The New Zealand Journal of Psychology

The Au: Addressing the ripples of racism within intergenerational trauma

Andre McLachlan[1], Tahlia Kingi,[2] & Waikaremoana Waitoki[3]
[1]Te Rau Ora Māori Workforce Development, Waikato
[2]Independent researcher/Private Practice, Rotorua
[3]Faculty of Māori and Indigenous Studies, University of Waikato

Correspondence: andre.mclachlan@terauora.com

Abstract

Racism reproduces trauma contributing to negative health and mental health outcomes for Indigenous and minoritised peoples. Racism is intergenerational, and systematic, intimately tied to what is viewed as trauma, how it is identified, and how trauma is dealt with in the helping professions. The Au Intergenerational Trauma Scale (Au-ITs), where 'au' symbolises the ripples and currents that reflect trauma's transmission across time, situates racism as a trauma that contributes directly to the maintenance of intergenerational trauma. A kaupapa Māori research lens was employed to develop the Au-ITs comprising a literature review, an online Delphi method, and kanohi ki te kanohi wānanga (face-to-face forums) with expert Māori practitioners. The AU-ITs offers a collaborative therapeutic tool enabling practitioners and Māori accessing their services, to explore direct and compounding trauma that is unacknowledged within current assessment frameworks.

Keywords: Intergenerational trauma, Racism, Māori, Indigenous practice

Acknowledgement: We are grateful to our advisory group for sharing their experience for this important work. Part of this work was completed under the MBIE WERO Working to End Racial Oppression project (UOWX2002) and Marsden Fund (UOW-043).

Disclosure: The authors have no conflict of interests related to this publication.

Note. In alignment with ethical research practices and respect for the integrity of the Au-Intergenerational Trauma Scale, we, the authors, have opted not to disclose the specific scale items in this publication. This decision reflects our commitment to ensuring the tool is used strictly within its intended scope and only by individuals who are adequately trained in its application. We acknowledge that unauthorised or out-of-context use of such tools could lead to ethical concerns and unintended consequences, potentially compromising the well-being of those involved. Moreover, this approach is consistent with established practices for restricted-use instruments that are often protected by intellectual property or professional training requirements and hence, are not disclosed in public domains. Similarly, the development of guidelines for addressing self-harm in schools in Aotearoa by Meinhardt et al. (2022) refrained from listing specific items and providing detailed statistical analysis on those items. This methodology ensures the guidelines necessitate specific training for effective utilisation, safeguarding the application and integrity of the research.

Similar considerations apply to research involving culturally significant tools, where control over disseminating sensitive or proprietary methodologies is crucial to safeguard their intended use and the communities they serve. This precaution aligns with principles of indigenous data sovereignty and ethical research partnerships (Kukutai & Taylor, 2016; Kovach, 2009, Boulton, 2010), underscoring

the need for careful stewardship of knowledge to preserve the mana and well-being of the communities involved. Our approach adheres to ethical research principles as outlined in frameworks like the HRC Māori Health Advancement Guidelines (2018), which advocate for culturally appropriate and context-specific research methodologies that protect the integrity and purpose of tools designed for Māori contexts.

Positionality

Andre McLachlan is a Māori male of Ngāti Apa and Muaūpoko whakapapa. He is a neurodivergent and raises children with neurodiversity. He is a clinical psychologist with a background in forensics and addictions, currently practicing in trauma. Andre's research focuses on Māori centred practice and Māori workforce development, with a more recent interest in neurodevelopment. The current research is focused on bringing forward practice tools that enable and facilitate discussion and planning to address intergenerational trauma, including the compounding role of racism and the ongoing impacts of colonisation. As a white-passing Māori, my experience of racism differs from many of the people I work with and work for. The development of the current practice tools as outlined in this research allows for a wider perspective of racism and intergenerational trauma.

Tahlia is a wahine Māori with whakapapa to Te Arawa (Ngāti Whakaue, Ngāti Makino, Ngāti Rangiwewehi) and Te Aitanga-ā-Hauiti. Her positionality is grounded in the lived realities of raising Māori tamariki while navigating the ongoing effects of colonisation and systemic racism in Aotearoa. As a Clinical Psychologist with a foundation in neuroscience, her work spans concussion, chronic pain and trauma services, with research dedicated to integrating Mātauranga Māori approaches within neurodevelopment and trauma healing. Her commitment to workforce development and developing practice tools that support the healing of intergenerational trauma emerges from her understanding of the layered impacts of racism and colonisation on Māori communities. As a Māori mother raising three tamariki strong in te ao Māori, she is acutely aware of the discrimination they may encounter. This awareness, situated within her own whānau experience, fuels her commitment to ensuring that her work contributes to a future where her tamariki, and others like them, are not subjected to the same forms of racism. Through fostering resilience and pride in Māori identity, her research seeks to empower future generations to navigate and challenge the systemic inequities they may face.

Waikaremoana is a Māori wahine of Ngāti Hako and Ngāti Māhanga descent, a Tiriti-led academic, kaupapa Māori researcher, and clinical psychologist. Her positionality is grounded in the lived realities of intergenerational trauma and resilience shaped by settler-colonialism in Aotearoa. Drawing on Indigenous standpoint theory, she acknowledges that all knowledge is situated and that her social location as a Māori woman informs the questions she asks, the methodologies she employs, and the interpretations she makes. Her standpoint is collectively held and shaped by whakapapa, whenua, and whānau. It is through this lens that she critiques white supremacist paradigms and advocates for Indigenous ways of knowing and being.

Through an intersectional framework, she recognises that her identity is shaped by the convergence of multiple systems of power—colonialism, patriarchy, and institutional racism. These intersecting structures produce unique forms of marginalisation for Māori, particularly wāhine Māori, within health, education, and justice systems. Her work seeks to expose and challenge these inequities by centring Māori voices, values, and aspirations. As a Tiriti-led scholar, she is committed to upholding the promises of Te Tiriti o Waitangi through research that is relational, accountable, and transformative. Her kaupapa Māori approach is not only methodological but ontological—it reflects a worldview that privileges collective wellbeing, intergenerational responsibility, and tino rangatiratanga.

To cite: McLachlan, A., Kingi, T., & Waitoki, W. (2025). The Au: Addressing the ripples of racism within intergenerational trauma. *New Zealand Journal of Psychology*, *54*(3), 58-73.

Introduction

A comprehensive exploration of the literature on the intergenerational transmission of trauma considers Aotearoa New Zealand perspectives of historical losses, epigenetics, and the pervasive impacts of racism. In this context Adverse Childhood Experiences (ACEs) and the embodiment of trauma have a profound impact on present and future generations. Existing Western measures of intergenerational trauma fail to capture the lived experiences of Indigenous peoples in settler-colonial nations. To respond to these limitations, a kaupapa Māori, trauma-informed lens was used to develop the Au Intergenerational Trauma Scale (Au-ITS). Using an online Delphi method and an in-person wānanga the authors were able to consolidate existing trauma models with a focus on the impact of colonialism that pervasively affect the lives of Māori.

The concept of 'au' holds particular significance in understanding intergenerational trauma transmission for Māori. The term "au" symbolises various meanings, including self, current, or the wake of a canoe, reflecting the transmission of trauma as ripples across time. As a "rapid or whirlpool" (PK, 2008: 43), au can mean an ocean current (NIT, 1995: 37), or the wake of a canoe breaking through the waves (PK, 2008: 43). This metaphor captures how trauma creates ripples that move across generations, and the importance of navigating these ripples as they become waves through re-traumatisation. The Au Intergenerational Trauma Scale (Au-ITS) draws on this concept to represent how historical and contemporary traumas create currents that flow through whānau and communities across time.

