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Diagnosable Mental Disorders Among American Indians and Alaska Natives in the United States: A Scoping Review

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Objective: American Indian/Alaska Native (AI/AN) communities experience critical health inequities in the United States. In American mental health research, these inequities are defined by disorders classified in the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*. Therefore, it is vital to the pursuit of health equity to understand how diagnosable mental health disorders among AI/AN people have been characterized and understood. We conducted a scoping review to address the question: What have we learned from existing research concerning diagnosable mental disorders among AI/ANs in the United States? **Method:** A literature search was conducted on February 16, 2024, in PsycINFO, PubMed, Embase, and Web of Science. **Results:** The final corpus was composed of 152 peer-reviewed articles that were published between 1973 and 2024 and addressed a wide variety of research questions. The corpus was reviewed for disorder focus, sampling and methodology, diagnostic approach, and reoccurring project and investigator groups. Substance use disorders were the most frequently studied, followed by depression. Symptom screeners were the most commonly used diagnostic approach (37% of corpus studies). Trends in sampling strategies and populations studied are also reported. **Discussion:** Based on these findings, we discuss insights for future research and the limitations of the *DSM* as a taxonomy that has never been cross-culturally validated for AI/AN populations and may conflict with AI/AN conceptions of health, distress, and desirable intervention.

Public Health Significance Statement

In an examination of the mental health disorder literature for American Indian/Alaska Native (AI/AN) communities, this scoping review highlights the prevalence of substance use disorders and depression studies, the common use of symptom screeners as an indicator of diagnosis, and sampling and investigator group trends. The study discusses the use of the *DSM* disorders and underscores the need for culturally sensitive and validated approaches to mental health assessment for AI/AN communities.

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Anna Kawennison Fetter served as lead for validation, visualization, writing–original draft, and writing–review and editing and served in a

supporting role for conceptualization. Tara L. Maudrie served as lead for project administration and served in a supporting role for conceptualization, writing–original draft, and writing–review and editing. Carly Chiwiwi and Liz Contreras served in a supporting role for data curation, formal analysis, investigation, and writing–review and editing. Tonya M. Kjerland served in a supporting role for data curation, formal analysis, and writing–review and editing. Donna Hesson served as lead for resources and served in a supporting role for writing–review and editing. Joseph P. Gone served as lead for conceptualization, funding acquisition, and supervision and served in a supporting role for project administration, writing–original draft, and writing–review and editing. Anna Kawennison Fetter, Tara L. Maudrie, and Donna Hesson contributed equally to data curation. Anna Kawennison Fetter, Tara L. Maudrie, Tonya M. Kjerland, and Donna Hesson contributed equally to investigation. Anna Kawennison Fetter and Tara L. Maudrie contributed equally to the formal analysis. Tara L. Maudrie, Donna Hesson, and Joseph P. Gone contributed equally to methodology.

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Psychology as a discipline has a long history of erasing, stigmatizing, and dehumanizing Indigenous communities in the United States. This was recently recognized by the American Psychological Association's unprecedented *Offer of Apology to First Peoples in the United States* (2023). American Indian and Alaska Native (AI/AN) Nations and peoples today deal with the highest rates of mortality from deaths of despair (including suicide, overdose, and alcohol-associated liver disease) of all ethnoracial groups (Friedman et al., 2023). However, there is also incredible heterogeneity between AI/AN Nations and communities. In addition, the sociopolitical causes of these disparities have been noted, yet rarely meaningfully informed the work of psychology (Gone, 2023a, 2024; Gone & Trimble, 2012) or motivated large-scale policy change to support AI/AN Nations' sovereignty and sociopolitical futures. In addition, AI/AN communities often experience data erasure in health fields, meaning that AI/AN health data are often not systematically collected and reported (Friedman et al., 2023). Due in part to this ongoing data erasure and lack of research, our broadscale understanding of AI/AN communities' experiences of mental health disorders is in many ways limited.

Previous Reviews of Mental Health Disorders Among AI/AN Communities

Only a handful of systematic and scoping reviews have been conducted examining mental health disorders among AI/AN populations. Three have been at least in part comparative in nature, addressing the comparison between AI/AN communities and other racial/ethnic groups in the United States. The first, a small review, comprising nine studies, found that AI/AN women appeared to have higher rates of postpartum depression than the general population, but there was a dearth of studies examining risk, protective factors, or treatment in the literature (Heck, 2021).

Second, in 2014, Bassett and colleagues examined posttraumatic stress disorder (PTSD) among AI/ANs, finding 37 articles dealing with comparative and single-group analysis, prevalence, comorbidities, risk and protective factors, and treatment. With respect to prevalence, they found evidence for a higher PTSD burden among AI/AN participants than among White participants, which reflected a higher burden of inciting/traumatic incidents experienced. In addition, Bassett and colleagues found no meaningful differences in the types of risk factors preceding PTSD for AI/AN communities as compared to the general U.S. population. Concerningly, they also found little evidence to inform the identification of optimal treatment selection for clinicians treating AI/AN patients.

Third, another review examined anxiety and depressive disorders among Indigenous peoples of the Americas (Kisely et al., 2017). Kisely and colleagues found that for the U.S. subgroup of 10 articles, AI/AN participants' lifetime rates of anxiety and depression were significantly lower than the non-Indigenous populations, and only lifetime PTSD and social phobia rates were higher. However, they note that only four of these 10 studies adjusted or accounted for socioeconomic status or educational level. Understanding the role of socioeconomic status and education when interpreting prevalence rates is vital (Brave Heart et al., 2016), as we know that these two

factors are critical social determinants of health known to profoundly impact the quality of life and health (Healthy People, 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2024).

Two reviews have focused solely on AI/AN communities without comparative analyses across racial/ethnic groups. Ka'apu and Burnette (2019) summarized disparities, comorbidities, and risk and protective factors for substance use, depression, PTSD, and suicide among U.S. Indigenous adults. Among 38 articles, they reported that historical oppression and loss, familial issues, and substance use disorders (SUDs) all served as risk factors for mental health concerns. Protective factors included cultural engagement and familial and/or social support.

Most recently, Herron and Venner (2023) examined the interplay between trauma (defined as trauma exposure, trauma symptoms, or PTSD), substance use, and cultural factors for AI/ANs. Among 42 studies on the subject, they noted high rates of trauma exposure, high rates of co-occurrence, and a dose-response relationship between traumatic experiences and substance use among reservation-based AI/AN participants. Similar to Ka'apu and Burnette's (2019) work, this review found evidence that cultural protective factors and culturally relevant stressors (such as boarding school attendance, discrimination, and historical loss) played a role in the prevalence and remittance from substance use and trauma.

Of note, the reviews cited above focus on prevalence rate comparisons, risk and protective factors, and development and remission for either a specific set of mental health disorders and/or mental health symptoms. To our knowledge, no researchers have sought to characterize the broad state of the literature among AI/AN populations with respect to *Diagnostic and Statistical Manual of Mental Disorders (DSM)*-defined mental disorders as such. Reconciliation between Indigenous knowledge and professional knowledge in these domains is vital to truly support AI/AN mental health and well-being. A clear overview of the empirical record containing professional knowledge about these forms of suffering serves as an important early step in this work.

Mental Health and the *DSM*

Psychopathology as classified in the *DSM* remains the metric by which the profession measures and conceptualizes illness (and, by implicit association, health). Attribution of *DSM* disorders determines who gains access to treatment and services, and the kinds of healthcare they receive. The reigning health insurance systems in the United States depend on *DSM* diagnoses to gatekeep, dictate, and monitor treatment. *DSM* disorders, in serving as the definitive characterizations of illness, also then serve as the health outcome by which clinical research trials are designed and evaluated, with success being measured by the amelioration of identifiable symptoms or the remediation of the targeted disorder.

