression manifests outwardly. One common alternative manifestation is irritability (APA, 2013; Mayo Clinic, 2018b). Currently there eight different depressive disorders with their own diagnostic criteria, symptoms, and prevalence. For additional information regarding the eight depressive disorders, consult the *DSM-5* (APA, 2013). Please see Appendix C for a brief excerpt from the *DSM-5*'s Depressive Disorders Category Introduction.

Bryan and Heron (2015) report that depressive disorders have been receiving far less attention than disorders like PTSD since Operation Enduring Freedom (2001–2014) and Operation Iraqi Freedom (2003–2011). They believe this is due to the fact that depressive symptoms tend to manifest later and less intensely than symptoms of trauma or anxiety. During my search for literature, I found Bryan and Heron's (2015) claims to be true regarding limited depressive disorder literature. What I did find were reviews and varying methodological studies focusing on suicidality, risk factors, and depression as a symptom or comorbid disorder to other prevalent disorders such as PTSD. Two identified risk factors when it comes to the onset of a depressive disorder for military men and women are deployments and combat exposure (Biggs et al, 2016; Bryan & Heron, 2015). However, Bryan and Heron (2015) conducted a study with a sample of 168 active-duty Air Force members, which found a potential protective factor. While the study was only conducted with a small non-diverse sample of active-duty military members and is

therefore not generalizable, it was found that a general sense of “belongingness” may protect service members from experiencing depression prior to, during, and post deployment. They recommend more research be conducted with a larger, more diverse sample who have experienced different levels of combat.

Anxiety Disorders

Anxiety disorders are the most common mental disorders in the United States but the third most prevalent amongst the active-duty military population (Anxiety and Depression Association of America, n.d.). The *DSM-5* recognizes twelve anxiety disorders all with differing criteria, symptoms, comorbidity, and prevalence. *Anxiety* can be described as a clinically significant feeling of nervousness, anxiousness, fear or panic about real or imagined events that impact one’s ability to function in their day-to-day life (APA, 2013; Mayo Clinic, 2018a). Some individuals with anxiety disorders report experiencing physical symptoms as well. A few common physical symptoms include sweating, hyperventilation or shortness of breath, rapid heartbeat, and nausea (Mayo Clinic, 2018a; National Alliance on Mental Illness, 2017). For additional information regarding the criteria of the twelve anxiety disorders, consult the *DSM-5* (APA, 2013). Please see Appendix D for a brief excerpt from the DSM 5’s Anxiety Disorders Category Introduction.

Literature on active-duty military anxiety as the primary diagnosis appears to be limited. Similar to depression, it is often studied as a symptom or comorbidity, primarily with PTSD. However, I was able to identify two studies that reviewed anxiety disorders as the primary diagnosis. The Armed Forces Health Surveillance Center (AFHSC, 2013) identified “non-specific anxiety disorders” to be the most prevalent in their military

sample, while Lovering et al. (2013) identified “anxiety not otherwise specified” to be the most prevalent. These disorders are no longer coded in the *DSM-5* and would now be known as either Other Specified Anxiety Disorder or Unspecified Anxiety Disorder. Lovering et al. (2013) identified potential risk factors for the onset of anxiety disorder. Two notable risk factors were deployment duration and occupational role. Their study also observed a general increase in anxiety disorders over the course of nine years across the DoD. It was noted that combat years correlated with the influx of these diagnoses. The AFHSC (2013) 13-year surveillance study reported 217,409 diagnoses of anxiety disorders, 94.6% of which were “nonspecific.” Some of these “non-specified” diagnoses were later re-diagnosed as other anxiety disorders (generalized anxiety disorder, panic disorder without agoraphobia, specified phobic disorders, and obsessive-compulsive disorder); however, more than three-fourths of the initial “nonspecific” disorders remained unchanged. Lastly, AFHSC (2013) found that approximately one-third of the active-duty military members had comorbid disorders. Among those, 34.4% had adjustment disorder, 33.5% had depressive disorders, 16.4% had PTSD, and 10.7% had alcohol-related disorders.

