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Mosurska, A and Ford, JD orcid.org/0000-0002-2066-3456 (2020) Unpacking Community Participation in Research: A Systematic Literature Review of Community-based and Participatory Research in Alaska. *Arctic*, 73 (3). pp. 347-367. ISSN 0004-0843

<https://doi.org/10.14430/arctic71080>

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1 **Unpacking community participation in research: a systematic literature review of**
2 **community-based and participatory research in Alaska**

3

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7

8 **Acknowledgements**

9 We would like to formally thank Angus Naylor, Melanie Flynn and Katy Davis for their support and
10 thoughtful comments on earlier versions of this work. We further thank three anonymous reviewers
11 for their careful and thought-provoking suggestions that improved the quality and rigour of this paper.

12 This work was supported by the Economic and Social Research Council, as a part of the White Rose
13 Doctoral Training Partnership.

14

15 **Unpacking community participation in research: a systematic literature review of**
16 **community-based and participatory research in Alaska**
17

18 **Abstract**

19

20 Although concepts of community and participation have been heavily critiqued in the social sciences,
21 they remain uncritically applied across disciplines, leading to problems that undermine both research
22 and practice. Nevertheless, these approaches are advocated for, especially in Indigenous contexts. This
23 article aims to address this by conducting a systematic literature review of community-based and
24 participatory research in Alaska, USA, where social change has been rapid, having ramifications for
25 social organisation, and where participatory and community-based approaches are heavily advocated
26 for by Alaska Native organisations. Conceptualisations of community and participation were extracted
27 and analysed quantitatively and qualitatively. The majority of articles showed a lack of critical
28 consideration around both community and participation, although this was especially the case in
29 reporting around community. Whilst this could lead to issues of local elite co-opting research, an
30 alternative interpretation is that Western sociological literature surrounding community is not
31 transferable to Indigenous contexts.

32

33 **Keywords:** Alaska, community, participation, research politics, collaboration, systematic literature
34 review, inequality, Indigeneity, sociology

35

36 **1.0 Introduction**

37

38 Community-based and participatory approaches, which claim to empower marginalised peoples, have
39 increased in popularity across various disciplines, including medicine, psychology, and environmental
40 science (Israel *et al.*, 2017; Le *et al.*, 2011; Minkler *et al.*, 2006; Wallerstein and Duran, 2010).

41 However, community and participation are heavily contested and critiqued within the social sciences
42 (Cooke and Kothari, 2001; Barrett, 2015), which is not always recognised across all disciplines using
43 these concepts (Titz *et al.*, 2018). For example, the idea that a community is a homogenous, benign,
44 and identifiable entity is contested, as there are always internal power structures operating within
45 groups of peoples (Brint, 2001). Meanwhile, participation in research has been critiqued as a means of
46 increasing control over marginalised peoples under the guise of empowerment (Guta *et al.*, 2013). As
47 community-based and participatory approaches are concerned with action and social change
48 (Wallerstein and Duran, 2006) the risks of uncritical notions of community and participation have the
49 potential to reproduce underlying inequalities (Titz *et al.*, 2018).

50

51 To assess the usage of participation and community, we use Alaska, USA, as a case study. Here there
52 is a substantial Indigenous population, and community-based and participatory approaches are
53 frequently promoted as the most appropriate (Balestrery, 2011). Rapid socio-political changes, some
54 of which resulted from the Alaska Native Settlement Claims Act (ANSCA) have altered social
55 organisation with ramifications for how community and participation looks in Alaska (Ganapathy,
56 2011). This, combined with the way that community-based and participatory approaches (when used
57 together) involve community members and emphasise action emerging from research, render
58 community-based and participatory research susceptible to being co-opted by more dominant groups
59 within a community.

60

61 This paper conducts a systematic literature review of participatory and community-based research in
62 Alaska to examine how these are used. Of particular interest are definitions of community,
63 considerations of who is included (and excluded), consistency of participation of participants, and the

64 nature of participation. These are discussed within the context of the history of research in Alaska,
65 and in relation to contemporary debates in social science more broadly.

66

67 **2.0 Conceptualising community participation**

68

69 In this section we outline the foundations of community participation, which provide the basis for our
70 systematic literature review. We start by examining the shift from extractive, colonising research
71 practice towards more participatory approaches that aim to break down power structures between the
72 researcher and the researched. We discuss this in the context of communities, participation and micro-
73 politics of research, before focusing specifically on the Alaskan context.