Criticism of the *DSM*

There is, of course, ongoing criticism about the *DSM* classification system. One critique concerns the real-world validity and

applicability of a categorical and symptom-based taxonomy of mental illness in contrast to a research framework that incorporates genetic etiologies and organizes inquiry by functional domains (Research Domain Criteria, Cuthbert & Insel, 2013). Others critique the diagnostic class organization, suggesting alternative taxonomies that represent “higher-order” and transdiagnostic distress markers that seek to be culturally universal (Kotov et al., 2017). Still others see gaps in the symptom markers, diagnostic criteria, and/or providers’ training as missing key (and especially culturally based) manifestations of distress (Bailey et al., 2019). Finally, at perhaps the most foundational level, some critique the individualist, medicalized, disease-based model of the *DSM* and have called for the abolition of the system (Timimi, 2014).

Importance of the DSM

Despite the serious and legitimate critiques of the *DSM* system, it remains undeniably the framework by which the mental health professions conceptualize and communicate about disabling psychosocial distress in the United States. Therefore, it is vital to gain an understanding of how diagnosable mental health disorders have been studied among AI/AN people. In this review, we sought to specifically examine the literature on mental health diagnoses. This broad scope gives us a “10,000-foot view” to understand how the field is characterizing and understanding mental health conditions in AI/AN communities. Therefore, rather than focusing on comparative prevalence rates, disorder course and remission, treatment outcomes, or risk and protective factors, this approach uniquely allows us to examine and characterize the validity and rigor of diagnostic practice as it currently stands in AI/AN mental health research.

This Study

To understand the knowledge base concerning diagnosable *DSM* mental disorders among Indigenous peoples in the United States, our team undertook a scoping review of the peer-reviewed published literature in adherence with the process described by Arksey and O’Malley (2005), as subsequently updated by Peters et al. (2020). This scoping review adheres to the 22-item Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews Checklist (PRISMA-ScR) provided by Tricco et al. (2018; see Table 1 in the online supplemental materials for this study’s PRISMA-ScR Checklist). The research question guiding this review was: What have we learned from existing research concerning diagnosable mental disorders among AI/ANs in the United States?

By positioning our review as a scoping review, our goal was not to synthesize (through a meta-analytic review) or evaluate study findings (e.g., derive diagnostic prevalence rates as in a systematic review). Instead, we focused on examining how research has been conducted in this body of work related to AI/AN mental health disorders. We use the language “diagnosable” to signal this focus on the methodological approaches used in the corpus. By using the term diagnosable or “able to be diagnosed, capable of being diagnosed,” we address a research question that attends to the processes or tactics by which the mental health field assigns a diagnosis (i.e., our diagnostic approaches).

Method

In consultation with a research librarian (Donna Hesson), a comprehensive search strategy was developed consisting of three sets of

keywords combined with the AND or NOT operator. The first set of keywords was related to our target population (e.g., American Indian or Alaska Native), the second set of keywords was related to mental disorders, and the last set of keywords was designed to exclude (using the NOT operator) studies with Indigenous samples from Australia and New Zealand (complete search strategies are available in the online supplemental materials). Searches were limited to peer-reviewed published literature. These searches were conducted on February 16, 2024, in four bibliographic databases: PsycINFO, PubMed, Embase, and Web of Science (see the online supplemental materials for the full search strategy, including all keywords). In accordance with PRISMA guidelines (Tricco et al., 2018), Figure 1 details the selection process for article inclusion.

Title and Abstract Screening

After deduplication, 3,178 articles remained for title and abstract screening. The study team of three Indigenous graduate students, three Indigenous undergraduate students, and the lead author were trained on inclusion and exclusion criteria by the senior author (Joseph P. Gone). Using a double-masked process, two students, or one student and the lead author, assessed each title and abstract using the systematic review management software, Covidence (Covidence systematic review software, 2023). Studies were included for further screening if they: represented empirical peer-reviewed publications; included the terms “American Indian,” “Alaska Native,” “Native American,” or a specific Tribe/Tribal nation in the United States; referred to a *DSM* disorder (or obvious synonym for a *DSM* disorder, such as “alcoholism” or “depression”); and included at least five AI/AN participants.F

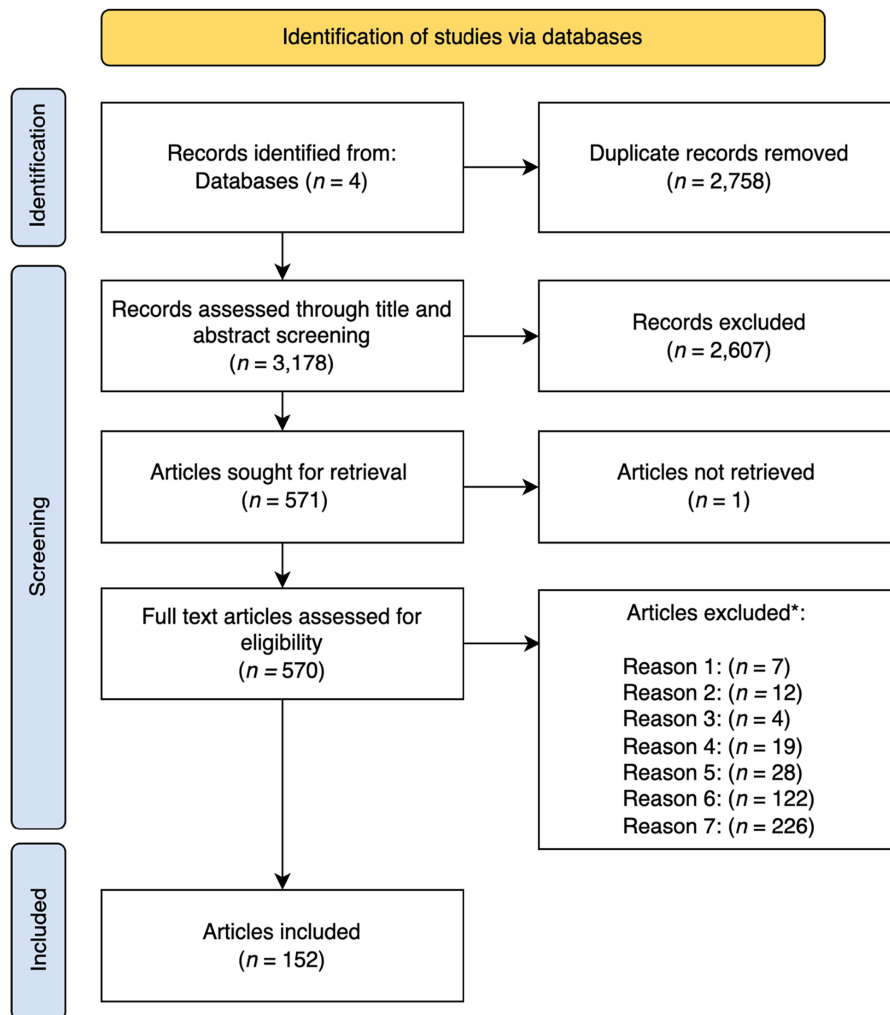
Aligned with the intended scope of our review, we excluded articles if they: (a) were not published in a peer-reviewed journal article, (b) lacked original data collection or novel analysis of existing data, (c) focused on samples outside the United States, (d) included less than five AI/ANs in the sample, (e) reported primarily on research processes, treatments, interventions, programs, services, or caregiving (i.e., studies for which investigations of psychopathology proper was not the primary focus), or (f) did not focus on a *DSM* diagnosable disorder as indicated by authors. Given the broad and inclusive scope of our review, including the changing conceptualizations of mental health conditions over the past 50 years, this criterion ensured that exclusion rested on the study authors’ language (i.e., did they describe a *DSM* diagnosable condition in their article?) rather than our contemporary assessment of the validity of that language (e.g., our evaluation of the appropriateness of the diagnostic threshold used).

