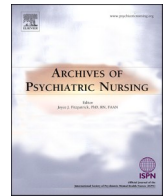


Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Archives of Psychiatric Nursing

journal homepage: www.elsevier.com/locate/apnu

Engagement with reservation-based Head Start teachers to explore their stress and coping: A qualitative study

Deborah H. Wilson^{a,c,*}, Michelle Sarche^{b,1}, Adriann Ricker^{a,2}, Lydia Koh Krienke^a,
Teresa Brockie N.^{a,3}

^a School of Nursing, Johns Hopkins University, 525 N Wolfe St., Baltimore, MD 21205, USA

^b University of Colorado Anschutz Medical Campus, Colorado School of Public Health, Centers for American Indian and Alaska Native Health, USA

^c Auckland University of Technology, 90 Akoranga Drive, Auckland 0627, New Zealand

ARTICLE INFO

Keywords:

Native American
Mental health
Head Start
Stress
Culture

ABSTRACT

Background: Native Americans residing in remote reservation communities find strength in connection to place, culture, language, and sovereignty; they also face challenges as their communities struggle with historical and contemporary traumas that have resulted in poverty, high crime and suicide rates and drug misuse. The psychological well-being of Head Start teachers who teach and support the needs of Native American children, is overlooked.

Methods: Qualitative interviews ($n = 18$) and focus groups ($n = 9$) were conducted with Head Start teachers, supervisors, parents, and ancillary staff to identify risk and protective factors at each level of the socioecological model (individual, relationships, community, society). Using content analysis and F4 analyse software two coders identified recurring themes.

Results: Individually teachers are resilient, focused more on the children's well-being than their own. Family was both significant support and stressor. Community struggles with drug and alcohol misuse and homelessness were the most frequent stressors. Workplace support included their supervisors and the mentorship they provided each other. Spirituality in the form traditional cultural practices, prayer and Christen faith were important sources of support and well-being.

Conclusions: This paper provides insight into the stress and coping mechanisms of reservation-based Head Start teachers, identifying ways to protect and promote their health and well-being. It is important to provide support at all levels of the socioecological model to enable these teachers to strengthen their physical and psychological health and wellbeing so that they may support the children and families of Head Start to help strengthen Native American health overall.

Introduction

One of the most stressful occupations in the United States (U.S.) is teaching within early childhood education (ECE) settings (Harding et al., 2019) with workplace stress being attributed to low pay, behavior problems in the classroom, limited educational resources (e.g. equipment, supplies), gaps in pre-service training, and lack of appreciation for their role (Cumming et al., 2021). High levels of teacher stress are correlated with issues such as depression, anxiety, poor physical health,

burnout, and, ultimately, attrition from the ECE teaching profession (Schaack et al., 2020). Correlations between high levels of ECE teacher stress, classroom quality, and children's socioemotional and academic outcomes have also been found which has motivated research into how to support and promote teacher health and well-being (Smith & Lawrence, 2019; Zinsler et al., 2016).

Research into ECE teacher stress, and more specifically, Head Start teacher stress, focuses on workplace stressors and strategies and policies to moderate teacher stress, and improve classroom quality and the

* Corresponding author at: 90 Akoranga Drive, Auckland 0627, New Zealand.

E-mail address: Debbie.Wilson@aut.ac.nz (D.H. Wilson).

¹ An enrolled citizen of the Lac Courte Band of Ojibwe Nation.

² An enrolled member of the Assiniboine and Sioux tribes.

³ An enrolled member of the Aaniniin Nation.

<https://doi.org/10.1016/j.apnu.2024.06.008>

Received 8 February 2023; Received in revised form 24 January 2024; Accepted 9 June 2024

0883-9417/© 2024 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

children's outcomes (Jeon et al., 2019; Smith & Lawrence, 2019; Zinsler et al., 2016). For reservation-based Native American Head Start teachers in rural and frontier environments, the historical and contemporary traumas that their communities have experienced may further exacerbate their stress and influence the coping strategies they employ to manage stress and promote their well-being.

Native Americans struggle with health disparities at rates higher than their white counterparts. For example, Native Americans are twice as likely to have diabetes as whites, are more likely to experience PTSD, substance use, and suicide and their adverse childhood experiences (ACE) are 2.5 times the rate of the general population (Bullock et al., 2017). On reservations, lack of access to healthy foods, poorly resourced schools and health care likely compounds these risks increasing morbidity and mortality. Moreover, culturally specific adverse experiences such as historical traumas experienced because of colonization, and higher levels of contemporary discrimination have been significantly related to multiple risk behaviors and poor mental health outcomes (Brockie et al., 2015). Significant associations have also been found between suicide and familial attendance at residential bordering schools (McQuaid et al., 2017). At Fort Peck, the site for this research, a study of reservation youth ages 15–24 revealed that 78 % of participants had experienced at least one ACE (Brockie et al., 2015). After controlling for demographics, each additional ACE increased the odds of PTSD by 55 %, depression by 57 %, high-risk substance use by 51 % and suicide attempts by 37 % (Brockie et al., 2015). This has implications for Fort Peck Head Start teachers not only because the children that they care for are potentially at risk for mental health challenges and manifesting at-risk behaviors, but it is also likely that the teachers themselves have or are experiencing traumas such as Intimate Partner Violence (IPV), discrimination, and poverty while needing to provide nurturing relationships and a safe, stable environment for the children.

The recognition that historically anchored traumas can influence contemporary lives and manifest as depression, distress, anxiety, diabetes, substance and alcohol misuse and suicide has led to the utilization of cultural buffers such as tribal identity, language and traditional practices to promote and sustain wellness (Walls et al., 2016; Walls & Whitbeck, 2012). Being part of a close-knit social network and valuing the movement of the whole group toward success, rather than the individual, is also a potentially strong protective factor within Native American communities (Hobfoll et al., 2002). Potentially, these factors may influence reservation-based Head Start teacher well-being.

Despite Treaty promises by the Federal Government to provide education resources to tribes, education in rural areas such as Fort Peck are woefully underfunded and struggle to attract qualified teachers, provide up to date educational technology and school buildings are often in poor condition (Newland, 2022). Only 70 % of Native children that attend kindergarten will graduate from high school compared to 82 % for the rest of the US population (Aud et al., 2012). Of those that do attend high school Native American students perform 2–3 grade levels below their white peers in K12 reading and mathematics (Aud et al., 2012). One federal program that has acknowledged the need to support Native American and Alaska Native children and provide traditional language and cultural practices to improve educational outcomes is Head Start.

Head Start is a federally funded ECE program that began in 1965, that is designed to help break the cycle of poverty and to support preschool aged-children's early learning, social-emotional development, health, and family wellbeing (ACF, 2019). Head Start operates in 12 regions, 10 of which are geographically defined and two of which are defined by the populations they serve: Region XI is comprised of federally recognized American Indian/Alaska Native tribal communities and migrant and seasonal workers and their families make up Region XII (ACF, 2019).

While studies investigating Head Start teacher stress are growing data on the Region X1 Head Start teacher stress and wellbeing has been more recent (Office of Head Start, 2021; Walker et al., 2021; Wilson et al., 2022). According to the American Indian and Alaska Native Head

Start Family and Child Experiences Survey (2019) (AIAN FACES), 64 % of children had lead teachers who reported some level of depressive symptoms from mild (27 %) to moderate (26 % of children) to severe (11 % of children). (American Indian and Alaska Native Head Start Family and Child Experiences Survey, 2019).

A previous search for peer-reviewed publications investigating Native American Head Start teacher stress and well-being or exploring the unique cultural factors that support their health and well-being turned up no results (Wilson et al., 2022). This study seeks to fill current gaps in the literature by providing a unique perspective held by reservation-based community members who hold perhaps the most comprehensive understanding of stressors and supports that affect teachers who work at the Fort Peck Head Start program. Further the Head Start director discussed her concerns with us about the stress teachers struggle with which warranted exploring the stressors and protective factors that affect these teachers physical and psychological health and well-being.

Conceptual framework

The conceptual model used to frame this work is based on the socio-ecological model to understand the protective and risk factors that reservation-based Native American Head Start teachers experience and utilize at the individual (knowledge, attitudes, behaviors), relationship (family, friends, social activities), community (organizations, faith base institutions, law enforcement), and societal level (federal state and local policy makers) to cope with stress and enhance their well-being. According to the socio-ecological model individual behaviors that can be linked to chronic diseases and coping strategies are influenced by the social environment such as organizations, the community one lives in, and public policies – all of which can contribute to unhealthy behaviors or be targeted to create changes in the environment that support an individual's health and well-being (McLeroy et al., 1988). This model allowed us to explore the factors that potentially cause or protect Fort Peck Reservation Head Start teachers from stress and or promote well-being thus allowing us to identify individual, organizational and systems levels changes that could support this population.

Research questions

For this qualitative study we were interested to hear the experiences of reservation-based Native American Head Start teachers to understand:

1. What stresses they experience and how they cope. Are these stressors similar or different to those reported by Head Start teachers from other regions?
2. How does their community environment influence their stress and well-being?
3. What protective factors do Native American Head Start teachers employ to support and promote their well-being?
4. What cultural buffers are used to help manage their stress?