74

75

76 **2.1 From extractive to emancipatory research**

77 It is broadly recognised that the historical intersection of knowledge, research and Imperialism
78 ‘othered’ Indigenous peoples and Indigenous knowledge (McMillan and Yellowhorn, 2004; Smith,
79 1994). Despite this acknowledgement, contemporary research practice has continued to be harmful to
80 Indigenous peoples, creating a (valid) distrust of researchers (Battiste and Youngblood Henderson,
81 2000; Ford *et al.*, 2016; Glass and Kaufert, 2007). Emancipatory approaches, aligned with critical
82 theory, constructivist-interpretivism, and feminism, recognise the political nature of research
83 (Sommerville and Perkins, 2003). They emphasise the subjective and partial nature of knowledge
84 through interrogating power relations between the researcher and the researched (Kral, 2014), whilst
85 also recognising that the production of knowledge is implicit in the reproduction of power dynamics
86 (DeLyser and Karolczyk, 2010; Rose, 1997). For example, it is recognised that research is rooted in
87 colonial and relational power structures (Louis, 2007; Smith, 2013), requiring consideration of
88 positionality and reflexivity to reveal biases and assumptions in individual, institutional, and
89 geopolitical terms (Nagar and Ali, 2003). In the context of colonised peoples, particularly Indigenous
90 peoples such as in Alaska, an additional necessity is the deconstruction of history and subsequent

91 application of ideologies and social theory, as theories developed in Western contexts are not
92 necessarily transferable to other contexts (Abolson and Willett, 2004; hooks, 1992).

93

94 Such emancipatory approaches have led to a participatory turn in research (Chambers, 1994; Fuller
95 and Kitchin, 2004), whereby power is transferred through the research process through participation
96 at each stage of the research and resultant social action (Louis, 2007). For example, involvement of
97 the researched group in research development ensures that the researcher's (often Western) worldview
98 does not dominate the research focus (Atleo, 2004). Similarly, in analysis and evaluation of research,
99 involvement of the researched group allows for their interpretations to be included, potentially to the
100 point that studies are re-orientated based on different worldviews (Anderson *et al.*, 2012). It is this
101 component of participation that is promoted as fundamentally transferring power to the researched
102 and facilitates the breaking down of colonial institutional structures while preventing
103 misinterpretation of local realities (Castleden *et al.*, 2008).

104

105 Participatory research needs to be clear and transparent about who participated, and in what way
106 (Castleden *et al.*, 2012). For instance, during project planning and development, who is consulted can
107 define project direction. Notwithstanding that deciding who is included and who is excluded involves
108 making a judgement about whose values matter (Estrella and Gaventa, 1997), researchers have a
109 tendency to consult local leaders, who can recommend people based on various considerations,
110 including political ones (Widdowson and Howard, 2008). Thus, as well as careful consideration of
111 who to include and who to exclude, it is also important to reflect on these decisions. Moreover,
112 participatory research is subject to critiques that fundamentally undermine its goal to empower
113 marginalised peoples. From a practical standpoint its increased usage across disciplines leads to
114 uncritical and tokenistic research, with participation as a box-ticking exercise (Dodman and Mitlin,
115 2013; Ford *et al.*, 2016; 2018; Wilson *et al.*, 2018). Additionally, despite the social justice orientation
116 of these approaches, the growing acceptance of participatory approaches may have more to do with
117 accessing marginalised populations and obtaining better quality data, rather than empowerment (e.g.
118 Leung *et al.*, 2004).

119

120 From a postcolonial perspective, Willow (2015) critiques that participating in mainstream processes,
121 within Western institutional structures, does not lead to empowerment on Indigenous terms, but
122 within asymmetrical colonial systems. This mirrors Nadasdy (2003), who comments that as a pre-
123 requisite to participation, Indigenous peoples need to agree to engage in these structures (and their
124 rules) to become empowered. Contributing to Western (dominant) systems also creates a tension as
125 contributions perpetuate discourses and rules around the production of knowledge without addressing
126 deep-rooted inequalities and legitimate desires for difference (Willow, 2015). Moreover, when
127 applied in practice, these can become means of increasing control of peoples (Gombay, 2014;
128 McNeeley, 2012; Nielsen and Meilby, 2013; Egan and Place, 2012). Thus, building on Foucault
129 (1988; 2003; 2010), participatory research can promote forms of governance that increase control and
130 management of the most marginalised (Buggy and McNamara, 2016; Guta *et al.*, 2013; Miller and
131 Rose, 2008). In a First Nations context, Cargo *et al.*, (2008), hypothesise that the democratic and
132 equal participation ideals of participatory research conflict with self-determination in some
133 Indigenous groups, where community direction and control are desired, but undermined through
134 notions of participation.