In this stage of screening, if it was unclear whether the article met inclusion or exclusion criteria by examining its title and abstract, it was routed for full-text review. Conflicts between reviewers were resolved through discussion and consensus. At this stage, a total of 2,607 records were excluded, leaving 571 articles for full-text review.

Full-Text Review

Four Indigenous graduate students, three Indigenous undergraduate students, and the lead author [an Indigenous psychologist], participated in a full-text review. Full-text articles were uploaded to Covidence for screening by two students. One article was unable

Figure 1
PRISMA Flow Diagram of Searching and Screening Process



Note. PRISMA = Preferred Reporting Items for Systematic Reviews and Meta-Analyses; US = United States; AI/AN = American Indian/Alaska Native; DSM = *Diagnostic and Statistical Manual of Mental Disorders*. See the online article for the color version of this figure.

to be retrieved and therefore was excluded, leaving a total of 570 full-text articles. In addition to the inclusion criteria described above, articles at this stage of screening were required to include at least one, multisentence standalone paragraph dedicated to AI/AN

experience of the disorder(s) in question in the results or findings section of the article. This additional criterion was included to ensure that reviewed articles substantively addressed the mental health problems of AI/ANs (as opposed to merely including a small

Table 1
Descriptive Attributes of Full Corpus Across All Studies (N = 152)

Descriptives	N; (%)
Sample sex (%female): mean; median [range] ^a	57%; 58% [0%–100%]
Sample age, n ^b	
Child-emerging adult (<25)	35 (23.0%)
Adult (18+)	86 (56.6%)
Lifespan (<18 + >25)	15 (9.9%)
Elders (55+)	15 (9.9%)
Sample size: mean; median [range] ^c	21,057; 285 [8–1,788,932]
Study setting	
Community	92 (60.1%)
Hospital/health clinic	33 (21.7%)
School	14 (9.2%)
Treatment center	13 (8.6%)
Study setting, n (%)	
Urban	25 (16.4%)
Rural	78 (51.3%)
Both	48 (31.6%)
Study methods	
Qualitative	10 (6.5%)
Quantitative	137 (90.1%)
Mixed methods	5 (3.3%)
Study analysis	
Within AI/AN sample	123 (80.9%)
Between AI/AN and non-AI/AN sample	29 (19.1%)

Note. AI/AN = American Indian/Alaska Native.

^aNineteen studies did not report the percentage of female participants. ^bOne study did not include sample age (Brown et al., 1992). ^cTwo studies did not include sample size (Gordon et al., 2016; Travers et al., 2013).

number of AI/ANs in larger samples). Once again, reviewer conflicts were resolved by discussion and consensus. At this stage, 418 articles were excluded.

Total Corpus Validation

One of the goals of this review was to build research capacity among Indigenous students. Consequently, many of the student research assistants were new to article screening of this kind. The undergraduate team members first reviewed the corpus for accurate adherence to screening criteria. The graduate student team (authors Tara L. Maudrie, Carly Chiwiwi, Tonya M. Kjerland, and Liz Contreras) and the lead author (Anna Kawennison Fetter) then charted basic information about each article (diagnostic class, *DSM* diagnosable disorders described in studies, and methods used to identify or diagnose mental health disorders) for corpus validation. Consistent with the iterative process expected in a scoping review (Peters et al., 2020), the graduate student team identified an additional 30 articles that were previously included but, upon initial charting, did not appear to meet all inclusion criteria. Each of these articles was thoroughly examined and discussed as a graduate study team to come to a final consensus (reasons for the exclusion of these 30 articles appear in the Data Charting document in the online supplemental materials, per Peters et al. [2020]). Particularly ambiguous articles were brought to the senior author (Joseph P. Gone) for final decision. In the end, 152 articles were included in the final corpus.

Data Charting

The following items were charted from each article: study design, research question(s) or hypotheses, study objective(s) or aim(s), study population demographics, AI/AN sample size, study location,

outcome measures, and key AI/AN findings related to the *DSM* disorder(s) in question. The lead author (Anna Kawennison Fetter) served as an independent reviewer of the charting of the above data. In addition, the lead author served as a single reviewer for the final charting of a few additional items from all studies. Specifically, the lead author abstracted and interpreted data items for age groups studied, the diagnostic manual used by studies, whether the analysis was comparing AI/AN samples to non-AI/AN samples, Indian Health Service (IHS) Regions, and project and author groups. Excel and SPSS V. 28 (IBM Corp., 2021) were used for data synthesis.

To gain a broad understanding of the AI/AN communities represented in this corpus, studies were coded according to the IHS area from which the sample was drawn. The IHS divides its services into 12 geographical regions in the United States (Indian Health Service, n.d.). To identify the corresponding IHS region, article method sections were first consulted. If the study methods did not contain information about the locations, or if the information was nonspecific (e.g., “Southwest”), the study website, grant information, or parent studies were examined to determine the appropriate area. For studies that were explicitly national, all IHS regions were counted as represented.

Finally, to better characterize the perspectives captured in the corpus, we sought to identify groupings of studies according to larger projects. In order for an article to be categorized as a part of a larger project, it had to either: (a) include one third or more of author names in common with the other considered studies AND collect data from the same data source/site, OR (b) clearly name the larger research project of which the article was a part (see Data Charting document in the online supplemental materials for full Data Charting guidelines authors used).

Results

The question that guided this review was as follows: What have we learned from existing research concerning diagnosable mental disorders among AI/ANs in the United States? 152 articles published between 1973 and 2024 were included in the final corpus. These explored a wide variety of questions that were too numerous and diverse to distill into a focused meta-analysis or to represent in terms of cumulative findings with respect to common lines of inquiry. Instead, to summarize this corpus parsimoniously and practically, tables and figures presented here highlight broad patterns across the corpus using frequencies and counts rather than organizing tabular results by articles or studies (however, the complete data charting with all 152 articles can be found in the Data Charting document in the online supplemental materials).

Demographic Information

Table 1 outlines various descriptive information about studies in the corpus. Sex representation was relatively equitable across all samples, with 58% of participants across the total corpus identified as female. However, of note, only four studies explicitly focused on gender or sexual diversity, with three of those coming from the same project team (Nicdao et al., 2023; Parker et al., 2017; Yuan et al., 2014). The fourth focused on differing rates of alcohol use disorder (AUD) and suicidal ideation among AI/AN adults with minoritized sexual identities as compared to heterosexual AI/AN adults and

White heterosexual adults (Kelly et al., 2023). Just over half of studies were conducted with adult samples (57%), with a quarter featuring children or emerging adults under age 25.

With respect to setting, 60% of studies were conducted in community settings and 51% were sampled from a rural population. In terms of study methods and analysis, most were quantitative (90%), with only 10 studies using qualitative methods and five studies using mixed methods to examine diagnostic phenomena. Finally, most articles examined diagnoses within the AI/AN sample (81%), as opposed to directly examining differences between AI/AN and non-AI/AN samples (19%). To map and visually represent the AI/AN communities included in the corpus, Figure 2 displays the study counts for each of the 12 IHS Regions. The Great Plains and California IHS regions were the most frequently represented by study samples.

Diagnostic Trends

To better understand the diagnostic focus of this research over time, Figure 3 highlights the *DSM*-diagnostic class by year of study publication. The total below exceeds 152 as individual studies may have examined more than one disorder. Although there is a range of diagnostic classes represented, there are two that predominate. Substance-related and addictive disorders were the most studied of all diagnostic classes ($n = 76$), with the majority of these ($n = 51$) focusing at least in part on AUD specifically. Depressive disorders were the second-most studied, with 75 articles interested in these mood disorders. Anxiety disorders were far less commonly examined ($n = 26$).