Methods

A qualitative descriptive approach was used within Community-Based Participatory research (CBPR) so that the lived experience of the Head Start teachers and reservation community could be captured. Content analysis of data was employed as we were interested in the frequency of the themes that emerged during interviews and focus groups. By using this methodology, a more accurate account of the factors that both facilitate and mitigate teacher stress was collected and reflects the true lived experience of community members within the reservation without the imposition of a priori assumptions about that lived experience.

Community-based participatory research

To ensure that this research centered community needs and perspectives, we conducted this study within a Community-Based Participatory research (CBPR) framework. CBPR ensures that the team works to balance power between the academic institution and community partners (Wallerstein et al., 2011). To be mindful of the historical unethical research practices inflicted upon Native American communities which have resulted in mistrust of research institutions, adherence to CBPR principals was essential to maintaining the integrity of this study and to model a culture of respectful mutual research engagement.

To support the CBPR approach non-Indigenous members of the research team attended workshops led by Native American Elders and a Native American academic on how to work with Indigenous communities and were on a team that conducted a literature review on best practices for culturally safe research with Native American populations (Brockie et al., 2022). One Native American community member on our team was trained in one on one interviewing and leading focus groups and took on interviewing the parents and leading the parents focus groups. The first author conducted the interviews and focus groups with the Head Start teachers and staff, as she worked as nursing faculty at a tribal college nursing program and volunteered with Fort Peck Head Start as a yoga teacher meaning that she had started to develop a relationship with the community.

Research ethics

Other steps within the CBPR process involved time spent engaging with community leaders and tribal members in the development of this study. Comments by the Head Start director that teachers were stressed and needed support were the impetus for the study's focus. With permission from the Head Start director, we sought permissions for the study from the tribe and the academic institution in which this study was housed. Tribal Resolution (#30-348-2020-03) authorized the research study and approved the application for funding. This resolution details the tribe's rights to protect their intellectual property and Indigenous knowledge (e.g., pictures, songs, and stories). It also requires that the Tribal Council review any manuscripts before publication. Johns Hopkins University and Tribal Institutional Review Board (IRB) approval were also obtained before commencing this study. We then set up a tribal advisory board to provide culturally appropriate guidance during the research and communicate with the community as needed. Our board consisted of a Head Start teacher, Head Start supervisor, Head Start parent, Head Start grandparent, and a cultural advisor.

Impact of COVID-19 on the research study

It is important to note that during the implementation of this qualitative research, the COVID-19 pandemic broke out resulting in the closure of all Head Start schools on the reservation and at times closed reservation borders. They re-opened a few months later for reduced in-person classes with COVID protocols in place.

Disasters, which include infectious disease outbreaks, are particularly stressful for Indigenous individuals and communities who were already struggling with limited, infrastructure challenges, historical trauma, poor access to health care and significantly higher rates of disease – all of which affect individuals' and communities' ability to cope during a disaster (Asfaw et al., 2019). Thus, questions about the effect of the pandemic were added to the interview. The results of this study have been unavoidably influenced by the real time stressors of the pandemic occurring during data collection potentially obscuring everyday stressors and skewing results.

Study area and context

The Fort Peck reservation, located in rural, northeastern Montana is

home to the Assiniboine and Sioux Tribes and consists of 12,000 Tribal members. It spans 180 miles and encompasses a total of 3200 mile² (Fort Peck Assiniboine and Sioux Tribes, 2022). In total Fort Peck Head Start includes six schools across the 2- million-acre reservation funded to serve over 200 children with 21 teachers and teachers assistants at the time of data collection (Fort Peck Assiniboine and Sioux Tribes, 2022).

Briefly as a frontier remote reservation the reservation struggles with multiple health disparities and structural inequities. A 2016 community health assessment found that 13 % of youth had attempted suicide compared to 9 % of youth in the rest of Montana, and a third of households have children living in poverty (Fort Peck Tribal Health Department, 2016). The Head Start administration reports that most of the Head Start children live in single parent homes with 80 % living below the federal poverty line. Access to primary care is limited with 1 provider per 5500 residents and for mental health it is 1 provider per 1000 residents (Fort Peck Tribal Health Department, 2016).

Recruitment and data collection

To answer our research questions, we conducted interviews and focus groups with Head Start administrators, supervisors, teachers, teachers' assistants, ancillary Head Start staff, and parents. By collecting data from parents and ancillary staff, we hoped to achieve our overarching goal of capturing an in-depth perspective on the stress affecting the teachers and their coping mechanisms. Purposive sampling was used to ensure information rich sources. We presented our planned study at a reservation-wide Head Start staff meeting. A research assistant from the community assessed prospective participant eligibility. Flyers and follow up emails were also distributed. Teachers, staff, and parents were offered the choice of a one-on-one interview or to participate in a focus group as our tribal advisory board mentioned that some participants might feel safer being interviewed in a group environment. However, the outbreak of COVID-19 interrupted data collection due to reservation closures which prevented the interviewer from entering the reservation and when the reservation re-opened there were limits imposed by tribal leadership to in-person gatherings. This resulted in us switching from in-person to phone or Zoom interviews based on interviewee preference. We were able to delay the two in-person focus groups ($n = 4$ teachers and $n = 5$ parents) and conducted those when the reservation re-opened. These were held with COVID restrictions in place which involved social distancing in the room, sanitizing, and switching from offering food at the focus groups to providing a meal voucher.

Eligibility criteria included the following: currently working or having worked on the reservation at Head Start as an administrator, supervisor, teacher, teachers' assistant, or ancillary staff or be a parent of a child who was currently attending or has attended Head Start; be over the age of 18; and speak English. We informed all prospective participants that participation was completely voluntary. We worked with those who consented to participate to schedule convenient interview times.

Semi-structured interview guides were developed: one for Head Start staff and one for parents based on a literature review and our research aims. Our tribal advisory board reviewed the interview guides, provided feedback on order of the questions, cultural appropriateness, and interview length. The resulting guides included the following prompts: sources of strengths and stress at work, home, and in the community; descriptions of coping mechanisms; actions taken to promote well-being; cultural activities employed as part of everyday life or for stress relief; existing support mechanisms and potential mechanisms that could be leveraged to support psychological health; and characteristics of a resilient teacher/staff member. We also asked parents and ancillary staff about their relationships with the teachers; what observations they had about teacher stress; what suggestions they would recommend for teacher support; and what cultural practices they employed for themselves and their children. We added a section to the guides to capture the effect of the COVID-19 pandemic on staff, parents, and the community.

We started all interviews and focus groups by carefully reviewing the consent form with participants, allowing time for questions and to ensure clarity of the study's focus. Voluntary participation was emphasized with each member able to discontinue or leave the interview or focus group without experiencing any adverse effects to their employment. We described why we wanted to record the interviews and that recordings would be deidentified, transcribed and used to inform our understanding of their stress and look for potential solutions. We explained that all signed consent forms and recordings were uploaded into a HIPPA-secure database, with paper copies destroyed. Two participants refused to be recorded; detailed notes were taken by study staff during their interviews to ensure that a comprehensive account of the participants' perspectives was captured. All participants received a \$25 Visa gift card in appreciation for their time.

Theoretical saturation, determined through the observation of repeating themes and the absence of new information in the data, was reached after a sample size of 27: four administrators/supervisors, seven teachers, four teacher's assistants, eight parents, and four ancillary staff. Two focus groups were held, one with parents ($n = 5$) and one with teachers and teachers' assistants ($n = 4$).

Data analysis

Recordings from interviews and focus groups were transcribed verbatim by a professional transcription service. Each transcript was checked against the recordings for accuracy by the first author.

Prior to analysis, the first author developed a codebook based on the social-ecological model and literature review to understand the documented mechanisms of stress and coping for Head Start teachers. This allowed for an analysis of similar or different patterns in participant narratives. Two coders first worked independently to read three transcripts and inductively code risk and protective factors based on the levels within the socio-ecological model: individual, relationship, community and societal, using the qualitative data management software F4Analyse. Our rationale for using content analysis was to conceptualize the phenomena of the reservation-based teachers experience of stress and coping (Elo & Kyngäs, 2008). Taking the broad conceptual categories of the socio-ecological model, we then identified themes and quotes and created categories within each section of the model. In meetings we compared our independent analyses and discussed codes and any patterns that emerged, working to define broader categories that captured these themes. The next step in the analysis included a conversation on which sub-categories could be subsumed into larger themes. For example, coping strategies connected to either Christian or culturally specific rituals were included in the overarching theme of spirituality. Similarly, we defined terms deemed to be significant in the data such as "pray", "God", "meditate", "go with the flow", "smudge", "Pow Wow", and "fasting", linking these data items into the broader category of spirituality. Interrater reliability was not calculated as we opted to encourage diversity of viewpoints to stimulate rich discussion, taking notes so that these discussions could be further enhanced through meetings with our Indigenous mentors. These meetings were important because we had been unable to find an Indigenous researcher to join the analysis team. Thus, careful attention was paid to memoing which were then discussed and explored in three scheduled meetings with two Native American scholars, one a professor conducting research on the reservation, and one an expert in childhood development in early care settings such as Head Start. In these meetings we discussed emerging content, our memos, identified biases and any discrepancies or questions we had about how to code data. At the end of analysis, we met and discussed our interpretation of results with one Head Start supervisor and one Head Start parent to ensure that our findings resonated with their experience.

