Key Considerations for the Inclusion of Pasifika Peoples in a National Prevalence Study of Mental Health, Substance Use and Gambling in Aotearoa

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Executive summary

O le tele o sulu e maua ai figota.

Through collaboration, the most difficult challenges can be overcome.

- Samoan proverb

Background

Two decades have now passed since Te Rau Hinengaro[1], the only nationally recognised prevalence study of mental health issues in Aotearoa New Zealand. There have been widespread calls since then for a new national prevalence study of mental health, substance use and gambling, to ensure Pasifika peoples are adequately represented alongside other priority groups.

Le Va welcomes the prospect of a long-awaited prevalence study on mental health, substance use and gambling in Aotearoa. A comprehensive, up-to-date, repeated cross-sectional study focused on Pasifika peoples is vital for monitoring health and wellbeing and informing culturally safe services, policy development, commissioning and resource allocation to enhance outcomes for Pasifika communities.

The findings and recommendations within this report will be crucial to enhancing this opportunity to meaningfully collect, analyse and report on the experiences of Pasifika peoples in Aotearoa, ultimately driving improved health and wellbeing for Pasifika families and communities.

Overview and purpose

This report summarises key considerations for including Pasifika peoples in any national prevalence study of mental health, substance use and gambling. It has been prepared by Le Va, with support from PwC New Zealand, Moana Connect, Le Va's clinical governance group and Pasifikology, for the New Zealand Government, Health New Zealand and the mental health and addiction sector.

The report contains two parts:

- Part 1 summarises findings from a scoping review which focused on identifying:
  - existing data sources that provide insights into mental health, substance use and gambling prevalence and impacts among Pasifika peoples, and key trends and gaps
  - existing surveillance and longitudinal studies that could be adapted and enhanced for any new prevalence study
  - assessment and diagnostic measures commonly used in Aotearoa and overseas to assess mental health, substance use and gambling, and the utility, validity and reliability of these measures for Pasifika peoples.
- Part 2 provides recommendations for the inclusion of Pasifika peoples in a national prevalence study of mental health, substance use and gambling. These recommendations are based on our assumption that any new prevalence study would be led by a multidisciplinary team with expertise in epidemiology and designed and implemented per best practice standards and appropriate ethics approvals. As such, our recommendations focus on the inclusion of Pasifika peoples only.

At Le Va, we affirm our deep commitment to honouring the articles of Te Tiriti o Waitangi and recognising the unique status of Māori as the Indigenous people of Aotearoa. We strongly advocate for adopting a Te Tiriti-based approach to any new prevalence study and would welcome opportunities to actively support this. Our commitment aligns with our organisation's dedication to Te Tiriti o Waitangi, our shared cultural connections and values with Māori rooted in our common Polynesian ancestry, and the dual heritage of our families, whānau and 'āiga across Aotearoa and the Pacific.

Summary of findings and recommendations

The diagram below summarises the key findings of the scoping review, our recommendations for the inclusion of Pasifika peoples in any new prevalence study, and guidance for the practical application of recommendations.

Scoping review findings

There is a paucity of surveillance of mental health, substance use, and gambling among Pasifika peoples in Aotearoa.

Pasifika peoples are disproportionately affected by mental health, substance use, and gambling issues.

There are some risk and protective factors for mental health, substance use, and gambling issues that are unique to Pasifika peoples.

There is a lack of assessments and diagnostic tools that are valid and reliable for use with Pasifika peoples in Aotearoa.

Practical application

1. The involvement of Pasifika clinical, cultural, and lived experience experts is crucial.	✕ Ensure Pasifika expertise on the overarching governance group for the study. ✕ A separate, but aligned, Pasifika advisory group comprising Pasifika cultural experts, lived experience experts, clinicians, professionals in aligned sectors, and non-Pasifika 'allies'. ✕ Consultation with a broad range of stakeholders. ✕ Pasifika to lead engagement with Pasifika participants.
2. Validation of survey, assessment, and diagnostic tools for use with Pasifika peoples is essential.	✕ Use of existing survey questions and assessment and diagnostic tools appropriate for Pasifika. ✕ Scope the development of assessment and diagnostic tools by Pasifika, for Pasifika. ✕ Pre-validation study. ✕ Validation of any language translations. ✕ Potential adaptation of the PIWBS-R for use with Pasifika participants. ✕ Collection of disorder-specific data.
3. A relationship-based approach using screening and talanoa to complement quantitative data.	✕ Two-part approach: a screening measure followed by a diagnostic measure to a sub-sample. ✕ Use of *talanoa* to complement quantitative findings. ✕ Periodic deep dives every 5 years, focusing on key gaps in data and insights.
4. The holistic nature of Pasifika health and wellbeing must be prioritised, including a focus on family and social determinants.	✕ A focus on protective factors. ✕ A family-based approach to data collection and analysis. ✕ Collection of data and insights relating to social determinants.
5. Any new prevalence study must be responsive to the diversity of Pasifika peoples.	✕ Collection and analysis of ethnic-specific data, including a focus on the largest Pasifika ethnic groups (including multi-ethnic groups). ✕ Collection and analysis of data on age, disability, sexual and gender identity, religion/spirituality, and family circumstances.

Part 1:
Scoping review findings

Part 1: Summary of scoping review findings

Ko te tama a te manu e fafaga i na ika, ka ko te tama a te tagata e fafaga i na kupu.
Birds feed their young with fish, while humans feed their young with words.
- Tokelauan proverb

Methodology and methods

Aims and objectives

The scoping review undertaken by Moana Connect and Le Va had four key objectives:

1. Identify existing data sources that provide insights into the current prevalence and impacts of mental health, substance use and gambling among Pasifika peoples, and key trends and gaps.
2. Identify existing surveillance and longitudinal studies that could be adapted and enhanced for any future prevalence study of mental health, substance use and gambling among Pasifika peoples.
3. Identify the assessment and diagnostic measures commonly used in Aotearoa and overseas to assess mental health, substance use and gambling issues, and assess the utility, validity and reliability of these measures for Pasifika peoples.
4. Provide recommendations on the scope and design of a future prevalence study that captures the diverse experiences of Pasifika peoples and advances Pasifika health and wellbeing in Aotearoa.

Overview of approach

A scoping review was used as an alternative to a systematic review, given the objectives to identify knowledge gaps and consider the breadth of literature, conceptual frameworks and research methodologies[12,13]. This enabled a diverse range of sources to be explored, including peer-reviewed articles, government reports and grey literature published in Aotearoa and internationally[14,15].

As there were a limited number of sources from Aotearoa, the review scope was broadened to include population groups with similar histories and characteristics to Pasifika peoples in Aotearoa. These included groups such as indigenous peoples in low- and middle-income nations, and minority and migrant populations (especially Hispanics and Asians).

Data collection

Development of search terms

Key search terms included:

- "Pasifika"
- "Pacific Islanders"
- "mental health"
- "mental illness"
- "substance abuse"
- "substance use disorders"
- "addictions".

In line with the consideration of international literature, key search terms also included:

- "migrant"
- "minority groups"
- "indigenous groups"
- "refugee populations".

These search terms were then linked with terms associated with the scoping review's key areas of exploration. For example, the search terms above were linked with:

- "prevalence" and "survey"
- "risk" and "protective" factors
- "models" and "worldviews"
- "validation" and "screening"
- "assessment tool".

Inclusions and exclusions

Key inclusions and exclusions were as follows:

- Broadly speaking, only longitudinal sources and/or sources that reported ongoing surveillance data that included Pasifika cohorts were included.
- While the Manalagi Survey Community Report[16] was included due to the dearth of information about Rainbow people, studies such as the New Zealand Drug Trends Survey 2022/2023[17] that did not offer Pasifika-specific insights were excluded.
- Also excluded were one-off studies that addressed topics such as the relationship between online gaming and gambling among Pasifika young people[18]. These subjects were addressed to some extent within the studies that were included.
- The focus was on prevalence tools validated for use with Pasifika peoples or population groups with similar histories and characteristics (as previously discussed). No tools were included that had not been validated with Pasifika peoples or comparable groups.

Search techniques

The data collection process began with exploratory searches across various sources. This included searches across academic databases such as Google Scholar, MEDLINE and Scopus. Additionally, institutional repositories and governmental databases were consulted to gather relevant grey literature.

The search was expanded by examining the reference lists provided by initial sources and actively reaching out to experts, researchers, clinicians and community members with expertise or experience working with Pasifika communities in Aotearoa. This collaborative approach enhanced the depth and richness of the scoping review.

Data management

Extraction and management of data

A standardised data extraction form was developed to systematically capture relevant data from selected studies, including author(s), publication year, aims, methodology, target population and key findings. EndNote and Excel were used for managing and organising bibliographic information and extracted data.

Data analysis

Collaborative thematic identification of extracted data

A systematic approach to analysing extracted data was used, as follows:

- Firstly, the sources were thematically analysed. This involved identifying recurring topics, key issues and gaps that warranted further investigation.
- The research team then engaged in reflection and interpretation, considering the relevance and implications of the extracted data.
- Next, the extracted data were synthesised with a focus on qualitative insights and storytelling, prioritising lessons learned and diverse perspectives over purely quantitative metrics. This approach aimed to prioritise the interpretation of rich, descriptive information from the studies, capture nuanced insights, experiences and perspectives across diverse contexts, identify key themes and lessons learned from the existing literature and highlight diverse voices, experiences and perspectives.
- Finally, an iterative review process was undertaken, incorporating feedback from expert stakeholders to interpret and refine the methodology, findings and recommendations.