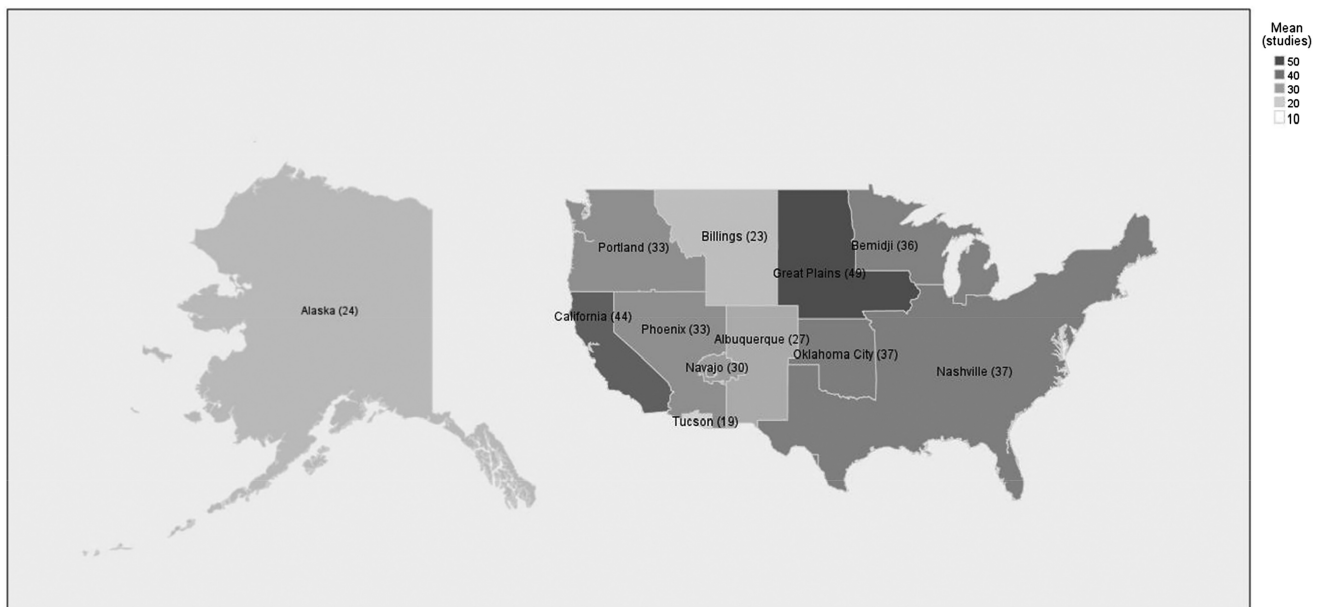
The class of trauma disorders, represented in 20 studies, was comprised exclusively of articles examining posttraumatic stress disorder (PTSD). These studies appear to have proliferated in the mid-2000s. Neurocognitive disorders were studied in 12 studies: six focused

predominantly on Alzheimer's, one on Huntington's, and two on substance/medication-induced neurocognitive disorders. Of the 11 instances in which disruptive, impulse-control, and conduct disorders were examined, eight focused on conduct disorder. Of the 11 studies that included neurodevelopmental disorders, attention deficit disorder (ADHD) was studied six times, autism spectrum disorder four, fetal alcohol syndrome two times, and intellectual developmental disorder, language disorder, and speech sound disorder each once.

In terms of the classification criteria or manual used, 33 articles used the *DSM-III* or *III-R*, 33 used the *DSM-IV* or *IV-TR*, 12 used the *ICD* (9 or 10), 12 used the *DSM-5*, two the *DSM-II* (Table 2), and one the World Health Organization (WHO, 1952) definition. Figure 4 displays the method of diagnostic assessment employed in these studies. Of note, 37% of studies utilized symptom screeners (e.g., the Patient Health Questionnaire-9, general anxiety disorder-7 screener, or the PTSD checklist for *DSM-5*) to characterize participant mental health diagnoses. The second-most frequent diagnostic assessment used was diagnostic interviews, with 32% of studies using this method. Table 2 displays the full list of diagnostic interviews used.

Out of 58 articles that utilized diagnostic interviews, the most common was the Semi-structured Assessment for the Genetics of Alcoholism with 25 studies (SSAGA; Bucholz et al., 1994). This was followed by the Composite International Diagnostic Interview ($n = 7$; CIDI; WHO, 1990, the NIMH Diagnostic Interview Schedule ($n = 7$; Robins et al., 1981), the Mini-International Neuropsychiatric Interview ($n = 6$; Sheehan et al., 1998), and the Schedule for Affective Disorders and Schizophrenia–Lifetime Version ($n = 6$; Endicott & Spitzer, 1978). Less commonly used were the Structured Clinical Interview for the *Diagnostic and Statistical Manual of Mental Disorders* ($n = 4$; First et al., 2002) and the Addiction Severity Index ($n = 3$; McLellan et al., 1990).

Figure 2
Geospatial Representation of Indian Health Service Regions and Study Frequency



Note. The 12 studies described as “national” were included as representing all IHS regions. IHS = Indian Health Service.

Figure 3
Diagnostic Class Studied by Year of Publication



Note. Trauma- and stressor-related disorders ($n = 20$), substance-related and addictive disorders ($n = 76$), somatic ($n = 1$), schizophrenia spectrum/psychotic disorders ($n = 1$), personality disorders ($n = 3$), neurodevelopmental ($n = 11$), neurocognitive ($n = 12$), feeding and eating disorders ($n = 2$), disruptive, impulse-control, and conduct ($n = 11$), depressive disorders ($n = 75$), bipolar disorders ($n = 2$), anxiety disorders ($n = 26$). The total above exceeds 152 as individual studies may have examined more than one disorder.

Project and Investigator Groups

To understand the perspectives and study foci represented in the corpus, studies that were part of larger projects or represent specific investigator groups are presented in Table 3. The sheer number and diversity of studies in this scoping review preempt a focus on specific study findings or evaluation of outcomes. Instead, we focus on diagnostic strategies, including the disorder foci, population, and diagnostic approach, presented here in narrative form.

Major Projects

Eight studies in the corpus were from the Strong Heart Study (SHS; Barbosa-Leiker et al., 2021; Calhoun et al., 2010; EagleStaff et al., 2023; Miao et al., 2023; Plaud et al., 1997; A. Suchy-Dicey et al., 2022; A. M. Suchy-Dicey et al., 2024; Warner et al., 2022), a NIH-funded longitudinal epidemiologic cohort study that started collecting data in 1984. SHS focused on longitudinal mortality, morbidity, and risk factors for cardiovascular disease in three distinct geographic regions: Arizona, Oklahoma, and the Dakotas (the Phoenix, Oklahoma City, and Great Plains IHS Areas, respectively). The investigators describe their work as community-engaged.

Among corpus studies, a cutoff for a symptom screener (the Center for Epidemiologic Studies-Depression [CES-D]) was used to assess depression and its relationship with physical health (including mortality, cardiovascular disease, and glycemic control).

Also, representing four studies in the corpus was the American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project (AI-SUPERPPP; Beals et al., 2013; Boyd-Ball et al., 2006; Libby et al., 2008; Whitesell et al., 2007). Citing a lack of foundational epidemiological data focused on AI/AN Tribes, this 5-year NIMH-funded grant sought to estimate psychiatric disorder prevalence and mental health utilization among two Tribes in the Great Plains and Navajo IHS Areas, with a particular focus on understanding cultural dimensions of help-seeking. Among the corpus studies, aims focused on assessing the prevalence of PTSD and SUDs between the two Tribes and the relationship of trauma and childhood abuse to SUDs and depression. To diagnose PTSD, depression, and SUDs, a structured diagnostic interview (the CIDI) was used.