Results

We have organized the results to follow the levels of the socio-ecological model to capture sources and mitigators of stress at each level: Individual, Relationship, Community and Society. Of course, many stressors, strengths and supports are a complex interplay involving more than one level of the socio-ecological model, however we organized the results this way to capture the scope of strategies participants employed to mitigate stress and improve resilience and well-being. Study participant quotes are identified as S = supervisor or administrator; T = teacher or teachers assistant; P = parent; A = ancillary staff.

Demographics

For teachers and teachers' assistants all 15 were female and identified as Native American, 87 % were over the age of 60 and 65 % had worked for Head Start for longer than 10 years. For the ancillary staff all four were Native American, female, two were cooks, one worked in administration, and one worked in the nutritional program. All four had worked for Head Start for more than 10 years. All parents were Native American with at least one child still in Head Start. Only one was male.

Level one: individual stressors

Stress was not an issue until COVID-19 pandemic

When asked what was stressful for participants individually, teachers either described not being stressed or having not really thought about it. This was consistent among participants' perspectives. As one teacher described "I don't get really, really super stressed out. I just like, 'Ah, I wish we didn't have to do this,' that kind of thing, but it doesn't really bother me that much." This pattern deviated when discussing the COVID-19 pandemic: "No, I probably think that, well, I didn't really notice that [stress], but when the virus [COVID-19] came, I noticed it." - A.

All participants described losing a relative or having suffered from COVID-19 themselves: "I guess the death of a lot of loved ones throughout our community really took a toll. It put a black cloud over our reservation." T, which exacerbated the fear of getting sick: "I don't want to catch it because my sister passed away on it. They tested her and she had it on a Thursday, Monday she was dead." A.

This fear of contracting COVID-19 was heightened for teachers when the Head Start classrooms re-opened because of the risk of contracting the disease from the children, despite reduced class sizes, shorter hours, mask mandates, temperature stations and sanitization procedures put in place to minimize this risk:

And then when they did actually start having children that came into the centers then at that point, I was seeing more stress from the teachers, ... more in regard to getting COVID, because they'd hear in the community so-and-so and so-and-so's cousin had COVID, and then yet they'd still send in that child to school.

S

Despite this anxiety the commitment and care that these teachers have for the children shone through in the interviews. As one teacher described: "And you can't touch the kids and the kids can't be near each other and they can't- yeah, it's just so different - and these kids need that touch and it's- yeah, it just breaks my heart."

In a focus group teachers discussed their commitment and resilience despite their fears of contracting COVID-19.

Interviewer: The stress of COVID hasn't caused teachers to leave from here? In in other places people are leaving their jobs.

Participant 1: I noticed that.

Participant 3: Not us.

Participant 4: We hang in there <snaps> tough, because we want our kids to learn.

Physical health disparities exacerbated by COVID-19

Despite this care and commitment to the children COVID-19 exacerbated teachers' fear and anxiety about underlying health issues that put them at risk of infection and death. As a result, an interest in managing their physical health emerged. Multiple comments about their vulnerability were echoed by this teacher saying, "I was scared to come out of my house and go to work every day because I got health problems, I mean I would never survive COVID." Even those without underlying health issues were concerned for their co-workers:

There's a lot of teachers here that have underlying health conditions, thank God I'm not one of them. A lot of them have diabetes and heart problems and all that. That's kind of scary to a couple of them especially because they have those heart problems and they're worried about kids coming to school [with COVID-19] and getting us sick.

T

Personal issues are not discussed in Indian country

In trying to find out why participants described not being stressed until the COVID-19 pandemic participants discussed that the reasons for not being aware of, or not discussing stress revolved around a cultural norm of not talking about personal issues. This was a trait consistent among administrators, teachers' parents, and ancillary staff with participants describing that they "cope with stress in their own way".

Like we're just that way in Indian country, you don't talk about things. That's just not how you were raised. So, I kind of keep a lot in. Don't talk about it to nobody, you know? That's just how it is.

P

I have never had any of them who have asked for us to help them with mental health services, but I'm sure they're pretty private about it, but I'm sure if they did, it's just something they usually don't tell you, you know?

S

This was further elaborated by comments indicating that teachers are so busy caring for others that they don't ever think about their well-being.

I feel like just even some basic emotions, some just basic knowledge about social emotional development in adults, not just kids [is needed]. I think being in Head Start they're always so focused on kids. I don't think they themselves know what that looks like for them as an adult, because I don't think they got that as a child. They're giving it to kids, but I don't think they internalized, know what that is and what that feels like for them individually.

S

When asked about utilizing mental health services, many teachers were uninterested saying that they never "contact them" citing that they don't need them. Two teachers cited confidentiality concerns with one stating "I don't feel I need them neither. Besides, it's not very confidential to go to those places. They say it is but it's really not." Instead, teachers expressed a preference for Head Start to provide leisure time. In the focus group comprised of teachers, they discussed wanting special time for them at the "wellness center" or "little workshops on how to cope with stress" with one teacher saying, "Maybe if they'd bring a table and have us do a massage or something once in a while like a spa day for us."

*Level one: individual mitigators**Head Start children are a stress reliever*

Working with the children at Head Start was not seen as stressful but rather, described as a personal stress-reliever with teachers describing a strong work ethic. As one teacher described: "...and just throw myself into the children. Because the children will cheer me up and make me happy."

Another teacher said:

I love my job, so when I come to my work it's a stress reliever for me. I come in here — I don't bring anything from home. I come in, and I just enjoy the little people and the way they talk, what they say.

T

Smoking as a coping mechanism

The most common individual way of coping with stress was smoking. This was observed by teachers, parents, and ancillary staff. One teacher's assistant described her stress relief as "I just go outside, smoke a cigarette, scroll through Google. Just about five minutes of alone time. That's it." All the parents in the focus group commented that teachers "go smoke" when asked how they see teachers managing their stress and one ancillary staff observed:

And the teachers that I've seen — everyone has their habits. And their habit was smoking, so they would go outside and smoke a pack a day and then vent about their stresses at home, and whether that included smoking five cigarettes in a row, they vented. And that was their way.

A

Spirituality is a foundational support

Five teachers described how a strong connection to their Christian faith helped them cope with stress with one saying "I gave myself to the Lord in 2008 and got re-baptized. Never had an anxiety attack since." With another describing how her faith helps her to cope with her stress and larger issues:

Well, I can go and pray and try to calm myself down and ask the Lord to help me and pray for that other person or whatever and the situation. If I didn't have that I don't think, there's days I wouldn't get through.

T

When asked if traditional activities such as smudging (a traditional practice of burning sage or cedar to create smoke which cleanses the air and removes negative thoughts and feelings for those participating) were used to help manage stress, only one teacher and one parent described relying on such traditional activities in their daily life. Parents in the focus group discussed how they smudge but "not as much as they should". Otherwise, neither teachers nor parents reported utilizing cultural activities as coping mechanisms:

I mean, you know, like I told you I pray, I don't do anything Native American. I like incense and I do have like sage once in a while, but I don't really practice any Native American kind of— it's just my prayer, Jesus and God, that's what I do every day.

T

One parent described the importance of smudge in their family "If we go somewhere, we'll smudge before we go, like kind of protecting us. So yeah, I guess it kind of does give me somewhat of like peace of mind." An interesting theme that emerged was participants stating that they did not practice the traditional ways but then they would describe regular participation in cultural activities. As one teacher put it: "But there's powwows and stuff, I take my grandbabies to the powwows because we like to hear the music. And they used to dance [before COVID-19]."

One participant noted the lack of connection to traditional cultural ways providing the following description of the reason why reconnection was important:

Because I think there's a little piece in everyone, here especially, in the Native community here, that they want to learn that. They want to learn their cultural ways. They want to learn their language and want to have a connection in a sense with their ancestors and their family lineage, you know? There is somebody in their family tree, every person here, that was a cultural person, that did know their language, that did follow these ways. And I think there's something deep down inside every single person here, I believe, that craves that.

*Level two: relationship stressors**Family*

When asked about sources of stress in their lives, the unanimous response was family, with all 15 teachers and some parents describing this as their most frequent source of stress. This was further clarified by teachers who explained this was because they were single parents who were working full time, caring for their grandchildren, and attending college to get their bachelor's degree.

I never stress over there [Head Start], just at home once in while I do, over my family when we're all having, you know, fights and stuff, and it'll bug me, you know, so I just get up, clean, and talk to my sister.

A

Several of the family stressors were connected to the structural inequities and disparities that affect the reservation community:

The reason why I took my grandkids is because... my oldest got into meth, and I didn't want to see them [her grandchildren] put into foster homes or anything like that. So, I had to take them in, and that's who I'm raising now.