Finding 1 - There is a paucity of surveillance of mental health, substance use and gambling among Pasifika peoples in Aotearoa

Summary

- There is currently no consistent surveillance of mental health, substance use and gambling among Pasifika peoples in Aotearoa.
- There are major gaps within the data currently being collected, particularly relating to Pasifika elders, children and young people, disabled people and Rainbow people. Other key gaps include ethnic-specific data, disorder-specific data, data on the social determinants and impacts of mental health, substance use and gambling issues and inconsistency in the tools and definitions used.

In recent years, there have been some positive developments in the collection of data on mental health, substance use and gambling among Pasifika peoples in Aotearoa, notably the work undertaken by Health New Zealand on the New Zealand Health Survey[4], the Mental Health Monitor[19], and the Health and Lifestyles Survey[19]. However, surveillance continues to be inconsistent and there are major gaps within the data currently being collected, summarised below. A table containing further detail on the studies included in the scoping review is included in Appendix 1.

Pasifika elders, children and young people

Existing surveys were largely oriented towards working age adults, with surveillance of the experiences of children and young people less common and often relying on parental reports. Longitudinal studies such as the Pacific Islands Families Study (PIFS)[20] and the Growing Up in New Zealand (GUINZ)[21] study collected mental health and addiction data for children, while the Youth2000 series collected equivalent data on young people[9]. The experiences of Pasifika elders were not the focus of any studies, and findings specific to older people were rarely reported.

Disabled people

While the New Zealand Health Survey Data Explorer[22] publishes data on disabled people, data on people who are both Pasifika and disabled are not readily available. Disabled people are known to experience high or very high levels of distress at rates about three times higher than the general population[83], therefore this is an important gap.

Rainbow people

Data on mental health, substance use and gambling among Pasifika peoples who identify as Rainbow was a significant gap, especially given the stigma, discrimination and other challenges experienced by this population group.

Ethnic-specific data

None of the health surveys included in the scoping review reported Pasifika ethnic-specific findings. In some instances, longitudinal studies reported results for larger Pasifika groups, such as Samoan, Tongan, Cook Islands and Niuean peoples.

Disorder-specific data

Surveys mostly focused on symptoms of depression and anxiety or on general psychological distress, with some inclusion of eating and substance use disorders. There was a lack of data on eating and substance use disorders and other mood and anxiety disorders, dissociative disorders, psychotic disorders and neurodevelopmental disorders. Information regarding addiction – particularly gambling addiction – was very limited. The Health and Lifestyles Survey[19] and the New Zealand Health Surveys[4] have recently discontinued data collection on specific disorders such as anxiety, depression and other mood disorders, contributing to the incompleteness of the picture.

Data on the social determinants and impacts of mental health, substance abuse and gambling issues

Numerous surveys and studies included in the scoping review collected data on the social determinants of mental health, substance use and gambling. This included longitudinal studies, particularly the PIFS[20] and the GUINZ study[21]. However, social determinants appear to have gone largely unexplored in mental health and addiction epidemiological and surveillance studies.

While Te Rau Hinengaro[1] and the 2007/2008 New Zealand Alcohol and Drug Use Survey[23] considered the impacts of mental health and substance use issues in terms of disability and economic participation, other impacts (for example, family functioning, participation in education, spiritual wellbeing, etc) have not been explored to the same extent.

Inconsistency in tools and definitions used

Where some surveys explicitly asked respondents about anxiety and depression, other surveys focused on past diagnoses of mental illness and/or symptoms of mental distress, such as fatigue and restlessness. These questions all elicit different responses and therefore different insights into mental health, substance use and gambling among Pasifika peoples. Reports such as Te Kaveinga[24] identify opportunities to better leverage existing datasets, including through the Integrated Data Infrastructure (IDI).

Finding 2 - Pasifika peoples in Aotearoa are disproportionately affected by mental health substance use and gambling issues

Summary

- Te Rau Hinengaro[1] showed that historical assumptions of low rates of mental illness among Pasifika peoples were inaccurate. Historically (and presently) there were higher rates of mental illness among Pasifika peoples than other ethnic groups, including suicidal ideation and attempts, and lower rates of service access[1].
- More recently, self-reported data from the New Zealand Health Survey[4] indicates higher levels of psychological distress and hazardous drinking among Pasifika peoples.
- New Zealand Health Survey findings[4] also indicate increasing use of illicit drugs such as cocaine and hallucinogens among Pasifika peoples, and increasing use of cannabis, ecstasy and MDMA among Pasifika men.
- Pasifika peoples in Aotearoa appear to gamble less than other ethnic groups overall. However, rates of problem gambling are roughly twice that of NZ European/Other peoples[84].

Although it is difficult to meaningfully identify trends due to the paucity of surveillance outlined in the previous section, there is evidence that Pasifika peoples are disproportionately affected by mental health, substance use and gambling issues. The New Zealand Health Survey[4] and the Health and Lifestyles Surveys[19] have enabled some ongoing cross-sectional observation. The GUINZ study[21], the Youth2000 series[9] and the PIFS[20] offer more targeted longitudinal insights. Key patterns and trends are summarised as follows.

Mental health issues

Generally, Pasifika peoples appear to be experiencing higher rates of mental distress than the general population[4]. There was significant variation in the measures used by the surveys and studies included in the scoping review, for example, a focus on the clinical symptoms of depression and anxiety compared to general feelings of malaise or negativity.

Existing studies offered limited insights into the broader range of disorders, such as other mood anxiety disorders, eating disorders, substance use disorders, dissocial disorders, psychotic disorders and neurodevelopmental disorders.

Substance use and abuse

Estimates of drug use among Pacific peoples published in 2008 indicated relatively lower levels of drug use among individuals aged 16 to 64 years[23]:

- Approximately 41.6% of Pacific peoples were estimated to have used drugs recreationally at some point in their lives. Pacific women, however, were significantly less likely to have engaged in recreational drug use both over their lifetime and within the past 12 months, compared to men and women in the general population.
- Among individuals who reported using drugs in the past year, Pacific men were significantly less likely to report driving or working under the influence of drugs than their counterparts in the general population.

- The lifetime prevalence of cannabis use among Pacific adults was recorded at 37.1%. Pacific women were notably less likely to have ever used cannabis and were significantly less likely to be daily cannabis users compared to men and women in the general population.
- Pacific men and women were also less likely to have used prescription stimulants, amphetamines, hallucinogenic drugs (both synthetic and naturally occurring), cocaine and ecstasy over their lifetime, compared to men and women in the general population.

However, subsequent studies conducted since the 2007/2008 Alcohol and Drug Use Survey suggest an increasing trend in the use of cannabis and other illicit substances, including cocaine and hallucinogens use among Pasifika peoples, and cannabis, ecstasy and MDMA use among Pasifika men[4].

Inequities between Pasifika and other population groups persist in several key areas, including:

- **heavy alcohol consumption**, with Pasifika peoples more likely to engage in excessive drinking when consuming alcohol, and therefore at higher risk of alcohol harms[4]
- **use of kava**, with numerous studies indicating that Pasifika men consume kava at significantly higher rates than individuals in other demographic groups.

While Pasifika youth appear to be drinking excessively less often than in the past and less frequently than their peers, further research is needed to fully understand the patterns of illicit drug use among Pasifika young people.

Gambling

The pattern of adult alcohol use noted above was repeated with respect to participation in gambling versus problem gambling. Pasifika peoples appear to gamble less overall, however, rates of problem gambling are roughly twice that of NZ European/Other peoples. Results also indicate that gambling is a potential problem among Pasifika children and young people, although more insights are needed.

Appendix 2 provides a summary of the latest data available for each issue/area, general patterns and trends based on previous surveillance reports, and future considerations for any national prevalence study. Where possible, data for parents, children and young people are reported.

Finding 3 - There are some risk and protective factors for mental health, substance use and gambling issues that are unique to Pasifika peoples

Summary

- Data on risk factors for mental health, substance use and gambling issues are routinely collected as part of surveillance and longitudinal studies. Common risk factors include:
  - physical and behavioural factors, such as poor health status, poor sleep, substance use and gambling
  - demographic risk factors, such as youthfulness, female gender, Pasifika-specific migration history, disability and Rainbow identities
  - socioeconomic status, including deprivation, low housing quality and unemployment and underemployment
  - family and community relationships, including family conflict, intimate partner violence, partner separation, sole parent status, partner engagement in gambling, various maternal factors and peer relationships
  - experiences of discrimination, exclusion and acculturation.
- Unique risk factors for Pasifika peoples include ethnic identity and acculturation-related stressors, such as migration history and experiences and mixed ethnic identities. Additionally, family conflict, intimate partner violence and low parental monitoring are significant risks, particularly for Pasifika youth and mothers.
- Information about protective factors was relatively limited. However, protective factors typically align with Pasifika cultural values and models of health belief. Family and social unity, socioeconomic stability, good physical health and healthy habits, spiritual connectedness and a strong sense of belonging – especially to culture and place – have all been associated with better mental health and wellbeing outcomes to varying degrees[1,24].

