Community Mental Health Journal (2022) 58:222–230
https://doi.org/10.1007/s10597-021-00813-w

ORIGINAL PAPER

Involuntary Cultural Change and Mental Health Status Among Indigenous Groups: A Synthesis of Existing Literature

Madhurima Mukherjee[1] · **Purnima Awasthi**[1]

Received: 19 August 2020 / Accepted: 5 March 2021 / Published online: 15 March 2021

Abstract
Indigenous groups throughout the world have experienced social exclusion and have been subjected to marginalization. Globalization has resulted in significant changes in traditional lifestyles and developmental programs have not been successful in integrating Indigenous people into communities with non-Indigenous people. Although there is substantial research on acculturation and adaptation within the field of cross-cultural psychology, there are few narrative reviews of this literature. The present paper provides such a review and examines the mental health concerns of Indigenous groups undergoing acculturation. We address the consequences of involuntary cultural change and review studies that have been conducted on mental health issues, psychosomatic symptoms, substance use, and suicidality in Indigenous groups. We conclude by offering suggestions to mitigate mental health problems. Directions for future research on the acculturation of Indigenous groups are also provided.

Keywords Acculturation · Indigenous groups · Mental health · Substance use · Suicide

In the last several decades, the world has witnessed an amalgamation of cultures owing to urbanization, migration, and globalization. As a result, cross-cultural research, or more specifically, acculturation research has emerged as a major force in psychology that seeks to understand the consequences of cultural change and how people deal with it. Ever since colonization, intercultural contact has on one hand developed economies while on the other, it has marginalized certain groups of people. Indigenous people throughout the world represent such communities who have experienced social exclusion and marginalization following culture change. The present review specifically focuses on the mental health of Indigenous people undergoing sociocultural changes. We attempt to answer two critical questions:

1. What do we currently know about the stressors and mental health concerns of Indigenous people?
2. How does acculturation experience contribute to Indigenous peoples' mental health?

To address these questions, we will first present a brief contextual description of Indigenous groups followed by a theoretical background and review of research on the acculturation of Indigenous groups in terms of acculturative stress, mental health problems, substance use, and suicide. In conclusion, we will also discuss and offer directions for future research in the area of acculturation of Indigenous groups.

Indigenous Groups

Indigenous groups are culturally distinct societies with a long history of social exclusion and psychological marginalization. At present, there are approximately 476 million Indigenous Peoples worldwide constituting roughly 6.2% of the world's population. They belong to 5000 different groups spread in over 90 countries. Individuals from different descents tend to prefer to be called by their tribal names, each having its own historical and sociopolitical significance. Literature uses the terms Tribals, First Peoples, Native People, Adivasis, Aboriginals, and Indigenous Peoples, but to ensure uniformity, Indigenous people will be

✉ Madhurima Mukherjee
madhurima.2323@gmail.com

Purnima Awasthi
awasthip9@gmail.com

[1] Department of Psychology, Banaras Hindu University, Varanasi 221005, India

used throughout this document. Although due to the heterogeneity of tribal groups there are constraints in a universal definition of Indigenous people, the United Nations (2017) has described them as descendants of those who inhabited a region before the people of different ethnic cultures or origins arrived. Indigenous people have existed before the development of states and they are known for their unique language and traditions, as well as different social, cultural, and economic characteristics which are inextricably linked to their ancestral lands and distinct from the dominant mainstream society. Few major Indigenous groups are, for instance, the Cree in Canada, Sámi in Russia, the Yanomami in the Amazon rainforest, Maasai in East Africa, Bhil and Gond in India, and the Wiradjuri and Lardil people in Australia.

To begin understanding the construct of acculturation of Indigenous people, one must understand their historical, cultural, and political context. Although most studies on acculturation have focused on the effect of globalization in the last few decades, contact with Indigenous peoples began during colonial times. The goal of colonization was to explicitly change the culture and behavior of Indigenous peoples, especially their religious beliefs, values, and educational practices. In the era of globalization, the continuous movement of people across the globe led to the formation of culturally plural societies. In addition, the governments of respective countries launched developmental programs to integrate the Indigenous people with the majority society. These changes have brought about opportunities as well as unforeseen challenges for the tribes. While some have benefitted from job opportunities and better educational and medical facilities, others have been exposed to an alien lifestyle which has led to an increase in mental health problems and a loss of happiness (Mishra et al., 1996; Mishra, 2017).

Conceptual Understanding of Acculturation and Stressors of Indigenous Groups

Exposure of the tribes to a foreign culture and way of life has brought in the concept of acculturation. Acculturation is the process of cultural change resulting from contact which comes from education, urbanization, industrialization, and migration. The classic definition of acculturation as "a phenomenon that occurs when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups" was provided by Redfield et al. (1936). Acculturation is not a passive, external process but rather it differs from individual to individual because even though the source of change is external, every individual has a difference in opinion regarding the impact of inter-cultural contact they want in their life.