T

We do have a couple of the young girls that are in abusive relationships, and then they come in, and there's been times in a couple of our centers the last couple years where the staff in the center have to be afraid that their significant others will come there and... [be violent].

S

Teacher-parent relationships

Consistent with literature on stressors for Head Start teachers in other regions, teacher-parent relationships were a significant source of stress from teacher, parent, and ancillary staff perspectives.

That's a tough one because there are some parents that are good at coming in, communicating, or doing what the teachers ask — Some are good and some are not, and I know that stresses the teachers out, too. Parent involvement is really hard for this program. Yeah.

A

“Like parents that possibly are on drugs and then they try to come and take a child that— they both have custody, but I can't give it to that parent because you could pretty much know when they're high on drugs...”

T

“If they have to talk to a parent about an issue that may come up with the child in the classroom, especially when they have to deal with behavior issues, that's very stressful for them. And then sometimes, something has come up and then they have to turn around and call me so that we're aware in the office in case the parent may call, and they're concerned.”

S

Parents also discussed their relationship with teachers, noting concerns about not being contacted in a timely manner if their child was acting up in the classroom. In the parent focus group, all parents discussed their awareness that parent involvement was needed at Head Start but was lacking; the reason being that they were working full-time and were therefore not available.

Managing children with behavior problems

Supervisors discussed the increase in children with autism or behavioral issues. They observed that the behavioral issues were sometimes related to parental drug use. While stressful, teachers more frequently described how they work with these children to manage their

behavior: “I know what works and how to talk with a child, and if we have one with behavior problems I work with them, one on one, so I'm paying attention to them so they're not harming other children.” T.

We have definitely seen an increase in autism and then sometimes they have to work closely with the parents and usually, what they will do is they will ask the parent to come in and observe our whatever and then try to work with the family.

S

Yeah, he wouldn't listen, well found out later he was autistic and stuff, but at the time I didn't know. And I don't have training in autism. Yeah, and that's another thing that stresses, these kids that are coming in, some of them have been on drugs and their parents are like, “Oh there's nothing wrong with them”.

T

Potty training

A topic of debate was having to manage children who are not potty trained. Six teachers discussed this with one stating: “And that's another thing, way back when we started working for Head Start, kids could not come if they weren't potty trained, now we have to take them, so we're changing diapers.” Another highlighted the physical strain this activity places on them:

And when I was younger, it was no problem, but I can't even — I get because of my [health condition] I can't really bend over, I get dizzy at anything, so I don't know how they're going to expect me to change diapers this year.

T

Parents acknowledged that this was a stressful issue for teachers: “I know one stress was like not having them potty-trained, but they have to change them, you know.”

*Level two: relationship mitigators**Family a foundational support*

While participants stated family was their biggest stressor, a clear theme that emerged during conversations was that family was simultaneously their most important source of support. The term “family” meant any relative by blood, marriage, or “adoption.” Regardless of the connection, the importance of family was clear as one teacher highlighted: “Oh, my best, best, best, best support is my family.” One of the ancillary staff described how it was her family that was her stress relief: “I go over to my cousin's and she'll keep me busy, listen to her sad stories. ‘I just got through with that,’ I always tell her, she'll start laughing.” Another ancillary staff member described the benefits and potential difficulties of living in a close-knit community:

We live in a small community, so you kind of know everybody. Everyone knows everybody. So, you kind of know what's going on. We have social media now. And you see — you follow the lives of your relatives and your community, and you know kind of what they're going through, whether it be marital problems and, you know, stuff like that.

A

Strong co-worker collegiality

Co-worker support was a consistent theme that arose when discussing coping with workplace stress.

... And we got each other's backs. We do the best we can to help each other out, and if — let's just say if there was something that this teacher had and I didn't have, she go out her way to give me that.

T

And from the supervisory perspective:

I think a lot of times they don't really want anything else but to be able to talk. Also, they mentor each other. They know to go to each other and ask "What would you do?" or "How are you doing this?" but to keep confidentiality.

S

Co-worker relationships suffered if participants were struggling with too much personal stress. During interviews, this stressor was COVID-19 and the loss of relatives to the virus.

So, it's like employee to employee. "They're not respecting me. They're not respecting my decision. They went and they did this." It comes out as that, and then, once I just listen and I just validate and reassure, then it comes out. "My mom died from COVID. My sister's sick with COVID." And I know that's [the conflict] grief. It's grief that's coming. And what are they doing? Do they have tools? I don't know.

S

Head Start supervisors and directors are a strong workplace support

A strong supportive and trusting relationship between the teachers and their supervisors was a theme described in all teacher interviews and the focus group: "we can talk to XX or XX (supervisors) about any problems and I work with XX and she's the center supervisor and she's always really helpful, she's good to talk to."

A supervisor's response to being asked if she ever sees her staff burned out captured the supportive nature of this administration.

Just trying not to get upset with them, because sometimes they start to let their jobs slide...but, yeah, that's usually what I do as a supervisor, is just to try to— or sometimes just to say to them— say if they're dealing with tardiness or whatever— "What is it that we can do?" instead of just putting it on them, like "What is it that we can do that will help you?"

S

Level three: community

Community stressors and support could be divided into two areas: the Head Start workplace community and the reservation community.

Head Start community

Lacking enough bus driver staff to adequately transport students was a theme discussed by all participants – teachers, parents, ancillary staff, and administration. Without a bus driver, children were either not able to attend Head Start or parents had to ensure their own transportation, which was not always possible. Further, teachers are required to deliver food and learning activities to students' homes.

It's a set of circumstances they're living in. Poor. Overcrowded. Maybe their health needs are not being met and they're sickly or they're not getting enough rest because of the overcrowding or eviction or some type of domestic violence situations in their home. And they don't have transportation. That's why Head Start buses are important. It gets them to school.

T

And then when we lost our bus drivers and couldn't hire bus drivers because no one was qualified, then slowly we began to see, you know, less and less [children attending Head Start]. And then talk about the dropout rate. Mostly it was in the 3-year-old classrooms it seemed like.

S

COVID-19 specific stressors affect Head Start teaching

The closure of Head Start schools and the implementation of COVID-19 protocols mandated by the Office of Head Start triggered stressors and concerns for the teachers. During full closure of the classroom's teachers switched to preparing packets of lessons and delivered these to

children's homes along with a packed lunch which elicited concerns as the teachers could not have as much contact with the children and parents as they usually would.

Also, like right now, with the COVID, they can't really go into the homes. They have to just try to keep in contact with families because we're still — we're sending packets home to the families to give them lessons and then we try to make sure that they have meals. So, right now, they don't have as much contact actually with the families as they normally do.

S

We're gonna have a lot of children that are probably a year behind by the time they actually start with school again, because, see, in the past when it wasn't the pandemic when the kids aren't coming to school they're reported to the tribal courts, and then they'll be pulled into truancy court, and the parents have to come and answer why their children aren't in school, yeah, but right now none of that can go on because of the COVID, so...

T

The mandated closures highlighted a gap in the online proficiency of the Fort Peck teachers which prevented setting up online learning.

This program has really lacked technology and they're a little behind in that and so, that was one of my goals was kind of to bring them up to date and just enough to function while we're online and it's been slow, but one of my goals was just to get everybody an official email address and to make sure everyone knew how to check their email.

S

In focus groups Head Start parents expressed their frustration at this lack of technological capacity.

If this happens again, I think that there needs to be more of a response to getting teachers trained to be online.

Parent 3: Yeah.

Parent 1: There's no reason that my son who has internet at home, who has a computer, couldn't Zoom into your class. You know?

Parent 2: I agree...

Reservation community struggles with the effects of structural inequities

Drugs, crime, and homelessness on the reservation were ubiquitous concerns among study participants and highlighted the structural inequities that this community struggles with. Comments from teachers included: "What really stresses me out is when I see our young Native Americans that are homeless, that are on drugs and not just the dealing but doing drugs and steal and breaking things." and "I just go home, and I pray and just ask God to put a cover over our reservation and that he could help our young people get off drugs or, you know, show us the light or something." Other teachers described their own families struggle with drugs "All of the drug use. I mean, my families are right in there, you know, and I talk to them all the time and I tell them, ..., what could happen to them. It goes in a deaf ear. They don't care." One of the supervisors with more than 40 years with Head Start said "I do not remember drug abuse on the reservation being this out of hand."

COVID-19 impacted the whole community with many of those interviewed describing family members who died, highlighting the risks of COVID-19 being exacerbated by the inequities in this community. As one participant said: "During COVID, we lost a lot of fluent elders in the language here at Fort Peck. It's just— we're still trying to pick up the pieces."

In the parents focus group the effect on the community was palpable:

Parent 01 It took a big toll on everybody, you know. I know lot of people that lost people, you know, like, it was hard.

Parent 04: Mm-hm. I know a lot of people talk about the difficulty, like, weren't able to really mourn during this whole time either, right, like...?