Similar to adjustment disorder and depressive disorders, I observed a general lack of research on anxiety disorders with military samples. Not seeing the gaps filled by researchers is potentially problematic for this population in terms of understanding general scope, treatment methods, and outcomes. This ultimately will impact not only the individuals with these disorders, but also military readiness.

Post-Traumatic Stress Disorder

Prior to the official introduction of post-traumatic stress disorder (PTSD) to the 1980 publication of the *DSM-III*, it was often referred to as *soldier's heart*, *shell shock*, or *combat fatigue* (APA, 2020a). Now it is known as a trauma and stressor-related disorder that typically leads an individual to experience clinically significant fear, anxiety, anger, or aggression. This often directly impacts one's life and ability to function as they did prior to the triggering event. PTSD may develop as a result of an experienced or witnessed traumatic event such as a serious accident, combat, terrorist attack, serious injury, sexual or physical abuse, etc. (APA, 2013, 2020a). Due to the mission of the military and need for deployments, service men and women are at elevated risk of developing PTSD. The *DSM-5* provides a detailed list of criteria, symptoms, and specifiers one may experience. For the full list of PTSD criteria, please see Appendix E. For further reading into the disorder, consult the *DSM 5's* Trauma and Stressor-Related Disorders chapter.

It has been estimated to cost approximately \$6 billion to treat active-duty military members with PTSD (Jones et al., 2018). This estimate makes sense with the rates of diagnosed PTSD amongst this population. It has been reported that rates of PTSD in the military population fall between 10% and 30%; however, this can vary by service era (Thomson, 2021; Wachen et al., 2016). There is an estimated lifetime prevalence rate of 30.9% in Vietnam veterans, 10.1% in Gulf War veterans, and between 13.8% and 20% in Operation Iraqi Freedom veterans. There is some speculation that this has to do with factors such as type of combat experienced, tactics utilized, location, and stigma surrounding mental health at the time (Thomson, 2021).

PTSD literature, particularly with veteran samples, is extensive and almost overwhelming. Since 2001, more than 2.6 million military members were deployed to combat zones in Iraq and Afghanistan (Wachen et al, 2016). Unlike the other disorders discussed so far, PTSD literature with active-duty samples has increased since the wars in Afghanistan and Iraq, both of which resulted from the September 11, 2001 attacks on the World Trade Center and Pentagon. From this growing literature, it has been found that PTSD symptoms of anger and aggression are common in young service men. Among Miles et al.'s (2020) sample, 88% reported experiencing anger, 97% reported psychological aggression, and 32% reported physical aggression. Resick et al. (2020) focused on treatment outcome predictors. Their only statistically significant finding was age. Active-duty military members younger than 35 had better outcomes compared to their 35 and older counterparts in both 1:1 and group settings. Barns et al. (2016) claim that PTSD evidence-based practice intervention literature has become a “central theme” in the military community, which I find to be true as I sift through the literature. This will be discussed further in later chapters.

Alcohol Related Disorders

Alcohol use disorder (AUD) is the problematic and persistent pattern of alcohol consumption that causes various behavioral and physical symptoms that lead to clinically significant distress and impairment and impact one's ability to fulfill major life roles (APA, 2013; Short et al., 2019). Prior to determining whether one has an alcohol use disorder, a recommended screening tool called the Alcohol Use Disorders Identification Test–Concise (AUDIT-C) can be used to gauge one's level of hazardous drinking (Hawkins et al., 2012). From there, one may receive an AUD diagnosis by meeting two

or more of the eleven criteria in the *DSM-5*. For the full list of AUD criterion please see Appendix F.

It is well known that hazardous alcohol consumption and alcohol-related disorders are common and increasing among the military population (Bollinger & Waters, 2018; Brady et al., 2019; Bray et al., 2013; Luk et al., 2020; Military Medicine, 2015; Mooney et al., 2014; Walker et al., 2017). In 2019, the DoD reported that 116,234 active-duty military members screened positive for hazardous drinking on the AUDIT-C. Of those positive screens, 19,109 received an alcohol-related disorder. Of those individuals, 11.8% ended up in the hospital due to their disorder (Department of Defense, 2019b). Despite the fact that active-duty military males are diagnosed with an AUD more often than their female counterparts, the rates are generally comparable (Department of Defense, 2019b).