Initially, acculturation was conceptualized as a unidimensional process. The unidimensional model assumed that acculturation is an inescapable process of assimilation into the dominant culture and a definite loss of own culture (Gordon, 1964). Further, acculturation was considered to be a bipolar construct and the individuals undergoing acculturation experiences were either 'acculturated' or 'not acculturated'. Later, this simplistic dichotomy was expanded to perceive acculturation as a continuum where individuals varied in their levels of acculturation (Berry, 1997). From the perspective of minority ethnic groups, four acculturation strategies were identified such as separation or maintenance of traditionalism, assimilation, integration or biculturalism, and marginalization or peripheral status in both cultures (Berry & Sabatier, 2011; Gamst et al., 2002). 'Assimilation' occurs when individuals have a strong identification with the majority culture and discard their own cultural identity. Contrarily, when one holds on to own culture and avoids interaction with the majority culture, the strategy is 'separation'. 'Integration' occurs when one accepts and interacts with the majority culture while maintaining own culture and 'marginalization' occurs when there is a lack of interest in own cultural maintenance or having interaction with the other culture (Berry, 1997). Research has found that most individuals and groups resort to integration strategy as it enables them to live in harmony with both the cultures and have a sense of self-acceptance along with empathy towards others (Miranda &Umhoefer, 1998). In addition to these four strategies, there is another orientation called 'coexistence' claimed to be present among the Indian population (Mishra et al., 1996). India's diverse socio-cultural status acknowledges the differences between cultural groups and allows them to exist together without any compromise.

Although Indigenous groups are not culturally homogenous, they have faced similar socio-historical predicaments. A comparative analysis of Indigenous mental health as a consequence of culture change can shed light on the sources of problems and possible solutions. Before delving into the consequences of intercultural contact, it is appropriate to answer our first question: What do we currently know about the stressors and mental health concerns of Indigenous people? Research on Kharwar women living in Uttar Pradesh, India, has identified their stressors to be primarily related to their socioeconomic conditions, child education, care of the sick and elderly, child mortality, guarding crops from wild animals, drinking water, diminishing forest, loans, and unwanted pregnancy (Mishra & Vajpayee, 1996). Similarly, Hawkins et al. (2014) studied the stressors of Indigenous women living in Canada and found their stressors to be related to their socioeconomic status, adverse home and work environments, lack of control over their own health, and inequitable access to healthcare. Other key stressors that impact their lives are the manifestation of historical trauma,

violence, discrimination, and prejudiced beliefs about Indigenous identity (Hawkins et al., 2014).

By recognizing the disadvantaged status of Indigenous groups, governments, non-governmental organizations, and missionaries have made attempts for their development and upliftment. However, in the process of development, the acculturative experience has emerged as another potential stressor. For instance, under the influence of Christian missionaries, some Indigenous people have gained education and employment and alienated themselves from the tribe. Similarly, the process of industrialization has converted Indigenous lands into industrial belts making the indigenous people victims of displacement. Even today, most Indigenous groups engage in traditional modes of subsistence such as hunting-gathering and agriculture but governmental bans on the free use of forests have forced them to look for alternate jobs. Therefore, it appears that in addition to their socio-economic challenges, the external changes imposed on indigenous groups have disrupted their lives and made their living more stressful (Mishra, 2007). The case is true for the Adivasi people in India as well as Indigenous communities worldwide (Kvernmo, 2006; Mishra, 2017). With this background, we will discuss the researches conducted on Indigenous groups undergoing acculturation and attempt to answer our second question: how does acculturation experience contribute to indigenous peoples' mental health?

Studies on Mental Health

Considering the long-lasting effects of colonization and the socio-cultural changes following globalization, the exploration of mental health problems of Indigenous groups becomes a critical area of acculturation research. Epidemiological research has been carried out to identify the prevalence and intensity of mental health problems in Indigenous groups. Caron and Liu (2010) found Indigenous people to experience greater depression and other mental health concerns compared to other non-Indigenous people. Depression is the most common mental health concern for Indigenous peoples in Canada (Khan, 2008). Further, posttraumatic stress disorder due to intergenerational trauma of colonization is also found in acculturation literature (Kirmayer et al., 2014). The relationship between the level and strategies of acculturation and the risks of developing mental health issues have been discussed in several studies (Abraído-Lanza et al., 2006; De la Cruz et al., 2000). Separation and marginalization (low acculturation) were found to be related to more stressful relationships, and assimilation and integration (high acculturation) were related to healthy relationships with family and peers (Jolicoeur & Madden, 2002).

In an early study of the Aboriginals in Australia, Berry (1970) found evidence of psychosomatic stress and feelings of psychological marginality in traditionally-oriented people. It was also found that assimilating with the majority culture lessened the feelings of marginality. Similar findings were obtained for Sami adolescents where a strong identification and assimilation with the majority Norwegian society reduced behavioral problems (Kvernmo & Heyerdahl, 2003). In another classic study on acculturation, the health conditions of three sub-groups of Australian Aborigines living in Mornington Island in North Australia were studied (Cawte et al., 1968). The three groups were the highly acculturated Lardils, Mainland Aborigines who were also highly acculturated but lacked group identity, and the socially fragmented Kaiadilts who were the least acculturated. It was found that the Kaiadilts suffered from most mental disorders, especially depression while the most acculturated groups were the healthiest. Therefore, it emerges from the earlier studies that greater identification and assimilation with the majority culture led to reduced mental health problems.