Given the breadth of qualitative studies of Pasifika mental health and substance use undertaken to date, and the significant work that Le Va has already done to translate these qualitative insights about risk and protective factors into public health resources and public health practice[25], this section focuses on how risk and protective factors have been assessed by the surveillance and longitudinal studies included in this scoping review.

There were a limited number of sources that provided insights into the associations between risk and protective factors and mental health, substance use and gambling. Where these were provided, they were generally limited to associations between demographic factors and prevalence. For example, Te Rau Hinengaro[1] and Te Kaveinga[24] found that being a Pasifika young person is associated with a higher risk of mental distress compared with the total Pasifika population. Longitudinal studies were a better source of data, providing a range of insights into risk and protective factors (although these were still rather limited).

While adverse childhood experiences (ACE) are widely recognised as risk factors for a range of negative health and wellbeing outcomes, including suicide[85], none of the studies included in this review focused specifically on ACE among Pasifika. Similarly, child maltreatment and sexual abuse were not examined. This reflects a notable gap in the longitudinal and surveillance-based literature and highlights an important area for future research. Strengthening the evidence base on the long-term impacts of ACE, child maltreatment and sexual abuse within Pacific communities would support more culturally responsive and prevention-focused approaches.

Key findings are summarised in the following tables. Generally speaking, routine data collection methods often lack the cultural nuances important for understanding risk and protective factors for Pasifika peoples, particularly ethnic-specific factors and those for Pasifika peoples with intersectional identities.

Physical and behavioural risk factors

Poor health status	✕ Poor health status was associated with poor mental health among Pasifika peoples. Self-rated health is monitored in the New Zealand Health Survey[4] and longitudinal studies, with the most recent results indicating that 20.3% of Pasifika peoples report poor or fair health compared to 13.8% of the total population[23]. ✕ The GUINZ study[21] reported that moderate to severe nausea during pregnancy was a risk factor for perinatal depression[26] and that poor health status was a risk for paternal depression symptoms among Pasifika fathers[27]. ✕ The high rates of depressive symptoms amongst people with physical disabilities[28] highlight the need to further explore how specific physical disabilities contribute to mental health issues.
Poor sleep	✕ Poor sleep is an established risk factor for poor mental health, including anxiety, depression[30] and attention deficit hyperactivity disorder[31]. The relationship between sleep and poor mental health is complex, given poor sleep is also a symptom of many mental health disorders. ✕ Sleep was added to the New Zealand Health Survey[4] in 2017/18 for both children and adults. The 2022/23 survey found that approximately 35.3% of Pasifika children (vs 23% of total population) and 32.5% of Pasifika adults (vs 26.8% of total population) sleep less than the recommended hours of sleep for the relevant age category[28]. ✕ A recent study has used New Zealand Health Survey[4] data to highlight poor sleep as a risk factor for mental health issues for Pasifika children[32].
Substance use and gambling	✕ Alcohol consumption, smoking and gambling are all linked to psychological distress, with a complex, mutually reinforcing pattern of distress and hazardous/problematic substance use and gambling noted for Pasifika parents in particular[33]. ✕ As drug and alcohol use is typically higher amongst Pasifika men than women, gendered differences also warrant further exploration[23].

Demographic risk factors

Youthfulness and female gender	✕ A number of studies and surveys have found that Pasifika young people, in particular young Pasifika females, are at higher risk of depression/more likely to show depressive symptoms than other age groups[1,24,26]. ✕ The PIFS[20] found that being an older mother (aged 40+) was significantly associated with increased gambling behaviours[34].
Pasifika-specific ethnicity	✕ The PIFS[21] found that: • Samoan children showed higher rates of symptoms of depression than other Pasifika children. • Tongan and Cook Islands fathers experienced perinatal depressive symptoms more often than other ethnic groups. • Tongan mothers were more likely to gamble than those of other Pasifika ethnicities[33]. ✕ Te Kaveinga[24] found that mixed ethnicity (mainly Pacific/European) was associated with poorer mental health and wellbeing outcomes, often associated with perceived tensions in cultural identity and a lack of acceptance from either ethnic group.
Migration history	✕ Migration history also appeared to contribute to risk, with Te Rau Hinengaro[1] finding that Pasifika peoples born in Aotearoa were more likely to report mental health and addiction issues than those who migrated after the age of 18. However, this has not been well explored in subsequent studies. Further investigation into how the timing of migration influences mental health outcomes is also needed, as individuals may face distinct challenges depending on their age at migration.
Disability and Rainbow identities	✕ Based on the higher rates of mental illness amongst people with disabilities[28] and the higher rates of mental health service use by Pasifika Rainbow people[16], disability and Rainbow identities also appear to be demographic risk factors. However, further exploration is needed.

Risk factors related to socioeconomic status

Deprivation is a well-known risk factor for most health outcomes, including mental health and substance use[35]. There are a range of indicators to assess socioeconomic status, with all surveillance and longitudinal studies included in this review using some form of socioeconomic measure.

Deprivation	✖ The PIFS found that: • Mothers living in the upper quartile of the neighbourhood problem scale (ie most problematic regarding size, street accessibility, condition, damp, cold, pest presence and cost) were almost twice as likely to be experiencing psychological distress than those in the lower quartile (ie least problematic)[36]. • The strongest relationship was between deprivation and distress, with those in the upper quartile of the deprivation index being 7.3 times more likely to exhibit psychological morbidity (the presence of psychological disorders or symptoms negatively impacting on an individual's mental health and wellbeing)[36]. • Deprivation was also associated with substance use and gambling. While high and low levels of deprivation were not significantly associated with gambling risk, mild/moderate deprivation was. Proximity to gambling venues in deprived neighbourhoods was also noted as a risk factor[33]. • For Pasifika young people, deprivation and gang involvement at age nine were significantly associated with gambling at ages 14 and 17[34]. ✖ The 2007/2008 New Zealand Drug and Alcohol Survey[23] reported that people living in more socioeconomically deprived areas (NZDep2006 quintile 5) were significantly more likely to have used drugs in the past year, compared with people living in less deprived areas (quintile 1), after adjusting for age. However, this association was not explored specifically for Pasifika peoples.
Low housing quality	✖ Housing quality has been found to have a significant impact on the mental health of Pasifika families, particularly poor housing conditions and exposure to pests (as opposed to house size, accessibility, dampness, temperature and cost)[37].
Unemployment and underemployment	✖ Unemployment and underemployment were reported by both the PIFS and GUINZ studies as risk factors for poor mental health, particularly affecting Pasifika fathers[26,27].

Risk factors related to family and community relationships

Family conflict	✕ The GUINZ study[21] found that for Pasifika parents, perceived stress in the other partner (regardless of gender) and experiences of conflict within the relationship and broader family were associated with increased risk of perinatal depressive symptoms.
Intimate partner violence, partner separation and sole parent status	✕ Intimate partner violence (particularly physical violence, rather than verbal) more than doubled the risk of perinatal and ongoing depression for Pasifika mothers[38]. ✕ The PIFS[20] and the GUINZ study[21] found that for Pasifika fathers, separation from the baby's mother was associated with increased risk of depression[37,39]. ✕ The PIFS[20], though not the GUINZ study[21], found that not having a partner was a risk factor for Pasifika mothers[37].
Partner engagement in gambling	✕ Having a partner who gambled was associated with higher likelihood of gambling for mothers[40,-43].
Various maternal factors	✕ Poor mother-child relationships, poor maternal mental health, and low maternal education have been found to have negative impacts on the mental health and wellbeing of Pasifika children[44,45,46]. ✕ Low parental monitoring was associated with increased gambling amongst Pasifika children and young people[44,45,46]. ✕ Previous experiences of perinatal depression are a risk factor for Pasifika mothers[37].
Peer relationships	✕ Low connectedness at school and trouble with friendships has been found to be a significant mental health risk factor for Pasifika adolescents[44].

Risk factors related to discrimination, exclusion and cultural identity

Discrimination	✕ Experiencing discrimination is a significant mental health stressor that can contribute to poor mental wellbeing. ✕ When discrimination due to a mental illness occurs, this can further exacerbate the psychological distress experienced by Pasifika peoples. Data from the two most recent Health and Lifestyle Surveys[19] highlight this issue: in 2020, 23.5% of Pasifika peoples with a mental illness reported experiencing discrimination, compared to 21.9% of the total population with a mental illness[29].
Exclusion and bullying	✕ Te Kaveinga[24] found that exclusion from social groups was strongly associated with increased depression symptoms. ✕ The findings from the PIFS[20] reiterate this, highlighting that experiences of bullying – as a victim or a perpetrator – is a significant risk factor for depression amongst Pasifika children, as well as a contributor to gambling risk[40].
Negative experiences of health services	✕ Experiences of racial discrimination and unfair treatment by health professionals have also been identified as risk factors for depression amongst Pasifika parents in the GUINZ study[21], and the impacts of such experiences are cumulative[47]. ✕ The GUINZ study identified a lack of a regular doctor as the strongest predictor of depressive symptoms, with 40% of Pasifika pregnant women indicating that they did not have a regular doctor, increasing the likelihood of developing depression symptoms by 4.5 times[26].
Acculturation	✕ The GUINZ study[21] found that negative feelings towards the dominant culture within Aotearoa and not seeing one's own culture as important are risk factors for perinatal depression[26]. A reduced sense of cultural identity was also identified by the PIFS[20] as a risk factor for gambling[41].

