Mental health disparities, mechanisms, and intervention strategies: perspective from Hawai'i

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Purpose of review
Although there is a growing body of literature describing the scope and impact of mental health disparities, there is relatively less literature focused on youth and on interventions that are grounded in the cultures of youth most significantly affected by disparities. From the perspective of Hawai'i, one of the world's most diverse communities where disparities nonetheless exist, the authors review the varieties of diversity encountered in psychiatry and healthcare, specific youth mental health disparities, and examples of locally tailored solutions.

Recent findings
Mental health disparities are born from the differential exposures to poverty, trauma, discrimination, and barriers to accessing care, especially mental healthcare, which is nationally in short supply. They exist even in supposedly high-resource settings and significantly impact indigenous populations, including in terms of risk for incarceration and risk for suicidal behavior.

Summary
Addressing disparities involves insuring access to preventive and treatment-focused mental healthcare and applying cultural humility in clinical and community settings. The authors add to the reviewed literature by highlighting interventions that are population-based, culturally grounded, and focused on indigenous youth.

Keywords
child mental health, culture, health disparities, Native Hawaiian and Pacific Islander health

INTRODUCTION

Your new inpatient admission is a 16-year-old female, Kiara, with bipolar disorder. She has an intact adoptive family, overall good health, a positive record of academic, athletic, and musical achievement in a well resourced school. Although she has many significant symptoms of depression alternated with hypomania, she has never had any suicide attempts.

Subsequently, your new intake in a juvenile correctional facility is a 16-year-old female, Kalei, with bipolar disorder. She has been in multiple foster placements, uses substances, has obesity and poor dentition, and has dropped out from school. Although incarcerated, she has made at least one serious suicide attempt by hanging, and before her incarceration, she had a history of cutting. Your inkling that the two are biological twins proves to be correct.

Many of the youth in the correctional facility have psychiatric diagnoses that are nearly identical to those in the inpatient unit; however, the youth in corrections are more likely to come from poorer families and communities, to have darker-colored skin, and to have experienced various challenges (related to stigma, undesirable healthcare insurance, geographic isolation, and discrimination) in accessing mental healthcare.

In this fictitious vignette, the debate of nature versus nurture becomes apparent. Both children have nearly identical genes, yet their presentation is starkly different. Human populations have common origins as recently as 50 000 years ago, and apparent differences based on regional ancestry are as much the result of nongenetic as genetic forces

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KEY POINTS

- Mental health disparities are born from differential exposures to poverty, trauma, discrimination, and barriers to accessing mental healthcare.

- Mental health disparities – including risks for incarceration and suicidal behavior – significantly impact indigenous, and other disadvantaged populations.

- Addressing disparities involves creatively insuring access to preventive and treatment-focused mental healthcare that is population-focused, evidence-based, and culturally grounded.

- Addressing disparities involves multidisciplinary collaboration, practice in settings beyond traditional healthcare settings, and advocacy.

[1]. The impacts of these apparent differences, nonetheless, are encountered by mental health professionals in day-to-day practice.

In this article, we review the varieties of diversity encountered in psychiatry and modern healthcare; highlight examples of youth mental health disparities; and review – from experiences in Hawai'i, one of the world's most culturally diverse communities – examples of how locally tailored solutions address mechanisms leading to disparities and show promise for clinical practice.

According to the American Psychological Association [2], health disparities are 'preventable, adverse difference in health experienced by socially disadvantaged populations in comparison with more advantageous populations.' They 'are caused by persistent, systematic, unjust policies, and practices that increase a group's risk for poorer health and limit access to quality care.' They exist in psychiatry and in modern healthcare and across the globe, and persist even in well resourced non-US countries [3].

Diversity based on regional ancestry (often labeled as 'racial,' ethnic, or ethnocultural diversity) is just one of the many types of diversity relevant to healthcare. In the United States, ethnic minorities represent close to one-third of all patients in healthcare. Sex diversity extends beyond traditional binary (male/female) classification and encompasses transgender, sex nonconforming, and other sex identifications, which are often neither adequately documented, let alone adequately represented in healthcare delivery, and which may be associated with mental health risks [4]. Globally, women are twice as likely as men to have a mental illness, and these disparities are worse with greater sex inequalities [5]. Generational diversity encompasses characteristics of ''generations'' that do not necessarily correlate with age. Experiential diversity refers to diversity in skill sets, abilities, credentials, and interest areas, whereas cognitive diversity incorporates diverse viewpoints to enhance decision-making and to encourage creativity and innovation.