Research conducted by Mishra et al. (1996) on the Birhor, Asur, and Oraon Adivasis of Bihar, India highlighted the conflicts of people undergoing acculturation. For all the three groups, the most preferred strategies were coexistence and integration. Separation, assimilation and marginalization attitudes were generally low in all three groups and the level of acculturation was negatively associated with feelings of marginality. Individuals who used marginalization strategies and reported greater feelings of marginality had more psychological and psychosomatic problems. Those who held stronger integration and coexistence attitudes had lesser health problems. In a study carried out of the members of the Agaria tribe in the Sonebhadra district of Uttar Pradesh, acculturation and health problems of individuals were assessed. Findings revealed that educated individuals with higher contact-acculturation reported greater mental health problems (Mishra & Chaubey, 2002). Similar to the acculturation strategies measured in multicultural societies across the world, integration, along with coexistence was found to be the preferred strategies in Indian Adivasis [such as Kharwar and Agaria in Uttar Pradesh (Mishra & Chaubey, 2002), and Parhaiya, Birjia, and Oraon in Jharkhand (Kumar, 2019)]. In general, individuals with a bicultural orientation had better psychological well-being as compared to low and high acculturated individuals.

Individuals who are more traditional in their lifestyle (such as nomadic hunter-gatherers) experience greater and more frequent stress due to acculturative experiences in comparison to those who are less traditional and lead a sedentary lifestyle (such as agriculturalists). For instance, the Agarias who are more traditional than the Kharwars report greater magnitude and prevalence of stress (Mishra & Vajpayee, 1996). Another study conducted on the Asur tribe who are undergoing the transition from nomadic to sedentary lifestyle found an "inverted U-shaped"

relationship between acculturation and health. Individuals with high or low acculturation reported lesser health problems and stress. Individuals with moderate level of acculturation reported maximum stress and health problems (Mishra & Kothiyal, 1995). These results are in contrast with the findings discussed above that bicultural orientation results in better mental health. Mishra and Kothiyal (1995) explain that the less acculturated individuals find the new changes interesting, a phenomenon called "honeymoon effect" while the high acculturated individuals got adapted to the changes resulting in lesser stress in both the groups.

Urbanization and its associated modernization lead to stress in the form of arterial hypertension and hypertensive disease. Findings of Kozlov et al. (2003) highlight the development of stress on various physiological domains in response to modernization in Khanty and Mansi communities residing in the Verezov region of North Siberia, Russia. It was found that with increasing settlement size, there was an increase in arterial blood pressure. Similar results were reported in an earlier study by Vasiljev et al. (1987) who found 16% arterial hypertension in Khanty people living in small Indigenous settlements and 27% in those living in settlements with mixed ethnicities. As a result of urbanization and abandonment of traditional lifestyles, an increase in serum blood glucose and carbohydrate metabolism disorders was also observed. Khanty and Mansi people engaged in traditional activities had significantly lower serum blood glucose levels compared to those engaged in modern activities for livelihood. These increases may be attributed to situational and personal anxiety levels caused by stressors as well as a shift in food habits. Inability or lack of desire to adapt to the modern system can adversely affect physical and psychological health (Graves, 1967). Beiser et al. (1976) found that Senegalese women who identified with the Western culture but were not proficient in French reported increased arterial blood pressure levels. This illustrates that when people feel the necessity to adapt to a modernized environment but are not able to do so due to personal or societal constraints, they develop both physiological and psychological manifestations of stress. Considerable research has been directed at comparing the lives of tribal and non-tribal individuals living under the same ecological conditions. Their differences lie in the degree of disruption caused in their lives due to contact with the outside world. Tribals are generally under the pressure of socio-cultural change. In a comparative study of Kharwar and Yadav (non-indigenous counterparts) women living in the same villages, it was found that although the two groups did not differ significantly in terms of physical health, Kharwar women reported more psychological and psycho-physiological health problems than Yadav women (Mishra, 2015). They also reported greater psychosomatic symptoms compared to physical symptoms which confirm Helman's (1990) idea that acculturative stress in traditional communities is often manifested in somatic forms.

Important sex differences in acceptance or rejection of traditional cultural values were found in a study on Aboriginal youth in Australia. Aboriginal males continued to be more traditional whereas females were more willing to participate in traditional as well as modern religious practices (Davidson et al., 1978). Gender differences were also reported in the Arctic Sami adolescents of Norway. In males, integration attitude played a protective role but marginalization attitudes were risk factors for mental health problems, especially anxiety and depression (Kvernmo & Heyerdahl, 2003). For Sami females, separation from the dominant Norwegian culture contributed to mental health problems. Adolescents who separate from the majority culture during intercultural contact may likely be psychologically maladjusted in the future. Interesting gender differences also emerged in the prevalence of psychiatric problems and substance-use related disorders in a comparative study of American Indians and Alaskan Natives (AI/AN) and Non-Hispanic Whites (NHW) in the United States (Brave Heart et al., 2016). It was found that 70% of AI/AN men and 65% women met the criteria for at least one DSM-IV disorder while this% was much lesser (62 and 53%) for NHW men and women respectively. Although both AI/AN men and women showed higher prevalence for any anxiety disorder, women reportedly had greater prevalence of panic disorder. These gender differences call for special attention to Indigenous women's mental health concerns.