Alcohol-related disorders in the military have received a lot of attention from researchers. Over the span of many years, the impact on military readiness has been a shared concern (Brady et al., 2019; Bray et al., 2013; Dworkin et al., 2018; Hawkins et al., 2012; Military Medicine, 2015; Short et al., 2019; Walker et al., 2017). Brady et al. used past DoD statistics on military readiness to illustrate the importance of this issue. Their publication stated that continued abuse of alcohol “costs the US approximately \$425 million annually, results in 34,400 arrests and 320,000 lost days of work, 2,200 active-duty members separated from service, and 10,400 members unable to deploy” (2019, p. 451).

Researchers are also studying how deployments, combat, and comorbidity with PTSD are related to the etiology of AUDs in the military. Brady et al. (2019) and Bray et al. (2013) conducted two differing methodological studies, both of which found that

combat exposure is significantly linked to alcohol abuse in active-duty military members. Brady et al.'s (2019) meta-analysis also found that deployment duration, as well as symptoms of depression, PTSD, and traumatic brain injury (TBI) were risk factors linked to alcohol abuse. As for comorbidity with PTSD, researchers such as Dondanville et al. (2019), Dworkin et al. (2018), and Straud et al. (2021) determined the correlation was strong enough to warrant research exploring treatment methods and interventions for the co-occurring disorders.

Current Study

Military providers must be familiar with the most current best-practice treatment interventions when working with their fellow service members. Unfortunately, recent and relevant literature pertaining to best-practice treatment interventions and their efficacy with active-duty military samples is sparse. Upon speaking to my thesis panel about my intended study, it was suggested that I reduce my scope. I agreed with this recommendation, and I elected to remove PTSD and alcohol-related disorders from this study. I believed reducing the scope to the three most prevalent mental disorders among active-duty military members would allow me to delve deeper into the existing literature with the time I had remaining in this research process. PTSD and alcohol-related disorders were selected for removal because they were fourth and fifth on the prevalence list.

With the reduced scope, this study delved into current treatment focused literature pertaining to adjustment disorder, depressive disorders, and anxiety disorders with the hope of determining best-practice treatment interventions. I have also noted literature gaps and propose ideas for future research. Making such identifications and

recommendations can aide in positive treatment outcomes ultimately leading to mission ready military members.

CHAPTER III
METHODOLOGY
Research Design

This study utilized a narrative systematic review approach to identify and synthesize existing literature examining treatment interventions and their efficacy. The purpose of this study was to determine best-practice treatment interventions for active-duty military members who have received at least one of the three most prevalent mental health diagnoses across the DoD (e.g., adjustment disorder, depressive disorders, and anxiety disorders).

Data Collection

To identify relevant literature for this narrative systematic review, EBSCO, a database host, accessed through the Abilene Christian University Library website, was utilized. Databases such as MEDLINE, Military and Government Collection, and PsychINFO within EBSCO were searched separately to ensure no literature was lost while conducting searches in EBSCO. For an optimal search experience, the Boolean search modality, and advanced search features such as date range (2010–2022), source type (academic journal), geographic location (United States of America), and full text were utilized with selected keywords. The following Boolean search terms were utilized in various combinations.

1. “military” OR “military personnel” OR “active-duty” OR “armed forces” OR “service members”

2. “interventions” OR “treatment” OR “therapy” OR “best-practices” OR
“evidence-based interventions” OR “evidence-based treatments” OR
“evidence-based practices”
3. “adjustment disorders” OR “depressive disorders” OR “depression” OR
anxiety disorders” OR “anxiety”
4. “random” AND assign” OR “random” AND “control” AND “trial” OR
“double blind” OR “RCT”

Inclusion Criteria

Literature produced from the above search methods, with seemingly relevant titles and abstracts, were further reviewed for inclusion or exclusion purposes. For a study to be selected for inclusion, I required a set of criteria I developed to be met. Included studies must be peer-reviewed research conducted in the United States between the years of 2010 and 2022. The content of these studies must also be related to intervention efficacy for the diagnoses currently under study. Lastly, included studies required a sample of active-duty military members in one or more of the primary active-duty branches. If any of the criterion were not met, the piece was excluded.