Protective factors

Protective factors for Pasifika peoples typically align with Pasifika cultural values and models of health belief. Family and social unity, socioeconomic stability, good physical health, healthy habits, spiritual connectedness and a strong sense of belonging – especially to culture and place – have all been associated with better mental health and wellbeing outcomes to varying degrees[1,24].

The surveillance studies included in this scoping review had much less of a focus on protective factors. However, the New Zealand Health Surveys[4] have increasingly focused on wellbeing. Collection of data relating to family wellbeing began in the 2021/22 survey (eg 'how would you rate how your family is doing these days?'). The 2022/23 survey reported that 82.7% of Pasifika peoples rated their family wellbeing as 'high or very high', which is similar to the equivalent figure of 83.7% for the total population.

The biennial Health and Lifestyles Survey[29] has routinely collected data aligned with protective factors for Pasifika peoples for some time. This includes items related to:

- family (eg 'my family is doing well')
- social connectedness (eg 'my social relationships are supportive and rewarding')
- cultural connectedness (eg 'I feel strongly connected to my culture' and 'maintaining a strong connection to my culture is important to me').

Te Kaveinga[24] included these data sources from the 2018 survey to report on protective factors for Pasifika peoples.

Both the PIFS[20] and the GUINZ study[21] have reported on protective factors for Pasifika peoples, finding significant associations with reduced depression, gambling and substance use. The factors identified as protective against depression have primarily been reported regarding children, and include:

- positive perception of self
- positive perception of physical abilities
- positive parental and peer relationships
- high verbal intelligence
- high performance at school
- positive parenting
- Tongan ethnicity[40].

Pregnancy has been reported as protective against alcohol consumption for both Pasifika mothers and fathers[48]. In terms of gambling, religious affiliation and being separated or a sole parent have been reported as protective factors for Pasifika mothers[41], while high cognitive function has been reported as protective for Pasifika children and young people[45].

Finding 4 - There is a lack of assessments and diagnostic tools that are valid and reliable for use with Pasifika peoples in Aotearoa

Summary

- The Pacific Identity and Wellbeing Scale (PIWBS) and PIWBS-R (revised) have been developed and validated with Pasifika peoples in Aotearoa, although are not designed for clinical assessment and diagnosis.
- The Matalafi Matrix, and the Popao Cultural and Collaborative Assessment (PCCA) are two additional tools to support Pasifika clinicians to undertake more holistic assessments and treatment planning.
- Only two assessment and diagnostic tools have been validated for Pasifika peoples in Aotearoa: ASSIST and the Edinburgh Postnatal Depression Scale.
- Few tools have been validated for young people, and even fewer for children.
- While various tools such as the Patient Health Questionnaire 9 (PHQ-9) have been modified for use with global Indigenous populations, the cultural validity of these tools has been found to be limited (see Appendix 3).

Expression of distress varies across cultures, raising questions about the effectiveness of widely used assessment measures for mental health disorders within diverse populations and across diverse settings[49,50]. In particular, it is possible that assessments and diagnostic tools with Western origins skew prevalence estimates in population-based studies[51]. Therefore, cross-cultural validation of assessment tools is essential to capturing the unique experiences and expressions of mental health among Pasifika peoples.

This scoping review examined a range of tools used in the assessment and diagnosis of mental health and substance use issues within Pasifika peoples in Aotearoa or comparable groups, with a focus on their validity, utility and reliability. In addition to summarising the four available Pasifika-specific wellbeing tools, a total of 30 publications regarding assessment and diagnostic tools were included in this scoping review. Our findings are summarised as follows.

Pasifika-specific wellbeing tools

All of the Pasifika-specific tools detailed below require direct clinical administration and significant clinical insight to support interpretation. In addition, they do not consistently align with broader current understandings of mental illness and addiction. While none of these tools are adequate on their own for direct translation into a survey tool, all offer insights into the potential development of a Pasifika-specific diagnostic tool and the types of areas that a comprehensive prevalence study of Pasifika mental health, substance use and gambling might explore.

PIWBS and PIWBS-R

Two tools have been developed and validated for Pasifika peoples in Aotearoa: the Pacific Identity and Wellbeing Scale (PIWBS) and the Pacific Identity and Wellbeing Scale – Revised (PIWBS-R)[7,8]. The PIWBS and the PIWBS-R use a clinically validated, multi-factor model of Pasifika identity and wellbeing to examine the relationship between wellbeing and cultural identity for Pasifika peoples. The PIWBS and PIWBS-R scales assess:

- perceived familial wellbeing
- perceived societal wellbeing
- Pasifika connectedness and belonging
- religious centrality and embeddedness
- group membership
- cultural efficacy (PIWBS-R only).

While these scales were developed for research purposes rather than clinical assessment and diagnosis, the PIWBS and PIWBS-R questionnaires may offer useful insights into how Pasifika peoples and their families experience culture, cultural connectedness and collective wellbeing, and their impacts on mental health and wellbeing.

Results from the validation of the PIWBS show construct definitions for the five-factor model of Pasifika identity and wellbeing, providing a comprehensive framework for understanding Pasifika peoples' psychological dimensions. Moving forward, longitudinal research using the PIWBS could deepen our understanding of Pasifika identity and wellbeing dynamics, and culturally safe interventions could benefit from insights from the scale's assessments. Inclusion of the cultural efficacy factor supplements the PIWBS, offering valuable insights into the diverse identities and wellbeing of Pasifika communities in Aotearoa. Moreover, the analysis underscores the versatility of the PIWBS-R and predictive power in areas such as language confidence, church attendance, travel patterns, health satisfaction and diabetes diagnosis. The PIWBS-R has a wide range of potential applications for research benefitting Pasifika populations.

The Matalafi Matrix, the Popao Cultural and Collaborative Assessment (PCCA) Scale

These two tools have been developed to support Pasifika clinicians to undertake assessments and treatment planning in a more holistic way that better aligns with Pasifika health beliefs.

The Matalafi Matrix

The Matalafi Matrix[52] was developed and qualitatively validated by Waitematā District Health Board (although it was noted that further internal validation and a user manual were needed to help ensure validity and consistency)[52]. The Matrix involves a series of questions designed to evaluate the consumer's wellbeing against five key areas, in alignment with the DSM-IV-OCF:

- **Aiga (family relationships) -** Peers, roles, responsibilities and affiliations.
- **Tino Atoa (physical wellbeing) -** General appearance and health, physical disorders and problems, etc.
- **Lagona (emotional and psychological wellbeing) -** Emotions and mood related to how the person feels about their current situation (eg depression, anxiety, guilt).
- **Aganu'u (cultural) -** Cultural or ethnic meanings and considerations, how they explain what is happening (attributions), perceived causes of abnormal thoughts, and beliefs or experiences (perceptual abnormalities).
- **Fa'alegaga (spirituality) -** What spirituality means to the individual, and how spirituality impacts wellbeing.

The PCCA Scale

The PCCA Scale[53] is an unvalidated mental health and addiction assessment that uses the metaphor of the Popao (Tongan for canoe/waka/va'a/vaka) to explore and communicate care priorities. The 12-

part questionnaire sits alongside the Popao Health Model[53] and, like the Matalafi Matrix, is a holistic assessment of Tongan peoples' wellbeing. Rather than aligning with a Western framework such as the DSM-IV-OCF, the PCCA scale draws on the embedded cultural logic of its underpinning health model to assess the following:

- Knowledge of condition - *Mahino'i/ 'Ilo'i hoto tukunga.*
- Knowledge of treatment - *Mahino'i/ 'Ilo'i 'a e ngaahi tokoni / tauhi 'oku lolotonga fai kia au 'i he 'eku folau ki he Mo'ui Lelei.*
- Ability to engage support - *Malava ke tali e ngaahi tokoni/poupou.*
- Ability to share in decisions - *Fofola e Fala ka e fai e Talanga.*
- Ability to arrange and attend appointments - *Malava ke fakakaukau'i mo fakahoko ngaue.*
- Understanding of monitoring and recording - *Mahino'i e founga tokanga'i (monita'i) mo e lekooti.*
- Ability to monitor and record - *Malava ke ke tokanga'i(monita) mo lekooti.*
- Understanding of symptom management - *Mahino'i e founga ke tokanga'i 'aki koe.*
- Ability to manage symptoms - *Malava pe 'o tokanga'i koe?*
- Ability to manage physical impacts - *Malava ke matu'uaki 'a e ha'aha'a 'o natula.*
- Ability to manage social, spiritual, and emotional impacts - *Malava ke matu'uaki e peau fakasosiale, fakalaumalie, mo e ongo.*
- Journey towards a healthy lifestyle - *Fakalakalaka ho'o mo'ui kakato. Fononga ki he Mo'ui Lelei*[53].