Patients who seek care represent multiple types of diversity. The diversity of the healthcare provider workforce, however, may not exactly match the diversity of the patients served. If the provider and patient's cultural partnership is a mismatch, the patient may not improve. Moreover, healthcare technological advances may facilitate care for some but might make the healthcare system less personal and accessible for others, including patients who may already be anxious or suspicious.

In 2016, the US Department of Health and Human Services estimated that over 15 million children and adolescents ages 12–17 need psychiatric care; however, only 3.6 million received care. White youth are more likely to receive care than youth of color. Asian adolescents are less likely than others ethnic groups to receive care, and Hispanic youth, compared with Black and White peers, have unmet needs. Males are less likely than females to receive care by a mental health professional. Youth in rural areas are less likely to receive care – including delivered by primary care physicians – than those in urban areas [6]. Overall, ethnic minority youth may experience delays in diagnoses and are less likely to receive certain evidence-based treatments, such as psychotherapy and medications for mental illnesses [7], including common ones such as depression [8▪,9▪]. Risk of a mental disorder and likelihood of receiving mental health services appears to vary by race/ethnicity and immigrant generation [10▪].

As reviewed by Alegría et al. [7], minority youth disproportionately experience mental illness risk factors, including poverty, isolation, food insecurity, and exposure to violence – especially compounded by community trauma (violence both in the home and in the neighborhood), neighborhood social disorganization, discrimination, and racism. Alegría et al. [11] note that minority youth may be differentially exposed to various factors that contribute to risk for adverse mental health outcomes; these factors include socioeconomic status, childhood adversities, family structure, and neighborhood characteristics including segregation. Furthermore, cultural diversity impacts the ways illness and health are perceived, the way people seek care, and the attitudes of the patient, provider, and larger healthcare system [12▪].

Minority and rural-dwelling youth in the US face not only a severe shortage of child and adolescent psychiatrists (only 8300 for one population of 150 million children [13]), but also socioeconomic,

stigma-related, and cultural barriers to care. In addition, those minorities who do access care are less likely to trust the information given and more likely to receive lower quality care, even when adjusted for insurance status and income [14].

DISPARITIES EVEN IN 'PARADISE'

Hawai'i, where the authors are primarily based, is considered a physically beautiful place and the healthiest state [15] within the United States, a country considered well resourced and high-income. Nevertheless, as reviewed by Guerrero *et al.* [16], there are numerous examples of health and mental health disparities impacting Native Hawaiian youth and youth from other vulnerable populations, in terms of rates of suicidal behavior, psychiatric disorders especially anxiety disorders, and other psychosocial adversities.

Disparities in sentencing and incarceration rates are prominent examples of the impact of institutionalized discrimination and bias that have far-reaching implications for minority ethnic groups. In Hawai'i, there is strong evidence that Native Hawaiians are treated disparately in the correctional system [17]. They are over-represented in pretrial detention, receive harsher sentencing, and receive longer probations and prison terms. Native Hawaiian youth are over-represented in incarcerated settings and are more harshly treated than Whites with similar situations in the juvenile justice system.

Understanding the basis of disproportionate incarceration is important in breaking the cycle of disparities, as the breakup of the family exacerbates and perpetuates effects of other social and health inequities. Children whose parents are in prison face traumatic separation, stigma, childcare and parenting disruptions, reduced income, and instability of residence and appear to be at higher risk for antisocial behavior [18].

Suicide death rates for indigenous peoples have been increasing for over a hundred years and are now among the highest in the world for youth [19]. Native Hawaiian and Pacific Islander adolescents, especially those who reside in rural areas, exhibit the highest risk for suicide-related behaviors [20]. Furthermore, more Native Hawaiians and other Pacific Islanders seek care in emergency rooms due to suicide attempts than other ethnic groups. Risk factors associated with youth suicide in Hawai'i include previous attempts, sexual minority identification, anxiety and depressive symptoms, substance use, incarceration, foster care, death of a parent, violence (cyberbullying, dating violence, victimization, perpetration), and historical trauma [21■,22].