Parent 03: Yeah. We couldn't do what we usually do, you know, like the four-day feast and everybody meeting up, and couldn't do that. That was hard. Could only see him at the morgue — or the... <snaps>

Level three: community mitigators

Despite these hardships, inequities, and community stressors, six teachers described actively supporting those who were struggling or involved in some initiative to improve the community: I knew they were struggling, and I just told them, "If you need any help, I got extra meat. I have canned food," because I'm old school. I was raised with my grandmother where we didn't have nothing. T.

Others described being on school boards and committees:

I also am a part of the advisory group. I'm aware of the effort to get the Buffalo Curriculum into Head Start. Our goal and focus with the buffalo trail that we're trying to build was to provide an opportunity for healing and bringing back our culture and awareness that the buffalo belong to the people and those are our relatives.

P

Participants also described the community support they received during the height of the COVID-19 pandemic. One teacher who was in quarantine with COVID-19 said: "And my other friends was bringing me stuff, so yeah, it was pretty good. I was never without. Yeah."

A parent described the community supports to help those in need:

Huge. I mean, boxes of groceries and I mean, they turn out. Family nights where there is something that will maybe lessen a burden in their home such as food, food insecurities, small perks. I'm telling you, a jug of laundry soap or, you know, some hygiene products are very welcome, you know.

P

Organizationally a supervisor discussed one silver lining of the COVID-19 pandemic.

One blessing COVID gave us was the recognition that we needed to take time to care for each other's mental health. There is so much grief and loss in our community and taking the time to process that together as a team, introduce mental health supports – even yoga in our staff meetings. Yeah, we never took time for things like that before, it was always just go go go.

S

Level four: societal stressors

Societal issues fell into two domains – Head Start services and tribal governance.

Head Start services don't reach the reservation

When discussing Head Start policy, the supervisors and administrative staff stated that the policies were constructive but because of its remote location, reservation staff were often not able to benefit from these services which meant that the burden "falls onto the teacher".

We lost those promises, you know. They said, "Oh, you know, we'll do training for you in the mental health, and we'll set up a referral system and we'll provide services in the evenings or just let us know when," and all that. And then at the end they always put the word out that, you know, "Oh, our staff is limited," or, you know, "The caseload is overwhelming. They can't get to our reservation right now." So, it didn't help too much.

T

Furthermore, trainings they received did not necessarily consider the unique circumstances that exist on the reservation:

That's what they say sometimes on the reservation like with this trauma-based training that you receive [from Office of Head Start] and then they

talk about how if you've dealt with one trauma, how it affects you, but sometimes on the reservation, it isn't just one trauma. It's just layer after layer after layer of different traumas that are happening.

S

Data collection during the pandemic

The pandemic highlighted the complex issues with collecting data on the tribe which risks not having the data required to drive funding support and policy change. Head Start administration highlighted important issues about data collection on reservation land:

Because we have tribal, we have county, we have state, and we have federal. So, we have all these different layers of people that overlap and so, collecting data and collecting numbers, it was kind of like a cluster headache because we had numbers coming from here, we had case numbers coming from there. We had people reporting on their own and it was just like there wasn't one solid data collection source, where people were saying "Hey, let's work together and let's put this one source out there where people can go to", I didn't see that.

S

Participants provided a rationale for the complexity of data collection and not working together.

Teachers and parents described the "endless bickering between Tribal and State governments."

I mean, you can see like decades and decades, centuries of the poor relationship between government and tribal. I would say some states have a hard time with tribal governments and it just goes with the relationship with a lot of traumas that has been a thing that's just driven, I think, the two entities kind of apart. It depends on the leadership at that time, whether those two can come together and work together.

S

Level four: societal mitigators

Tribal governance stepped up during COVID-19

The overall response to tribal support during COVID-19 was very positive. One teacher said "The tribe's is super-good. They brought me food, — to last I don't know how many days, and they're really, really good." Another described the supports they all received during the pandemic:

They gave everybody, they paid everybody's bill for five months which was, that was great, you didn't have to pay your MDU bill and not water, but just your utilities. And then we got the payments, stimulus payments from our tribe.

T

And in the parents focus group one parent commented:

Yeah. <laughter> I mean, I felt like it was pretty, they did pretty good considering, you know, it happened all so fast. And you know, I think I went in to — three times we had the quarantine: And they were fast to make sure that we had what we needed. People were dropping stuff off, you know, quick.

P

Discussion

This qualitative study explored the sources of stress for reservation-based Head Start teachers to better understand their coping strategies and what supportive mechanisms could be employed to improve their health and well-being. Reservation-based Head Start teacher stress needs to be understood within the cultural, historical, and political contexts that influence the unique strengths or exacerbate the structural inequities experienced on this reservation. For the purposes of this

paper, we separated the sources of stress and coping mechanisms into the socio-ecological model levels (individual, relationships, community and societal). They are in fact intertwined with complex and dynamic processes at play. Fig. 1 graphically depicts the how we included stressors and coping mechanisms that are unique to this reservation-based Head Start into the socio-ecological model.

Individual: physical disparities need to be addressed

The COVID-19 pandemic brought to the fore staff concerns about their physical health. Montana state level data estimates that the cumulative incidence of COVID-19 among Native American and Alaska Native was 2.2. times the rate among white persons and the cumulative COVID-19 mortality rate was 3.8 times the rate than among whites (Williamson et al., 2021). One factor increasing the risk of Native Americans to COVID-19 is the high incidence of non-communicable diseases such as hypertension, heart disease, and type 2 diabetes (Pickering et al., 2023). During the interviews teachers with diabetes, heart conditions or trouble walking because of arthritis described how at risk they were during the pandemic. Their renewed urgency to improve their physical health is an opportunity to implement supports that could help improve teacher physical well-being e.g., visits by a Native diabetes counselor to offer education and solutions such as the provision of healthy snacks or integration of physical activity in the workplace. This may help teachers take advantage of their renewed interest in taking care of their physical health. From discussions with the teachers, they are less likely to travel to receive such education so working with the Indian Health Service for example to set up clinics at Head Start centers may encourage session attendance.

From comments made by teachers about the difficulties bending down due to age and physical disability coupled with us noticing on site that there was very little adult furniture forcing teachers to sit on chairs built for children for example supported an organizational change for Head Start to provide adult furniture especially diaper changing tables. This could support this aging workforce that struggles with multiple disparities.

Smoking emerged as a significant coping mechanism. Careful, respectful discussion about smoking cessation is warranted as tobacco is an important ceremonial medicine in Native American culture yet commercial tobacco use poses an ongoing and significant health threat in tribal communities. Furthermore, no teacher mentioned interest in quitting. It's important to note that health inequities and smoking and

substance use are of concern in Native American communities (Gameon & Skewes, 2021). Evidence shows significant associations between historical trauma thoughts and substance use including smoking being used to cope with unresolved grief and anger (Brockie et al., 2013; Soto et al., 2022). Current trauma symptoms were mentioned by teachers during interviews, the loss of children to suicide and drugs, IPV, and discrimination when dealing with white officials. For smoking cessation campaigns to be successful on the reservation these traumas both historical and contemporary need to be addressed. Protective factors as strong cultural identity, communal mastery as well as addressing historical trauma thoughts have shown to be a protective factor against substance use (Gameon & Skewes, 2021).

Relationships: existing strong workplace support needs formal recognition

Fort Peck Head Start has a stable workforce with low turnover and the interviews revealed a strong co-worker collegiality. As these are important indicators of supporting quality early childhood education, they are important to support and promote. Thus, creating opportunities for positive team building to further strengthen the psychosocial climate is warranted. Team retreats for example may be a way to provide leisure time for teachers, with training opportunities and team building exercises. Evidence suggests that promoting social activities and team building can decrease stress and depression and promote flourishing in Head Start teachers (Hindman & Bustamante, 2019; Jeon & Wells, 2018). Such events support teacher's preference for leisure activities as they expressed disinterest in more formalized forms of mental health support. Further, study findings indicate that a culturally appropriate individually focused intervention delivered at the Head Start centers that focuses on stress reduction and promoting well-being could provide support for teachers especially after the stress and trauma of the pandemic.

Positive Head Start administrative and supervisory support was clear throughout the interviews. A supportive supervisory team and good relationships with a Head Start director helps to promote social cohesion and improve job satisfaction (Jeon & Wells, 2018). It may be that the cultural value placed on the collective rather than individual need has placed importance on this level of professional support within Head Start. Greater formal recognition from entities such as the Tribal Council, of the value and service that these teachers provide could enhance their standing in the community and their sense of personal and professional self-worth. Working environments that reward teachers' work ethic have shown improved job satisfaction (Grant et al., 2019; Roberts & Kim, 2019).

Community: structural inequities need federal support

Research investigating Head Start teacher stress has largely focused on workplace factors that contribute to staff turnover and how stress affects teacher interaction with children (Wilson et al., 2022). Fewer studies have investigated how the community environment affects teacher stress. It is clear in this context that community structural inequities such as drug and alcohol misuse and crime affect the teachers more than issues at work. Solutions for this are complex but need to be incorporated into discussions when planning how to support reservation-based teacher well-being. Conversely, the strength and power of the community connectedness emerged as an important source of support firstly between relatives but also in times of calamity individuals stepped up to provide significant community supports. Addressing root causes of the violence and drug misuse with interventions that discusses historical traumas in a culturally driven format that builds on community strengths may be productive and could be a way to build on the academic community partnership involved in this study. Furthermore, with these structural inequities steaming from historical injustices it is incumbent on the Federal Government to increase support to tribal communities and nations.