Adverse childhood events (ACEs)

A landmark study by Felitti et al., (1998) developed the Adverse Childhood Events (ACEs) framework to understand the early-life experiences that significantly impact either long-term health risk behaviours or health outcomes. The ACEs framework uses a checklist of 10 specific adversities that may be encountered before the age of 18. Felitti et al., identified seven categories of adverse childhood experiences such as psychological, physical or sexual abuse, family violence (against the mother), substance abuse in the home, mental illness, and imprisonment (of a family member). The study showed the interrelationship between childhood exposure and health outcomes, including early mortality. Health risk behaviours include substance abuse, multiple sexual partners, smoking and early initiation of sexual activity and pregnancy. The health outcomes of high-risk behaviours can include sexually transmitted infections, depression, suicidal behaviour, obesity, heart disease, chronic lung disease, and earlier death (Felitti et al., 1998). Individuals with elevated ACE scores face a considerably heightened risk of enduring health challenges later in life, underscoring the lasting influence of early adversities on lifelong health and wellbeing (Hughes et al., 2017; Zeanah et al., 2018). The ACEs checklist has undergone several adaptations since its inception, with changes typically involving the addition of items or modifications in wording to better capture the spectrum of childhood adversities (Mendel et al., 2021).

The impact of ACEs

In Aotearoa New Zealand, the Growing Up in New Zealand study involving 5,562 children, found that over half (52.8%) had encountered at least one ACE by the time they started primary school. This exposure adversely affected seven out of the eight school readiness ability tests in a dose-response pattern, although data on child sexual abuse and ethnicity were not included in the collection (Walsh et al., 2019). Further research focusing on the experiences of violence by intimate partners (IPV) and non-partners in adulthood found that Māori individuals, younger people, and those from lower socioeconomic backgrounds reported a higher prevalence of ACEs. This exposure significantly correlated with subsequent experiences of IPV and non-partner violence. Notably, 78 percent of Māori participants reported at least one ACE, with 27.4 percent experiencing four or more ACEs. The study emphasised that action was needed to develop culturally informed intervention and prevention strategies, and that provide redress for experiences of colonisation and historical and cumulative trauma (Fanslow et al., 2021).

Zeanah et al. (2018) pointed out that ACEs represent only one of the many pathways leading to adverse outcomes for children. They highlighted the 'two-generation' effect of ACEs, which demonstrates the cyclical nature of intergenerational trauma transmission: mothers who experienced adverse childhood events in their own upbringing (often transmitted from previous generations) are more likely to have children who also experience ACEs, perpetuating the cycle of trauma transmission through biological and psychological channels across generations.

The prevalence and impacts of ACEs vary across different populations, with specific groups experiencing higher rates of adversity. For instance, Māori populations, younger individuals, and those of lower socioeconomic status reported higher occurrences of ACEs (Fanslow et al., 2021). These findings are crucial as they highlight the need for culturally responsive approaches in addressing ACEs. The differential impact of ACEs within various populations underlines the role of broader social and structural factors, such as socio-economic conditions and racial dynamics, in shaping childhood experiences. This variance necessitates tailored strategies for intervention and prevention that are cognisant of the unique contexts of different groups, especially in addressing the needs of Indigenous and minoritised communities and acknowledging the historical and ongoing effects of colonisation.

Critique and limitations of the ACEs checklist

In Aotearoa, the application and study of ACEs has been gaining traction, particularly in fields such as social welfare, education, and mental health (Fanslow et al., 2021; Walsh et al., 2019). Notably, the original ACEs framework may not fully encapsulate the structural factors such as racism, colonisation, and poverty that profoundly influence the development and perpetuation of these childhood adversities (Joy & Beddoe, 2019). Furthermore, studies highlight that the causes of childhood adversity often lie upstream and include structural racism (Fanslow et al., 2021; Joy & Beddoe, 2019).

Cronholm et al., (2015) focused on community-level adverse childhood events, which they termed the 'Expanded ACEs' that incorporated: experiencing racism, witnessing violence, living in an unsafe neighbourhood, experiencing bullying, and having a history of living in foster care. The authors noted that these forms of ACEs were more likely to occur in more diverse and minority populations. Of note, the authors recognised that gender, race, and poverty were associated with increased risk for Expanded ACEs but not standard ACEs. The author also noted the importance of adapting ACEs for the population under study.

The pathways from ACEs to adverse health outcomes

The ACES pyramid (Goddard, 2021) traces how ACEs lead to disrupted neurodevelopment, which in turn contributes to social, emotional, and cognitive impairments as children grow. More recently, they adapted the ACEs pyramid with two additional layers: Social Conditions/Local Context, and Generational Embodiment / Historical Trauma. This expanded model recognises that adverse childhood events are deeply influenced by broader societal dynamics and historical contexts, particularly for Indigenous communities. The concept of generational embodiment, as discussed by Walters et al., (2011), highlights how trauma is internalised, manifesting both psychologically and physically in individuals and across generations. This internalisation, encapsulated in the phrase 'bodies tell [hi]stories', underscores the complex interplay between personal experiences and broader historical traumas. Such a perspective necessitates a broader examination of gene and gene-environment interactions, bringing epigenetics into the conversation. Epigenetics provides a framework for understanding how historical and social traumas, embedded in the fabric of communities and passed down through generations, can influence gene expression and, consequently, an individual's susceptibility to poor health outcomes. This macro and micro view emphasises the need to consider not just individual adverse experiences but also the collective and historical experiences that shape health trajectories.

Integrating Indigenous wisdom: Understanding genomics and epigenetics

In Aotearoa, Māori have led significant advancements in the realm of genomics and the handling of DNA/genetic material, viewing them as taonga to be treated with utmost care. For Māori, genes embody whakapapa (genealogy) and are therefore considered tapu (sacred). They encapsulate not only our connections to our creators and ancestors but also lay the foundation for our mokopuna (grandchildren), intertwining past, present, and future. As described by Taiuru (2018), a genome represents an individual's complete whakapapa, containing physical, spiritual, and cognitive memories, and affects future generations eternally. Hence, a genome is inherently sacred as it encompasses whakapapa, mauri (life force), and the wairua (spirit) of tupuna (ancestors), the living, and future generations.

Epigenetics, meaning 'outside of conventional genetics', involves gene regulation without altering DNA molecules, the 'turning on or off' in response to the environment (Jiang et al., 2019). Changes in the human genome (through mechanisms like epigenetic changes) have been argued to be part of adaptation and evolution. Epigenetic changes, linked to diseases such as cancer, type 2 diabetes, and various mental health disorders, can be

influenced by factors like age, environment, lifestyle, and disease aggression (Jiang et al., 2019; Jones et al., 2021). Foetal development and early childhood are particularly important times due to increased vulnerability to stress-related changes. These epigenetic changes, including those resulting from childhood trauma, can be passed to subsequent generations and are often amplified if the initial triggers recur or are ongoing (Jiang et al., 2019; Raz et al., 2019).

Biological pathways from intergenerational trauma to health outcomes

Conching and Thayer (2019) illustrated how external stressors related to social determinants of health, such as low SES, discrimination, and historical loss and grief, can lead to epigenetic modifications. Low socioeconomic status (SES) is linked to epigenetic changes in the methylation process, particularly affecting immune responses. Individuals experiencing trauma in low SES environments are likely to exhibit alterations in genes responsible for the nervous system's response to stress reactivity. Chronic or prolonged exposure to intensely stressful environments can lead to an increased risk of traumatic events such as substance use and violence (Conching & Thayer, 2019), and neuronal changes affecting language, memory, executive functioning, and social-emotional processing (Lee & Sawa, 2014, Ursache & Noble, 2016).

Discrimination, historical loss and grief

For Indigenous peoples, discrimination is deeply intertwined with the legacy of colonisation, affecting individuals and serving as a constant reminder of the historical mistreatment of their ancestors. Higher levels of perceived discrimination are associated with increased stress hormone levels, elevated blood pressure, obesity, and higher overall mortality rates (Conching & Thayer, 2019). Historical loss includes the grief related to the impacts on ancestors and the continuous reminders of dispossession that Indigenous peoples endure including alienation from language and culture and economic hardship through dispossession of land (Sotero, 2006). These effects are recurring, for example, when we hear and yet cannot understand our language, when we are expected to fulfil customary roles related to our age or status that we cannot fulfil, or when we can no longer access customary practices or sacred sites (Conching & Thayer, 2019).