Assessment/diagnosis tools validated with Pasifika peoples in Aotearoa

Our scoping review found that only two assessment/diagnostic tools have been validated with Pasifika peoples in Aotearoa: a modified version of the ASSIST 3.0 (ASSIST 3.0r) with Pasifika adults[2]; and translated versions of the Edinburgh Postnatal Depression Scale (EPDS) with Samoan and Tongan mothers[3]. The scoping review also identified a third study assessing response parameters of the Kessler K-6 in a diverse sample of New Zealanders, which included Pasifika peoples[55].

ASSIST 3.0r

Based on focus groups with Pasifika community members and an expert group of Pasifika alcohol and drug practitioners, the first study recommended the following broad amendments to ASSIST 3.0r:

- Shortening the questionnaire.
- Using colloquialisms.
- Expanding drug categories (including a separate category for kava).
- Simplifying language using everyday terms.

The subsequent ASSIST 3.0r was then validated with 150 Pasifika participants categorised into three groups: (i) abstinent or non-problematic users of alcohol and other drugs; (ii) current substance users (abuse); and (iii) dependent users. Overall, the findings showed that the ASSIST 3.0r is an acceptable screening tool for use with Pasifika New Zealanders[2]. The ASSIST 3.0r score showed a significant correlation with the total number of individual diagnoses recorded on the MINI-Plus ($r=0.42$, $p<0.001$)[2].

EPDS

As part of the second study, the EPDS was translated into the Samoan and Tongan languages and then independently back-translated by a professional translation service[3]. The translated versions were checked by Pasifika clinical researchers fluent in Samoan and Tongan for appropriateness of language and meaning. The translated version was then administered to 150 Samoan and Tongan mothers who had recently given birth at Middlemore Hospital (four weeks after delivery). Those mothers then undertook the Composite International Diagnostic Interview (CIDI) within four weeks of EPDS completion.

The findings showed that Samoan and Tongan mothers found the EPDS in English and the translated versions easy to complete, confirmed by the Kappa Statistic of 0.85, which showed agreement between the English and Samoan or Tongan versions[3].

Kessler K6

In the third study, the authors assessed the item response parameters of the K-6 in an ethnically diverse population within Aotearoa, including Pasifika peoples. Their findings showed that the K-6 consistently displayed acceptable item response parameters and operated as expected; that is, it provided the highest level of precision among participants with moderate to high levels of psychological distress. This is important, as Pasifika peoples disproportionately experience distress at these levels[55].

Validation studies of assessment/diagnosis tools with comparable populations

Validation findings from comparable population groups show that all tools included in this review (summarised on Appendix 3) perform effectively in their unmodified state. For example, in Australian Aboriginal and Torres Strait Islander peoples, the K-10 and K-5[56,57] were proven to be effective. Modified versions of those tools were also found to be effective. For instance, a modified version of the PHQ-9 performed well in determining the prevalence of depression within Aboriginal and Torres Strait Islander peoples[58,60].

In terms of modifications to standard tools, most included translations and changes to questions. When translations were undertaken, this was generally done as a robust and rigorous process of consultation with translation services, experts and face validity testing with communities. Similarly, where there were modifications to questionnaire items, the process involved consultation with a range of key stakeholders.

Several systematic reviews of global Indigenous populations have shown increasing awareness of the need for adapted and validated tools. In one systematic review[59], authors identified the PHQ-9, and CES-D, and the EPDS as being the most commonly modified tools for global Indigenous populations. In saying this, cultural adaptations (that is, modifications and tests of cultural relevance) were limited. Across most studies, the MINI or CIDI were found to be the gold standard diagnostic tools for assessing mental health disorders. While these tools can be time and resource intensive, some systematic reviews recommend incorporating qualitative as well as quantitative approaches to screening and diagnosis, to ensure a comprehensive approach to mental health assessments with diverse populations.

The PHQ was the most frequently studied tool (n = 5)[58-,63], followed by the Kessler Psychological Distress Scale (n = 4)[55,56,57,64], GAD (n = 3)[65-67], EPDS (n = 3)[3,68,69], AUDIT (n = 3)[70-72], MINI (n = 2)[73,74], CIDI (n = 2)[75,76], ASSIST (n = 1)[2], and SBRIT (n = 1)[77]. No validation of tools for assessing gambling were found. Four systematic reviews were also identified, offering relevant information on a range of diagnostic tools for Indigenous or culturally diverse populations[59,78,79,80] and valuable insights into how these tools could be adapted.

Part 2: Detailed recommendations

Part 2: Detailed recommendations

E vave taunu'u le malaga pe a tatou alo va'a fa'atasi.
Our destiny is within sight when we paddle our canoe together.
- Samoan proverb

This part of the report contains detailed recommendations for the inclusion of Pasifika peoples in any new prevalence study of mental health, substance use, and gambling, based on the comprehensive scoping review of existing literature summarised in Part 1 and consultation with members of Pasifikology and Le Va's Mental Health and Addiction Clinical Reference Group. These recommendations assume that any new prevalence study would be led by a multidisciplinary team with expertise in epidemiology, and designed and implemented in accordance with best practice standards and appropriate ethics standards, guidance and approvals.

Recommendation 1: The involvement of Pasifika clinical, cultural and lived experience experts is crucial

Rationale

Pasifika clinical, cultural and lived experience expertise is crucial to the effective design, implementation and analysis of any new prevalence study. This will ensure the appropriate integration and application of clinical and cultural factors, approaches that are strengths-based, mana-enhancing, and trauma-informed, and ensure the wellbeing of Pasifika participants, families and communities is protected and promoted.

Practical application

- **Pasifika governance and quality assurance**. Ensure Pasifika expertise on the overarching governance group for the study. This would be complemented by a separate, but aligned, Pasifika Advisory Group that supports all phases of the study, providing important cultural leadership and quality assurance. This must be adequately funded and resourced (ideally with dedicated Full-Time Equivalent (FTE)) and should offer diverse perspectives. Membership could include Pasifika people with:
  - cultural expertise in Pasifika knowledge and protocols, with representation from across the different Pacific ethnic groups
  - lived or living experience of mental health distress
  - clinical expertise in mental health, substance use and gambling, with experience in a range of settings (eg primary, community, acute)
  - professional experience in aligned sectors (eg education, research).

It could also include non-Pasifika 'allies' who have demonstrated experience supporting and collaborating with Pasifika peoples.

- **Co-design with a broad range of stakeholders in the study design phase.** For example, Pasifika community leaders, other clinicians and professionals, pre-existing specialist groups (such as Pasifikology, Le Va's Clinical Reference Group, Drua Pasifika Addictions Network, Le Va's Matua council and Pasifika Allied Health Aotearoa New Zealand) and lived experience groups (one village). Ideally, these groups would assist with the promotion and implementation of the survey.
- **A consistent focus on cultural safety.** This will see Pasifika leading engagement with Pasifika participants (where desired by participants), and supporting the cultural safety of non-Pasifika professionals involved in the study.

Recommendation 2: Validation of survey, assessment and diagnostic tools for use with Pasifika peoples is essential

Rationale

There is a lack of survey, screening, assessment and diagnostic tools that are valid and reliable for use with Pasifika peoples in Aotearoa. Assessment tools usually reflect Western or biomedical approaches to assessment and diagnosis, and diagnostic tools are normed with Pasifika populations excluded. At the time of writing, we are aware of only two existing diagnostic and assessment tools that have been validated with Pasifika peoples: ASSIST (alcohol use) with Pasifika adults[2] and the Edinburgh Postnatal Depression Scale with Samoan and Tongan mothers[3].

Practical application

- **Inclusion of disorder-specific data** - While prevalence studies on mental distress, addiction and gambling have included Pasifika populations, there are significant gaps in data on the prevalence of diagnosed disorders. These should be prioritised for any new prevalence study, with clear clinical safety protocols to ensure the safety of both participants and field collectors.
- **Use of current measures** - As a short-term and cost-effective approach, existing survey items and assessment or diagnostic tools appropriate for Pasifika peoples could be used. This includes tools already validated with Pasifika populations and the analysis of existing data sets, such as the New Zealand Health Survey and other research surveys using similar screening measures. Selected tools should prioritise validity and reliability. Pasifika-specific measures of holistic wellbeing must also be included. A key example is the Pacific Identity and Wellbeing Scale (PIWBS), developed and validated by Manuela in 2013 and later revised as PIWBS-R by Manuela and Sibley in 2015. This tool incorporates Pasifika worldviews and culturally significant factors, making it a strong model for holistic wellbeing assessment. It could be adapted for a new prevalence study by reducing the number of items to ensure it remains fit for purpose.
- **Concurrent development of assessment and diagnostic tools by Pasifika, for Pasifika.** In addition to using existing tools, there must be a concurrent and long-term investment in the development of new assessment and diagnostic tools created by Pasifika, for Pasifika. While adapting existing measures is a practical short-term solution, it is equally important to build tools from the ground up that are grounded in Pasifika knowledge systems, cultural values and ways of understanding mental health and wellbeing.
- There is an urgent need for Pasifika-specific tools that assess mental health, substance use and gambling challenges - tools that meet clinical diagnostic standards and also meaningfully reflect Pasifika perspectives and worldviews. These tools would provide more accurate, culturally safe assessments and lead to a better understanding of Pasifika communities.
- This work requires a longer-term timeframe and should be guided by established Pasifika research methodologies such as the Kakala model[5] and the Fa'afaletui Pacific Research Framework[6]. By embedding cultural integrity into the design of these tools, we ensure that

assessments are not only clinically valid, but also culturally relevant and empowering for Pasifika peoples.