Analysis

This study utilizes Leonard Gibbs’ Quality of Study Rating Form (QSRF). This tool aids in analyzing selected studies quality, provides indices detailing the studies quality and treatment impact, and lastly, computes treatment effect-sizes. Data extraction from the QSRF consists of, who, what, when, where, why, as well as details pertaining to subjects, control and treatment groups, outcome measures, reliability measures, and follow up rates. Naturally, due to the nature of this tool’s design, the most effective

studies for each diagnosis will score the highest, thus leading to the potential best-practice determinations. Recommendations for future research that may bridge identified literature gaps are also provided.

IRB Approval

This study was reviewed and deemed non-Human research by the Abilene Christian University Institutional Review Board (IRB). The IRB approval letter can be found in Appendix A.

CHAPTER IV

RESULTS

Approximately one and a half months were spent searching through various databases and reviewing hundreds of studies for inclusion criteria. Advanced search methods such as Boolean search modality, date range, source type, geographic location, and full text were utilized. Filters such as “academic journal” under source type and “United States of America” under geography were incorporated into the advance search in hopes of keeping the results relevant. Table 2 below details the publications yielded from my search efforts.

Table 2

Studies Yielded from Searches by Diagnosis and Database

Diagnosis	EBSCO	MEDLINE	Military and Government Collection
Adjustment Disorder	290	14	142
Depressive Disorders	1,421	113	443
Anxiety Disorders	2,029	68	629

The majority of dismissed literature were not reviewed beyond their titles due to clear irrelevance, indication of a veteran or civilian sample, or focus on a diagnosis not under study. Fifty-three publications were pulled for further review and assessment, none of which showed any potential connection to adjustment disorder. After reviewing the publications further by reading their abstracts, background, and methodology sections, none of the fifty-three studies met the eligibility criteria for inclusion in this study.

Studies were dismissed at this stage due to publication type such as literature review, systematic review, or non-treatment focused studies, non-active-duty military samples, or interventions utilized targeted different diagnoses.

For assistance with my failed search efforts, thesis committee member Dr. Alan Lipps graciously offered to aide in the search for literature. His searches resulted in 267 publications from MEDLINE and 70 from PsychINFO. Of those publications, Dr. Lipps provided me with 48 pieces for further review and assessment. Unfortunately, none of the studies were eligible for inclusion in this study.

CHAPTER V

DISCUSSION

This narrative systematic review sought to review recent treatment focused literature with a sample comprised of men and women actively serving in the United States Armed Forces diagnosed with at least one of the three most common mental disorders across the DoD. Ultimately, this study's goal was to determine what treatment methods were best-practice when working with this population. Unfortunately, this study found that no active-duty military sampled literature researching effective treatments for the diagnoses under study were published between 2010 and 2022.

Existing Literature

The inability to locate a single study testing the efficacy of treatment interventions for the disorders under study clearly indicates a major literature gap within active-duty military mental health research. What is taking the attention from this topic? Based on my search return, researchers are publishing an abundance of epidemiological research, most notably regarding topics such as PTSD, alcohol-related disorders, deployments, and combat. While this information is important to establish and understand, discussions and trials pertaining to treatment of these diagnoses and symptoms is falling by the wayside. How will it be possible to best serve a population if best practices for treatment cannot be established?

Implications

While this study attempted to fulfill its intended purpose of identifying best-practice interventions for the treatment of active-duty military members diagnosed with adjustment disorder, depressive disorders, or anxiety disorders was unsuccessful, all of the time and effort put into this study is not lost. The immensity of the literature gap alone should be enough for researchers to call for change and take action. Although no literature has been published pertaining to the treatment of the DoD's three most commonly diagnosed mental disorders in the last eleven years, implications for practice, policy, and future research can be made.

Implications for Practice

At this time the VA/DoD have clinical practice guidelines in place for military members that are at risk for suicide or are diagnosed with major depressive disorder, PTSD, and substance use disorder. While this resource may be helpful for clinicians, the literature utilized to create these guidelines are predominantly civilian sampled studies. Many stressors contributing to military members diagnoses are unique to their time serving, such as loss of autonomy, deployment, combat exposure, extended periods away from loved ones, and stigma associate with the military culture.