135

136 **2.2 Micropolitics of collaboration**

137

138 Participatory research inevitably requires extensive collaboration with various actors such as steering
139 committees, co-researchers and community-based organisations. Here we discuss the importance of
140 considering the micropolitics of collaboration, which have ethical ramifications and influence data
141 quality. For example, co-researchers, who are members of the researched group who work with
142 researchers to conduct parts of the research (Guta *et al.*, 2013), are frequently used in participatory
143 research. Whilst this increases co-researcher control of the research (Louis, 2007), it is important to
144 consider the co-researcher's positionality, and how this changes through their role (Greene *et al.*,
145 2009). For example, placing responsibility on the co-researcher to move between researchers and the
146 researched group can result in tokenism and inauthentic participation (Guta *et al.*, 2013), whilst also

147 placing the co-researcher in a vulnerable position (McCartan *et al.*, 2012). Smith (2013) further
148 critiques the assumption that co-researchers can speak on behalf of their community, as their lived
149 experience can invalidate the lived experience of others. Similar arguments can be extended to
150 steering committees and collaborators (Buggy and McNamara, 2015). Jewkes and Murcott (1998)
151 also found that the same types of people ('volunteer sector elites') can dominate steering committees.
152 This is not to suggest that collaborations are inherently flawed, but rather that the power relations
153 within them need to be acknowledged so as not to exacerbate inequalities (Buggy and McNamara,
154 2015; Peterson, 2010).

155

156 **2.3 Community**

157

158 Communities are often the level at which participatory approaches are used. However, communities
159 are not homogenous entities but host to internal power dynamics, interests, and divisions (Brint,
160 2001), which can result in social stratification and marginalisation (BurnSilver and Magdanz, 2019;
161 Gujit and Shah, 2009). Even where there is apparent community consensus, as early as 1961,
162 Coleman showed that consensus-generation within a community largely reflects the views of
163 dominant groups, whilst Rieder (1988) shows how such consensus could be a means of resistance to
164 subordinate groups that threaten dominance of the elite. Therefore, by working within existing power
165 structures, outsiders may (unknowingly) reproduce underlying inequalities (Lynam *et al.*, 2007;
166 Platteau 2004).

167

168 Whilst the above arguments are well-documented in sociology, anthropology, human geography, and
169 development studies, applied research (e.g. climate change, tourism, resource management, and
170 public health) can fall into the pitfall of adopting the term uncritically, resulting in a number of
171 opponents to the concept (e.g. Agrawal and Gibson, 1999; De Beer, 2013; Scheyvens, 2002; Titz *et*
172 *al.*, 2018). For instance, Smith (1996: 250) states that, "*of all the words in sociological discourse,*
173 *community is the one that has most obviously come from wonderland, in that it can mean whatever*
174 *you want*". Some authors (e.g. Buggy and McNamara, 2016; Burckett, 2001; Christens and Speer,

175 2006; Lane and McDonald, 2005; Westoby and Dowling, 2013) further argue that community is often
176 used in place of a geographical entity, divorcing it from its socio-political context, including symbolic
177 importance (Cohen, 2013). Kobayashi and de Leeuw (2010) and Mawani (2009) suggest that
178 Indigenous peoples are incorrectly understood as a homogenous group, often only in relation to non-
179 Indigenous researchers. More recently, Barrett (2015) argues that considering the impact of
180 exogenous forces (e.g. colonialism, globalisation and neoliberalism), is just as important as
181 considering community cohesivity. For example, they highlight that the rise of private interests, such
182 as wealth, leads to exclusionary practices within communities.

