

Short Communication

Psychological Wellbeing in the Face of Adversity among American Indians: Preliminary Evidence of a New Population Health Paradox?

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Submitted: 12 December 2015

Accepted: 12 January 2016

Published: 14 January 2016

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Keywords

- American Indians
- Psychological wellbeing
- Native Americans
- Mental health

Abstract

Our objective was to determine self-reported psychological wellbeing of American Indians (AIs). Data are from two surveys, a) 218 adults from the 2011 – 2012 Mino Giizhigad study including Ojibwe adults in Minnesota and Wisconsin, and b) 146 AI women aged 15 – 35 years from the 2011 Sacred Journey study residing in the Pacific Northwest. Reports of AI mental wellness/positive mental health were on par with or higher than found in previous studies with non-AI samples despite simultaneously disparate rates of AI anxiety, depressive symptoms, and differential exposure to socio-historical stressors. Results are a paradoxical mismatch between mental wellness and mental stressors consistent across two separate, diverse samples of AI adults.

ABBREVIATIONS

PMH: Positive Mental Health; PWB: Positive Wellbeing; AI: American Indian.

INTRODUCTION

Among the longest standing empirically supported observations of population health is that members of the most disadvantaged sectors of society bear the greatest burden of physical and mental health problems [1,2]. Research results that negate this pattern are paradoxical, intriguing, and prompt deeper inquiry in the search for replication and explanation. For example, the “Latino Health Paradox” reveals higher risk exposure but better health among first generation Latino immigrants compared to U.S.-born counterparts [3,4]. In Keyes’ [5] “Black-White Paradox in Health,” Black Americans reported better mental health despite experiencing heightened stressors compared to Whites.

This report presents the mental wellbeing of American Indians (AI) in two separate studies using two measures of positive mental health/psychological wellbeing (PMH [6]/PWB

[7]). With many AIs experiencing socio-political marginalization and disproportionate psychological distress [8-12], these findings suggest the paradox of flourishing mental health despite socio-political adversity.

MATERIALS AND METHODS

Data are from two separate community-based participatory research studies, each conducted in collaboration with tribal research teams/advisory boards and supported by tribal government resolutions. Informed consent was obtained from all participants and study protocols reviewed and approved by tribal partners and Institutional Review Boards.

Study 1, the Mino Giizhigad (A Good Day) Study, involved random selection of participants from tribal health clinic records for patients 18 years or older, with a type 2 diabetes diagnosis, and who self-identified as American Indian. Face-to-face interviewer administered surveys were completed in participants’ location of choice. Incentives were \$30 and a gift of locally cultivated wild rice. Of total initial eligible sample of 289 individuals, 218 completed surveys for a response rate of 75.4%.

Study 2, Sacred Journey, is a cross-sectional study using a mixed sampling approach including respondent-driven (i.e., an advancement of snowball sampling in which seeds were identified based on diverse location, age, and risk factors. Seeds where interviewed, asked to recruit others in their network to the study), convenience, and venue-based recruitment methods. Venue-based recruitment focused on areas where young Indigenous women were known to socialize, such as tribal housing areas, local powwows, maternal health clinic, schools, and the local college. Audio computer-assisted self-interviews were completed by 146 self-identified AIAN women ages 15-35 residing in a Pacific Northwest tribal community who received \$40 as an incentive for participating. Additional methodological details for each study are available.

Measurement

Positive mental health (PMH) was measured in Mino Giizhigad by the Mental Health Continuum (MHC-SF [5]) including 14 items of emotional, social and psychological wellbeing, with recommended scoring for flourishing, moderate, or languishing

status (Cronbach's $\alpha = 0.93$) [6]. Sacred Journey used the 42-item [13] Ryff Psychological Wellbeing (PWB) [7] measure, assessing autonomy, environmental mastery, personal growth, positive relationships, life purpose and self-acceptance ($\alpha = 0.87$) on a six-category Likert scale. Means were calculated across the six PWB categories. PMH and PWB are validated in multicultural populations, though we were unable to locate prior use in AI samples.