Currently, the Veterans Administration/DoD report cognitive behavioral therapy (CBT) to be the front-line treatment for veterans and active-duty military members with major depressive disorder (Department of Veteran Affairs; Department of Defense, 2022). CBT is a treatment method that requires individuals to change ones thought pattern in hopes to minimize distorted thinking, gain better insight and understanding to thoughts, behaviors and motivators, and form positive coping skills (APA, n.d). Due to a

general feeling of lost autonomy, for example, CBT methods might be more difficult for an active-duty military member to buy into. Perhaps other evidence-based practices such as acceptance and commitment therapy will yield better outcomes for this population. Unfortunately, this will remain unknown until the proper research is conducted.

If active-duty military sampled studies were conducted, the most effective evidence-based treatment interventions would be identified, which then should lead to the change of what is considered best-practice. In theory, utilizing these findings should shape the VA/DoD's clinical practice guidelines to become more effective and in-turn align with the multitude of factors associated with active-duty military culture. Ultimately, the hope would be that these treatment interventions would lead to optimal treatment outcomes creating a healthier and more resilient Armed Forces.

Implications for Policy

Due to the missing literature, I would argue it is time for the DoD to evaluate the policies they have in place. Questions such as what policies need to change and what should be developed and implemented to avoid such large literature gaps in the future should be asked. My biggest questions pertaining to VA/DoD policy are concerned with access to data. Are there policies preventing access to crucial data that may bridge this literature gap? Do policies need to be changed or implemented to allow researchers to have authorization to access such data? If there is no data, are there policies restricting researchers access to conduct studies with the active-duty population? What needs to be done to remove these barriers?

Some minor questions I have include should policy makers set timeframes for how frequently treatment-focused research should be conducted, and should the

diagnoses under study follow the trends of prevalence? As for their clinical practice guidelines, the DoD should also consider developing a policy that dictates what percentage of civilian sampled studies can be included in partnership with active-duty military studies to identify these best best practices. This would help ensure the active-duty sample is properly represented in research and informing treatment.

Limitations and Implications for Future Research

Like most research, this study is not without limitations. The narrowness of this study's methodology likely played a role in my findings. Perhaps if the criteria in my methodology allowed for other data to be included in this study, data would have been found; however, the data found may not have been relevant to the intended goal of this study. The immense literature gap was also a major limitation of this study. What does not exist cannot be found. Lastly, a speculated limitation is the potential policies in place by the VA/DoD restricting access to data pertaining to or conducting research with active-duty military members. If data were more accessible or researchers were granted the ability to conduct necessary research, perhaps this would no longer be a limitation.

Future systematic reviews should be conducted by experienced researchers to verify and validate this study's findings or lack thereof. These additional studies will assist in displaying the severity of the literature gap and potentially create an urgency for other researchers. To bridge this gap, access to working with active-duty military members to conduct varying qualitative and quantitative trials should be granted. Upon approval, research must be conducted to test evidence-based treatment intervention efficacy and long-term outcome rates. Factors such as setting should be considered as well. Active-duty military members may most often use an outpatient mental health clinic

for treatment; however, others may find themselves in an inpatient or deployed setting. Conducting such studies in alternative settings, such as deployments, is crucial to the military population due to their inevitability and the increased risks they pose for developing an adjustment disorder, depressive disorder, or anxiety disorder. This specifically may lead to the potential of identifying best-practice brief interventions, ultimately allowing clinicians to be better equipped to treat service members in the field. The above recommendations are where I suggest researchers start; however, the gap is so large that many avenues can be taken to rectify this issue.

Conclusion

Though this study's intention was to determine best-practice treatment interventions for active-duty military members with adjustment disorder, depressive disorders, or anxiety disorders, it instead identified a major gap in treatment focused literature among this population. Despite this study's limitations, implications for practice, policy, and future research were still able to be drawn. The severity of this literature gap should be a sign to researchers that action needs to be taken. While the military mental health system has utilized civilian best practices to shape their mental clinical practice guidelines and treatment to date, this population deserves researchers' attention. To better care for those who serve and face uniquely military related experiences, various methodological studies must be conducted to ensure efficacious best-practices can be identified and implemented for the men and women of the United States Armed Forces.