Not surprisingly, Native Hawaiians and other Pacific Islanders, like other disenfranchised indigenous people, report more risks and suffer disproportionately from chronic health problems, including mental health problems. In the wake of the illegal overthrow of the sovereign nation of Hawai'i, Hawaiian Homesteads were established through an Act of the US Congress in 1920, which set aside land exclusively for Native Hawaiians for residential, agricultural, and/or pastoral purposes. However, disparities remain perpetuated by socioeconomic disadvantage and lack of resources to support interventions intended to address these disparities.

MECHANISMS AND POTENTIAL SOLUTIONS

You note the many missed opportunities for intervention in Kalei's history. Removed from her parents' care at a young age due to their substance abuse and neglect, she had significant behavior problems as a school age child and changed foster homes frequently. She has not had a special education plan and has not attended school regularly in 2 years. She has had numerous contacts with law enforcement, mostly related to status offenses and substance use, and although she did not report it, she may be a victim of sex trafficking.

Together with the patient, her guardians, and center staff, you develop a comprehensive treatment plan that addresses her needs, including dental and medical evaluations, psychoeducation and medication management for bipolar disorder, therapy to address her history of trauma and suspected ongoing victimization, and intensive case management assisting with transition back to the community. The stark contrast between Kalei and Kiara inspires you to pursue opportunities for advocacy and early intervention.

As reviewed by Alegría *et al.* [7], mental health disparities prevention encompasses developmentally targeted approaches to mental health prevention (e.g., nurse home visitation programs during infancy, parent behavioral training during early childhood, school-based behavioral programs during childhood, and mentoring and family support programs); implementation of evidence-based treatments, including those adapted for specific populations; and improved child mental healthcare financing on the federal level, including through the State Children's Health Insurance Program, the Affordable Care Act, and the Center for Mental Health Services. Certain interventions, such as parenting programs to prevent conduct problems, appear to be effective across ethnicities and levels of advantage [23■]. Alegría *et al.* [11] recommend

further research and intervention in understanding developmental risk periods, addressing socioeconomic disparities, reducing childhood adversities, targeting family-level interventions, improving neighborhood conditions, reducing violence, expanding opportunities and care access in schools, and understanding provider-based mechanisms for disparities. Practical guides are available [24,25▪] to assist practitioners in applying and hardwiring (using, e.g., culturamaps and ecograms) the principles of cultural humility in assessing and treating youth and families.

Castillo *et al.* [26▪] describe that community interventions to promote mental health and social equity must span individual, interpersonal/family, organizational/institutional, community, and policy levels. Examples of evidence-based interventions are lay health worker interventions, parenting interventions to reduce child abuse, whole-school cognitive behavioral therapy prevention program, adapted Assertive Community Treatment teams for early psychosis and justice-involved populations, Housing First services, and multisector collaborative care and prevention services.

Guided by Table 1, we propose that approaches to addressing disparities should include society-embraced empathy toward youth and families affected by disparities, implementation of culture-affirming assessments and interventions that restore resilience factors that can change trajectories otherwise leading to disparities, and the healthcare system's hardwiring of multiple strategies to eliminate barriers – whether financial, cultural, or geographic – and insure accessibility. Many of these approaches require interfaces with disciplines outside of the traditional practice of psychiatry and require engaging with patients and families in the settings where they are likely to first present with risks that could be mitigated or protective factors that could be strengthened. These settings encompass schools, primary care centers, and other community forums that extend beyond traditional outpatient and inpatient child and adolescent psychiatric practices, where youth and families often will present with illnesses whose impacts and levels of severity may already have been worsened by disparities. These settings also encompass juvenile justice facilities, homeless shelters, and the streets,