Racism

Racism, increasingly recognised as a significant determinant of health, contributes to health inequalities among Indigenous populations. Current research indicates a relationship between racism and adverse physical and mental health in Indigenous people. Grosfoguel (2011) describes racism as a global hierarchy of superiority and inferiority based on skin colour, and can also include gender and religious beliefs, that serves to entrench a modern/colonial, capitalist/patriarchal, Christian, imperialist/Western-centric world system. This hierarchy categorises people as 'above' or 'below' the line of humanity, affecting their rights and societal recognition (Fanon, 1967).

Racism is a complex and multi-faceted issue and is fundamentally a classification system designed to uphold white supremacist power across all areas of society. Its origins and manifestations are varied, encompassing interpersonal, structural, and systemic forms, all tied to stereotypes, prejudice, discrimination, and antagonism based on racial or ethnic and gendered group membership (Harris et al., 2006; Harris, Stanley & Cormack, 2018; Paradies et al., 2015). Four interrelated levels of racism are widely known: structural (societal) involves maintaining privilege and negative stereotypes, institutional (systemic) policies and practices that create unfair differences in power; interpersonal discriminatory behaviours between individuals and; internal, oppressive stereotypes towards oneself (Tinirau, Smith & Haami, 2020; Smith et al., 2021). This nuanced understanding is crucial in comprehensively addressing racism's impacts on health and social disparities, particularly among Indigenous populations. In Aotearoa New Zealand and other Indigenous nations, a pervasive system of racism rooted in colonialism has had profound impacts on Māori, undermining rangatiratanga (chiefly authority), disrupting connections with tūpuna (ancestors), and hindering the transfer of Māori knowledge and practices to future generations (C. Smith et al., 2021).

Racism and impacts on health

A scoping review focusing on Aboriginal and Torres Strait Islander peoples in Australia has highlighted a critical link between racism and various negative health outcomes. This research by Kairuz et al. (2021) noted a broad range in the prevalence of reported racism and showed that racism is associated with poor mental health, general health perception issues, and specific conditions such as anxiety, depression, asthma, increased BMI, and substance use. Crucially, these adverse outcomes demonstrate a dose-dependent relationship with

racism: The greater the exposure to various forms of racial discrimination, the worse the health and mental health impacts. Cormack et al., (2018) explored this dose-dependent relationship using data from the 2008, 2010, and 2012 General Social Surveys (GSS). Their analysis encompassed multiple forms of discrimination, including those based on skin colour, ethnicity, language, dress, gender, age, disability, marital and family status, sexual orientation, occupation, religious beliefs, and political views. Literature has used terms such as 'dual minority status' and 'multiple stigmatised identities' to discuss the realities of multiple forms of discrimination (Cormack et al., 2020). The study found that Māori, along with Pacific and Asian ethnic groups, were more susceptible to experiencing multiple forms of discrimination. Importantly, a direct correlation was observed between the number of discrimination experiences and deteriorating health and mental health outcomes, reinforcing the dose-dependent nature of racism's impact.

Measurement of racism in Aotearoa New Zealand

In Aotearoa New Zealand the General Social Surveys (GSS) have been instrumental in large population studies, assessing experiences of racism in various situations, including public spaces, work environments, interactions with the justice system, education, housing, and healthcare. This detailed approach provides a comprehensive understanding of the multifaceted nature of racism in everyday life. Internationally, the Measure of Indigenous Racism Experiences (MIRE; Paradies & Cunningham, 2008) parallels the approaches used in the New Zealand Health Survey (NZHS) and GSS surveys. This scale probes the frequency of unfair treatment due to Indigenous identity across various domains, offering a global perspective on Indigenous experiences of racism.

In Aotearoa, health research commonly employs self-rated health measures and physical and mental functioning scales, alongside assessments of alcohol use, smoking, and cardiovascular disease. Examples include self-rated health, physical functioning (using the SF36 physical functioning scale (Ware et al., 1992), and mental health measures (using the SF36 mental health scale and/or the Kessler 10 (Kessler et al., 2003) Studies consistently show a dose-response relationship between racism and poor health and mental health outcomes (Cormack et al., 2018; Cormack et al., 2020).

The 2002/2003 New Zealand Health Survey NZHS (Ministry of Health, 2007) involving extensive face-to-face interviews, revealed that Māori reported the highest experience of racial discrimination, with a notably higher likelihood of encountering multiple types of discrimination compared to European/Others (5% vs. 1%). An analysis of the 2002/2003 and 2006/2007 NZHS, including the addition of alcohol consumption and doctor-diagnosed chronic mental health conditions, identified that all racial discrimination items were associated with negative physical and mental health. Talamaivao et al., (2020) conducted a systematic review revealing strong associations between racism and mental health issues such as depression, psychological distress, and other diagnosed mental health conditions. Similarly, Williams et al., (2018) found a correlation between racial discrimination, depressive symptoms, and prior suicide attempts.

Cormack et al. (2020) analysed data from the Te Kupenga Māori Social Survey 2013, revealing that approximately 60 percent of Māori participants had experienced discrimination in their lifetime, with racial discrimination being the most common form (41%). Their findings show that Māori are also exposed to forms of discrimination other than racial discrimination, including discrimination on the grounds of age, gender, income (own or whānau income) and health status. This study emphasised the intersectionality of various forms of discrimination experienced by Māori, highlighting the complex and interwoven nature of these oppressive systems in colonial societies.

The Whakatika study (C. Smith et al., 2021) included 2096 participants from across Aotearora to explore experiences of racism impacting not only the individual but their wider whānau and incorporating forms of discrimination relevant to Māori. The study examined everyday experiences of racial discrimination in New Zealand including getting service/shopping; media representation of Māori; Indigenous Peoples and colonial monuments; and their tūpuna or Māori names. The survey focused on not only the occurrence of racism, but also the response in a way that is not covered in previous surveys of racial discrimination. The authors explored areas including pōuri (a deep sense of sadness); whakaiti (ashamed, humiliated, anxious or fearful); riri (angry, annoyed or frustrated); amused, contempt or sorry for the person who did it; powerless, hopeless or depressed; upset in the stomach or gut, headache, tensing of your muscles or a pounding heart; uncertain, and not feeling anything. Most participants identified that racism impacted them daily (93%) and their wider whānau to some extent (96%). Participants reported

experiencing feeling pōuri and riri from their experiences with racism. Eighty-nine percent of participants reported at least some of the time they were less likely than other customers to get assistance because they are Māori. Most participants also noted that they had been followed, watched or asked to open their bags in a shop. A quarter of participants reported being followed all the time or often. Many (63%) reported that colonial statues caused anger, and most (79%) said that non-Māori media negatively portrayed Māori all the time or often. Those with tūpuna names reported that they had to spell their names all the time (53%) and around the same number had to spell their name regularly.

While Indigenous communities have long recognised the interlocking nature of different systems of oppression in colonial societies, there has been scant previous reporting of the different bases for which Māori experience discrimination in Aotearoa New Zealand (Cormack et al., 2020, p. 118).

Existing measures of intergenerational trauma

Several scales have been developed to explore the occurrence and impact of historical grief. The Lakota Grief Experience Questionnaire (Brave Heart, 1998) is a 15-item questionnaire focused on the Lakota people. The author adapted this from the Grief Experience Questionnaire, a 55-item grief measure (Barrett & Scott, 1989). Whitbeck et al. (2004) developed the Historical Losses Scale (HLS) and the Historical Losses Associated Symptoms Scale (HLASS) to explore the present-day impacts of historical trauma. This includes 12 forms of loss experienced by Native American peoples and 12 forms of emotional responses. Studies using the HLS and HLASS have found that Native American children reported being highly cognisant of historical losses, with one in five children thinking of these things daily, some even more often than adults (Whitbeck et al., 2004). Studies identifying higher levels of historical loss using these scales have also noted higher levels of anxiety in adolescents (Armenta et al., 2016); higher levels of depression and anxiety and lower levels of resilience in college students (Altaha, 2012), and higher levels of anxiety and depression in adults (Whitbeck et al., 2004).