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APPENDIX A

Institutional Review Board Approval Letter

ABILENE CHRISTIAN UNIVERSITY

Educating Students for Christian Service and Leadership Throughout the World

Office of Research and Sponsored Programs
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103
325-674-2885

January 24, 2022

Leah Lawson
Department of Social Work
ACU Box 27866
Abilene Christian University



Dear Leah,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled "Treating Active Duty Military Members: Best Practices for Five Common Mental Health Diagnoses Across the DoD",

(IRB#22-002) is exempt from review under Federal Policy for the Protection of Human Subjects as:

- Non-research, and
- Non-human research

Based on:

* The research does not involve interaction or intervention with living individuals, and the information being collected is not individually identifiable [45 CFR 46.102(f)(2)]

If at any time the details of this project change, please resubmit to the IRB so the committee can determine whether or not the exempt status is still applicable.

I wish you well with your work.

Sincerely,

Megan Roth

Megan Roth, Ph.D.
Director of Research and Sponsored Programs

APPENDIX B

DSM-5's Diagnostic Criteria for Adjustment Disorder

Adjustment Disorders

Diagnostic Criteria

- A. The development of emotional or behavioral symptoms in response to an identifiable stressor(s) occurring within 3 months of the onset of the stressor(s).
- B. These symptoms or behaviors are clinically significant, as evidenced by one or both of the following:
 - 1. Marked distress that is out of proportion to the severity or intensity of the stressor, taking into account the external context and the cultural factors that might influence symptom severity and presentation.
 - 2. Significant impairment in social, occupational, or other important areas of functioning.
- C. The stress-related disturbance does not meet the criteria for another mental disorder and is not merely an exacerbation of a preexisting mental disorder.

Adjustment Disorders

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- D. The symptoms do not represent normal bereavement.
- E. Once the stressor or its consequences have terminated, the symptoms do not persist for more than an additional 6 months.

Specify whether:

309.0 (F43.21) With depressed mood: Low mood, tearfulness, or feelings of hopelessness are predominant.

309.24 (F43.22) With anxiety: Nervousness, worry, jitteriness, or separation anxiety is predominant.

309.28 (F43.23) With mixed anxiety and depressed mood: A combination of depression and anxiety is predominant.

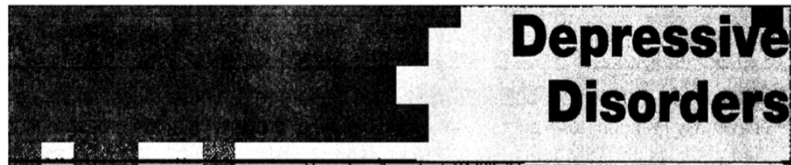
309.3 (F43.24) With disturbance of conduct: Disturbance of conduct is predominant.

309.4 (F43.25) With mixed disturbance of emotions and conduct: Both emotional symptoms (e.g., depression, anxiety) and a disturbance of conduct are predominant.

309.9 (F43.20) Unspecified: For maladaptive reactions that are not classifiable as one of the specific subtypes of adjustment disorder.

APPENDIX C

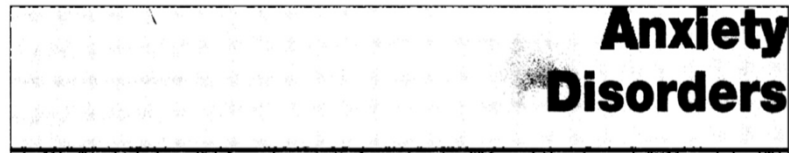
DSM-5's Introduction to Depressive Disorders



Depressive disorders include disruptive mood dysregulation disorder, major depressive disorder (including major depressive episode), persistent depressive disorder (dysthymia), premenstrual dysphoric disorder, substance/medication-induced depressive disorder, depressive disorder due to another medical condition, other specified depressive disorder, and unspecified depressive disorder. Unlike in DSM-IV, this chapter "Depressive Disorders" has been separated from the previous chapter "Bipolar and Related Disorders." The common feature of all of these disorders is the presence of sad, empty, or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function. What differs among them are issues of duration, timing, or presumed etiology.