183

184 Given community complexity, it is important to consider who is excluded and who is included in
185 community-based research (Eversole, 2003; Martin 2012). For example, as community-based projects
186 seek to shift power to communities, having them take ownership of the project can lead to elite
187 capture, whereby local elites reinforce vested interests to benefit those already most powerful
188 (Adhikari and Goldey, 2009; Mansuri and Rao, 2013; Titz *et al.*, 2018; Wong, 2010). Therefore,
189 despite the goal of local ownership of projects, uncritical notions of community can increase
190 inequality (Buggy and McNamara, 2016). Similarly, focusing on certain groups to understand an issue
191 can privilege particular voices and discourses (e.g. BurnSilver and Magdanz, 2019; BurnSilver *et al.*,
192 2016; Hitomi and Loring, 2018).

193

194 Looking towards so-called communities to improve all manner of issues can be viewed as misleading
195 and naïve, as outcomes of participation and increased social bonds are exaggerated, particularly where
196 deep-rooted inequalities and structures are part of the problem (Cass and Brennan, 2002; Mowbray,
197 2004; Inaba, 2013; Wiseman, 2006). Thus, focusing on communities can place undue responsibility
198 on local actors to address structural issues beyond their power, such as poor governance (Gaillard and
199 Mercer, 2013; Lavell, 1994).

200

201 Despite differences between community-based and participatory approaches to research, these terms
202 are frequently used synonymously (Washington, 2004). However, this can exacerbate inequalities if

203 the critiques of community are not considered. For example, Israel *et al.*, (2017:32) identify
204 recognising the “community as a unit of identity” as a key principle of community-based participatory
205 research (CBPR) and, although they highlight positive attributes of community, they do not consider
206 internal power structures. Furthermore, they highlight that CBPR seeks to strengthen a sense of
207 community through collective engagement (Israel *et al.*, 2005), which can be problematic given that
208 apparent cohesiveness within communities can reflect the interests of dominant groups, or are a
209 means of excluding subordinate groups (Brint, 2001; Coleman, 1961; Jewkes and Murcott, 1998;
210 Rieder, 1988). Therefore, there is evidence that in research that is both community-based and
211 participatory there is often a lack of engagement with critical notions of community, and potential for
212 elite capture.

213

214 **2.4 Alaska**

215

216 Alaska is the most northern and sparsely populated US state, with a population of 731, 000 (State of
217 Alaska, 2019), of which 15% are Alaska Native (AN) or American Indian (AI) (State of Alaska,
218 2018). There are overall large disparities in health, education, and other social indicators, owing to
219 historical and contemporary marginalisation of AN peoples. For example, forced removal of children
220 to residential schools disrupted traditional education and family ties, which is evident today as
221 intergenerational trauma (Thurman *et al.*, 2004). Thus, research with AN occurs in the context of
222 “*violent dispossession of property, homeland, culture, language and religion*” (Caldwell *et al.*, 2005;
223 4). Therefore, the Alaska Federation for Natives and the Alaska Native Science Commission have
224 developed guidelines which highlight the need for inclusion of Alaska Native co-researchers and for
225 decision-making to be based on consensus (Balestrery, 2011). Reflecting this, participatory
226 approaches have become important in research with AN peoples (Cochran *et al.*, 2008; Rasmus,
227 2014).

228

229 Whilst AN society was once stratified based on social and cultural factors, rapid political changes
230 have impacted social relations within AN communities, shifting towards what some scholars have

231 referred to as capitalist class stratification (Mason, 2002). Whilst this has had a range of consequences
232 throughout Alaska, (see Ganapathy, 2011; Irlbacher-Fox, 2009), it has also changed family relations,
233 leadership and decision-making, which has increased inequalities within communities (Kuokkanen,
234 2011; Shearer, 2012). For example, some literature has documented how a small minority of AN in
235 each village become wealthy corporate representatives, who prioritise economic development over
236 other concerns (Altamirano-Jimenez, 2007; Fontaine, 2002; Irlbacher-Fox, 2009). This rapid
237 transformation from collective to private interests could result in more exclusionary tendencies in AN
238 communities, as suggested by Barrett (2015). This, combined with the way that community-based and
239 participatory approaches (when used together) involve community members and emphasise action
240 emerging from research, render community-based and participatory research susceptible to being co-
241 opted by more dominant groups within a community. This is not only because of the aforementioned
242 challenges in deciphering community consensus, but also because dominant groups are more likely to
243 be more able to engage in research, whilst marginalised groups can be excluded leading to harmful
244 consequences (Marston *et al.*, 2016).