Table 1. Synthesis of mechanisms that lead to mental health disparities

	Factors that may impact upon the risk or presentation of psychiatric illness	Factors that may impact upon help-seeking or access to mental healthcare	Factors that may impact upon other aspects of management of psychiatric illness
Biological	Higher rates of alcohol and substance use in certain minority groups [27] Food unavailability and its impacts on health [7] Epigenetic impacts of historical trauma [28▪]		Increased risk of side effects (e.g., metabolic side effects, other side effects related to pharmacogenomic profiles) from certain psychiatric treatments [29▪]
Psychological/ Psychocultural	Acculturative stress impacting immigrant [30▪] and indigenous youth [31] Trauma from various family and other adversities that arise in the context of poverty [7]	Mistrust related to historical trauma Stigma related to psychiatric illness Health-and-illness-related beliefs that differ from healthcare providers' beliefs Language/terminology barriers leading to inaccurate or delayed diagnoses [7] Poor fit with current models of healthcare delivery	
Social and environmental	Poverty that increases stress, lowers self-worth, or that limits opportunities for education and other developmentally appropriate activities [24]	Institutionalized discrimination: inadequate appreciation of the reality of injustices that lead to disparities, and inadequate prioritization of resources to address these disparities Bias that adversely impacts quality of screening, provision of care, and overall engagement in care [24] Healthcare workforce diversity that inadequately matches the diversity of the population served [14] Poverty that limits transportation, ability to take off from work, or ability to purchase other prerequisites to receiving care [32] Geographic isolation	

for youth whose circumstances have marginalized them beyond the usual reach of healthcare safety nets.

In view of the shortages and geographic maldistributions of child and adolescent mental health providers, much of this work, especially in the island chain of Hawai'i, is assisted by video-teleconferencing and other technologies [33] and by models that focus on building the skills of front-line primary care physicians [34] and educators [35]. We elaborate further on population-focused and culture-affirming interventions that appear to show promise.

Shifting societal response to youth juvenile justice involvement

Federal grant programs from the Office of Juvenile Justice and Delinquency Prevention focus on providing safe conditions for adjudicated youth and decreasing disproportionate minority contact. In Hawai'i, the judiciary and other state agencies have collaborated to reduce detention of youth for status offenses (e.g., runaway, truancy) and shift to nonpunitive, treatment-focused consequences for youth committing low-level offenses. Through community partnerships, there have been attempts to increase access to substance use treatment and improve services for homeless youth and victims of human trafficking. Culturally sensitive diversion programs such as Ho'opono Mamo [36] provide assessments and linkages to services to proactively intervene and prevent youth from entering the criminal justice system. Some successes have already been noted, with juvenile incarceration rates and numbers of youth on probation significantly reduced through these efforts.

Drawing upon culturally rooted strengths in suicide prevention

'Ike aku, 'ike mai, kokua aku kokua mai; pela iho la ka nohana 'ohana

Recognize others, be recognized, help others, be helped; such is the family/community way.

The above Hawaiian proverb speaks to the wisdom of ancient Pacific Islanders in understanding the importance of connection for suicide prevention. Many Native Hawaiians and others living in Hawai'i consider everyone in their community to be a part of their extended family: helping one's family and community and fosters others' willingness to reciprocate.

Despite exposure to multiple risks and adversity, most youth do not develop suicidality or other behavioral problems [37]. Several protective factors, including family and community connectedness, have been identified for preventing suicidality [38,39]. From a local perspective, strengths-based approaches enhance existing assets and relationships in families and communities. Comprehension of local and indigenous perspectives of suicide and well being enhances the ability to develop better suicide prevention programs and services [40■].

In a recent review of culturally adapted mental health interventions, Sorenson [41] identified several ways to incorporate values by fostering a positive indigenous identity, including multigenerational families, and integrating traditional practices; using metaphor and stories; encompassing spiritual beliefs; changing the language to simplify jargon and use local terms; changing visuals for cultural congruence; removing problematic western elements; and tailoring for within group differences. Aligning with local practice and adapting evidence-based practices, suicide prevention efforts in Hawai'i involved training youth and community members as trainers to provide education and develop awareness projects and activities [38]. Hawaii's youth suicide prevention programs are adapted to community and cultural needs, honor community knowledge, and prioritize relationships [40■,42]. By integrating community wisdom and best practices, effective youth suicide prevention efforts mitigate health disparities in general and improve the well being of indigenous youth and their communities.