Depressive Symptoms were measured in Mino Giizhigad by nine items (Patient Health Questionnaire [PHQ-9] [14]) assessing symptoms of depression experienced within two weeks of survey participation. The summed possible range was 0 - 27 (≥ 10 indicating clinical significance; $\alpha = 0.98$). We used the Centers for Epidemiological Studies Depression Short Scale (CESD-10) [15] in Sacred Journey. Values ranged from 0 - 30 with scores ≥ 10 meeting clinical significance [16,17]. Anxiety was measured in Mino Giizhigad with the 21-item Beck Anxiety Inventory [18] (0= not at all, 1= mildly, 2= moderately, 3= severely bothered; $\alpha = 0.95$); generalized anxiety disorder in Sacred Journey used

Table 1: Mean Positive Mental Health Continuum Scores (MHC) by Dichotomous Demographic and Mental Health Characteristics in the Mino Giizhigad Study of Midwest American Indian Adults (N = 218) and Sacred Journey Study of Pacific Northwest Rural American Indian Women (N = 146).

Mino Giizhigad Variables	Variable Attributes	MHC-SF Mean Score (Sample M = 45.18, SD = 13.63)	Test Statistic
Gender	Male (43.6%)	44.33 (14.44)	t = -0.77
	Female (56.4%)	45.82 (13.01)	
Above/Below Median Age (57 years)	<57 years	45.32 (13.87)	t = 0.14
	>57 years	45.05 (13.44)	
Attained High School/GED or Higher	Yes (88.9%)	45.43 (13.41)	t = -0.36
	No (11.1%)	44.23 (15.07)	
Relationship Status (Partnered/Married)	Partnered (44.0%)	45.20 (13.12)	t = -0.01
	No Partner (56.0%)	45.17 (14.04)	
Housing Status	Stable (94.0%)	44.91 (13.56)	t = 1.07
	Unstable (6.0%)	49.46 (15.01)	
Employment	Employed (72.8%)	45.75 (12.76)	t = -0.88
	Not Employed (27.2%)	43.66 (15.90)	
Above/Below Median Household Per Capita Income (\$7,500)	< \$7,500	44.27 (14.28)	t = -1.01
	> \$7,500	46.19 (13.00)	
Sacred Journey Variables	Variable Attributes	Psychological Wellbeing Mean Score (Sample M = 29.9, SD = 4.0)	Test Statistic
Above/Below Median Age (23 years)	<23 years	30.1 (4.0)	t = 0.55
	>23 years	29.8 (4.1)	
Attained High School/GED or Higher	Yes (72.6%)	30.4 (3.8)	t = -2.32*
	No (27.4%)	28.7 (4.5)	
Relationship Status (Partnered/Married)	Partnered (61.0%)	29.9 (4.1)	t = 0.02
	No Partner (39.0%)	29.9 (4.0)	
Housing Status	Stable (54.1%)	30.3 (3.8)	t = -1.33
	Unstable (45.9%)	29.5 (4.3)	
Employment	Employed (29.5%)	31.6 (3.6)	t = -3.37**
	Not Employed (70.5%)	29.2 (4.0)	
Above/Below Median Household Income (\$19,992)	< \$19,992	29.4 (3.3)	t = -2.08*
	> \$19,992	30.8 (4.8)	
* < 0.05; ** < 0.01; two-tailed tests for within-study comparisons; t = independent samples			
M = mean, SD = standard deviation			
Note: Stable housing = owning or renting; Unstable housing = homeless, transitional, or temporary housing			

Table 2: American Indian Mental Health Status in the Mino Giizhigad and Sacred Journey Studies: Comparisons to Previously Published Work in Non-Native Samples.