245

246 **3.0 Methodology**

247 **3.1 Approach**

248

249 A systematic literature review of community-based and participatory research in Alaska was
250 conducted to assess the operationalisation of these approaches in light of aforementioned critiques.
251 The work builds upon a growing literature examining participatory research in similar contexts
252 (David-Chavez and Gavin, 2018; Flynn *et al.*, 2017; Hitomi and Loring, 2018), with the difference
253 here being our explicit focus evaluating the concept of community. The review was limited to
254 research in Alaska to ensure that the social and political context around research politics and
255 regulation were kept consistent across all studies.

256

257 We use procedures identified in Berrang-Ford *et al.*, (2015) to identify relevant peer reviewed
258 literature, with searches conducted in ISI web of knowledge, Jstor, Scopus, PubMed, ASSIA and
259 Google Scholar. Synonyms for “participatory” and “community-based” were used to account for
260 differences in disciplinary language (see supplementary materials), and test searches were conducted
261 to experiment with lexicon. This was aided by consultation with an academic librarian as well as by
262 reading regionally specific documents (supported by Pearce *et al.*, 2009). Identifying search terms
263 was an iterative process, with terms added throughout the process, before concluding the
264 identification phase of the systematic literature review. Nevertheless, it is likely that there are studies
265 that have used these approaches, yet do not explicitly state this, even when accounting for different
266 disciplinary languages. Thus, it is unlikely that we have captured all relevant articles. The review did
267 not focus on AN, as this would introduce bias into how community was defined, although we
268 expected that the majority of our sample would consist of articles working with AN peoples. For a full
269 search matrix, see supplementary materials. A two-stage screening process aided in removing articles
270 not relevant, beginning with screening of titles and abstracts with reference to inclusion and exclusion
271 criteria (Table 1). The final procedure is demonstrated by Fig. 1.

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284 Table 1: Inclusion and exclusion criteria for the systematic literature review. Given that the mode of
285 research that we were interested in assessing is relatively new, we decided not to limit the searches by
286 date so as to track trends of usage over time (see supplementary materials for more information). Note
287 that to be included, all of the inclusion criteria has been met.

<i>Inclusion criteria</i>	<i>Exclusion criteria</i>
In English	Not in English
'Participatory' or similar	Not 'participatory' or similar
'Community-based'	Not 'community-based' or similar
Study conducted about Alaska only	Study conducted outside of Alaska
	Study is a comparison of Alaska and a place outside of Alaska