The Australian Aboriginal Version of the Harvard Trauma Questionnaire (AAVHTQ; Atkinson, 2008) is an adaptation of the Harvard Trauma Questionnaire (HTQ; Mollica et al., 1992). The measure is presented in several sections, including 17 stressors experienced by Australian Aboriginal Peoples and 30 items derived from the DSM-III-R criteria for post-traumatic stress disorder (PTSD). The list of 17 stressors was developed through literature review and focus group discussions with key informants (Atkinson, 2008). The Harvard Trauma Questionnaire (HTQ) provides direction for adapting the scale for different populations. For each item of the 17-item stressors list, subjects were asked whether they had (1) not experienced, (2) heard about, (3) witnessed, or (4) personally experienced that stressor. Open personal description questions also asked: "Can you tell me about the most hurtful or terrifying events that have happened to you in your own community and/or family, if any. Follow-up questions prompt for more detail: (Please tell me where and when these events happened"). Another open personal description question asked, "Can you tell me about the most hurtful or terrifying events that have happened to you outside your community and/or family if any. (Please tell me when and where these events happened.)" (Atkinson, 2008, p. 286). Participants were also separately asked if they had experienced a head injury, drowning, suffocation or beating/hitting to the head, and if they lost consciousness.

The Negative Life Events Scale (NLES; Kowal et al., 2007) was designed to measure the emotional and social wellbeing of Australian Aboriginal and Torres Strait Island People. The scale is a simple yes/no 16-item questionnaire. Participants are asked "Have any of these things been a worry for you or anyone else living in this house during the last year?" A study by Stevens and Paradies (2014) found that the scale loaded on three separate domains: Social transgressions, labour market stressors, and grief and trauma. The only item that did not load on one of these domains was 'divorce or separation'.

The concept of PTSD, while significant, may not encompass the full spectrum of challenges arising from complex forms of trauma. Complex trauma is characterised by exposure to multiple or repeated traumatic events, often involving invasive, interpersonal experiences. Such trauma frequently results in a broader array of severe and pervasive symptoms, as noted by Cook et al. (2017) and Rocha et al. (2019). The introduction of the ICD-11 Complex PTSD (c-PTSD) diagnosis has brought attention to three primary symptom clusters associated with complex trauma: Profound difficulties in emotion regulation, a deeply negative self-concept, and a multitude of interpersonal

challenges, as identified by Cloitre et al., (2013, 2018) and further elaborated by Cook et al., (2017).

Measurement of microaggressions

T The Racial and Ethnic Microaggressions Scale (REMS; Nadal, 2011) is a 45-item self-report measure designed to assess the impact of racial and ethnic microaggressions across six subscales: Assumptions of inferiority; second-class citizen and assumptions of criminality; microinvalidations; exoticization and assumptions of Similarity; environmental microaggressions; and workplace and school microaggressions. Similarly, the Racial Microaggressions Scale (RMAS; Torres-Harding et al., 2012) focuses on the recurrent or consistent experiences of racial microaggressions, emphasizing microinsults and microinvalidations. This measure evaluates themes such as the perception of being an alien in one's own land, ascription of intelligence, colour-blindness, criminality, exoticization, meritocracy myths, pathologizing cultural values, second-class citizenship, environmental invalidations, and racial invisibility. Each item is rated on a 4-point Likert scale, ranging from "never" to "often" with an additional component allowing respondents to indicate the stress or upset caused by these experiences. Together, these scales offer complementary approaches to understanding the frequency and impact of racial microaggressions.

The range of assessments available for trauma, including intergenerational trauma demonstrates the necessity to consider the relationship of colonisation and racism on individual and community mental health and health risk. With these imperatives in mind, this research sought to explore the development of a tool that could be used with Māori who experience mental health concerns.

Method

Kaupapa Māori, as a research approach, seeks to uphold the mana and integrity of Māori while addressing critical issues within individuals and communities. The KM approach provides for affirmation of Māori ways of knowing and being with the aspiration of achieving wellbeing and healing (Smith, 2021). This study employed the Delphi method (Turoff & Linstone, 1975, 2002), integrated with the principles of kaupapa Māori methodology, to provide a pathway to reassert tino rangatiratanga (autonomy) and mana motuhake (self-determination) in our research. It respects and acknowledges Māori epistemologies with research conducted by, for, and about Māori. The integration of Māori and Western approaches aided the formulation of questions, the sharing of knowledge among panellists, and the interpretation of results, guaranteeing that the findings reflect Māori values and worldviews. This is crucial in intergenerational trauma research, where understanding of historical and cultural context is essential.

The 7th edition of the Publication Manual of the American Psychological Association (2019, p. 103) lists nine checks supplementary to qualitative analysis that can augment a study's methodological integrity. The Kaupapa Māori approach employed the Delphi method and wānanga using five of the proposed checks including:

> *transcripts or data returned to participants for feedback; triangulation across multiple sources of information, findings, or investigators; consensus or auditing processes; member checks or participant feedback on findings; checks on the utility of findings in responding to the study problem (2019, p. 103).*

The remaining four checks (interview thoroughness assessments, data displays/matrices, thick description methods, and structured reflexivity methods) were not applicable to our Delphi methodology, which relied on structured online surveys rather than interviews, and focused on consensus-building rather than detailed ethnographic description.

The items above are consistent with Māori processes of achieving consensus among a group. We employed robust discussion and reflection among the panellist, sought consistent feedback and reflection. We engaged in open debate to ensure that concerns were heard and validated. While the Delphi method is somewhat antithetical to a face-to-face approach, we were mindful that our panelists were very busy and most preferred to contribute virtually. The Delphi method was chosen for its capacity to gather diverse expert opinions through a process of anonymity, controlled feedback, statistical group consensus, and iterative refinement. This online anonymous process was then complemented by a face-to-face wānanga, which allowed for open debate and collective reflection in alignment with Māori consensus-building practices. The involvement of an expert panel, comprising iwi representatives, health professionals, and trauma survivors was essential to capturing the complex historical, cultural, and psychological dimensions of the topic. The iterative nature of the Delphi method allowed for the refinement of these diverse perspectives into a cohesive understanding, informed by both lived experience and academic insight. This approach was systematically employed

to identify key priorities for scale items and incorporate expert insights on intergenerational trauma, resulting in a tool designed to support therapeutic outcomes.

Delphi Method Process

Originally developed in the 1950s in the United States as a forecasting tool (Turoff & Linstone, 1975, 2002), the Delphi method involves multiple rounds of questionnaires distributed to a panel of experts who rate the importance of items to a particular agenda. After each round, the responses are gathered and anonymised. These collated responses are then summarised, and the updated survey and feedback summary is circulated back to the experts. In the next iteration, a panel of experts review the collective feedback and adjust their responses accordingly. This iterative process continues until the group reaches a pre-established consensus level. We followed Keeney et al., (2001) and used items developed from a literature review on intergenerational trauma.

Applications of the Delphi method in Aotearoa

The Delphi method has been employed in various research contexts, reflecting its adaptability and cultural sensitivity. A two-round Delphi study using Qualtrics was conducted by Meinhardt and colleagues (2022) to develop evidence-based guidelines for schools supporting students engaging in self-harm behaviour. This study featured two distinct expert panels: A stakeholder panel with 27-34 members and a youth panel with 21-30 members. The methodology involved a 5-point Likert scale to gauge consensus, which was set at 80 percent. This approach exemplifies the use of the Delphi in addressing sensitive educational and mental health issues, combining the perspectives of various stakeholders, including youth voices. Similarly, Hardy and colleagues (2004) utilised the Delphi method in a bicultural mental health nursing study to identify clinical indicators. This study involved three rounds, and 24 participants divided into two groups: Nurses and consumers. Like Meinhardt's study, it employed a 5-point Likert scale, but here consensus was defined as 85 percent of ratings falling within two points on the scale. A unique aspect was the ranking of the importance of each item, with a mean rating of 4.5 out of 5 required for an item to be included in the final set of clinical indicators. This study did not have a specific focus on Māori; however, a Māori clinical governance group guided the study process. The unique aspect of ranking the importance of items in these studies demonstrates the Delphi method's ability to distil expert opinions into actionable insights. This approach signifies how Delphi studies in Aotearoa have tailored the method to fit culturally sensitive and bicultural research needs.