	Current Study 1: Mino Giizhigad				Comparison Study 1: Keyes, et al. (2012) [20]		Comparison Study 2: Ross et al. (2013) [21]		Comparison Study 3: Grant et al. (2013) [22]	
Sample Characteristics	American Indian Adults with Type 2 Diabetes (N = 218)				College students (N = 5689); randomly selected from 13 universities in U.S.		Yoga practitioners; randomly selected, anonymous online surveys (N = 1087)		Medical interns, online survey, baseline scores (N = 1621)	
Construct	Measurement Source & Scoring	summed scale mean (sd)	mean (sd)	%	Measurement Source & Scoring	%	Measurement Source & Scoring	%	Measurement Source & Scoring	mean (sd)
Positive Mental Health	Mental Health Continuum-Short Form (MHC-SF); 0 (never) - 5 (every day)	45.18 (13.63)	3.31 (.97)	51.5%	MHC-SF; flourishing	51.8%	MHC-SF; flourishing	43.8%	MHC-SF; summed scale mean	54.51 (11.51)
Depressive Symptoms	Patient Health Questionnaire (PHQ-9); >10		4.55 (5.46)	17.1%	PHQ-9; >15	7.9%	Self-reported lifetime history of depression	24.8%	PHQ-9	2.43 (3.05)
Anxiety	Beck Anxiety Inventory (moderate/severe)		10.70 (12.63)	24.9%	n/a		Self-reported history of mental health conditions including anxiety or panic attacks	15.4%	n/a	
	Current Study 2: Sacred Journey				Comparison Study 1: Winefield et al. (2012) [23]		Comparison Study 2: Cruice et al. (2011) [24]		Comparison Study 3: Valiente et al. (2012) [25]	
Sample Characteristics	American Indian Women 15-35 Years of Age (N = 146)				Telephone interviews of a representative sample of Adults in South Australia (N = 1933)		Non-clinical elderly, Brisbane Australia, 60 years and older (N = 75)		Non-clinical participants recruited from community settings Spain 16-65 years (N = 44)	
Construct	Measurement Source & Scoring	mean (sd)		%	Measurement Source & Scoring	mean(sd) or %	Measurement Source & Scoring	mean(sd) or %	Measurement Source & Scoring	mean(sd) or %
Ryff's Psychological Well-being (PWB)	Abbot 2006 v. of Ryff's 1989 PWB, 42 items, 6 subscales	29.9 (4.03)		n/a	Ryff's 1989 54 items Range across 2 PWB subscales; mean (sd)	19.5 (2.8) - 24.0 (3.4)	Ryff's 1989 54 items, Range across 6 PWB subscales	14.8 (1.7) - 16.1 (1.5)	Ryff's 1989 54 items Range across 6 PWB subscales	30.0 (5.2) - 34.4 (5.8)
Depressive Symptoms	Center for Epidemiological Studies Depression Scale (CES-D), mean score & % meeting clinical importance, >10	9.23 (5.7)		39.7%	K10 Psychosocial distress: Depressive symptoms or anxiety (% meeting clinical importance)	9.3%	Geriatric Depression Scale (GDS), > 9	2.6%	Beck depression inventory (BDI-II), > 10 = mild depression	15.9%
Anxiety	International Neuropsychiatric Interview (MINI) Generalized Anxiety Disorder Symptoms (% meeting criteria)	n/a		26.7%	n/a		n/a		Paranoia Persecution & Deservedness, > 8	13.6%

the Mini-International Neuropsychiatric Interview [19]. DSM-IV Diagnosis was defined as ≥3 of the 6 items.

We searched for published comparison studies including: a) Keyes or Ryff's PMH/PWB, and b) at least one measure of depression/anxiety. All authors searched PubMed, PsychInfo, and Google Scholar. We chose 3 of 12 comparisons to Mino Giizhigad using PMH; Six studies included Ryff's PWB. For optimal comparability to Sacred Journey we chose the three studies reporting findings from non-clinical samples.