To a greater or lesser extent, all Indigenous groups are influenced by the modern way of life. On one hand, they are aware of the material advantages of modern society; on the other hand, they are often victims of displacement (for industrial development) to areas where sustenance through traditional ways is difficult. Despite the stressful effects of acculturation, some groups such as Maasai and Hadza in Kenya and Tanzania continue to hold onto their traditional culture. However, they are also accepting the advantages offered by modern society such as modern technologies, healthcare facilities, and education. Similarly, the majority of aboriginals in Malaysia, the Philippines, and Australia have adapted to the mainstream society (Grinde, 2009). Indigenous groups demonstrating integration or coexistence point to the fact that people are willing to accept the modern facilities provided by the mainstream culture while maintaining their traditional culture.

Studies on Substance Use

The lasting effect of colonization and the stressors associated with contemporary developments are often the antecedents of increased substance use among Indigenous people. The

exceeding rates and early onset of substance use in Indigenous groups represent a threat to the wellbeing of individuals, families, and communities. Binge drinking rates among Indigenous adolescents in the USA were found to be five times higher than non-Indigenous adolescents (Centers for Disease Control and Prevention, 2018). In terms of tobacco smoking, Indigenous adolescents in the USA were nine times more likely to smoke, followed by three times in New Zealand and two times in Canada as compared to non-Indigenous adolescents (Centers for Disease Control and Prevention, 2018; Reading & Wien, 2009). Injecting drug rates were three times higher among Indigenous adolescents compared to non-Indigenous adolescents in Australia (Bryant et al., 2016) and the USA (Centers for Disease Control and Prevention, 2018). In AI/AN population, both men and women have high rates of substance use disorders and drug dependence is more prevalent than alcohol use disorders (Brave Heart et al., 2016).

Both personal (gender, socioeconomic status, education, coping skills, cultural orientation, comorbid mental health problems) and societal factors (perception of the community towards substance use, community resilience) moderate the relationship between acculturation and substance use (De La Rosa et al., 2000). Traditionalist cultural orientation plays a protective role in preventing substance use (Herman-Stahl & Chong, 2002) as cultural affiliation was found to be associated with both depression and alcohol use in American Indians (Westermeyer et al., 1984). However, in adolescents, the relationship between substance use and cultural identity is not uniform. While Oetting and Beauvais (1990) found in a study that bicultural adolescents were less likely to use drugs, results from other studies including other Indigenous groups suggested no significant relationship (Oetting et al., 1989). It has also emerged that linguistically acculturated ethnic-minority adolescents who were proficient in the majority language were more likely to abuse alcohol (Epstein et al., 2003). This finding indicates that lack of familiarity with ethnic language may hinder participation in traditional activities. Such detachment from own culture may trigger alcohol use. Therefore, cultural attachment appears to be an important determinant in the development of substance-use disorders in Indigenous people.

Studies on Suicide

Qualitative studies on Indigenous groups through interviews, narratives, and life histories have identified forced assimilation policies as prime factors leading to poor health and social problems. Forced assimilation intensely affects one's identity, mental health, and the structure of families and communities. Introduction of a foreign way of life, such as modern education, healthcare, employment, and technology disrupts life by replacing traditions, values, and customs. Changes are observed in a loss of traditional knowledge, language and customs, increased physical and sexual violence and devaluing of aboriginal identity which finally leads to an individual and collective loss of self-esteem and destruction of communities. Unfortunately, while the traditional communities are lost, the stereotypes associated with them prevail. As a result, one who has abandoned own culture to assimilate with the majority is still identified by the majority society as fulfilling an Indigenous stereotype. This aggravates discrimination, racism, and an enduring impact of well-being marked by increased rates of suicide in Indigenous communities (Kirmayer et al., 2003).

The high rate of suicides among Indigenous adolescents and young adults is a major concern for mental health professionals. Pollock et al. (2018) found evidence of suicide rates being 20 times higher among Indigenous groups than non-Indigenous populations. Increasing cases of suicide among the Indigenous groups in New Zealand, the USA, Canada and Australia have been reported in a number of studies (Beautrais, 2001; Cantor, 2000; Lester, 1999). Hunter and Harvey (2002) reported constantly increasing number of suicides in Indigenous youths with suicide incidence ranging from 0 to 187.5 deaths by suicide per 100,000 individuals. Cultural distance from the mainstream society, loss of cultural identity, inability to adapt to modernization, and being considered a minority have been identified as main triggers for suicidal ideation and behavior (Bjerregaard, 2001; Lee et al., 2002; Leineweber & Arensman, 2003).

For diagnostic purposes, the clinicians must have an understanding of the historical and contemporary stressors that underlie the health concerns. One such construct is that of Indigenous historical trauma. Although historical trauma is the result of colonization, its impact is cross-generational in the transmission of risks and vulnerabilities (Hartmann & Gone, 2014). Gone et al. (2019) carried out a systematic review to understand the health impacts of Indigenous historical trauma on the Indigenous groups of the United States and Canada. Therefore, their review included AI, AN, First Nations, Metis, Inuit, and Hawaiian Native population. Greater historical loss was associated with increased anxiety in adolescents (Armenta et al., 2016), more suicidal thoughts, suicide attempts, substance use, and post-traumatic stress disorder (Brockie, 2012), binge eating behaviors (Clark & Winterowd, 2012), increased youth smoking (Soto et al., 2015), and depressive symptoms (Tucker et al., 2016). Even though the studies reviewed have used fledging research paradigms, it seems conclusive that Indigenous historical trauma is significant even today in determining the wellbeing of Indigenous groups. Future research focusing on the continuing effects of historical trauma may take into consideration the contemporary disadvantages faced due to racism and its impact on people around the world.