Next, the Native Elder Care Study was described in three of the corpus studies (Çayır et al., 2018; Goins et al., 2019; Tehee et al., 2019). The Native Elder Care Study is a cross-sectional study of older adult Tribal members in the Southeastern United States (the Nashville

Table 2
Diagnostic Assessment

Diagnostic criteria/reference (<i>n</i> = 128) ^a	<i>N</i>
<i>DSM-III</i> or <i>DSM-III-R</i>	33
<i>DSM-IV</i> or <i>DSM-IV-TR</i>	33
Screening cutoff score	35
<i>ICD-9</i> or <i>ICD-10</i>	12
<i>DSM-5</i>	12
<i>DSM-II</i>	2
WHO (1952)	1
Type of diagnostic interview used (<i>n</i> = 58)	
Semi-structured Assessment for the Genetics of Alcoholism	25
Composite International Diagnostic Interview	7
NIMH Diagnostic Interview Schedule	7
Schedule for Affective Disorders and Schizophrenia— Lifetime Version	6
Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders	4
Addiction Severity Index	3
Mini-International Neuropsychiatric Interview	6
Child and Adolescent Psychiatric Assessment	1
Primary Care Evaluation of Mental Disorders	1
A Developmental Neuropsychological Assessment	1
Differential Abilities Scale-2nd edition	1
PTSD Symptom Severity Interview	1

Note. *DSM-III* = *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.); *DSM-III-R* = *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., revised); *DSM-IV* = *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.); *DSM-IV-TR* = *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text revision); *ICD-9* = *International Statistical Classification of Diseases and Related Health Problems*, ninth revision; *ICD-10* = *International Statistical Classification of Diseases and Related Health Problems*, tenth revision; *DSM-5* = *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.); *DSM-II* = *Diagnostic and Statistical Manual of Mental Disorders* (2nd ed.); WHO = World Health Organization; NIMH = National Institute of Mental Health; PTSD = posttraumatic stress disorder.

^aOverall, 24 studies did not explicitly report the diagnostic reference or criteria used; eight of those were qualitative self-report.

IHS Area) from 2006 to 2008 focused on a needs assessment to inform service provision and delivery. Critically, the Native Elder Care Study used a Tribal Participatory Research Framework (described in Goins et al., 2011), the focus and implementation of which was determined by Tribal leaders. To assess depression and PTSD within the corpus studies, the Native Elder Care Study used the PTSD checklist for *DSM-5* and CES-D symptom screener cutoff scores.

In addition, three corpus studies were a part of the American Indian Research (AIR) Project, a 10-year panel study among a community sample of urban AI adolescents and mothers in Washington State (Portland IHS Area), funded by the National Institute on Alcohol Abuse and Alcoholism (Henry et al., 2011; Howard et al., 1999; Swaim et al., 2011; described in Walker et al., 1996). This epidemiological study had numerous aims: evaluate the prevalence of AUD among this sample of adolescents; evaluate comorbidity with other SUDs; describe the consequences of AUD for AI adolescents; examine risk factors for AUD and develop a screening battery; and assess potential mediators/moderators between AUD and family history including gender, cultural participation, maternal mental health, and comorbid psychiatric disorders. To evaluate AUD, AIR investigators utilized the SSAGA, a structured diagnostic interview.

Finally, three studies were a part of the Honor Project, a multisite survey from seven urban centers focused on the impact of culturally

relevant stressors on mental health and well-being among self-identified lesbian, gay, bisexual, transgender, or Two-Spirit AI/AN adults. One of those studies focused on childhood maltreatment and alcohol use (Yuan et al., 2014), one examined bias-related victimization and generalized anxiety disorders (Parker et al., 2017), and the final study examined prevalence of mental health disorders and treatment utilization among this sample (Nicdao et al., 2023). Investigators used the MINI, a diagnostic interview based on *DSM-IV* criteria, to evaluate major depressive disorder, generalized anxiety disorder, panic disorder, and substance dependence.

Investigator Groups

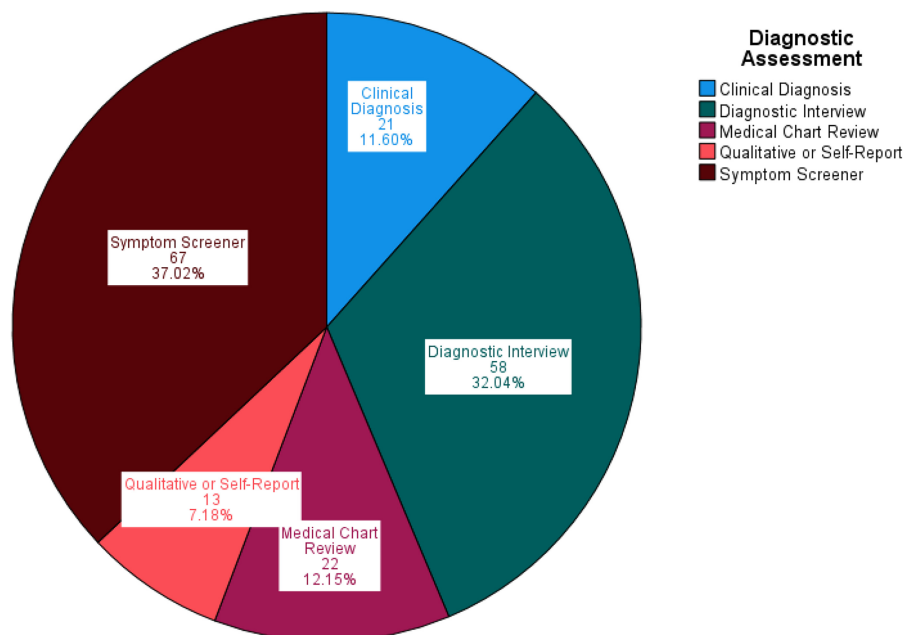
One author team represented a far larger portion of the corpus than others: The Ehlers author team, with 16 studies. The Ehlers team conducted a series of studies among a community sample of reservation-dwelling “Southwest California Indians” in the California IHS Area using the SSAGA to determine diagnoses. Studies focused on risk factors for SUDs, such as early onset of marijuana use disorder (Ehlers, Slutske, et al., 2007) and AUD (Ehlers, Slutske, et al., 2006) among adolescents, the clinical course of AUD both within the AI sample (Ehlers, Wall, et al., 2004) and between the AI sample and a Mexican American sample (Ehlers et al., 2015), and an Item Response Theory analysis for stimulant use disorder criteria (Gilder et al., 2014). The bulk of studies, though, focused on possible neuro-biological and genetic risk factors for SUDs.

Several of these studies focused on neurophysiological risk factors and associations with marijuana dependence (Ehlers et al., 2008), PTSD (Ehlers, Hurst, et al., 2006), and alcohol dependence (Criado & Ehlers, 2007). In addition, two studies examined heritability first for AUD (Wilhelmsen & Ehlers, 2005) and then for illicit drug use and dependence more generally (Ehlers, Wall, et al., 2007). The final group of studies sought to identify potential genomic underpinnings of SUDs or AUD, including genes that encode for ethanol metabolism (Ehlers, Spence, et al., 2004; Ehlers et al., 2012; Gizer et al., 2011; Wall et al., 2003) as well as a genome scan seeking genetic linkages for so-called “consumption phenotypes” of Body Mass Index and SUDs (Ehlers & Wilhelmsen, 2007).