- **Pre-validation study** - Once a long list of potential survey items has been identified, a pre-validation study should be undertaken with a cross-section of Pasifika peoples and appropriate sample size.
- **Validation of any language translations.** Data collection instruments should be translated into Pasifika languages to support completion by people who identify with a Pasifika language as a first or preferred language. Translated versions of tools must be tested, to ensure they are performing with the same accuracy, validity and reliability as the English versions. This must ensure that translations are not only semantically accurate, but also conceptually accurate. If this is not feasible, a protocol of the translation process should be followed. Analysis should also capture when a translated version has been used, as a roundabout way of testing its validity and reliability. Alternatively, people administering the survey should be skilled language experts who can provide verbal translation assistance where required. Ideally, there would be a data indicator where verbal translation assistance has occurred.

Recommendation 3: A relationship-based approach using screening and talanoa to complement quantitative data

Rationale

Pasifika cultures are inherently collective and relational. The concept of Va, used in many Pasifika cultures to refer to the relational space between people and things where the reciprocal flow of interpersonal exchange exists, has been used to characterise the relational and balanced nature of wellbeing for Pacific peoples. The pan-Pacific concept and practice of talanoa (conversation) nurtures the Va, deepening connections and relationships. Therefore, talanoa should be embedded in the survey design and data collection approaches for any new prevalence study that includes Pasifika peoples, to complement quantitative data.

Practical application

- **Two-part approach -** Any new prevalence study should consider taking a two-part approach, using a screening instrument followed by a diagnostic measure to a sub-sample (where indicated).
- **Use of talanoa -** The use of talanoa with a sub-sample will complement quantitative data and provide a richer understanding of the experiences of Pasifika peoples. Authentic, non-judgemental and mana-enhancing data collection approaches should be ensured, to understand the specific needs and challenges faced by Pasifika communities. **It is important to note that engaging in talanoa is a specialised skillset requiring training.** Once again, Pasifika research frameworks will have much to offer in the incorporation of talanoa into design and implementation of the survey (as well as the quantitative components).
- **Flexibility of data collection modes -** A range of data collection modes could be employed to accommodate the unique needs and communication preferences of participants, recognising that face-to-face data collection may be most appropriate for talanoa.
- **Periodic deep dives** - Any new prevalence study could use routinely collected data to support ongoing surveillance, complemented by periodic deep dives every five years, given high-quality service design relies on regular surveillance. The purpose of the deep dives would be to offset gaps within existing datasets and literature. Therefore, the focus would be on data not routinely collected by studies such as the Youth 2000 Survey Series[9].

Recommendation 4: The holistic nature of Pasifika health and wellbeing must be prioritised, including a focus on family and social determinants of health

Rationale

For Pasifika peoples, health and wellbeing is holistic – a state of physical, mental, social, spiritual and cultural wellbeing. To enable a strengths-based approach, any new prevalence study must include a focus on protective factors. While information about protective factors is relatively limited in existing studies, it is well known that there are protective factors unique to Pasifika peoples that align with Pasifika cultural values and models of health belief.

Family and social unity is a particularly important protective factor. Pasifika peoples in Aotearoa are a youthful population, with a median age of 23.4 years[10]. This highlights the importance of focusing on family relationships and children and young people. It is important to note that for Pasifika peoples, the 'family' is not limited to the nuclear family. 'Family' encompasses the extended family and is defined by the individual themselves, in line with Pasifika concepts of 'āiga/kāinga.

It is well known that Pasifika peoples are disproportionately affected by adverse social determinants of health. These must be explored, particularly housing, employment, access to education, kai security, deprivation, racism, discrimination and social exclusion.

We acknowledge Pasifika peoples' experiences with mental health services, supports and impacts of mental health distress as important areas of knowledge generation that warrant further examination. However, these fall outside of the scope of the current discussion in this paper.

Practical application

- **A focus on protective and risk factors** - Survey items should elicit data and insights into protective and risk factors. For example, socioeconomic stability, cultural identity, good physical health and healthy habits, spiritual connectedness and sense of belonging – especially to culture and place.
- **A family-based approach to data collection and analysis -** Specific survey questions about family relationships and functioning should be included. In addition, talanoa could be used to incorporate family perspectives. Where possible, the experiences of children and young people should be explored using age-appropriate methods.
- **Data and insights relating to social determinants** - There must be a focus on social determinants of health to enable meaningful monitoring, analysis and interpretation. For example, survey items should be designed to explore how aspects of socioeconomic status and deprivation correlate to risk, experience or prevalence in different areas of mental health, substance use and gambling.

Recommendation 5: Any new prevalence study must be responsive to the diversity of Pasifika peoples

Rationale

There is great diversity among Pasifika peoples. The term 'Pacific' or 'Pasifika' encompasses more than 20 ethnic groups with unique languages, holistic worldviews, traditions and customs, immigration histories, identity and experiences[11]. For instance:

- two in five Pasifika people identify with more than one ethnicity, which is especially common in our young people
- it is well known that the experiences of Pasifika peoples in Aotearoa vary according to age, life stage, gender and sexual identity, disability and other lived experiences. Currently, there are significant data gaps on Pasifika elders, children and young people, disabled people and Rainbow. We know that intersectionality plays a role, for example, a Pasifika person who is also disabled and Rainbow may experience 'double discrimination'
- there is diversity in migration and generational factors, such as whether people are born in Aotearoa or are Pacific-born migrants. Although place of birth can influence identity and service access, these factors are often overlooked.

Practical application

- **Collection and analysis of ethnic-specific data** - This is a basic requirement for any new prevalence study, to produce meaningful insights that reflect the diversity of Pasifika peoples. There could be a focus on our largest Pacific communities (Samoan, Tongan, Cook Islands, Niuean, Fijian and multi-ethnic Pasifika groups), which could guide the membership of any Pasifika advisory group, promotion of the study, validation of assessment and diagnostic tools, investment decisions about translations, recruitment of interviewers, etc. Oversampling of smaller ethnic groups will allow for reliable statistical analysis and sub-group comparisons.
- **Collection and analysis of data on age, disability, sexual and gender identity, religion/spirituality and family circumstances (including languages spoken, migration and generational factors) -** Capture of these data points is another basic requirement. In addition, the collection and analysis of data and insights that enable the experiences of Pasifika people with intersectional identities to be explored.

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Appendices

Appendix 1 - Surveillance and longitudinal studies included in the scoping review

Surveys	Scope	Pasifika inclusion	Tools	Initial year	Regularity
Te Rau Hinengaro: The New Zealand Mental Health Survey[1]	Prevalence rates of major mental disorders.	2,237 Pasifika respondents (total of 12,992 New Zealanders), with oversampling of Pasifika peoples to improve precision of estimates.	CIDI WHO-DAS-II	2004	One-off.
New Zealand Alcohol and Drug Use Survey[23]	Alcohol, illicit and other drug use for recreational purposes.	817 Pasifika respondents (total of 6,784 New Zealanders).	None specified	2007	One-off comprehensive survey.
The Pacific Islands Families Study[20]	Maternal depression, paternal depression, child depression, gambling, alcohol consumption.	1,398 Pasifika children within the context of their families.	EPDS-10 GHQ-12 CDI-S AUDIT-C SOGS-R PGSI Bespoke gambling measures	2000	Longitudinal, assessments undertaken at 6 months, and ages 1, 2, 4, 6, 9, 11, 15, 17 and a subset at 18 years.
Growing Up in New Zealand Survey Series[21]	Maternal depression and anxiety, child depression and anxiety, drug use, alcohol consumption, gambling, eating disorders.	1,200 mothers recruited during pregnancy identified as Pasifika (out of approx. 7,000 mothers).	EDI EPDS-12 CES-DC CESD-10 PROMIS SDQ	2008	Data collection waves every two years, with short check-in or bespoke collections in between waves.

Surveys	Scope	Pasifika inclusion	Tools	Initial year	Regularity
New Zealand Health Survey[4]	Mental health, oral health, physical health, family wellbeing, life satisfaction, sleep, nutrition, alcohol use, tobacco use, illicit drug use, body size, primary care access, mental health care access, emergency department use, sexual orientation, private health insurance (and others being added/removed over time).	For 2022/23, 447 Pasifika adults and 309 Pasifika children (out of 6,799 adults and 2,029 children). Generally, varies from year to year, 6,000-13,000 adults, and 1,000 to 5,000 children.	ASSIST PHQ-SADS SDQ PHQ-9 GAD-7 Somatic Symptoms PHQ-15	2011	Annual.
Te Hiringa Hauora - Health Promotion Agency Surveys[19] **Health and Lifestyle Surveys** **New Zealand Mental Health Monitor/Mental Health and Wellbeing Survey** **Alcohol Use**	Depression, anxiety, psychiatric impairment, attitudes towards and knowledge of depression and anxiety, alcohol consumption, attitudes towards alcohol, gambling participation.	Varies from 1,000-6,000, depending on survey and timing.	RIBS MAKS NZCAMII-III PHQ-9 GAD-7 K10 Bespoke substance use measures.	2008	Alcohol use is monitored annually. Health and Lifestyles is Biennial (last survey conducted 2020). Mental Health and Wellbeing monitor has had three waves: 2015, 2016, 2018.
New Zealand General Social Survey[81]	The wellbeing of New Zealanders aged 15 years and over, covering a wide range of social and economic outcomes: health and wellbeing, work and family life, social attitudes and values, such as views on social welfare, crime and the environment.	Varies from 3,000-12,000.	SF-12 WHO-5	2008	Biennial.