Agenda for Action

Studies discussed above clearly indicate that intercultural contact and involuntary culture change have direct or indirect influences on mental health problems, substance use, and suicide in Indigenous groups. The higher prevalence of disorders in Indigenous communities must be understood on the basis of several social issues such as poor socioeconomic status, less formal education, place of residence which limits their access to modern amenities, and ongoing racism. However, most individuals experiencing acculturative stress or other psychological issues develop their own coping strategies and are less likely to seek professional help. The underutilization of mental health services may be attributed to the unavailability of mental health services in remote locations, language or cultural barriers, poor cultural competence of the clinician, stigmas associated with mental health problems, preference to seek help from indigenous healers, and mistrust with institutions of the majority society. Therefore, it becomes important that professionals working with Indigenous clients develop cultural competency and become aware of specific cultural values of the Indigenous groups and their acculturation process. A culturally competent clinician is able to identify the cross-cultural expressions of illness and counteract the negative impact of race, ethnicity, religion, sexual orientation, and other social barriers. Developing cultural and linguistic competencies help in building rapport with patients in multicultural settings and also improve treatment outcomes (Perez, 2008). However, many a time, patients' non-compliance with doctors' orders (such as to consume healthy food, medications, joining a gym or taking a walk in the park) is due to a lack of structural resources. Inadequate food delivery systems, discriminatory laws, zoning laws, tax codes, and cost of health care facilities are major structural barriers in healthcare. Modern psychiatry is recognizing the need for structural competencies especially in the treatment of people belonging to marginalized communities. Scholars have identified that stigma is not essentially located in the individuals but rather in the action of institution, markets and healthcare delivery system (Hatzenbuehler & Link, 2014). Therefore, structural competency is as essential as cultural competency to ensure well-being of marginalized groups.

The second problem discussed as a consequence of cultural change is substance use which makes it the responsibility of researchers and mental health professionals to introduce prevention programs to reduce the same. Prevention programs can be introduced through school, family, or community keeping in mind the situational and contextual factors of Indigenous groups. These programs should make use of substance education, skill development, and cultural knowledge enhancement, and the community should be involved in understanding, planning, and implementing the programs. Substance Abuse and Mental Health Services Administration (SAMHSA) offers three programs especially to benefit the AI/AN tribes in the United States. Through National Tribal Behavioral Health Agenda, Tribal Behavioral Health Grant, Tribal Opioid Response (TOR), the Office Of Tribal Affairs (OTAP) under SAMHSA addresses prevention, treatment and recovery from substance use disorders and suicide prevention among its many other goals. While western interventions of substance use treatments go for individual, group, family therapy, and supervision, various researchers have explored culture-based interventions as well. For alcohol addiction program, ceremonial practice, land-based activities, social culture (Anderson, 1993), Sweat lodge, traditional teachings, access to spiritual elders, cultural activities such as singing and art (Boyd-Ball, 2003), and talking circle (Patchell et al., 2015) are used in cultural interventions. In an extensive review, Rowan et al. (2015) summarized the impact of cultural interventions to treat addictions. They found that culture-based interventions were beneficial in improving client functioning and overall wellbeing. However, given the diversity of Indigenous peoples, the generalizations of these interventions remain an issue.

Finally, concerning suicide prevention among Indigenous groups, there exists a gap between the typical suicide prevention approaches and the Indigenous understandings of suicide. Suicide in Indigenous communities is often associated with erosion of culture and historical trauma. Modern suicide prevention programs often ignore these conceptions and separate the individual from the community in planning interventions. Such measures ignore the socio-cultural context, indigenous beliefs and practices, and collective suffering. Therefore, interventions need to be more culturally sensitive and address the community and not just the individual. It is important to recognize the personal strengths as well as resources within one's family and community to protect an individual from the negative impacts of acculturative stress. Further, given the rise of internet use amongst Indigenous adolescents (Rice et al. 2016) and the effectiveness of computer-based prevention programs (Champion et al., 2016), wherever possible, computerized programs may also be utilized. However, effective computer-based programs may require cross-cultural translations of these interventions mapped on the specific Indigenous language, sociocultural context, and understandings of good health.

Overall, in Indigenous mental healthcare, there is a need to shift from individual care to care for the family and community. To mitigate the existing mental health problems, while modern psychiatry focuses on the individual, Indigenous mental healthcare goes beyond individual wellbeing.

Knowledge of one's land, traditions, history, and a sense of connectedness to the tribe are considered vital to health and wellbeing. The loss of traditional societies and associated collective identity negatively impact one's mental health. For centuries, Indigenous groups have sustained with the help of their traditional medicines and healing practices. Instead of entirely discarding them, clinicians may consider incorporating traditional healing approaches while treating this population. Only by fostering community wellbeing, individuals and communities can better adapt to cultural changes.