Delphi expert panel creation

Jorm (2015) used the Delphi method and emphasised the importance of defining expertise and employing a systematic strategy for identifying experts who meet the criteria. In line with Jorm's guidelines, the expert participants were selected based on clear criteria and either had at least 5 years of clinical experience with Māori who experienced trauma, or at least 10 years of research experience in intergenerational trauma, evidenced by peer-reviewed publications. All participants were required to be of Māori descent and recognised as leaders in the topic area. The stringent criteria ensured that the panel had a deep, culturally informed understanding of trauma from both clinical and research perspectives, essential for addressing the nuanced aspects of intergenerational trauma among Māori. While the literature provides no clear agreement on the required number of Delphi participants, our method aimed for a balance between inclusivity and manageability. What is clear in the Delphi set-up process is the importance of a small, well-selected panel with a range of knowledge related to the area of interest (Akins et al., 2005, Hsu & Sandford, 2007).

Delphi expert panel description

In the present study, 22 experts, identified through professional networks were approached, with 14 completing round one and 13 completing round two. The 14 expert panel members comprised nine clinical psychologists (including leading kaupapa Māori academics), two registered counsellors, two cultural/health practitioners, one registered nurse, and one registered social worker. Panel members included individuals with lived experience of trauma, two practitioners acknowledged for their mahi in te ao wairua, multiple trauma specialists, and active iwi members. Several panel members held multiple roles and expertise areas, reflecting the interconnected nature of Māori professional networks.

Experts were recruited through the authors' existing professional networks. Given that kaupapa Māori research operates within interconnected communities where researchers are embedded participants, the pool of recognised experts in intergenerational trauma and Māori mental health is small and well-known. Panel members were

directly approached based on their wide acknowledgment as leaders within their respective fields by the broader Māori health and research communities, not solely by the research team.

Cultural and spiritual guidance was provided by kaumātua, koroua, and kuia among the panel members, alongside practitioners acknowledged for their expertise in te Ao Wairua, ensuring appropriate tikanga oversight throughout the research process.

The stringent criteria ensured that the panel had a deep, culturally informed understanding of trauma from both clinical and research perspectives, essential for addressing the nuanced aspects of intergenerational trauma among Māori. While some practitioner groups such as additional social workers were underrepresented, the panel composition prioritised those with specific expertise in trauma and intergenerational transmission.

Ethical approval was granted by the Wintec Human Ethics in Research Group on 16th January 2023 (Approval reference: WTLR01120123).

Analysis approach

Due to significant overlap in expertise and experience among panel members (with lived experience participants also being clinicians or researchers), subgroup analysis by role was not conducted. Instead, all responses were analysed collectively while maintaining awareness of the diverse perspectives represented.

The Au-ITS Scale Questionnaire development

The initial questionnaire was developed following a literature review summarising the key points or salient items identified in multiple existing scales. These were then grouped into scale categories, reflecting common themes identified in the literature as contributing to trauma. The Au-ITS scale is divided into two sections: Tāmitanga 'Things that have happened in my life' (experiences of patu ngākau/trauma) and Wheako Whaiaro 'Things that I sometimes experience' (symptoms of patu ngākau/trauma). Presenting these aspects side by side offers a holistic view of trauma, acknowledging both the external incidents and the internal, sometimes less obvious repercussions. The two categories are closely connected but remain distinct. The first focuses on observable events, or circumstances, while the second addresses personal, subjective experiences and responses.

The statements included in the first round were derived from the literature and agreed upon among the three authors, who drew on their experience of clinical work in trauma-related fields. For Delphi round one, a total of 67 items were proposed consisting of 38 experiences and 29 symptoms.

Each item in the questionnaire was grouped according to a subscale. The Au-ITS was divided into two sections. Section one focussed on the Tāmitanga - experience of trauma, with four subscales; Intergenerational and Whenua Trauma; Adverse Childhood Events; Adverse Life Stressors; Racism, Discrimination and Marginalisation. Section two covered the symptoms of trauma as Wheako Whaiaro (experiences). There were five subscales under this section, grouped according to the research on patu ngākau reflecting Māori experiences, emotions and sensations that have been noted to relate to trauma and stress. These include: Ngākau Riri (anger/hurt); Mamae Ngākau (emotional pain); Ngākau Pōuri (a deep sense of sadness); Whakamā (shame, despair); Whakamomori (despair, desperation) (T. Smith, 2008, 2015, 2019).

The Au-ITS is designed to be used in conjunction with the Hua Oranga Māori health outcome measure (Kingi, 2002). The Hua Oranga is a brief 16-item questionnaire aligned with the four taha of Tā Mason Durie's Te Whare Tapa Whā, covering Taha Tinana (physical wellbeing), Taha Wairua (spiritual wellbeing), Taha Whānau (family/social wellbeing), and Taha Hinengaro (mental and emotional wellbeing). This complementary tool ensures that wairua is explored as both a protective factor and potential area of concern, while maintaining focus on strengths and wellbeing alongside trauma assessment. The combined use of both measures provides a balanced approach that addresses trauma while building on Māori concepts of holistic wellbeing.

Online Delphi process

The Delphi survey was conducted online using Qualtrics, providing the expert panel with a two-week window to complete the questionnaire. Each item was accompanied by a detailed description, and participants were asked to rate it on a 5-point Likert scale, explaining the rationale behind their rating. At the end of each subscale, they were asked whether they had any additional feedback on the items within that subscale and whether they thought any items needed to be added. In round one participants were also asked to select their top five items for each subscale. Following the completion

of the first round, the expert panel members received a report summarising the outcomes of that round. This report detailed the items that had achieved consensus and were selected for inclusion in the final scale and the items that had not reached consensus. The items from the first round were reassessed for inclusion or exclusion in the following round. In round two, participants reviewed a summary of feedback from all panel participants and were asked to rate each item again, providing the rationale for their ratings. McDonnell et al., (1996) asserted that such a practice enhances the study's reliability and validity by allowing participants the opportunity to interpret the items and clarify their ratings.

Consensus

In Delphi research, setting a consensus level among experts is crucial for validating study outcomes. The consensus level must be explicitly stated and rationalised to ensure the study's methodological rigor (Hasson et al., 2000; Jones & Hunter, 1995; Powell, 2003). Some studies have set their level of consensus as low as 51 percent, (Loughlin & Moore, 1979), others have set the level at 100 percent (Williams & Webb, 1994), with a common median threshold being 75 percent (Keeney et al., 2001; Diamond et al., 2014). In this study the consensus threshold was set at 80 percent, balancing inclusivity with decisiveness. This meant that for an item to be included in the scale, 80 percent of participants had to rate it as either 'important' or 'essential,' while items rated as 'unimportant' or 'should not be included' by 80 percent would be excluded. This criterion is more stringent than the most used 75 percent, strengthening the study's reliability by ensuring a higher degree of agreement among participants. However, it avoids the impracticality and risk of deadlock that can arise form aiming for unanimous consensus. A threshold of 80% allows for diverse expert opinions while still requiring a solid majority, making it both ambitious and achievable, and ensuring more robust and validated conclusions.

Item results

Of the 67 items proposed in round one, 41 reached the 80 percent threshold. The expert panel suggested 11 new items be added. These were based on their practice experience in the field of trauma. Following round one there were suggestions that the name of the 'Physical and Sexual Violence' scale was inappropriate and did not adequately reflect the items in that scale. It was subsequently renamed as the 'Adverse Life Events' scale within the Tāmitanga section. Round two consisted of 38 items, including 11 new items. Following round two, all items had reached consensus, with 17 items rated as either 'unimportant' or 'should be excluded' by at least 80 percent of participants. These items were then excluded from the scale.

Expert feedback wānanga

After the online Delphi study, a wānanga focus group was held with the expert panel. While the Dephi rounds require anonymity, the wānanga, a culturally grounded method of discussion and debate, facilitates consensus-building. Of the 14 experts on the panel, seven were able to attend the face-to-face wānanga. This wānanga provided an opportunity to present the final scale items and engage in a meaningful discussion about their applications and potential precautions in their use. The wānanga served as a crucial platform for collective reflection and input, ensuring that the scale was culturally resonant and practically applicable.