More recently, this author group has also been extending their work to explore risk related to suicidal thoughts and behaviors among their AI/AN sample. In one study, they explored the comorbidity of anxiety/affective, conduct/antisocial, ADHD, and AUD with suicidal thoughts and behaviors (STB) among AI/AN adolescents and adults (Ehlers et al., 2023). In a second, they examined the relationship between trauma, historical trauma exposure, PTSD, and STB among AI/AN adults (Ehlers et al., 2022). This year, the group sought to identify genetic risk associated with STB by conducting a genome-wide bivariate association analysis to identify genetic variants that were correlated with both STB and AUD (Peng et al., 2024).

The second largest author team was a single author, Westermeyer, who authored five of the corpus studies. Westermeyer’s studies were conducted among AI psychiatric patients from the Oklahoma, Great Plains, and Bemidji IHS areas admitted to the Department of Psychiatry at the University of Minnesota Hospital and Clinics in Minneapolis for a variety of clinical diagnoses. The focus of this work varied, with two studies focused on comparative analyses of

Figure 4
Pie Chart of Diagnostic Assessment Strategy Frequency in Corpus



Note. The total above does not equal 152 because 27 studies used multiple diagnostic assessments in some form (meaning that in a single study, multiple diagnosable conditions were assessed with differing strategies or multiple strategies were used to triangulate assessment of a diagnosable condition). Diagnostic assessment strategy was determined by author description of both measure and data collection procedure (see the online supplemental materials). See the online article for the color version of this figure.

AI and non-AI patients with psychoactive SUDs (Westermeyer, 1993; Westermeyer & Neider, 1994), one focused on a within-group analysis of AI psychiatric patients with psychoactive SUDs (Westermeyer et al., 1992), and one longitudinal study examining comorbidity of depressive symptoms with AUD and recovery (Westermeyer & Neider, 1984). Finally, one study consisted of interviews describing the experience and reported mental health diagnoses (as assessed by hospital staff) of AI psychiatric patients who had been placed in cross-racial foster homes as children (Westermeyer, 1977).

Discussion

This scoping review was conducted to answer the question: What have we learned from existing research concerning diagnosable mental disorders among AI/ANs in the United States? The final corpus consisted of 152 articles spanning 1973 to 2024 and addressed, in order of frequency: substance-related and addictive; depressive; anxiety; trauma- and stressor-related; disruptive, impulse-control, and conduct; neurodevelopmental; neurocognitive; personality; feeding and eating; somatoform; schizophrenia spectrum/psychotic; and bipolar disorders among AI/AN populations across the United States. Of these, SUDs were by far the most studied in the corpus, with 14 of the 76 studies focusing on SUDs authored by a single author group. In terms of diagnostic approach and strategy, 37% of studies in the corpus used symptom screeners based on particular cutoff scores to deem a participant as “having” a particular disorder.

In addition, there were also gaps in terms of who was included in these studies, with lesbian, gay, bisexual, transgender, queer, intersex, asexual or agender, and two-spirit (LGBTQIA2S+) children and emerging adults, and certain geographic regions underrepresented in the corpus. Below, we discuss and provide recommendations for future work based on three primary insights from this corpus with respect to a focus on SUDs, approaches to diagnostic assessment, and limited sampling strategies. Finally, in response to this review, we reflect on the use of the *DSM* with AI/AN populations more broadly.

Focus on Substance Use Disorders

The population being captured among these studies are largely adults experiencing SUDs. Given the prevalence of SUDs in the U.S. writ-large (Grant et al., 2015) and the pernicious impact of SUDs in some AI/AN communities, this focus is perhaps not surprising. However, given the attention paid to trauma-related disorders in the larger mental health community and the prevalence rates of trauma and trauma-related disorders among AI/ANs, the relatively few studies in the corpus focused on PTSD in particular are noteworthy (Bassett et al., 2014). In addition, the fact that studies on SUDs surpass both depression and anxiety suggests that the pattern of disorders studied across the corpus may reflect wider sociocultural beliefs about AI/AN peoples and AUD. Specifically, this may reflect the widespread (but false) belief that there is an inherent predisposition to AUD among AI/AN people, and that this is evidenced by

Table 3
Major Project and Investigator Groups in Corpus With Study Citations

Projects and investigator groups	Studies	Citation list
Project title		
Strong Heart Study ^b	8	Barbosa-Leiker et al. (2021), Calhoun et al. (2010), EagleStaff et al. (2023), Miao et al. (2023), Plaud et al. (1997), A. Suchy-Dicey et al. (2022), A. M. Suchy-Dicey et al. (2024), and Warner et al. (2022)
The American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project ^b	4	Beals et al. (2013), Boyd-Ball et al. (2006), Libby et al. (2008), and Whitesell et al. (2007)
Native Elder Care Study ^b	3	Çayır et al. (2018), Goins et al. (2019), and Tehee et al. (2019)
American Indian Research Project ^b	3	Henry et al. (2011), Howard et al. (1999), and Swaim et al. (2011)
Honor Project ^{a,b}	3	Nicdao et al. (2023), Parker et al. (2017), and Yuan et al. (2014)
Long-Term Care and Social Support: American Indian Aged Project ^{a,b}	2	Chapleski et al. (2004) and Curyto et al. (1998)
The Mino Giizhigad Study ^{a,b}	2	Aronson et al. (2016) and Walls et al. (2014)
Healing Pathways Project ^b	2	Armenta et al. (2016) and Whitbeck et al. (2004)
Investigator groups		
Ehlers, Gilder ^a	16	Criado and Ehlers (2007), Ehlers, Spence, et al. (2004), Ehlers, Wall, et al. (2004), Ehlers, Hurst, et al. (2006), Ehlers, Slutske, et al. (2006), Ehlers, Slutske, et al. (2007), Ehlers, Wall, et al. (2007), Ehlers et al. (2008, 2012, 2015, 2022, 2023), Ehlers and Wilhelmsen (2007), Gilder et al. (2014), Gizer et al. (2011), Wall et al. (2003), Wilhelmsen and Ehlers (2005), and Peng et al. (2024)
Westermeyer ^a	5	Westermeyer (1977, 1993), Westermeyer and Neider (1984, 1994), and Westermeyer et al. (1992)
Kunitz, Gabriel, Levy, Henderson, Lampert, McCloskey, and Vince ^a	2	Kunitz et al. (1999a, 1999b)
Gregory ^a	2	Aoun and Gregory (1998) and Gregory (1994)
Beals, Novins, Fickenscher ^a	2	Deters et al. (2006) and Fickenscher et al. (2006)
Shore, Boehnlein, Leung, Kinzie ^a	2	Boehnlein et al. (1992) and Leung et al. (1993)
D'Amico, Dickerson, Klein, Brown ^a	2	D'Amico et al. (2020) and Dickerson et al. (2024)
Wilhelm, White, Paulus, Spechler, Demuth, Stewart ^a	2	Baughman et al. (2023) and Wilhelm et al. (2023)

^a Studies had one third or more of author names in common with the other considered studies and collected data from the same data source/site. ^b Studies named the larger project the article was a part of.

AI/AN people having higher AUD rates when compared to other ethnorracial groups.

Several of the studies on SUDs used what appeared to be a race-as-biology rationale, as evidenced by the articulated theory, comparative analysis, and interpretation of findings. For example, Ehlers and Wilhelmsen (2007) theoretically grounded their chosen analysis examining a possible “consumption phenotype” in a supposed “long history of dependence on foraging and subsistence agriculture [which] may have led to selective enrichment of traits that improve genetic fitness, so-called ‘thrifty’ or ‘fat-sparing’ genes” among AI/AN peoples. Elsewhere, Ehlers et al. (2012) noted that “ethnic differences in the genetics of alcohol metabolism could potentially modify risk for alcohol dependence across individuals of different ethnic backgrounds,” specifically citing the “firewater myth” as a “theory” to be evaluated (p. 389).