Limitations of Existing Literature and Directions for Future Research

As the governmental policies of most nations aim at forced assimilation with the majority society, Indigenous people suffer from a loss of culture. Understanding the consequences of such loss on mental health and wellbeing needs to become one of the primary concerns of cross-cultural psychologists. In the present article, we have attempted to summarize the research on acculturation and mental health concerns among Indigenous groups. The insights generated should be interpreted in light of the limitations of prevailing research. First, although the acculturation theories consider acculturation and adaptation to be longitudinal processes that take place over time (Berry, 1997), the empirical studies in the area continue to be largely cross-sectional in nature. The temporal and progressive nature of acculturation and adaptation is not reflected clearly through such empirical research. This theory-methodology mismatch limits the ability to comprehend the adaptation of Indigenous people over time and during different phases of acculturation. Therefore, long-term longitudinal investigation should be the aim of future research.

Second, although research interest has shifted to studying the acculturation of Indigenous peoples, the cumulative results are still preliminary at this point. There is a lack of continuity in research and systematic findings which may be attributed to the lack of clear theoretical foundations and operational definitions of the antecedents and outcome variables in the empirical studies on acculturation and adaptation relationship. Future studies would benefit greatly by employing a clear theory-driven approach that will specify the research questions, hypothesis, design, and methodology of the study. Such steps will be useful in verifying or modifying the original theory. For instance, Mishra et al. (1996) has expanded the model of acculturation by Berry and Sabatier (2011) and added the strategy of coexistence which is prevalent in the Indian scenario. It is important for future research in India as well as in other countries to validate the construct of coexistence to integrate it into the acculturation framework. Additionally, the impact of social support, community support, and structural resources such as availability and accessibility of community mental health services should also be considered.

Finally, the existing literature on acculturation and adaptation is heavily dominated by experiences of Indigenous people living in Canada and the USA. Considering the significant proportion of Indigenous population in the world and their experiences with cultural change due to colonization and globalization, the research on their acculturation is fairly limited. Future research will benefit from investigating the acculturative experiences of Indigenous groups living in developing nations. The above discussion highlights the gaps in research and thus, provides directions for future research and theory-building on the acculturation of Indigenous groups.

Conclusion

Indigenous people throughout the world have undergone a lot of changes from their traditional lifestyle to forced assimilation into a 'modern' society under the influence of colonization, globalization, and developmental policies undertaken by the governments. Considering the increasing rates of intercultural contact, it becomes important to understand how Indigenous people react to and cope with the challenges that come with inter-cultural changes. The effect of acculturation on their mental health and wellbeing is a pressing issue that needs empirical studies as well as culturally sensitive interventions. Such studies will have far-reaching implications in research and policymaking for academicians, health professionals, governments, and community agencies concerned with the welfare of Indigenous groups. The present paper is an attempt to summarize the findings on acculturation and adaptation of Indigenous groups and it is hoped that this review will generate research questions and discussions to further the research on the psychological adaptation of Indigenous people in changing times.

Author Contributions MM conceived the idea and prepared the manuscript. PA supervised and contributed to the final version of the manuscript.

Declarations

Conflict of interest The authors declare that they have no conflict of interest.

References

Abraído-Lanza, A. F., Armbrister, A. N., Flórez, K. R., & Aguirre, A. N. (2006). Toward a theory-driven model of acculturation in public health research. *American Journal of Public Health, 96*(8), 1342–1346.