Based on discussions at the wānanga, four items were deemed to be more appropriate as follow-up questions to other items. One new item asking about 'hopohopo' (overwhelming fear) was added to the 'Ngākau Pōuri' subscale. The items that achieved consensus were compiled into the final Au-ITS version. This process was aligned with the approach advocated by McDonnell et al. (1996), which emphasised the enhancement of reliability and validity through participant feedback and clarification.

Caution - tūpato

In relation to the application of the Au-Its within practice, it was agreed by those present that the scale could not be used independently as a rating scale outside of a therapeutic process. Consistent with this, it was proposed that the term 'wānanga worksheet' is used instead of 'screening tool'. The term wānanga reflects the process of unpacking each conversation that is prompted through the worksheet, as opposed to a screening tool which draws connotations of being a fast and brief measure used to 'screen' for experiences or be used inappropriately. Clear concerns were that the experiences and impacts of intergenerational trauma must only be done in both culturally and clinically safe contexts by people who are able to manage the impact of these discussions. The expert group cautioned that the practitioners using the Au tool must have training and ongoing support to ensure its appropriate use. Furthermore, it was recommended that the scale is to be used by Māori practitioners

primarily, and those practitioners who are endorsed by a Māori organisation and where cultural supervision is provided.

The finalised scale items closely align with the existing international research on intergenerational trauma. Each item has been crafted to reflect the nuances of intergenerational trauma in Aotearoa New Zealand, resonating with established theories and findings in the field. This alignment ensures that the scale is grounded in a robust academic framework, enhancing its credibility and relevance.

Discussion

The differential impact of ACEs within various populations highlights the importance of considering broader social and structural factors, such as socio-economic conditions and racial dynamics, in shaping childhood experiences. This variability necessitates the development of tailored interventions and prevention strategies particularly for Indigenous communities, to address the historical and ongoing effects of colonisation. The Delphi method, paired with wānanga, was used to systematically develop an intergenerational trauma framework for Māori. Through iterative rounds and consensus-building, an in initial set of 68 items were refined to 57, ensuring that the final scale was both relevant and broadly supported by the panel experts. This framework offers a guided process to explore the potential presence and impact of racialised forms of trauma. The literature reviewed shows that specific questions pertinent to minoritised and racialised groups – such as the impact of colonisation and the disproportionate experiences of racism, have an impact on health and wellbeing. To overlook these forms of trauma as potential sites of healing, is unethical and harmful. However, as noted by the panel experts, care is needed when exploring the impact of racism and misogyny, particularly when the state is involved. The panel were clear that the presence of trauma should not be weaponised and used to punish those in need of help, as is often the case for Māori (Smith, 2019; Cormack, et al, 2020).

This work is part of a broader effort to enhance trauma identification and response in a culturally congruent, safe, and effective manner, exemplified by the forthcoming resource guide, 'He tohu te mauri: Māori concepts, principles, and practices in trauma-informed care' (McLachlan, Kingi, & Waitoki, in press). This guide incorporates the Pae tata, pae tawhiti for brief and early intervention and the TAWHITI Indigenous trauma-informed principles (McLachlan & Waitoki, 2024), providing practitioners with practical tools for engaging with intergenerational trauma. To ensure appropriate implementation of the Au-ITS alongside these frameworks, comprehensive training is being developed through Te Rau Ora, with details to be made available through their website when released.

Additionally, Māori-centered healing frameworks, such as the TOHU framework (McLachlan et al., 2024), Hua Oranga Māori health outcome measure (Kingi, 2002) and Whiti te Rā pathways to healing model (McLachlan et al., 2021), offer culturally grounded approaches to addressing trauma and promoting wellbeing. Further research is needed to explore the AU-ITs to examine its reliability and validity in therapeutic settings. The scale has not yet been piloted with clients in therapeutic settings, representing an important next step for validation. Additionally, ongoing refinement and adaptation of the scale might be necessary to ensure it remains relevant and effective in capturing the evolving understanding of intergenerational trauma.

Limitation

The expert panel composition reflected a high proportion of doctoral-level clinicians, which may have introduced bias toward academic perspectives. However, this composition was appropriate for developing a clinical assessment tool and was balanced by including practitioners with lived experience and those with expertise in te ao wairua.

Conclusion

This study sought to address the urgent need for culturally informed and context-specific approaches to address the pervasive effects of trauma among Māori in Aotearoa New Zealand. The disproportionately high prevalence of ACEs among Māori, compounded by the historical and ongoing impacts of racism, colonisation and structural inequities, demands a shift from Western-centric frameworks to Indigenous-centered methodologies. The development of the Au Intergenerational Trauma Scale (Au-ITS) through a Kaupapa Māori, trauma-informed lens represents a critical step forward in capturing the unique lived experiences of Māori. By integrating the perspectives of historical loss, epigenetics, and the enduring effects of racism, this culturally grounded tool offers a more nuanced understanding of trauma's transmission across generations. The AU-ITS requires further development to determine its use as a collaborative therapeutic tool to enhance client-centered aspirations.

To foster thriving futures for Māori, it is imperative to continue developing interventions, policies, and support systems that reflect Indigenous values, knowledge, and aspirations. This work represents a vital pathway toward dismantling systemic inequities and ensuring the wellbeing of present and future generations.

References

Akins, R. B., Tolson, H., & Cole, B. R. (2005). Stability of response characteristics of a Delphi panel: application of bootstrap data expansion. *BMC Medical Research Methodology*, *5*, 37. https://doi.org/10.1186/1471-2288-5-37

Altaha, N. (2012). Kill the Indian, save the man: Native American historical trauma in college students. *Metamorphosis*. https://icmglt.org/icmlibrary/kill-the-indian-save-the-man-native-american-historical-trauma-in-college-students/

Armenta, B. E., Whitbeck, L. B., & Habecker, P. N. (2016). The Historical Loss Scale: Longitudinal measurement equivalence and prospective links to anxiety among North American indigenous adolescents. *Cultural Diversity & Ethnic Minority Psychology*, *22*(1), 1–10. https://doi.org/10.1037/cdp0000049

APA (2019). *Publication Manual of the American Psychological Association (7th ed.).* American Psychological Association.

Atkinson, C. (2008). The violence continuum: Australian Aboriginal male violence and generational post-traumatic stress. [Doctoral thesis, Charles Darwin University]. https://doi.org/10.25913/5ea23b0cbbd5d

Barrett, T. W., & Scott, T. B. (1989). Development of the grief experience questionnaire. *Suicide and Life-Threatening Behavior*, *19*(2), 201–215. https://doi.org/10.1111/j.1943-278X.1989.tb01033.x

Brave Heart, M. Y. H. (1998). The return to the sacred path: Healing the historical trauma and historical unresolved grief response among the Lakota through a psychoeducational group intervention. *Smith College Studies in Social Work*, *68*(3), 287–305. https://doi.org/10.1080/00377319809517532

Cloitre, M., Garvert, D. W., Brewin, C. R., Bryant, R. A., & Maercker, A. (2013). Evidence for proposed ICD-11 PTSD and complex PTSD: A latent profile analysis. *European Journal of Psychotraumatology*, *4*(1), 20706. https://doi.org/10.3402/ejpt.v4i0.20706

Cloitre, M., Shevlin, M., Brewin, C. R., Bisson, J. I., Roberts, N. P., Maercker, A., Karatzias, T., & Hyland, P. (2018). The International Trauma Questionnaire: Development of a self-report measure of ICD-11 PTSD and complex PTSD. *Acta Psychiatrica Scandinavica*, 138(6), 536–546. https://doi.org/10.1111/acps.12956

Conching, A., & Thayer, Z. (2019). Biological pathways for historical trauma to affect health: A conceptual model focusing on epigenetic modifications. *Social Science & Medicine*, *230*, 74–82. https://doi.org/10.1016/j.socscimed.2019.04.001

Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., & van der Kolk, B. (2017). Complex trauma in children and adolescents. *Psychiatric Annals*, *35*(5), 390–398. https://doi.org/10.3928/00485713-20050501-05