RESULTS

In Mino Giizhigad, 51.5% of the participants reported flourishing PMH, 17.1% reached clinical cutoff for depression,

and 24.9% reported moderate/severe anxiety. Mean PWB in Sacred Journey = 29.9 with 40% of participants reporting depressive symptoms and 26.7% reporting anxiety. Wellbeing by dichotomized demographic variables appears in Table 1. Significant differences in wellness by demographics emerged only in Sacred Journey: participants with lower PWB scores were significantly less likely to have a high school education or be employed and had lower median incomes.

Table 2 compares our results to prior studies. PMH in Mino Giizhigad is greater than/on par with findings from healthy college students and yoga practitioners; depression and anxiety rates are generally higher than comparisons except for depression in the yoga sample, which relied on self-reported lifetime history

(vs. current symptoms). PMH was higher and depression lower for medical interns compared to Mino Giizhigad. Sacred Journey PWB scores are similar to three non-clinical community sample comparisons; however reports of depression and anxiety in Sacred Journey are considerably higher.

DISCUSSION

Given the widely documented exposure to contemporary and historical stressors across AI communities, these results are paradoxical. Relative to comparison studies, we documented similar or higher levels of positive mental health simultaneous with heightened rates of psychological distress. The trends are triangulated in two independently designed studies with AIs, thus strengthening our confidence in findings.

We found higher PMH among Mino Giizhigad patients living with type 2 diabetes, a chronic condition with increased risk for depression [26], than reported in two previously published studies with non-AIs. The Sacred Journey PWB scores were somewhat similar to other non-AI community samples, yet the comparison studies did not demonstrate accompanied high rates of depression or anxiety.

Limitations of this report include heterogeneity of methods between our studies and comparisons; findings cannot be generalized to all tribal groups. Because of the preliminary nature of these analyses, possible confounding factors that might influence reports of wellness should be investigated in future work.

We offer several possible explanations for these paradoxical findings that might stimulate additional investigations. First, heightened reports of AI wellbeing may be due in part to a larger reserve capacity against stress. For instance, resilience and coping factors including sense of identity and purpose, engagement with cultural beliefs, practices, and values, and social connectedness and supports [27-29] may produce stress buffering effects that promote mental wellness. In addition, some people find greater meaning and purpose and may experience spiritual and/or emotional growth following a traumatic event or stressor [30,31]. AI-specific cultural health beliefs may also be a factor. For example, some Indigenous people view connection to the land or environment, group and individual activism, and the reclamation of cultural traditions and languages as core aspects of wellness [32,33]. Concepts like positive mental health might be viewed holistically as a balance between the mind, body, and spirit [34] as opposed to a dichotomy of "sickness" and "wellness." Another consideration is whether or not the widely documented correlation between stressors and distress applies to negative outcomes only; that is, disadvantage may promote deficits, but perhaps has less impact on positive outcomes. That a majority of participants in both samples reported positive mental health statuses could provide clues for strength-based treatment initiatives in these communities and is worthy of further investigation in other AI cultures.

ACKNOWLEDGEMENTS

The Mino Giizhigad Team includes Community Research Council members: Doris Isham, Julie Yaekel-Black Elk, Tracy

Martin, SidneeKellar, Robert Miller, Geraldine Whiteman, Peggy Connor, Michael Connor, Stan Day, Pam Hughes, Jane Villebrun, Beverly Steel, Muriel Deegan and Ray Villebrun. The authors respectfully acknowledge the commitment and participation of project team members and their thoughtful review of this manuscript. We also thank Mr. Leo Egashira for his helpful editorial assistance on earlier drafts of this paper.

Research reported in this paper was supported by the National Institute of Mental Health under Award Number MH085852 M. Walls, Principal Investigator; National Institute of Drug Abuse R34 DA034529 C. Pearson, Principal Investigator; and the Indigenous Wellness Research Institute Center of Excellence NIMHD P60MD006909, K. Walters Principal Investigator. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

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Cite this article

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? *Ann Public Health Res* 3(1): 1034.