Anderson, E. N. (1993). A healing place: Ethnographic notes on a treatment center. *Alcoholism Treatment Quarterly, 9*(3–4), 1–21.
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 and Ethnic Minority Psychology, 22*(1), 1.
Beautrais, A. L. (2001). Child and young adolescent suicide in New Zealand. *Australian & New Zealand Journal of Psychiatry, 35*(5), 647–653.
Beiser, M., Collomb, H., Ravel, J. L., & Nafziger, C. J. (1976). Systemic blood pressure studies among the Serer of Senegal. *Journal of Chronic Diseases, 29*(6), 371–380.
Berry, J. W. (1970). Marginality, stress and ethnic identification in an acculturated Aboriginal community. *Journal of Cross-Cultural Psychology, 1*(3), 239–252.
Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology, 46*(1), 5–34.
Berry, J. W., & Sabatier, C. (2011). Variations in the assessment of acculturation attitudes: Their relationships with psychological wellbeing. *International Journal of Intercultural Relations, 35*(5), 658–669.
Bjerregaard, P. (2001). Rapid socio-cultural change and health in the Arctic. *International Journal of Circumpolar Health, 60*(2), 102–111.
Boyd-Ball, A. J. (2003). A culturally responsive, family-enhanced intervention model. *Alcoholism: Clinical and Experimental Research, 27*(8), 1356–1360.
Brave Heart, M. Y., Lewis-Fernández, R., Beals, J., Hasin, D. S., Sugaya, L., Wang, S., Grant, B. F., & Blanco, C. (2016). Psychiatric disorders and mental health treatment in American Indians and Alaska Natives: Results of the National Epidemiologic Survey on Alcohol and Related Conditions. *Social Psychiatry and Psychiatric Epidemiology, 51*(7), 1033–1046. https://doi.org/10.1007/s00127-016-1225-4
Brockie, T. N. (2012). *Historical and contemporary factors influencing non-lethal suicidal behavior among reservation-based Native American youth*. The Johns Hopkins University.
Bryant, J., Ward, J., Wand, H., Byron, K., Bamblett, A., Waples-Crowe, P., & Kaldor, J. (2016). Illicit and injecting drug use among I ndigenous young people in urban, regional and remote A ustralia. *Drug and Alcohol Review, 35*(4), 447–455.
Cantor, C. H. (2000). Suicide in the western world. *The International Handbook of Suicide and Attempted Suicide*, 9–28.
Caron, J., & Liu, A. (2010). A descriptive study of the prevalence of psychological distress and mental disorders in the Canadian population: Comparison between low-income and non-low-income populations. *Chronic Diseases and Injuries in Canada, 30*(3), 84–94.
Cawte, J. E., Bianchi, G. N., & Kiloh, L. G. (1968). Personal discomfort in Australian aborigines. *Australian & New Zealand Journal of Psychiatry, 2*(2), 69–79.
Centers for Disease Control and Prevention. National Youth Tobacco Survey, May 9, 2018. Retrieved August 14, 2018.
Champion, K. E., Newton, N. C., & Teesson, M. (2016). Prevention of alcohol and other drug use and related harm in the digital age: What does the evidence tell us? *Current Opinion in Psychiatry, 29*(4), 242–249.
Clark, J. D., & Winterowd, C. (2012). Correlates and predictors of binge eating among Native American women. *Journal of Multicultural Counseling and Development, 40*(2), 117–127.
Cruz, F. A. D., Padilla, G. V., & Agustin, E. O. (2000). Adapting a measure of acculturation for cross-cultural research. *Journal of Transcultural Nursing, 11*(3), 191–198.
Davidson, G. R., Nurcombe, B., Kearney, G. E., & Davis, K. (1978). Culture conflict and coping in a group of aboriginal adolescents. *Culture, Medicine and Psychiatry, 2*(4), 359–372.
De La Rosa, M., Vega, R., & Radisch, M. A. (2000). The role of acculturation in the substance abuse behavior of African-American and Latino adolescents: Advances, issues, and recommendations. *Journal of Psychoactive Drugs, 32*(1), 33–42.
Epstein, J. A., Doyle, M., & Botvin, G. J. (2003). A mediational model of the relationship between linguistic acculturation and polydrug use among Hispanic adolescents. *Psychological Reports, 93*(3), 859–866.
Gamst, G., Dana, R. H., Der-Karabetian, A., Aragón, M., Arellano, L. M., & Kramer, T. (2002). Effects of Latino acculturation and ethnic identity on mental health outcomes. *Hispanic Journal of Behavioral Sciences, 24*(4), 479–504.
Gone, J., Hartmann, W., Pomerville, A., Wendt, D., Klem, S., & Burage, R. (2019). The impact of historical trauma on health outcomes for indigenous populations in the USA and Canada: A systematic review. *American Psychological Association, 74*(1), 20–35.
Gordon, M. M. (1964). *Assimilation in American life: The role of race, religion, and national origins*. Oxford University Press on Demand.
Graves, T. D. (1967). Psychological acculturation in a tri-ethnic community. *Southwestern Journal of Anthropology, 23*(4), 337–350.
Grinde, B. (2009). An evolutionary perspective on the importance of community relations for quality of life. *The Scientific World Journal, 9,* 588–605.
Hartmann, W. E., & Gone, J. P. (2014). American Indian historical trauma: Community perspectives from two Great Plains medicine men. *American Journal of Community Psychology, 54*(3–4), 274–288.
Hatzenbuehler, M. L., & Link, B. G. (2014). Introduction to the special issue on structural stigma and health. *Social Science & Medicine*.
Hawkins, S. S., Gillman, M. W., Shafer, E. F., & Cohen, B. B. (2014). Acculturation and maternal health behaviors: Findings from the Massachusetts birth certificate. *American Journal of Preventive Medicine, 47*(2), 150–159.
Helman, C. (1990). *Culture, health and illness*. Jordan Hill.
Herman-Stahl, M., & Chong, J. (2002). Substance abuse prevalence and treatment utilization among American Indians residing on-reservation. *American Indian and Alaska Native Mental Health Research: The Journal of the National Center, 10*(3), 1–23.
Hunter, E., & Harvey, D. (2002). Indigenous suicide in Australia, New Zealand, Canada and the United States. Emergency Medicine Australasia, *14*(1), 14-23. https://doi.org/10.1046/j.1442-2026.2002.00281.x
Jolicoeur, P. M., & Madden, T. (2002). The good daughters: Acculturation and caregiving among Mexican-American women. *Journal of Aging Studies, 16*(2), 107–120.
Khan, S. (2008). Aboriginal Mental Health The statistical reality. *Visions Journal, 5*(1), 6-7. https://www.heretohelp.bc.ca/sites/default/files/visions_aboriginal_people.pdf
Kirmayer, L. J., Gone, J. P., & Moses, J. (2014). Rethinking historical trauma.
Kirmayer, L., Simpson, C., & Cargo, M. (2003). Healing traditions: Culture, community and mental health promotion with Canadian Aboriginal peoples. *Australasian Psychiatry, 11*(1), S15–S23.
Kozlov, A. I., Vershubsky, G., & Kozlova, M. (2003). Stress under modernization in indigenous populations of Siberia. *International Journal of Circumpolar Health, 62*(2), 158–166.
Kumar, D. (2019). Social identity and acculturation attitudes among different tribal groups of Jharkhand, India. In A. Shukla, A. Dubey, & N. S. Thagunna (Eds.), *Psyche of Asian Society* (pp. 169–180). Concept Publishing Company Pvt Ltd.
Kvernmo, S. (2006). Indigenous peoples.