Cormack, D., Harris, R., & Stanley, J. (2020). Māori experiences of multiple forms of discrimination: findings from Te Kupenga 2013. *Kōtuitui: New Zealand Journal of Social Sciences Online*, *15*(1), 106–122. https://doi.org/10.1080/1177083X.2019.1657472

Cormack, D., Stanley, J., & Harris, R. (2018). Multiple forms of discrimination and relationships with health and wellbeing: Findings from national cross-sectional surveys in Aotearoa/New Zealand. *International Journal for Equity in Health*, *17*(1), 26. https://doi.org/10.1186/s12939-018-0735-y

Cronholm, P. F., Forke, C. M., Wade, R., Bair-Merritt, M. H., Davis, M., Harkins-Schwarz, M., Pachter, L. M., & Fein, J. A. (2015). Adverse childhood experiences: Expanding the concept of adversity. *American Journal of Preventive Medicine*, *49*(3), 354–361. https://doi.org/10.1016/j.amepre.2015.02.001

Diamond, I. R., Grant, R. C., Feldman, B. M., Pencharz, P. B., Ling, S. C., Moore, A. M., & Wales, P. W. (2014). Defining consensus: A systematic review recommends methodologic criteria for reporting of Delphi studies. *Journal of Clinical Epidemiology*, *67*(4), 401–409. https://doi.org/10.1016/j.jclinepi.2013.12.002

Fanon, F. (1967). Black skin, white masks. Grove Press.
Fanslow, J., Hashemi, L., Gulliver, P., & McIntosh, T. (2021). Adverse childhood experiences in New Zealand and subsequent victimization in adulthood: Findings from a population-based study. *Child Abuse & Neglect*, *117*, 105067. https://doi.org/10.1016/j.chiabu.2021.105067

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, *14*(4), 245–258. https://doi.org/10.1016/S0749-3797(98)00017-8

Goddard, A. (2021). Adverse childhood experiences and trauma-informed care. *Journal of Pediatric Health Care, 35*(2), 145-155. https://doi.org/10.1016/j.pedhc.2020.09.001

Grosfoguel, R. (2011). Decolonizing post-colonial studies and paradigms of political economy: Transmodernity, decolonial thinking, and global coloniality. Transmodernity: *Journal of Peripheral Cultural Production of the Luso-Hispanic World*, *1*(1). https://dialogoglobal.com/texts/grosfoguel/Grosfoguel-Decolonizing-Pol-Econ-and-Postcolonial.pdf

Hardy, D. J., O'Brien, A. P., Gaskin, C. J., O'Brien, A. J., Morrison-Ngatai, E., Skews, G., ... & McNulty, N. (2004). Practical application of the Delphi technique in a bicultural mental health nursing study in New Zealand. *Journal of Advanced Nursing*, *46*(1), 95-109. https://doi.org/10.1111/j.1365-2648.2003.02969.x

Harris, R., Stanley, J., & Cormack, D. (2018). Racism and health in New Zealand: Prevalence over time and associations between recent experience of racism and health and wellbeing measures using national survey data. *PloS One*, *13*(5), e0196476. https://doi.org/10.1371/journal.pone.0196476
Harris, R., Tobias, M., Jeffreys, M., Waldegrave, K., Karlsen, S., & Nazroo, J. (2006). Racism and health: The relationship between experience of racial discrimination and health in New Zealand. *Social Science & Medicine*, *63*(6), 1428–1441. https://doi.org/10.1016/j.socscimed.2006.04.009

Hasson, F., Keeney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing*, *32*(4), 1008–1015. https://doi.org/10.1046/j.1365-2648.2000.t01-1-01567.x

Hsu, C.-C., & Sandford, B. A. (2007). The Delphi technique: Making sense of consensus. *Practical Assessment, Research, and Evaluation*, *12*(1), 10. https://doi.org/10.7275/pdz9-th90

Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., Jones, L., & Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health: A systematic review and meta-analysis. *The Lancet Public Health*, *2*(8), e356–e366. https://doi.org/10.1016/S2468-2667(17)30118-4

Jiang, S., Postovit, L., Cattaneo, A., Binder, E. B., & Aitchison, K. J. (2019). Epigenetic modifications in stress response genes associated with childhood trauma. *Frontiers in Psychiatry*, *10*, 808. https://doi.org/10.3389/fpsyt.2019.00808

Jones, J., & Hunter, D. (1995). Consensus methods for medical and health services research. *British Medical Journal*, 311(7001), 376-380. https://doi.org/10.1136/bmj.311.7001.376

Jones, D. E., Park, J. S., Gamby, K., Bigelow, T. M., Mersha, T. B., & Folger, A. T. (2021). Mental health epigenetics: A primer with implications for counselors. *The Professional Counsellor*, *11*(1), 102–121. https://tpcjournal.nbcc.org/mental-health-epigenetics-a-primer-with-implications-for-counselors/

Jorm, A. F. (2015). Using the Delphi expert consensus method in mental health research. *Australian & New Zealand Journal of Psychiatry*, *49*(10), 887-897. https://doi.org/10.1177/0004867415600891

Joy, E., & Beddoe, L. (2019). ACEs, cultural considerations and 'common sense' in Aotearoa New Zealand. *Social Policy and Society*, *18*(3), 491-497. https://doi.org/10.1017/S1474746419000046

Kairuz, C.A., Casanelia, L.M., Bennett-Brook, K. et al. (2021). Impact of racism and discrimination on physical and mental health among Aboriginal and Torres Strait islander peoples living in Australia: A systematic scoping review. *BMC Public Health*, 21, 1302. https://doi.org/10.1186/s12889-021-11363-x

Keeney, S., Hasson, F., & McKenna, H. P. (2001). A critical review of the Delphi technique as a research methodology for nursing. *International Journal of Nursing Studies*, *38*(2), 195-200. https://doi.org/10.1016/S0020-7489(00)00044-4

Kessler, R.C., Barker, P.R., Colpe, L.J., Epstein, J.F., Gfroerer, J.C., Hiripi, E., et al. (2003) Screening for serious mental illness in the general population. *Archives of General Psychiatry*, *60*, 184-189. http://dx.doi.org/10.1001/archpsyc.60.2.184

Kingi, T. R. (2002). *Hua Oranga: Best health outcomes for Māori* (Doctoral thesis, Massey University). http://hdl.handle.net/10179/2079

Kowal, E., Gunthorpe, W., & Bailie, R. S. (2007). Measuring emotional and social wellbeing in Aboriginal and Torres Strait Islander populations: An analysis of a Negative Life Events Scale. *International Journal for Equity in Health*, *6*(1), 1–12. https://doi.org/10.1186/1475-9276-6-18

Lee, R. S., & Sawa, A. (2014). Environmental stressors and epigenetic control of the hypothalamic-pituitary-adrenal axis. *Neuroendocrinology*, *100*(4), 278–287. https://doi.org/10.1159/000369585

Loughlin, K. G., & Moore, L. F. (1979). Using Delphi to achieve congruent objectives and activities in a pediatrics department. *Academic Medicine*, *54*(2), 101-106. https://doi.org/10.1097/00001888-197902000-00006

McDonnell, J., Meijlera, A., Kahan, J.P., Bernstein, S.J., Rigter, H. (1996). Panellist consistency in the assessment of medical appropriateness. *Health Policy*, *37*(1996), 139-152. https://doi.org/10.1016/S0168-8510(96)90021-4

McLachlan, A., Kingi, T., & Waitoki, W. (In Press). *He Tohu Te Mauri: Māori cncepts, principles, and practices in trauma-informed care*. Te Rau Ora.

McLachlan, A., Kingi, T., Waitoki, W., Wirihana, R., Hoeta, A., Kinred, S., Pehi, P., Harris, R., & Jones, H. (2024). The TOHU framework: Sensing and interpreting tohu to heal from trauma. *EXPLORE*, 20(6). https://doi.org/10.1016/j.explore.2024.103017

McLachlan, A., & Waitoki, W. (2022). *Pae Tata, Pae Tawhiti. Engaging with whānau to explore waipiro me te tarau kino and its harms to create pathways to whakaora*. Whare Tukutuku. Te Rau Ora.