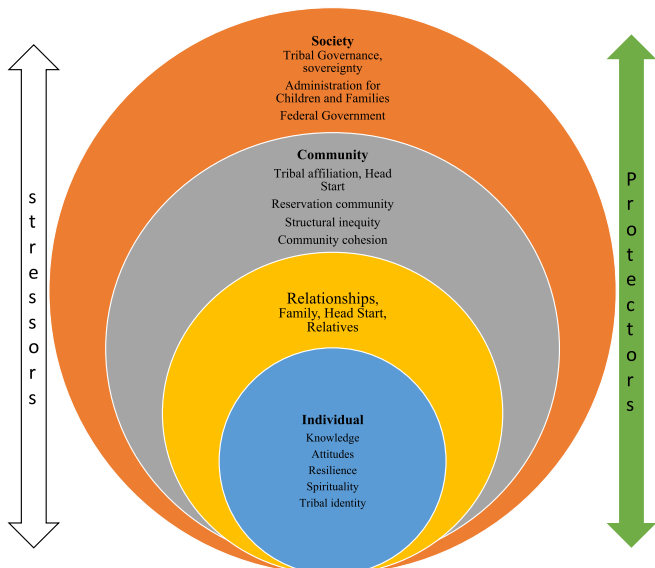


Fig. 1. Adapted socio-ecological model.

While teachers and other participants did not speak to utilizing traditional cultural practices to promote/protect their wellbeing, there was strong spiritual and community orientation throughout the interviews which represents fundamental Indigenous world views (Iwasaki et al., 2004). Teachers described the healing power of prayer, how it gave them strength to cope with stress, and give meaning and healing to the traumas that they experience. We had expected to see cultural buffers expressed more often as a counteraction to the negative impacts of colonization and historical traumas. However Christian faith and prayer were more frequently described. This will need to be considered when working to incorporate cultural practices into interventions to manage stress.

Both religion and traditional Native American spirituality anchors individuals in living an ethical and moral life and is therefore important to include and value both. Mindfulness and reflective practice beliefs have been shown to be a protective factor improving psychological well-being for ECE, particularly those who score high on ACEs (Hatton-Bowers et al., 2022). With participants stating they don't "practice the traditional ways" and yet simultaneously describing powwows and sweats as important events in their lives it may be that they are not conscious of the cultural pride and identity that they are expressing (Goodkind et al., 2012). Future research should investigate implementing culturally informed evidence-based interventions to reduce stress and promote well-being which may connect participants to existing cultural and community strengths they possess.

Societal: Head Start and tribal governance

Head Start teachers deserve competitive salaries

When coding the data, we noticed that teachers did not mention any concerns about pay which diverged from our literature review findings. One parent and one ancillary staff member commented on the low pay that teaching staff receive. Studies involving Head Start teachers from other regions frequently cite low pay as a reason for staff turnover (Clayback & Williford, 2021; Schaack et al., 2020). On the reservation, turnover is very low with 65 % of our sample having worked for Head Start for more than 10 years. However, there are positions open and the current Head Start workforce is aging with 87 % of our sample of 15 teachers and assistants over the age of 60. Thus, funding for incentives such as sign on bonuses to recruit new staff is warranted. This is critical as again low staff turnover promotes stability for children and is an important indicator for supporting quality early childhood education.

Social desirability bias may be the reason that teachers did not mention concerns about their pay, however the number of teachers and assistants expressing strong commitment to the children indicates that their reason for teaching is motivated more by a deep service ethic than a competitive salary. Existing data suggests that teachers driven by such intrinsic motives are more likely to stay at Head Start despite the low wages (Grant et al., 2019). Conversely, the financial support received during COVID-19 through COVID CARES funding and tribal stipends was mentioned as a welcome support by every participant which might indicate an unspoken economic insecurity. Thus, increased public investment compensating these teachers so that they receive a competitive salary that recognizes the important work they do in supporting the needs of the children would be a strategy that provides protective support, promotes teacher well-being, and potentially encourage others to apply to work at Head Start. Furthermore, a competitive salary could help these teachers move out of poverty helping to improve inequity in the community.

Professional support

Rather than feeling victimized about the lack of professional support due to their remote location teachers and staff appeared to cope with the situation demonstrating a remarkable resilience and commitment to the well-being of the children. Teachers and parents mentioned the lack of specialized support for children who struggle with disabilities or

behavioral challenges, however teachers spoke more to finding ways to handle it, being willing to work with parents to find solutions and learning through years of experience. Although committed to doing what they can for children with behavioral challenges, this must not be taken for granted. In response to evidence showing that behavioral issues have increased across Head Starts nationally and research identifying that this could be due to the traumas that children are experiencing Congress has provided \$250 million to be used for trauma informed care or to hire mental health consultants for teachers and children (Departments of Labor, Health and Human Services, and Education, 2019). However, due to its remote location and examples where such support does not reach the reservation its plausible that decreasing class sizes or using this funding to hire more staff are more appropriate effective options to consider.

Tribal governance: reservation specific data is needed

Participants were pleased with the support that they received from the tribe during COVID-19 in the form of food and financial support. However, evidence points to tribal governments now struggling financially post pandemic (Lozar, 2021). Revenue constraints post pandemic may limit investment in much needed infrastructure e.g., health care facilities, education, and water, with their critical need having been highlighted even more during the pandemic (Lozar, 2021). Federal agencies responsible for meeting treaty obligations remain woefully remiss in the distribution of adequate funding that would enable tribes to redress structural inequities. Through tribal sovereignty and self-determination tribal leadership has been investing funds into the community improving outcomes for their peoples (Akee, 2021). Adequate federal funding of existing policies would enable tribal governments to invest more in education on the reservation for example.

Data collection at the reservation level needs to improve, a complex task based on the information gathered in this qualitative study that has highlighted the known difficulties in communication and jurisdictional issues between tribal, state, and federal bodies, but it is essential that data is collected to provide evidence that can be used to advocate for funding and policy change (Akee, 2021). With research demonstrating that attendance at Head Start in rural areas leads to decreased criminal behavior, reduced teen pregnancy, and increases in high school graduation and college enrollment rates (Barr & Gibbs, 2019) collecting data on Fort Peck Head Start children as they grow up may provide data that could support greater funding and community recognition of the importance of Head Start in helping to improve equity in this community.

Transportation

Transportation was an area of concern described by all participants. During the COVID-19 pandemic Fort Peck Head Start partnered with the Tribal Transport Authority to enable children to still be able to be bussed to school. Public transportation is essential in the rural frontier environment where populations are dispersed over a wide area and parents are either working or do not have access to reliable vehicles. Such partnerships with existing transportation services need to be considered moving forward. The Office of Head Start does not provide transport however providing funding for tribal Head Starts to fund bus services is essential. Fort Peck Head Start and tribal leadership might be able to access available funding from the Federal Administration Tribal Transit Program (49 U.S.C.5311©) to further build upon existing transit services on the reservation (RTAP, 2020).

Increasing parental support

These interviews also highlighted the need for more parental support to mitigate teacher stress. Training and employing current and former Head Start parents has proven to be an effective method of retaining committed support staff which could help reduce stress for teachers and may help to improve parent teacher relationships and engagement. This can lead to better child outcomes (Reynolds, 2020). Discussions between

Fort Peck Head Start and tribal governance are warranted as supports such as this may be essential for these teachers and a community recovering from pandemic lockdowns, fears of illness and the grief and loss of so many loved ones and community members.

Limitations

This study must be considered within the context of its limitations. First this was a qualitative study with a very small population of Head Start teachers and thus cannot be generalized to other populations. By including other members of the Head Start community (parents, ancillary staff) we were able to capture their observations and experience of teacher stress, coping and needs which helped to ensure trustworthiness of the results. Future studies could consider using a survey to capture objective measures. Second, most interviews were conducted by the first author who is not from the reservation, which may have introduced social desirability bias. A research assistant from the community conducted the parent focus group and one of the parent interviews and was able to conduct these in person. Furthermore, the first author was required to conduct interviews via zoom or phone due to COVID-19 restrictions which limited observations of non-verbal cues.

As mentioned earlier attempts to hire a coder of Indigenous descent were unsuccessful, which is demonstrated to be best practice for analyses that include this subject matter (Brockie et al., 2022). Thus, although the two researchers responsible for coding had extensive training in Indigenous methodologies and working with Indigenous communities, (Brockie et al., 2022), this remained a limitation. The three scheduled meetings spaced during the analysis phase with two Native scholars were important to mitigate the effects of non-Indigenous bias. In these meetings we discussed emerging content, our memos and any discrepancies or questions we had about how to code data. While this is no substitute for the perspective rooted in Indigenous knowledge and ways of being that a Native American coder might bring, we believe these discussions provided a necessary counter to the bias that undoubtedly resulted from non-Native researchers conducting data analysis in this project.