Applying the metaphor of navigation in creatively optimizing access to care

Kapua works at a federally qualified health center (FQHC) in a small, geographically isolated rural community where, coincidentally, Kalei and Kiara's biological parents have ancestral roots.

On a Friday evening, Kapua attends her niece's high school volleyball match, where she is approached by a parent. This father has heard about Kapua's community work and tells her about his son. Recently, the fourth grader has experienced lower energy than usual and has been more withdrawn from activities, including those he used to enjoy. Kapua thinks these concerns may be significant and recommends that the boy comes to the Ho'okele patient navigation project at the FQHC for an assessment by the behavioral health specialist that links with an academic telepsychiatry service.

However, the father informs Kapua that the family only has one truck, which he uses for work on the other side of the island. By the time he arrives back home, the health center is closed. Kapua notes this detail and asks the father for his contact information. She will discuss transportation details with

her Ho'okele team. As a patient navigator, she offers to schedule an after-school home visit to meet their son and conduct a brief screening. Kapua also inquires if there are other issues or problems preventing the boy or anyone else in the family from receiving care. The father thanks her for taking the time to listen to his story, and she insists he is the one to thank for trusting her.

Patient navigators address the unmet needs and services of patients and their families in areas with multiple barriers to healthcare. Limited access to culturally informed care contributes to mental health disparities among rural and minority populations, including Native Hawaiians and other indigenous populations. Patient navigation reduces barriers to healthcare and has been implemented in cancer, HIV, diabetes, and, to a lesser extent, mental healthcare [43,44]. Yet, few patient navigation models exist for youth [45]. Although the evidence for child and adolescent mental health patient navigation is limited, it is a path for eliminating mental health disparities in places and populations that traditionally have been marginalized [45,46,47■].

Navigators may be trained lay persons from the community or healthcare professionals [44]. Patient navigation models provide healthcare access by addressing barriers, including under/uninsured status, lack of transportation, lack of culturally competent care, and fear or distrust in receiving care [43]. These barriers may be reduced or eliminated by the types of services provided by navigators, who identify healthcare facilities and physicians, make appointments, provide emotional and social support, and maintain contact throughout care [44].

Patient navigation has proven to be effective across three levels of analyses [48,49]. At the microlevel, patients may experience improved health and well being, access to care, and screening and follow-up. At the meso-level, patients may gain increased knowledge about community services and satisfaction with navigation programs, and navigators and physicians may develop more mutual trust. At the exo-level, systemic changes may include a reconceptualization of the space in which healthcare occurs, a move away from the clinic wall boundaries, and expanded inclusion of the community, including sports and other venues and homes.

One example of a program to eliminate mental health disparities is the Ho'okele Model. The Hawaiian word ho'okele refers to navigation and navigators, who courageously steered across the Pacific and around the globe for millenia. The Ho'okele project is in the design phase through a collaboration with a FQHC and the Hawaiian Homestead communities in its large rural catchment area. Hawaii's state government has passed laws that prioritize programs, services, interventions, and activities for Native Hawaiian populations and communities and that focus on issues (including substance use, mental illness, and homelessness) that disproportionately affect Native Hawaiians. These measures provide hope that access-enhancing programs such as the Ho'okele Model could be further developed, implemented, and evaluated.

CONCLUSION

Advocacy for resources is an important component of ensuring the sustainability of programs that address disparities. Such advocacy may be a challenge, especially since the multidisciplinary and multisetting work needed to address disparities is not always adequately resourced through traditional reimbursements, and since the discrimination that contributed to the disparities in the first place is likely to persist in how resources are allocated.

However, in view of the substantial healthcare savings estimated from eliminating disparities [50] and the necessary systems improvements born from removing barriers to optimal mental health, we propose that addressing mental health disparities improves the accessibility and quality of care for all, not just those directly harmed by disparities, and should be prioritized accordingly. Furthermore, we propose that addressing disparities and insuring equity in healthcare access should be an essential marker of success in cultural competency training and in any initiative geared toward advancing the specialty of psychiatry.

Conflicts of interest

There are no conflicts of interest.

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