APPENDIX D

DSM-5's Introduction to Anxiety Disorders



Anxiety disorders include disorders that share features of excessive fear and anxiety and related behavioral disturbances. *Fear* is the emotional response to real or perceived imminent threat, whereas *anxiety* is anticipation of future threat. Obviously, these two states overlap, but they also differ, with fear more often associated with surges of autonomic arousal necessary for fight or flight, thoughts of immediate danger, and escape behaviors, and anxiety more often associated with muscle tension and vigilance in preparation for future danger and cautious or avoidant behaviors. Sometimes the level of fear or anxiety is reduced by pervasive avoidance behaviors. *Panic attacks* feature prominently within the anxiety disorders as a particular type of fear response. Panic attacks are not limited to anxiety disorders but rather can be seen in other mental disorders as well.

The anxiety disorders differ from one another in the types of objects or situations that induce fear, anxiety, or avoidance behavior, and the associated cognitive ideation. Thus, while the anxiety disorders tend to be highly comorbid with each other, they can be differentiated by close examination of the types of situations that are feared or avoided and the content of the associated thoughts or beliefs.

APPENDIX E

DSM-5's Diagnostic Criteria for PTSD

Posttraumatic Stress Disorder

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Posttraumatic Stress Disorder

Diagnostic Criteria

309.81 (F43.10)

Posttraumatic Stress Disorder

Note: The following criteria apply to adults, adolescents, and children older than 6 years. For children 6 years and younger, see corresponding criteria below.

- A. Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways:
1. Directly experiencing the traumatic event(s).
 2. Witnessing, in person, the event(s) as it occurred to others.
 3. Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
 4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse).
- Note:** Criterion A4 does not apply to exposure through electronic media, television, movies, or pictures, unless this exposure is work related.
- B. Presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:
1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s).
- Note:** In children older than 6 years, repetitive play may occur in which themes or aspects of the traumatic event(s) are expressed.
2. Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s).
- Note:** In children, there may be frightening dreams without recognizable content.
3. Dissociative reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings.)
- Note:** In children, trauma-specific reenactment may occur in play.
4. Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
 5. Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
- C. Persistent avoidance of stimuli associated with the traumatic event(s), beginning after the traumatic event(s) occurred, as evidenced by one or both of the following:
1. Avoidance of or efforts to avoid distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).
 2. Avoidance of or efforts to avoid external reminders (people, places, conversations, activities, objects, situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).
- D. Negative alterations in cognitions and mood associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
1. Inability to remember an important aspect of the traumatic event(s) (typically due to dissociative amnesia and not to other factors such as head injury, alcohol, or drugs).

Note: Witnessing does not include events that are witnessed only in electronic media, television, movies, or pictures.

3. Learning that the traumatic event(s) occurred to a parent or caregiving figure.
- B. Presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:
1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s).

Note: Spontaneous and intrusive memories may not necessarily appear distressing and may be expressed as play reenactment.
 2. Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s).

Note: It may not be possible to ascertain that the frightening content is related to the traumatic event.
 3. Dissociative reactions (e.g., flashbacks) in which the child feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings.) Such trauma-specific reenactment may occur in play.
 4. Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
 5. Marked physiological reactions to reminders of the traumatic event(s).
- C. One (or more) of the following symptoms, representing either persistent avoidance of stimuli associated with the traumatic event(s) or negative alterations in cognitions and mood associated with the traumatic event(s), must be present, beginning after the event(s) or worsening after the event(s):
- Persistent Avoidance of Stimuli**
1. Avoidance of or efforts to avoid activities, places, or physical reminders that arouse recollections of the traumatic event(s).
 2. Avoidance of or efforts to avoid people, conversations, or interpersonal situations that arouse recollections of the traumatic event(s).
- Negative Alterations in Cognitions**
3. Substantially increased frequency of negative emotional states (e.g., fear, guilt, sadness, shame, confusion).
 4. Markedly diminished interest or participation in significant activities, including constriction of play.
 5. Socially withdrawn behavior.
 6. Persistent reduction in expression of positive emotions.
- D. Alterations in arousal and reactivity associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
1. Irritable behavior and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects (including extreme temper tantrums).
 2. Hypervigilance.
 3. Exaggerated startle response.
 4. Problems with concentration.
 5. Sleep disturbance (e.g., difficulty falling or staying asleep or restless sleep).
- E. The duration of the disturbance is more than 1 month.