Kvernmo, S., & Heyerdahl, S. (2003). Acculturation strategies and ethnic identity as predictors of behavior problems in arctic minority adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 42*(1), 57–65.

Lee, C. S., Chang, J. C., & Cheng, A. T. A. (2002). Acculturation and suicide: A case-control psychological autopsy study. *Psychological Medicine, 32*(1), 133.

Leineweber, M., & Arensman, E. (2003). Culture change and mental health: The epidemiology of suicide in Greenland. *Archives of Suicide Research, 7*(1), 41–50.

Lester, D. (1999). Native American suicide rates, acculturation stress and traditional integration. *Psychological Reports, 84*(2), 398–398.

Miranda, A. O., & Umhoefer, D. L. (1998). Depression and social interest differences between Latinos in dissimilar acculturation stages. *Journal of Mental Health Counseling, 20*(2), 159.

Mishra, R. C. (2007). Psychological perspective on educational development of tribals. In M. B. Sharan & D. Suar (Eds.), *Psychology matters: Development, health and organization* (pp. 1–17). Allied Publishers.

Mishra, R. C. (2015). Mental health problems in culturally changing adivasi communities. *Psychology and Developing Societies, 27*(2), 214–230.

Mishra, R. C. (2017). Meaning of happy life for the Kharwars in India in their journey towards development. *Psychology and Developing Societies, 29*(2), 221–245. https://doi.org/10.1177/0971333617716838

Mishra, R. C., & Chaubey, A. C. (2002). Acculturation attitudes of Kharwar and Agaria tribal groups of Sonebhadra. *Psychology and Developing Societies, 14*(2), 201–220.

Mishra, R. C., & Kothiyal, D. (1995). Stress in relation to varying experiences of culture change. *Ecological Perspectives and Behaviour*, 89–102.

Mishra, R. C., & Vajpayee, A. (1996). Mental health problems of women in a culturally changing community. *Indian Journal of Mental Health and Disabilities, 1*(2), 8–15.

Mishra, R. C., Sinha, D., & Berry, J. W. (1996). *Ecology, acculturation and psychological adaptation: A study of adivasis in Bihar*. Sage Publications Inc.

Nations, U. (2017). World population prospects: the 2017 revision, key findings and advance tables. *Department of Economics and Social Affairs PD, editor. United Nations*.

Oetting, E. R., & Beauvais, F. (1990). Adolescent drug use: Findings of national and local surveys. *Journal of Consulting and Clinical Psychology, 58*(4), 385.

Oetting, E. R., Swaim, R. C., Edwards, R. W., & Beauvais, F. (1989). Indian and Anglo adolescent alcohol use and emotional distress: Path models. *The American Journal of Drug and Alcohol Abuse, 15*(2), 153–172.

Patchell, B. A., Robbins, L. K., Lowe, J. A., & Hoke, M. M. (2015). The effect of a culturally tailored substance abuse prevention intervention with plains Indian adolescents. *Journal of Cultural Diversity, 22*(1), 3–8.

Perez, M. (Ed.). (2008). *Cultural competence in health education and health promotion*. JosseyBass.

Pollock, N. J., Naicker, K., Loro, A., Mulay, S., & Colman, I. (2018). Global incidence of suicide among Indigenous peoples: A systematic review. *BMC Medicine, 16*(1), 145.

Reading, C. L., & Wien, F. (2009). *Health inequalities and social determinants of Aboriginal peoples' health* (pp. 1–47). National Collaborating Centre for Aboriginal Health.

Redfield, R., Linton, R., & Herskovits, M. J. (1936). Memorandum for the study of acculturation. *American Anthropologist, 38*(1), 149–152.

Rice, E. S., Haynes, E., Royce, P., & Thompson, S. C. (2016b). Social media and digital technology use among Indigenous young people in Australia: A literature review. *International Journal for Equity in Health, 15*(1), 1–16.

Rowan, M., Poole, N., Shea, B., Mykota, D., Farag, M., Hopkins, C., & Dell, C. A. (2015). A scoping study of cultural interventions to treat addictions in Indigenous populations: Methods, strategies and insights from a Two-Eyed Seeing approach. *Substance Abuse Treatment, Prevention, and Policy, 10*(1), 1–10.

Soto, C., Baezconde-Garbanati, L., Schwartz, S. J., & Unger, J. B. (2015). Stressful life events, ethnic identity, historical trauma, and participation in cultural activities: Associations with smoking behaviors among American Indian adolescents in California. *Addictive Behaviors, 50,* 64–69.

Tucker, R. P., Wingate, L. R., O'Keefe, V. M., Hollingsworth, D. W., & Cole, A. B. (2016). An examination of historical loss thinking frequency and rumination on suicide ideation in American Indian young adults. *Suicide and Life-Threatening Behavior, 46*(2), 213–222.

Vasiljev, N. V., Pusyrev, V.P., & Podoplekin, V.D. (1987). Kompleksnoe Kliniko-Geneticheskoe Issledivanie Korennyh Narodnostej Zapadnoj Sibiri [Complex clinical-genetical investigation of the indigenous peoples of Western Siberia]. Tomsk University Publ.

Westermeyer, J., Neider, J., & Vang, T. F. (1984). Acculturation and mental health: A study of Hmong refugees at 15 and 35 years postmigration. *Social Science & Medicine, 18*(1), 87–93.