This search for biological etiological explanations (or vulnerabilities, predispositions, and risks) for psychopathology has dominated the psychological and psychiatric fields since the Neo-Kraepelinian movement almost five decades ago (Gone & Kirmayer, 2010). The scientific search for evidence of a biological predisposition to alcohol among AI/AN has persisted since the 1970s (Schaefer, 1981), following the legacy of early colonial racism (Martin, 2003). Today, researchers often justify this search through stated goals of either (a) reducing stigma or (b) discovering biomarkers that could eventually prove useful for early identification or prevention through population access to precision medicine.

And yet, we know that the biological framing of mental health disorders seems to increase rather than decrease public stigma (Angermeyer et al., 2014; Carter et al., 2019). We also know that

belief in a biological vulnerability to alcohol is harmful for AI/AN people (Gonzalez & Skewes, 2018, 2023; Gonzalez et al., 2021). In addition, the ongoing and dogged focus on ethnic- and race-based genetic predeterminants in the name of an ill-defined future benefit shifts discourse and resources away from known and much more significant explanatory contributors to mental health disparities, such as socioeconomic inequity established through Euro-American colonial dispossession and subjugation. As one stark example, in a national epidemiological survey, Brave Heart et al. (2016) found that when socioeconomic variables were included in analyses, differences in AUD rates were no longer significant between AI/AN and White samples. Given this, the fact that so much of the research on SUDs among AI/AN communities even in the past decade has continued to focus on either testing or refuting biological vulnerability is, to say the least, disheartening.

Approaches to Diagnostic Assessment

In terms of the diagnosis of mental health conditions, many studies in the corpus (nearly 40%) utilized symptom screeners to classify participants as “having” a mental disorder. The use of symptom screeners is common in studies of depression (Santomauro et al., 2021). This was reflected in the corpus, where 34 out of the 58 studies focused on depression used symptom screeners, where “cutoff” scores are used to classify participants as “having depression.” This was similar for studies that focused on anxiety disorders (with eight out of 17 studies using symptom screeners) as well as for studies that focused on PTSD (8 out of 15 studies used screeners). Symptom screeners were developed to identify possible cases of a

disorder for early intervention or referral. They can be administered by nonlicensed or nonclinical staff, tend to be brief, and (critically) were not developed to offer a definitive diagnosis (American Psychological Association, 2014). In contrast, semistructured diagnostic interviews were developed to offer a more systematic and valid process for applying diagnostic criteria as a part of an overall and multimethod assessment (Levis et al., 2019).

There are significant concerns about the misapplication of symptom screeners in research (Thombs et al., 2018). In one review of 69 meta-analyses (Levis et al., 2019), prevalence rates for “depression” were 31% in studies using screening tools and 17% for diagnostic interviews. Of note, no review that we know of has examined differences in estimated prevalence rates conducted by symptom screeners in comparison to diagnostic assessment for anxiety disorders or PTSD (Plummer et al., 2016). However, the implications of symptom screeners being used in research and epidemiology as diagnostic tools are profound: these overestimated prevalence rates can confuse our understanding of needs and effective approaches to solutions, sow panic about mental health disorder rates in the United States, and incorrectly inform conceptualization of course of development, treatment efficacy, comorbidity, and remission (Bovin & Marx, 2023; Levis et al., 2019; McDonald & Calhoun, 2010).

If the profession is going to continue to use the *DSM* classification system in research and clinical practice, we should at the very least use it well. As a method to route individual patients for further diagnostic assessment, we take no issue with the utility and benefits of symptom screeners in the healthcare system. However, for the task of researching diagnosable mental health disorders, we recommend that investigators use more rigorous methods of diagnostic assessment, ideally including semi-structured diagnostic interviews that allow for trained clinicians to assess whether someone truly meets *DSM* criteria for the disorder in question. In such cases where symptom screeners are used, we recommend that authors continue to use the terminology of “symptoms” rather than “disorder” and refrain from using cutoff scores that imply diagnosis to avoid confusion (Levis et al., 2019).

Limited Sampling Strategies

With respect to demographic representation in the corpus, several gaps emerged. In keeping with findings from another recent review on suicide risk factors among AI/AN communities (Fetter et al., 2023), fewer studies in this corpus focused specifically on urban communities (16%) despite the fact that the majority of AI/AN people live outside of Tribal areas (78%; Norris et al., 2012). Given that healthcare access may be lower outside of Tribal lands because of longstanding and significant underfunding of urban Indian healthcare (Warne & Frizzell, 2014), as well as recent evidence that AI/AN peoples living away from Tribal lands may experience worse behavioral health outcomes (Park-Lee et al., 2018), the lack of research is particularly concerning.

In terms of age groups studied, over half focused specifically on adults, and a quarter on AI/ANs under the age of 25. Given that three-fourths of diagnoses have their first onset by the mid-20s (Kessler et al., 2005), not to mention the concerning rates of suicide among some AI/AN youth (Centers for Disease Control and Prevention, National Center for Health Statistics, 2021), this age group is particularly understudied in this corpus. Moreover, only the four studies explicitly focused on gender and/or sexual minority health reported on any aspect of gender or sexual identity

(Kelly et al., 2023; Nicdao et al., 2023; Parker et al., 2017; Yuan et al., 2014), leading to a troubling dearth of information about LGBTQIA2S+ mental health experiences. We know that LGBTQIA2S+ individuals are particularly at risk for suicide and violent victimization as compared to heterosexual individuals; experience discrimination in healthcare, employment, and housing; and contend with these sources of adversity in an intersectional fashion (American Psychiatric Association, 2017). Therefore, it is critical that the profession gain a deeper understanding of the experiences of LGBTQIA2S+ AI/AN youth.

Broadly, we were also interested in understanding where the mental disorder literature is drawing samples from and therefore organized the findings according to the IHS Area. These physical regions vary greatly in size. For example, the Tucson Area encompasses the city of Tucson, Arizona, and the surrounding area, whereas the Nashville Area services 15 states and 36 Tribes. These enormous service region differences are not necessarily a reflection of cultural groupings, service needs, or meaningful geographic distinctions. Instead, these IHS regions must be understood as an administrative product of the differing timelines and histories that led to the designation of each IHS Area by the federal government. However, in this corpus, the volume of studies was not necessarily reflective of the relative size of the IHS area. The aforementioned Nashville Area had 37 studies conducted among Tribes in the 15-state region, while the Oklahoma City Area also had 37 studies in the two-state area. Although this metric provides only a broad overview of the landscape of literature on mental disorders among AI/AN peoples, it serves as an example of how arbitrary inequities in health care services and federal funding to the IHS and AI/AN Tribes may be emerging in the relative research focus on different Nations.

Reflections on Use of the *DSM*

We conclude this review with several considerations and recommendations for the use of the *DSM* in AI/AN communities moving forward. The value and benefit of privileging the *DSM* in the field of psychology is in service to standardized communication and understanding. This common language for suffering theoretically provides opportunities for comparability across difference. However, the standardization of suffering was crafted from an ethnocentric lens based on predominantly Euro-American patients and experiences (Gone & Kirmayer, 2010). Rather than reflecting ahistoric and universal human experiences, the *DSM* serves to catalog reigning cultural understandings at particular moments in time. Under the presumption of universality in experiences and expressions of distress, international diagnostic work often exports the very concepts and categories that it should instead hold at bay in search of cultural diversity (i.e., Kleinman’s [1987] “category fallacy”). Critically then, the current categorization system overlooks local or emic explanatory models and expressions of distress. The reification of a single nosology defines and determines our societal response to distress, including in our healthcare system. In sum, for AI/AN communities, the diagnostic activities of the mental health professions serve as an ongoing psy-colonizing enterprise that (a) devalues or dismantles local understandings of distress and the “good life,” and (b) establishes and enforces a hegemonic conceptualization of distress.