Finally, the COVID-19 pandemic may have influenced teachers' perception of what was stressful overshadowing sources of stress that they routinely struggle with this skewing data collection results causing us to miss important everyday stressors. The silver lining of this pandemic is, however, that it has placed national focus on teacher stress and well-being, provided funding and interest in finding organizational ways to promote the health and well-being of Head Start teachers (Johnson et al., 2020; Nagasawa & Tarrant, 2020).

Implications for community nurses

At each level of the socio-ecological level nurses who work in Native American communities are well-positioned to advocate for the health and well-being of these teachers. At the individual level the results of this study lead to the development of a mixed methods feasibility study implementing a culturally informed intervention for the teachers to reduce stress and promote well-being including cultural connection, which had positive results (Wilson et al., 2023). Organizationally working with Tribal Health, Indian Health Service and Tribal Head Start to implement visits to Head Start centers by educators promoting health on topics such as diabetes and cardiac care could take advantage of renewed interest in taking care of physical health post pandemic. The research team and the Fort Peck Administrator met with Tribal Council who implemented a day on the Tribal calendar to formally recognize the work that the Head Start teachers do for the children and community. Nationally the research team and Fort Peck Head Start are disseminating results at conferences to highlight the need to care for Native American Head Start teacher health and well-being. Data is being used to submit for greater funding for the Fort Peck Head Start for furniture and pay bonuses. While these are specific examples nurses can also advocate to

highlight the strengths and disparities faced by Native Americans thus working to dispel stereotypes and structural racism has had detrimental effects on the trust of Native Americans to seek care for both physical and mental health support.

Conclusion

Our study findings highlight the importance of collecting data on this understudied population as findings revealed unique and specific stressors and mitigators of stress for this population. Efforts to support teacher well-being and decrease their stress need to consider these unique contexts and pay attention to the importance of spirituality both traditional and Christian, and the effects of the structural inequities from years of discrimination, broken treaties, and historical traumas that affect the whole community. Providing supports at each level of the socioecological model is even more essential given stress and trauma the teachers have experienced because of the COVID-19 pandemic. Teachers expressed a willingness and interest to decrease their stress and improve their health and well-being meaning that community nurses can work with Head Start to implement interventions and supports that help to bring about positive change for these teachers who provide such a critical service and resource to this remote frontier community.

Funding

This work was supported by the National Institute of Nursing Research of the National Institutes of Health under Award Number F31NR019742. "The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health."; Sigma/Jonas Philanthropies Collaborative Research Grant under grant number 138054; Johns Hopkins University School of Nursing Discovery and Innovation Fund under grant number 80055563; and Johns Hopkins School of Public Health Center for Qualitative Studies (no grant number).

Ethics approval and consent to participate

The study was authorized by the Fort Peck Executive Board through Tribal Resolution (Resolution #30-348-2020-03). All study team members have completed required training on human subjects' research, conflicts of interest, and health privacy issues. Study team members completed consent with all participants prior to the start of data collection, which included consent to publication of findings. Human subjects review was conducted by the Fort Peck Tribal IRB (September 2020) and Johns Hopkins School of Medicine IRB (IRB00252294). Any modifications to study protocols were submitted to both IRBs for approval prior to implementation. Fort Peck Tribal IRB reviews all manuscripts prior to publication.

Consent for publication

Not applicable.

CRediT authorship contribution statement

Deborah H. Wilson: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Supervision, Validation, Writing – original draft, Writing – review & editing. **Michelle Sarche:** Supervision, Writing – original draft, Writing – review & editing. **Adriann Ricker:** Data curation, Investigation, Supervision, Validation, Writing – original draft. **Lydia Koh Krienke:** Formal analysis, Writing – original draft, Writing – review & editing. **Teresa Brockie N.:** Conceptualization, Formal analysis, Supervision, Writing – original draft, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no financial or non-financial competing interests or personal relationships that could appear to influence the work reported in this article.

Availability of data and materials

The government-to-government relationship between the U.S. and federally recognized tribes acknowledges tribal sovereignty, tribal laws, and the tribes' capacity to make decisions about research that is conducted within their jurisdictional boundaries. The Fort Peck tribal law that supports this research acknowledges the importance of community consent as well as individual consent and provided the particularities for data sharing as part of tribal research regulation. The datasets generated and analyzed during the current study are not publicly available due to the tribal law that supports this research to respect their tribal sovereignty and confidentiality but will be made available from the corresponding author on reasonable request in the most user-friendly, accessible, secure, and ethical format. We have taken the necessary steps to ensure adherence to Fort Peck Tribal Law (Resolution #30-348-2020-03) and National Institutes of Health guidelines on sharing of data, in collaboration with our tribal partners, including seeking the appropriate tribal approvals to respect their tribal sovereignty and confidentiality.