Surveys	Scope	Pasifika inclusion	Tools	Initial year	Regularity
Youth 2000 Survey Series[9].	The personal, family and socioeconomic wellbeing of New Zealand high school students. Includes physical health, mental health, social health, sexual health, drug and alcohol use, family environment, safety, belonging, school engagement, exposure to racism and a wide variety of other factors.	1,130 Pasifika high school students (total of 7,721 New Zealand high school students) (2019).	WHO-5 RADS-SF	2001	Every six years.
The Manalagi Report[16]	The physical health, mental health, health service access, family wellbeing, support systems and faith experiences of Pasifika Rainbow communities.	750 Pasifika Rainbow+ individuals and allies.	None specified.	2021	One-off survey.

Appendix 2 - Summary of prevalence, patterns, and trends in mental health, substance use and gambling among Pasifika people in Aotearoa

Issue	Latest findings available	Date and source	Patterns/trends	Future considerations
Overall psychological distress (anxiety and depression)	Pasifika peoples were more likely overall to report high or very high psychological distress, with percentages ranging from **14.8-17.3%** over the period covered (vs 9.6-11.9% of total population).	2021/22 and 2022/23 New Zealand Health Survey[4]	Increased from **8.4-12.5%** (vs 4.5-8.6% of total population) in the 2011/12-2019/20 period. Te Rau Hinengaro[1] found that 25% of Pasifika people had experienced a mental disorder in the past 12 months, and 46.5% had experienced a disorder at some stage during their lifetime (vs 20.7% and 39.5% of the total population respectively). These rates are significantly higher than those reported via the New Zealand Health Survey[4], however they are also derived from very different assessments. There were also higher 12-month prevalence rates of suicidal ideation (4.5%) and suicide attempts (1.2%) among Pasifika peoples.	The variation in results between Te Rau Hinengaro[1] and the New Zealand Health Survey[4] highlights the impact of taking different approaches to determining psychological distress and/or rates of mental illness. Future consideration needs to be given to what will be assessed (distress, specific disorders, etc) and how.
Parental psychological distress	**23%** of Pasifika mothers experienced antenatal depression symptoms, and that **2-4%** of Pasifika fathers experienced elevated depression symptoms during the natal and postnatal periods. **13%** of Pasifika mothers had elevated depression symptoms when their child was 8 years old.	GUINZ study[21]	PIFS reported **16.1-16.4%** of mothers were assessed as likely experiencing depression. Prevalence varied by ethnicity, ranging from 7.6% for Samoans to 30.9% for Tongans. Notably, 16.1-16.4% is at the top end of the range reported internationally, and prevalence increases to 29.6% for those who had been survivors of intimate partner violence, which is well outside of the usual range.	These results highlight the importance of considering when and how depressive symptoms are measured (eg during and after a pregnancy and other major life events) and whether perinatal depression should be treated as a separate disorder to depression more generally. Gendered differences in experience also play a significant role here and consideration should be given to how these might be captured, including for Pasifika peoples with diverse gender identities.

Issue	Latest findings available	Date and source	Patterns/trends	Future considerations
Youth psychological distress	**25.9%** of Pasifika students reported depressive symptoms in 2019. **26.4%** of Pasifika students reported serious thoughts of suicide and **11.7%** of Pasifika students reported a suicide attempt. It was noted that Pasifika students reported significantly higher rates of depressive symptoms than NZ European/Pākehā students.	Talavou o le Moana - Youth 2019 Pasifika Report[21]	Based on these findings, Pasifika young peoples' mental health has been worsening over time. In 2001, **17.6%** of Pasifika students reported depressive symptoms. In 2007, **18.8%** of Pasifika students reported serious thoughts of suicide and **9.7%** of Pasifika students reported a suicide attempt.	Te Rau Hinengaro[1] highlighted that younger Pasifika peoples are more likely to experience a mental disorder classified as serious than older Pasifika peoples. These findings reflect higher distress amongst young people than the overall population, however this does not include 'more serious' disorders.
Child psychological distress	**11.3-13.8%** of Pasifika children have been reported as experiencing emotional symptoms, and **10.4-14.7%** have been reported as experiencing emotional or behavioural problems (vs 11.4-13.3 % and 9.6-11.0% of the total population respectively).	2021/22 and 2022/23 New Zealand Health Survey[4]	It appears that rates of emotional symptoms and emotional and behaviour problems are increasing for Pasifika children, as rates reported in 2016/17 (the only other time this data was collected) indicate **9.9%** and **10.2%** respectively. Rates appear to be either equal to or higher than the total population, with emotional or behavioural problems being consistently higher. The GUINZ *Now We Are Eight* report found that Pasifika children had the highest mean depression scores (8.7) compared to 7.0 for European children, 7.1 for Asian, and 8.5 for Māori. Mean anxiety scores for Pasifika children were also the highest for Pasifika (52.6) however scores for the other ethnicities are not provided. This corroborates the idea that psychological distress amongst Pasifika children is likely to be higher than for the total population.	The rates here appear lower than for young people or for the total population but are increasing and reflect comparatively high distress. These results are also based on parental reporting. Consider how children's voices and experiences of their own wellbeing might be captured.

Issue	Latest findings available	Date and source	Patterns/trends	Future considerations
Overall alcohol use	**58.3%** of Pasifika peoples aged 15+ consumed alcohol in the previous 12 months (vs 76% of the total adult population), 28.2% of whom consumed alcohol hazardously (vs 21.9% of the total adult population), and 35.0% of whom engaged in heavy episodic drinking at least monthly.	2021/22, 2022/23 and 2023/2024 New Zealand Health Survey[4]	Alcohol consumption has remained relatively stable from the 2007/08 Alcohol Use Survey that identified **61.2%** of Pasifika peoples aged 16-64 consumed alcohol in previous year. In terms of alcohol use, this is corroborated by the New Zealand health survey 2011/12 - 2019/20 which identified that **54.9-64.1%** (vs 79.4-81.6%) of Pasifika peoples had consumed alcohol in the previous 12 months and that **35.6%-39.0%** (vs 24.9-26.1%) had been drinking in potentially unsafe ways in the past year (n.b. questions about hazardous drinking were introduced in 2016/17). In the 2023/24 Annual Health Survey, hazardous drinking (defined as an AUDIT score of 8 or higher) among Pasifika (16.2%, 12.2-21.0) was similar to the total population (16.6%, 15.5-17.7) and European/other population (17.9%, 16.5-19.2). However, past-year drinkers who engage in heavy episodic drinking at least monthly, were significantly higher among Pasifika (35%, 27.8-42.7), compared to the European/other and total populations (22.8%, 21.2-24.6 and 23.4%, 22.0-25.0, respectively).	Consider greater emphasis on understanding drinking in a 'hazardous way' and a focus on patterns of drinking most closely aligned to addiction. There is also some indication that rates of Pasifika women's alcohol consumption have increased over time, which highlights the potential for surveillance of gender-based patterns. Age/life stage should also be explored here, as detailed insights into this aspect of alcohol consumption for Pasifika peoples are not readily available.

Issue	Latest findings available	Date and source	Patterns/trends	Future considerations
Parental alcohol use	Approximately **13.6-15%** of Pasifika mothers were classified as problem drinkers, and **26-33.8%** of Pasifika fathers across data collection waves. During pregnancy, the figure dropped to **2.7%** for mothers.	Pacific Islands Families Study	These rates appear to be lower than for the general population, although the rates of problematic drinking approach the overall rate indicated by data from the 2021/22 and 2022/23 New Zealand Health Survey[4].	The lower rates here reiterate the consideration raised regarding measurements of parental depression and the need to consider gendered differences, including for Pasifika people with diverse gender identities.
Youth alcohol use	**12.7%** of Pasifika high school students reported binge drinking. Binge drinking was found to be less common amongst Pasifika students than NZ European/Pākehā students.	Talavou o le Moana (Youth 2019 Pasifika Report)	The survey series reports a significant decline in Pasifika students' substance use, with the rate of binge drinking having dropped from **23.2%** in 2001.	Given the heightened prevalence of hazardous drinking amongst the adult Pasifika population, consideration should be given to understanding other forms of hazardous drinking in addition to binge drinking. It may also be valuable to consider frequency.
Overall drug use	**16.8%-21.5%** of Pasifika peoples report using cannabis (vs 14.2-15.3%). Use of cocaine is now higher amongst Pasifika peoples than the total populations (**0.9-3.8%** vs 1.0-1.3%) and ecstasy use is about equivalent (**3.5-4.9%** vs 3.6-4.8%).	2021/22-2022/23 New Zealand Health Survey[4]	Reported cannabis use has been consistently higher amongst the Pasifika population - **8.3-17.8%** vs 8.1-15.5% for the 2011/12-2019/20 period. Use also appears to be generally increasing. The use of cocaine (**0.0-1.9%**) and ecstasy (**1.1-3.0%**) also appears to be increasing.	With the increasing use of illicit drugs among Pasifika peoples, this could be further explored. Consideration also needs to be given to patterns of use and problematic/hazardous use (as opposed to any use). Reasons for use should also be explored.
Youth drug use	**3.6%** of Pasifika high-school students reported marijuana use. In 2001, students were asked about other illegal substances. **3%** of Pasifika females and **5%** of Pasifika males indicated they had used drugs in the previous month.	Youth 2000 Pasifika Report and Talavou o le Moana - Youth 2019 Pasifika Report[9]	This survey series reports a decline in the use of marijuana, with the rate having dropped from 5.9% in 2001.	These results highlight the need to consider engaging with the use of a wider range of illicit substances amongst Pasifika young people and to explore problematic/hazardous use as opposed to any use, and reasons for use, as insights regarding addiction for this group are not readily available.