- F. The disturbance causes clinically significant distress or impairment in relationships with parents, siblings, peers, or other caregivers or with school behavior.
- G. The disturbance is not attributable to the physiological effects of a substance (e.g., medication or alcohol) or another medical condition.

Specify whether:

With dissociative symptoms: The individual's symptoms meet the criteria for post-traumatic stress disorder, and the individual experiences persistent or recurrent symptoms of either of the following:

1. **Depersonalization:** Persistent or recurrent experiences of feeling detached from, and as if one were an outside observer of, one's mental processes or body (e.g., feeling as though one were in a dream; feeling a sense of unreality of self or body or of time moving slowly).
2. **Derealization:** Persistent or recurrent experiences of unreality of surroundings (e.g., the world around the individual is experienced as unreal, dreamlike, distant, or distorted).

Note: To use this subtype, the dissociative symptoms must not be attributable to the physiological effects of a substance (e.g., blackouts) or another medical condition (e.g., complex partial seizures).

Specify if:

With delayed expression: If the full diagnostic criteria are not met until at least 6 months after the event (although the onset and expression of some symptoms may be immediate).

APPENDIX F

DSM-5's Diagnostic Criteria for Alcohol Use Disorder

Alcohol Use Disorder

Diagnostic Criteria

- A. A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
1. Alcohol is often taken in larger amounts or over a longer period than was intended.
 2. There is a persistent desire or unsuccessful efforts to cut down or control alcohol use.

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3. A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects.
4. Craving, or a strong desire or urge to use alcohol.
5. Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home.
6. Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol.
7. Important social, occupational, or recreational activities are given up or reduced because of alcohol use.
8. Recurrent alcohol use in situations in which it is physically hazardous.
9. Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol.
10. Tolerance, as defined by either of the following:
 - a. A need for markedly increased amounts of alcohol to achieve intoxication or desired effect.
 - b. A markedly diminished effect with continued use of the same amount of alcohol.
11. Withdrawal, as manifested by either of the following:
 - a. The characteristic withdrawal syndrome for alcohol (refer to Criteria A and B of the criteria set for alcohol withdrawal, pp. 499–500).
 - b. Alcohol (or a closely related substance, such as a benzodiazepine) is taken to relieve or avoid withdrawal symptoms.

Specify if:

In early remission: After full criteria for alcohol use disorder were previously met, none of the criteria for alcohol use disorder have been met for at least 3 months but for less than 12 months (with the exception that Criterion A4, "Craving, or a strong desire or urge to use alcohol," may be met).

In sustained remission: After full criteria for alcohol use disorder were previously met, none of the criteria for alcohol use disorder have been met at any time during a period of 12 months or longer (with the exception that Criterion A4, "Craving, or a strong desire or urge to use alcohol," may be met).

Specify if:

In a controlled environment: This additional specifier is used if the individual is in an environment where access to alcohol is restricted.

Code based on current severity: Note for ICD-10-CM codes: If an alcohol intoxication, alcohol withdrawal, or another alcohol-induced mental disorder is also present, do not use the codes below for alcohol use disorder. Instead, the comorbid alcohol use disorder is indicated in the 4th character of the alcohol-induced disorder code (see the coding note for alcohol intoxication, alcohol withdrawal, or a specific alcohol-induced mental disorder). For example, if there is comorbid alcohol intoxication and alcohol use disorder, only the alcohol intoxication code is given, with the 4th character indicating whether the comorbid alcohol use disorder is mild, moderate, or severe: F10.129 for mild alcohol use disorder with alcohol intoxication or F10.229 for a moderate or severe alcohol use disorder with alcohol intoxication.

Specify current severity:

305.00 (F10.10) Mild: Presence of 2–3 symptoms.

303.90 (F10.20) Moderate: Presence of 4–5 symptoms.

303.90 (F10.20) Severe: Presence of 6 or more symptoms.