An example of this is a key cultural idiom of distress in AI/AN communities: historical trauma (Gone, 2023b; Nagata et al., 2024).

Historical trauma serves as a re-socialized and recontextualized explanation of distress among Indigenous communities in the United States, which has its roots in the concept of a “soul wound” (Duran et al., 1998). The idea of a “soul wound” has largely existed outside of the bounds of modern psychology (neither historical trauma nor the soul wound was included as a cultural concept in the *DSM-5*, for example). Critical to the understanding of historical trauma is an emphasis on the collective experience of colonization as an etiology of Indigenous distress. However, efforts to respond to this cultural idiom reflect the dominant lens of biomedicine. Because it exists outside of the current nosology and therefore cannot be promoted as it was conceptualized, efforts to legitimize it have taken familiar shapes. Operationalization of historical trauma has included cognitive self-report scales to reflect frequency of thoughts about colonial losses (Fetter & Thompson, 2023; Gone et al., 2019; Whitbeck et al., 2004). In the context of ongoing colonization, this approach to assessing such cultural idioms can only enter the mainstream field of psychology through processes of medicalization that reduce suffering to an individual experience amenable to clinical solutions offered by health care providers to patients. The concern, of course, is that Indigenous struggles with addiction, trauma, and suicide may perhaps warrant formulation as collective postcolonial idioms of distress more so than individual medical problems (Gone, 2021, 2024). However, even when efforts to describe Indigenous idioms of distress seek to engage professional discourse, they often remain excluded from dominant taxonomies (such as the Hierarchical Taxonomy of Psychopathology; Rodriguez-Seijas et al., 2023) and clinical practice (Wendt et al., 2022).

DSM categories facilitate ready communication and common understanding, but they are far from validated. Thus, it cannot be taken for granted that they properly apply to Indigenous peoples in the absence of research to establish that they in fact validly do so. In large part, the field appears to have moved on from questions of cultural validity of diagnosis without apparent justification. Perhaps more troubling, when cultural idioms of distress are raised in AI/AN communities (as in the case of historical trauma), the current framework of mental health has limitations. It offers few pathways for directing resources toward local understandings and, critically, lacks nonmedicalized, systems-centered solutions for overcoming these expressions of distress. Indeed, far from remaining atheoretical, the *DSM* structures clinical activity toward individual-based solutions to ameliorate distress, which ultimately perpetuates psychology’s dogged focus on a person-centered causal attribution bias (Caplan & Nelson, 1973). For AI/AN people who contend with poverty, discrimination, marginality, lack of socioeconomic opportunity, food insecurity, climate change, and attacks on sovereignty and self-determination, this model may not just fall short—it may instead altogether mischaracterize the most salient and relevant features not of persons but rather of situations. Instead, we recommend that the profession attend to and include Indigenous understandings of health from Indigenous perspectives to inform health priorities, policies, approaches, and interventions (O’Keefe et al., 2023; Redvers et al., 2023).

Limitations

This scoping review has several limitations. First, this review sought to understand, at a broad level, the body of literature on mental health diagnoses among AI/AN people in the United States. To

accomplish this goal without producing an unmanageable corpus, search terms focused on diagnostic class rather than specific diagnoses (e.g., anxiety disorder vs. social anxiety disorder). Therefore, some studies may not be captured in this corpus as they were not identified utilizing the outlined search strategy. Although acceptable for an initial scoping of this literature, subsequent reviews should search for specific disorders within select diagnostic classes. It should also be noted that language specifying Native Hawaiians was not included in our search strategy, meaning that this review does not include literature specifically focused on Native Hawaiians. Native Hawaiians have both shared and unique experiences with settler colonialism relative to the AI/AN communities included in this review. Given that Native Hawaiians are vastly underrepresented in psychological science, we recommend intentionally including Native Hawaiians in the search terms of future work (McCubbin & Marsella, 2009).

Moreover, there are concessions in any review based on the necessity of limiting the corpus to align with study aims. For example, 81% of the studies in the corpus examined diagnoses within the AI/AN sample with only a fifth focusing on analyzing differences between AI/AN and non-AI/AN sample (19%). This is unsurprising, given that in many comparative analyses, results may not focus on in-depth findings for one ethnoracial group in particular. Therefore, this result should be interpreted in the light of our rigorous inclusion criteria, which required that studies include at minimum one standalone, multisentence paragraph focused on AI/AN experience of a disorder in the results. However, this may also reflect the prevalence of data erasure in psychological science, wherein AI/AN communities are not included in recruitment, analysis, or reporting (see Friedman et al., 2023 for a recent example). Future inclusion and reporting of AI/AN communities in large data sets must be done with intentionality and great attention to potential harms (see White et al. [2023] for a discussion of these potential harms as well as five recommendations for inclusion of AI/AN in large-scale publicly available data).

Next, given the scope and goal of this review (and in line with best practice for scoping reviews; Peters et al., 2020), we did not evaluate or offer a comparative analysis of the outcomes or methodological rigor of the studies included herein. Indeed, these studies are so diverse that comparative analysis between most studies is unlikely to be fruitful. Nevertheless, although the rigor of the corpus is not formally evaluated, we sought to describe the methodological approaches used in these studies to afford summary insight into this research corpus. We hope that future researchers will build upon this work to evaluate the methodological rigor for specific mental health diagnoses, with particular attention paid to cultural validity and measurement invariance for AI/AN communities. Further reviews that highlight prevalence rate differences or disorder courses for a particular diagnosis are unlikely to be as informative without first evaluating the appropriateness of the measurement approaches.

Finally, this scoping review did not include intervention studies (Gone, 2023a), which might reveal different methodologies and patterns of diagnostic assessment. Although AI/ANs are deeply underrepresented in mental health intervention research (Polo et al., 2019; Wendt et al., 2022), the body of studies is likely to be much larger even as these are less driven by *DSM* disorders and their formal assessment (e.g., substance use, symptoms of distress, suicidal behaviors). Future reviews should explore *DSM* disorders and their assessment in mental health intervention research with AI/AN communities.

Conclusion

The *DSM*, as the dominant metric by which we assess psychological distress in the United States, plays a significant role in the mental health and well-being of AI/AN peoples. It defines the mental health inequities described in AI/AN communities for our medical systems, thereby informing the resources allocated to the treatment of different disorders, and ultimately shapes the approach to treatment and therefore remediation promoted by mental health professionals. The corpus reviewed yields insights into what and how mental disorders have been studied among AI/AN populations to inform the field's approach moving forward.

The *DSM* is a culturally bound diagnostic tool that reflects a particular ontological understanding of health and illness, and as such, has significant limitations in describing and capturing AI/AN communities' understandings of "a good mind" (Gone, 2019). As outlined in the *Offer of Apology to First Peoples in the United States*, use of this diagnostic classification may lead to "misdiagnoses, inappropriate treatment, and negative psychosocial outcomes," and diagnostic assessments not validated for AI/AN people may contribute to overdiagnosis and pathologizing of AI/AN communities (American Psychological Association, APA Indigenous Apology Work Group, 2023, p. 16).

Ultimately, the *DSM* focuses on intraindividual understandings of mental health, which are unlikely to alleviate suffering in Indian Country without a concerted sociopolitical focus on supporting Tribal governance, sovereignty, and fulfillment of treaty obligations. If and when researchers utilize the *DSM*, as is currently necessary, we recommend that they strive for cross-cultural validation *first*, use best practices for assessment (rather than symptom screeners that can overestimate prevalence), and juxtapose *DSM* categories with other assessment strategies to capture well-being, contextual and relational distress, and structural inequity.

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