Issue	Latest findings available	Date and source	Patterns/trends	Future considerations
Kava use	**11.7%** of Pasifika people reported using kava (vs **6.3%** of the total population)	2007/08 New Zealand Alcohol and Drug Use Survey[23]	No other surveillance has been undertaken of kava use in Aotearoa.	As a uniquely Pasifika substance, it would be beneficial to collect more data regarding kava use. Careful consideration of how to approach this will be needed.
Overall gambling	Participation in online gambling was reported as lower among Pasifika peoples (**21%** vs 27%). It appears that Pasifika peoples participate in gambling at lower levels overall, with weekly purchase of Lotto tickets at **13.5%** (vs 18.0%), weekly use of gaming machines at **1.0%** (vs 1.0%), and monthly engagement in horse, dog or sports betting at **1.1%** (vs 3.4%). Problem gambling amongst Pasifika peoples was reported at **3.0%** (vs 1.4%).	2020 Health and Lifestyles Survey[4]	Overall, participation in gambling appears to have increased slightly since 2018. While more Pasifika peoples (**15.4%**) reported weekly purchase of Lotto tickets in 2018, only **0.9%** reported weekly use of gaming machines and **0.9%** reported monthly engagement in horse, dog or sports betting at **2.3%.** Problem gambling, on the other hand, appears to have decreased slightly from **3.5%** in 2018 (and significantly from 6.5% in 2010). The 1999 National Problem Gambling Prevalence Survey identified **11%** of Pasifika adults had experienced a lifetime problem or pathological gambling, compared with **1.9%** of the European population.	The pattern here reflects what is seen with alcohol use whereby, while overall participation is lower, problematic participation is higher. Reasons for gambling may be worth considering, alongside capturing a broader range of gambling types. The relative difference between the 1999 rates and the recent rates also needs further exploration.

Issue	Latest findings available	Date and source	Patterns/trends	Future considerations
Parental gambling	At six weeks postpartum, the 12 months prevalence of Pasifika mothers who participated in gambling was **30.1%**, with a median spend of $10 per week. Gambling prevalence was also higher amongst mothers aged 40+. At 12 months postpartum, the 12-month prevalence of gambling increased slightly to **30.7%**, and at 24 months postpartum it dropped slightly to **29.4%**, but with no change in spending. Approximately **1%** of mothers were classified as problem gamblers, and **2%** of fathers.	PIFS[20]	PIFS[20] found ethnic differences in gambling prevalence amongst mothers, with Tongan and Cook Islands mothers being significantly more likely to gamble than their Samoan counterparts.	Rates of problem gambling appear to be slightly lower amongst parents, potentially replicating the patterns seen with alcohol use in another way. The results highlight gendered differences, and differences related to timing around birth as a significant life event, both of which should be considered.
Youth gambling	**3%** of Pasifika high school students reported spending more than 30 minutes per day gambling (vs **0.5%** of NZ European students). **6%** of Pasifika students had gambled at least once in the past 4 weeks, and **3%** of Pasifika students reported spending more than $20 a week gambling.	Youth 2007 Pacific report[9]	No comparative data are available.	These findings highlight the need to ensure that young people are asked about gambling practices in as much detail as adults. Given the gendered differences found among parents, consideration should also be given to gender differences among high school students.
Child gambling	**27%** of 9-year-old children reported having bet with money.	PIFS[20]	No comparative data are available.	As above, these findings highlight the need to ensure that gambling is well explored amongst children and young people.

Notes:

- Data from the New Zealand Health Survey[4] regarding the intersection between disability and mental health has been excluded from this table, as specific findings for Pasifika peoples are not reported.
- The Manalagi Report[16] has also been excluded, as there is no reporting of clinical indicators or direct measures of mental illness, substance use or gambling.

Appendix 3 - Summary of assessment and diagnostic tools and their application to Pasifika peoples in Aotearoa

Assessment or diagnostic Tool	Approach	Current use in Aotearoa	Validity tests with indigenous peoples	Validity with Pasifika peoples (Y/N)
Kessler Psychological Distress Scale	Self-report questionnaire to assess psychological distress, particularly symptoms of anxiety and depression. Comprises ten questions (K10, or in the case of its modified shorter version, K6 or K5) and assesses the frequency of various symptoms experienced over the preceding month, such as feelings of nervousness, hopelessness or worthlessness. Each question is rated on a five-point Likert scale, producing a total score from 10 to 50, with higher scores indicating greater distress.	Currently used to measure psychological distress among adults (aged 15+ years) in the New Zealand Health Survey.	First Nations people Métis and Inuit populations in Canada. Aboriginal and Torres Strait Islander adults in Australia.	No.
The Patient Health Questionnaire (PHQ)	Self-administered screening tool to assess and monitor symptoms of depression and anxiety in primary care and other healthcare settings. It is based on the diagnostic criteria within the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). The PHQ consists of various modules, with the PHQ-9 being the most commonly used for depression screening, while the Generalized Anxiety Disorder 7-item scale (GAD-7) is often used for anxiety screening. Each item in the PHQ asks respondents to rate the frequency of specific symptoms over a defined period, typically the past two weeks, on a scale ranging from 0 to 3 or 4.	Widely used in primary care.	Aboriginal and Torres Strait Islander adults in Australia. Ethnically diverse populations in the US (non-Hispanic Whites; African Americans; Chinese Americans; Latinos; non-Hispanic American Indians; Alaskan Natives). Multi-ethnic populations in Europe (Dutch; South-Asian Surinamese; African Surinamese; Ghanaian; Turkish; Moroccan).	No.

Assessment or diagnostic Tool	Approach	Current use in Aotearoa	Validity tests with indigenous peoples	Validity with Pasifika peoples (Y/N)
Mini International Neuropsychiatric Interview (MINI)	A structured diagnostic psychiatric interview used to assess psychiatric disorders based on DSM criteria and the International Classification of Diseases (ICD).	Currently utilised by large studies with Pasifika populations in the Pacific region.[1]		No - translated into Pasifika languages only.[1]
Composite International Diagnostic Interview (CIDI)	Comprehensive, structured diagnostic psychiatric interview to assess mental health disorders according to Diagnostic Criteria for Research of International Classification of Diseases 10th Revision (ICD-10) and the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)[82].The CIDI aims to provide reliable and standardised assessments of mental health disorders across different populations and settings, allowing for comparisons between regions and countries.	Used by Te Rau Hinengaro and widely considered to be a gold standard diagnostic tool[1].	Aboriginal and Torres Strait Islander adults in Australia.	No.
Edinburgh Postnatal Depression Scale (EPDS)	Used to assess postnatal depression symptoms.	Longitudinal studies – the PIFS and the GUNZ, as well as general clinical practice.	Validated by Pasifika maternal and/or mental health researchers[3].	Yes - Samoan and Tongan women.

[1] Personal communication from Polynesian Health Corridors programme, which is currently conducting mental health prevalence surveys in the Pasifika Islands (unpublished).

Assessment or diagnostic Tool	Approach	Current use in Aotearoa	Validity tests with indigenous peoples	Validity with Pasifika peoples (Y/N)
Generalised Anxiety Disorder-7 (GAD-7)	A proactive approach to assessing and addressing symptoms associated with Generalized Anxiety Disorder. Uses a seven-item questionnaire to assess the severity of anxiety-related symptoms experienced over the past two weeks. Experiences are self-reported according to a scale from 'not at all' to 'nearly every day'.	Used in the New Zealand Health Survey and the Te Hiringa Hauora Surveys, as well as general clinical practice.	Ethnically diverse college students in the US (White/Caucasians; Hispanics; Black/African Americans).	No.
Alcohol Use Disorders Identification Test (AUDIT)	A screening tool developed by the World Health Organization to identify individuals who may have hazardous or harmful patterns of alcohol consumption, as well as those who may have alcohol dependence or alcohol-related problems.	Longitudinal studies – Pacific Islands Families Study, as well as general clinical practice.	Aboriginal and Torres Strait Islander adults in Australia.	No.
Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST)	Screening tool developed by the World Health Organization to identify and assess substance use and related problems in individuals.	Used in the New Zealand Health Survey, as well as general clinical practice.	Pasifika peoples.	Yes - validated in Pasifika peoples aged 18-45 years.