McLachlan, W., & Waitoki, W., (2024). Tawhiti: An Indigenous trauma informed harm reduction approach to alcohol and other drug use. *Journal of Indigenous Wellbeing*, *7*(1), 21-36. https://journalindigenouswellbeing.co.nz/media/2024/05/Tawhiti.-An-indigenous-trauma-informed-harm-reduction-approach-to-alcohol-and-other-drugs.pdf

McLachlan, A. D., Waitoki, W., Harris, P., & Jones, H. (2021). Whiti te rā: A guide to connecting Māori to traditional wellbeing pathways. *Journal of Indigenous Wellbeing*, *6*(1), 78–97. https://hdl.handle.net/10289/14332

Meinhardt, I., Cargo, T., Te Maro, B., Bowden, L., Fortune, S., Cuthbert, S., & Hetrick, S. E. (2022). Development of guidelines for school staff on supporting students who self-harm: A Delphi study. *BMC Psychiatry*, *22*(1), 1-14. https://doi.org/10.1186/s12888-022-04266-7

Mendel, W. E., Sperlich, M., & Fava, N. M. (2021). "Is there anything else you would like me to know?": Applying a trauma-informed approach to the administration of the adverse childhood experiences questionnaire. *Journal of Community Psychology*, *49*(5), 1079–1099. https://doi.org/10.1002/jcop.22562

Ministry of Health. (2007). *Urban–rural health comparisons: Key results of the 2002/03 New Zealand Health Survey*. Wellington: Ministry of Health.

Mollica, R. F., Caspi-Yavin, Y., Bollini, P., Truong, T., Tor, S., & Lavelle, J. (1992). The Harvard Trauma Questionnaire: Validating a cross-cultural instrument for measuring torture, trauma, and posttraumatic stress disorder in Indochinese refugees. *Journal of Nervous and Mental Disease*, *180*(2), 111-116. https://doi.org/10.1016/j.socscimed.2014.01.043

Paradies, Y., Ben, J., Denson, N., Elias, A., Priest, N., Pieterse, A., Gupta, A., Kelaher, M., & Gee, G. (2015). Racism as a determinant of health: A systematic review and meta-analysis. *PLoS ONE*, *10*(9), e0138511. https://doi.org/10.1371/journal.pone.0138511

Powell, C. (2003). The Delphi technique: Myths and realities. Journal of Advanced Nursing, 41(4), 376-382.
Raz, A., Pontarotti, G., & Weitzman, J. B. (2019). Epigenetic metaphors: An interdisciplinary translation of encoding and decoding. *New Genetics and Society*, *38*(3), 264–288. https://doi.org/10.1080/14636778.2019.1601009

Rocha, J., Rodrigues, V., Santos, E., Azevedo, I., Machado, S., Almeida, V., Silva, C., Almeida, J., & Cloitre, M. (2019). The first instrument for complex PTSD assessment: Psychometric properties of the ICD-11 Trauma Questionnaire. *Brazilian Journal of Psychiatry*, *42*, 185–189. https://doi.org/10.1590/1516-4446-2018-0272

Smith, C., Tinirau, R., Rattray-Te Mana, H., Tawaroa, M., Barnes, H., Cormack, D., & Fitzgerald, E. (2021). *Whakatika: A survey of Māori experiences of racism*. Te Atawhai o Te Ao Charitable Trust.

Smith, L. T. (2021). *Decolonizing Methodologies: Research and Indigenous Peoples*. (3rd Edition). Bloomsbury.

Smith, T. (2008). Indigenous knowledge in the Pacific: Knowing and the ngākau. *Democracy and Education*, *17*(2), 13-21.

Smith, T. (2015). He kōkonga whare. In L. Pihama, H. Skipper, & J. Tipene (Eds.), *He manawa whenua, e kore e mimiti: Indigenous centred knowledge—unlimited potential* (pp. 255–274).

Smith, T. (2019). *He ara uru ora: Traditional Māori understandings of trauma and well-being*. Te Atawhai o te Ao.

Sotero, M. (2006). A conceptual model of historical trauma: Implications for public health practice and research. *Journal of Health Disparities Research and Practice*, *1*(1), 93–108. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1350062

Stevens, M., & Paradies, Y. (2014). Changes in exposure to 'life stressors' in the Aboriginal and Torres Strait Islander population, 2002 to 2008. *BMC Public Health*, *14*(1), 1–11. https://doi.org/10.1186/1471-2458-14-144

Taiuru, K. (2018). Introduction to Tikanga Māori Considerations with Genomics. Author. Accessed 24/11/2024 https://taiuru.co.nz/introduction-to-tikanga-maori-considerations-with-genomics/

Talamaivao, N., Harris, R., Cormack, D., Paine, S.-J., & King, P. (2020). Racism and health in Aotearoa New Zealand: A systematic review of quantitative studies. *The New Zealand Medical Journal*, 133(1521), 55-68. https://nzmj.org.nz/media/pages/journal/vol-133-no-1521/racism-and-health-in-aotearoa-new-zealand-a-systematic-review-of-quantitative-studies/0e3298cdc9-1696476099/racism-and-health-in-aotearoa-new-zealand-a-systematic-review-of-quantitative-studies-open-access.pdf

Tinirau, R., Smith, C., & Haami, M. (2020). *Whakatika: How does racism impact on the health of Black, Indigenous and/or people of colour globally? An international literature review for the Whakatika Research Project*. Te Atawhai o te Ao Charitable Trust.

Turoff, M., Linstone, H.A. (1975). The Delphi method: Techniques and applications. *Journal of Marketing Research*, *18*(3). https://doi.org/10.2307/3150755

Turoff, M., Linstone, H.A. (2002). *The Delphi method*. https://www.researchgate.net/publication/272177922_The_Delphi_Method

Ursache, A., & Noble, K. G. (2016). Neurocognitive development in socioeconomic context: Multiple mechanisms and implications for measuring socioeconomic status. *Psychophysiology*, *53*(1), 71–82. https://doi.org/10.1111/psyp.12547

Walsh, M., Joyce, S., Maloney, T., & Vaithianathan, R. (2019). Adverse childhood experiences and school readiness outcomes: Results from the Growing Up in New Zealand study. *The New Zealand Medical Journal*, *132*(1493), 15–24. https://nzmj.org.nz/media/pages/journal/vol-132-no-1493/adverse-childhood-experiences-and-school-readiness-outcomes-results-from-the-growing-up-in-new-zealand-study/6c6c289440-1696473132/adverse-childhood-experiences-and-school-readiness-outcomes-results-from-the-growing-up-in-new-zealand-study.pdf

Ware, J. E., Jr., & Sherbourne, C. D. (1992). The MOS 36-Item Short-Form Health Survey (SF-36): I. Conceptual framework and item selection. Medical Care, 30(6), 473–483. https://www.jstor.org/stable/3765916

Walters, K. L., Mohammed, S. A., Evans-Campbell, T., Beltrán, R. E., Chae, D. H., & Duran, B. (2011). Bodies don't just tell stories, they tell histories: Embodiment of historical trauma among American Indians and Alaska Natives. *Du Bois Review: Social Science Research on Race*, *8*(1), 179–189. https://doi.org/10.1017/S1742058X1100018X

Whitbeck, L. B., Adams, G. W., Hoyt, D. R., & Chen, X. (2004). Conceptualizing and measuring historical trauma among American Indian people. *American Journal of Community Psychology*, *33*(3–4), 119–130. https://doi.org/10.1023/b:ajcp.0000027000.77357.31

Williams, A. D., Clark, T. C., & Lewycka, S. (2018). The associations between cultural identity and mental health outcomes for Indigenous Māori youth in New Zealand. *Frontiers in Public Health*, 6. https://doi.org/10.3389/fpubh.2018.00319

Williams, P. L., & Webb, C. (1994). The Delphi technique: a methodological discussion. *Journal of Advanced Nursing*, *19*(1), 180-186. https://doi.org/10.1111/j.1365-2648.1994.tb01066.x

Zeanah, P., Burstein, K., & Cartier, J. (2018). Addressing adverse childhood experiences: It's all about relationships. *Societies*, *8*(4), 115. https://doi.org/10.3390/soc8040115