References

- Administration for Children and Families. (2019). Early childhood development. Retrieved October 19, 2019, from <https://www.acf.hhs.gov/ecd>.
- Akee, R. (2021). *Sovereignty and improved economic outcomes for American Indians: Building on the gains made since 1990*. Washington DC: Equitable Growth. <https://equitablegrowth.org/sovereignty-and-improved-economic-outcomes-for-american-indians-building-on-the-gains-made-since-1990/>.
- American Indian and Alaska Native Head Start Family and Child Experiences Survey. (2019). *Case medical research*. <https://doi.org/10.31525/ct1-nct04046965>
- Asfaw, H. W., Sandy Lake First Nation, McGee, T. K., & Christianson, A. C. (2019). Evacuation preparedness and the challenges of emergency evacuation in Indigenous communities in Canada: The case of Sandy Lake First Nation, Northern Ontario. *International Journal of Disaster Risk Reduction*, 34, 55–63. <https://doi.org/10.1016/j.ijdrr.2018.11.005>
- Aud, S., Hussar, W., Johnson, F., Kena, G., Roth, E., Manning, E., Wang, X., & Zhang, J. (2012). Condition of education, 2012:2012 ASI 4824-1;NCES 2012-045. <https://nces.s.ed.gov/pubsw2012/2012045.pdf> (Washington DC).
- Barr, A. C., & Gibbs, C. (2019). *Breaking the cycle? Intergenerational effects of an anti-poverty program in early childhood*. EdWorkingPapers.com. <https://doi.org/10.26300/s93m-ss62>
- Brockie, T., Dana-Sacco, G., Wallen, G., Wilcox, H., & Campbell, J. (2015). The relationship of Adverse Childhood Experiences to PTSD, depression, poly-drug use and suicide attempt in Reservation-based Native American adolescents and young adults. *American Journal of Community Psychology*, 55(3), 411–421. <https://doi.org/10.1007/s10464-015-9721-3>
- Brockie, T. N., Heinzlmann, M., & Gill, J. (2013). A framework to examine the role of epigenetics in health disparities among Native Americans. *Nursing Research and Practice*, 2013, Article 410395. <https://doi.org/10.1155/2013/410395>
- Brockie, T. N., Hill, K., Davidson, P. M., Decker, E., Krienke, L. K., Nelson, K. E., ... Around Him, D. (2022). Strategies for culturally safe research with Native American communities: An integrative review. *Contemporary Nurse*, 58(1), 8–32. <https://doi.org/10.1080/10376178.2021.2015414>
- Bullock, A., Burrows, N. R., Narva, A. S., Sheff, K., Hora, I., Lekichvili, A., ... Espey, D. (2017). Vital signs. *MMWR. Morbidity and Mortality Weekly Report*, 66(1), 26–32. <https://doi.org/10.15585/mmwr.mm6601e1>
- Clayback, K. A., & Williford, A. P. (2021). Teacher and classroom predictors of preschool teacher stress. *Early Education and Development*, 1–17. <https://doi.org/10.1080/10409289.2021.1972902> (ahead-of-print(ahead-of-print)).
- Cumming, T., Wong, S., & Logan, H. (2021). Early childhood educators' well-being, work environments and 'quality': Possibilities for changing policy and practice. *Australasian Journal of Early Childhood*, 46(1), 50–65. <https://doi.org/10.1177/1836939120979064>
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107–115. <https://doi.org/10.1111/j.1365-2648.2007.04569.x>
- Fort Peck Assiniboine and Sioux Tribes. (2022). Fort Peck tribes. Retrieved March 1, 2020, from <http://www.fortpecktribes.org>.
- Fort Peck Tribal Health Department. (2016). *Fort Peck community health assessment*. Fort Peck: Fort Peck Tribes. <https://mthcf.org/wp-content/uploads/Fort-Peck-CHA.pdf>.
- Gameon, J. A., & Skewes, M. C. (2021). Historical trauma and substance use among American Indian people with current substance use problems. *Psychology of Addictive Behaviors*, 35(3), 295–309. <https://doi.org/10.1037/adb0000729>
- Goodkind, J., LaNoue, M., Lee, C., Freeland, L., & Freund, R. (2012). Feasibility, Acceptability, and initial findings from a community-based cultural mental health intervention for American Indian youth and their families. *Journal of Community Psychology*, 40(4), 381–405. <https://doi.org/10.1002/jcop.20517>
- Grant, A. A., Jeon, L., & Buettner, C. K. (2019). Relating early childhood teachers' working conditions and well-being to their turnover intentions. *Educational Psychology*, 39(3), 294–312. <https://doi.org/10.1080/01443410.2018.1543856>
- Harding, J. F., Connors, M. C., Krauss, A. F., Aikens, N., Malone, L., & Tarullo, L. (2019). Head Start teachers' professional development, well-being, attitudes, and practices: Understanding changes over time and predictive associations. *American Journal of Community Psychology*, 63(3–4), 324–337. <https://doi.org/10.1002/ajcp.12327>
- Hatton-Bowers, H., Clark, C., Parra, G., Calvi, J., Bird, M. Y., Avari, P., ... Smith, J. (2022). Promising findings that the Cultivating Healthy Intentional Mindful Educators' Program (CHIME) strengthens early childhood teachers' emotional resources: An iterative study. *Early Childhood Education Journal*, 1–14. <https://doi.org/10.1007/s10643-022-01386-3>
- Hindman, A. H., & Bustamante, A. S. (2019). Understanding well-being among teachers in early childhood settings: Challenges, supports, and implications for children's development. *Journal of Applied Developmental Psychology*, 61, 1–3. <https://doi.org/10.1016/j.appdev.2019.03.005>
- Hobfoll, S. E., Jackson, A., Hobfoll, I., Pierce, C. A., & Young, S. (2002). The impact of communal-mastery versus self-mastery on emotional outcomes during stressful conditions: A prospective study of Native American women. *American Journal of Community Psychology*, 30(6), 853–871. <https://doi.org/10.1023/A:1020209220214>
- Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriations Act, 2020, 116th Congress. <https://www.govinfo.gov/bulkdata/BILLS/116/hr/BILLS-116hr2740rh.xml>, (2019).
- Iwasaki, Y., Bartlett, J., & O'neil, J. (2004). An examination of stress among Aboriginal women and men with diabetes in Manitoba, Canada. *Ethnicity & Health*, 9(2), 189–212. <https://doi.org/10.1080/1355785042000222888>
- Jeon, H., Kwon, K., Walsh, B., Burnham, M. M., & Choi, Y. (2019). Relations of early childhood education teachers' depressive symptoms, job-related stress, and professional motivation to beliefs about children and teaching practices. *Early Education and Development*, 30(1), 131–144. <https://doi.org/10.1080/10409289.2018.1539822>
- Jeon, L., & Wells, M. B. (2018). An organizational-level analysis of early childhood teachers' job attitudes: Workplace satisfaction affects early Head Start and Head Start teacher turnover. *Child & Youth Care Forum*, 47(4), 563–581. <https://doi.org/10.1007/s10566-018-9444-3>
- Johnson, A. D., Phillips, D. A., Partika, A., Study Team, T. T. S., & Castle, S. (2020). Everyday heroes: The personal and economic stressors of early care and education teachers serving low-income children. *Early Education and Development*, 31(7), 973–993. <https://doi.org/10.1080/10409289.2020.1785266>
- Lozar, C. (2021). *Structural barriers to tribal revenues leave Indian Country vulnerable to COVID-19 pandemic*. Minneapolis, MN: Federal Reserve Bank of Minneapolis. <https://www.minneapolisfed.org/article/2021/structural-barriers-to-tribal-revenues-leave-indian-country-vulnerable-to-covid-19-pandemic>.
- McLeroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education & Behavior*, 15(4), 351–377. <https://doi.org/10.1177/109019818801500401>
- McQuaid, R. J., Bombay, A., McInnis, O. A., Humeny, C., Matheson, K., & Anisman, H. (2017). Suicide ideation and attempts among First Nations Peoples living on-Reserve in Canada: The intergenerational and cumulative effects of Indian residential schools. *Canadian Journal of Psychiatry*, 62(6), 422–430. <https://doi.org/10.1177/0706743717702075>
- Nagasawa, M., & Tarrant, K. (2020). *Who will care for the early care and education workforce? COVID-19 and the need to support early childhood educators' emotional well-being*. New York: New York Early Childhood Professional Development Institute, CUNY. <https://educate.bankstreet.edu/sc/1>.
- Newland, B. (2022). Federal Indian boarding school initiative investigative report. https://www.bia.gov/sites/default/files/dup/inline-files/bsi_investigative_report_may_2_022_508.pdf (Washington DC).
- Office of Head Start. (2021). Supporting the wellness of all staff in the head start workforce. <https://eclkc.ohs.acf.hhs.gov/policy/im/acf-im-hs-21-05>.
- Pickering, K., Galappaththi, E. K., Ford, J. D., Singh, C., Zavaleta-Cortijo, C., Hyams, K., ... Anza-Ramirez, C. (2023). Indigenous peoples and the COVID-19 pandemic: A systematic scoping review. *Environmental Research Letters*, 18(3), Article 033001. <https://doi.org/10.1088/1748-9326/acb804>
- Reynolds, M. (2020). *Head Start parents as your best employees: create a parent training program for entry level Head Start positions*. Lane County, Oregon: Head Start. <https://www.hsolc.org/wp-content/uploads/2020/03/seekers-howto-manual-03-2020.pdf>.
- Roberts, A., & Kim, H. (2019, May 6). To promote success in schools, focus on teacher well-being. Education + Development [BLOG]. <https://search.proquest.com/docview/2220436981>.
- RTAP. (2020). Head Start program transportation in rural areas. RTAP. <https://www.tran.nsit.gov/sites/fta.dot.gov/files/docs/regulations-and-programs/ccam/about/147016/head-start-program-transportation-rural-areas.pdf>.
- Schaack, D. D., Le, V., & Stedron, J. (2020). When fulfillment is not enough: Early childhood teacher occupational burnout and turnover intentions from a Job Demands and Resources perspective. *Early Education and Development*, 31(7), 1011–1030. <https://doi.org/10.1080/10409289.2020.1791648>
- Smith, S., & Lawrence, S. M. (2019). *Early care and education teacher well-being: Associations with children's experience, outcomes, and workplace conditions: A research-to-policy brief*. New York: Columbia University. <https://doi.org/10.7916/d8-ngw9-n011>

- Soto, C., West, A. E., Ramos, G. G., & Unger, J. B. (2022). Substance and behavioral addictions among American Indian and Alaska Native populations. *International Journal of Environmental Research and Public Health*, 19(5), 2974. <https://doi.org/10.3390/ijerph19052974>
- Walker, A., Barofsky, M., & Hoard, L. (2021). *At a Glance: Region XI Head Start During the COVID-19 Pandemic: New Supports for Staff*. Washington DC: Office of Planning, Research, and Evaluation. [https://PRE Report #2021-106](https://PREReport#2021-106) <https://www.acf.hhs.gov/opre/report/glance-region-xi-head-start-during-covid-19-pandemic-new-support-staff>.
- Wallerstein, N. B., Yen, I. H., & Syme, S. L. (2011). Integration of social epidemiology and community-engaged interventions to improve health equity. *American Journal of Public Health*, 101(5), 822–830. <https://doi.org/10.2105/AJPH.2008.140988>
- Walls, M., Pearson, C., Kading, M., & Teyra, C. (2016). Psychological wellbeing in the face of adversity among American Indians: Preliminary evidence of a new population health paradox? *Annals of Public Health and Research*, 3(1). <https://www.ncbi.nlm.nih.gov/pubmed/28553671>.
- Walls, M. L., & Whitbeck, L. B. (2012). Advantages of stress process approaches for measuring historical trauma. *The American Journal of Drug and Alcohol Abuse*, 38(5), 416–420. <https://doi.org/10.3109/00952990.2012.694524>
- Williamson, L. L., Harwell, T. S., Koch, T. M., Anderson, S. L., Scott, M. K., Murphy, J. S., ... Tesfai, H. F. (2021). COVID-19 incidence and mortality among American Indian/Alaska Native and White persons — Montana, March 13–November 30, 2020. *MMWR. Morbidity and Mortality Weekly Report*, 70(14), 510–513. <https://doi.org/10.15585/mmwr.mm7014a2>
- Wilson, D., Plesko, C., Brockie, T. N., & Glass, N. (2022). The well-being of Head Start teachers: A scoping literature review. *Journal of Early Childhood Teacher Education*, 1–26. <https://doi.org/10.1080/10901027.2022.2147880>
- Wilson, D. H., German, D., Ricker, A., Gourneau, H., Hanson, G. C., Mayhew, J., ... Sarche, M. (2023). Feasibility, acceptability and effectiveness of a culturally informed intervention to decrease stress and promote well-being in reservation-based Native American Head Start teachers. *BMC Public Health*, 23(1), 1–2088. <https://doi.org/10.1186/s12889-023-16913-z>
- Zinsser, K. M., Christensen, C. G., & Torres, L. (2016). She's supporting them; who's supporting her? Preschool center-level social-emotional supports and teacher well-being. *Journal of School Psychology*, 59, 55–66. <https://doi.org/10.1016/j.jsp.2016.09.001>