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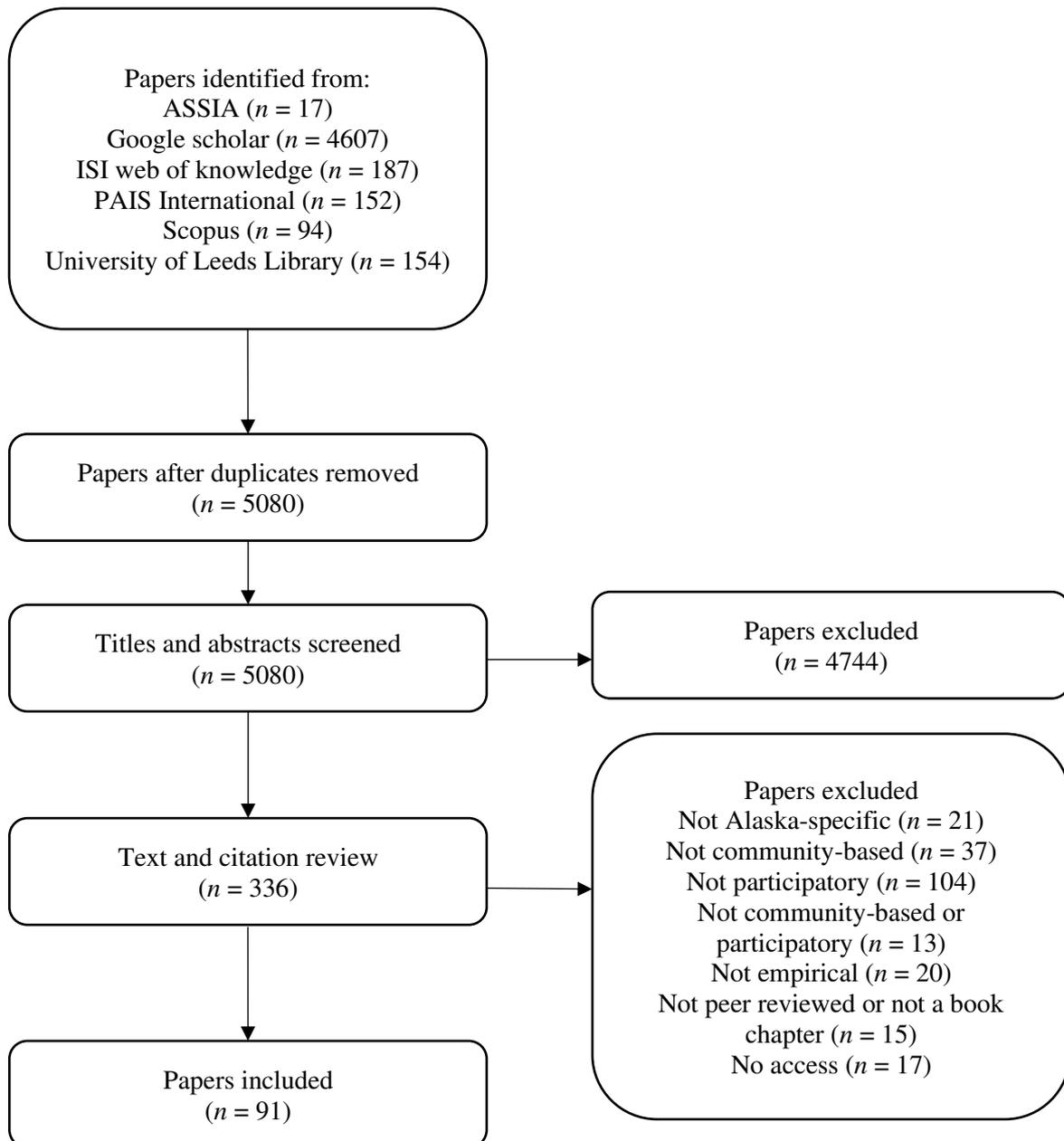


Fig. 1: Article identification process.

305 **3.2 Analysis**

306

307 A survey was created to systematically extract qualitative findings (Flynn *et al.*, 2017). Whilst this
 308 was based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)
 309 framework (Moher *et al.*, 2015), modifications were made to make it specific to assessing community
 310 and participation, as is recommended in reviews of qualitative research (Walsh and Downe, 2005).

311 The main components of this adapted framework are represented in Table 2. Results from the survey
 312 were imported into Microsoft Excel to facilitate quantitative and qualitative analysis.

313 Table 2: Key components of the survey used to extract qualitative data from articles.

<i>Theme</i>	<i>Question</i>
Community	Is a definition of community provided (yes/no)?
	What is the definition of community?
	Critical consideration around the concept of community
	Critical consideration of participants
	Consideration of who was excluded
Consistency	Are the same participants engaged in each stage or are they different at each stage?
Participation	Who participated?
	Participation in design (yes/no)?
	How did participants participate in design?
	Participation in data collection (yes/no)?
	How did participants participate in data collection?
	Participation in analysis
	How did participants participate in analysis?
	Participation in evaluation
	How did participants participate in evaluation?
	Participation in results dissemination

	How did participants participate in results dissemination?
Challenges	Are challenges reported (yes/no)?
	Description of challenges

314

315 Content analysis was conducted to characterise how community and participation were
316 operationalised (Haslam and McGarty, 2014). Responses to questions about community, participants,
317 how participants engaged in the research, and challenges reported were coded, categorised and sorted
318 into themes. Challenges reported were included to elucidate tensions between theory and practice in
319 community and participation, similar to Gaziulusoy *et al.*, (2016). Such qualitative analysis is
320 important as quantitative analysis alone is inappropriate for evaluating qualitative and participatory
321 research as it decontextualizes it (Walsh and Downe, 2005).

322

323 3.2.1 Evaluation rubric

324

325 An evaluation rubric was created to assess the extent to which articles considered and incorporated
326 the critical literature surrounding community and participation at each phase of the research, similar
327 to Flynn *et al.*, (2017). We note here that all scoring is dependent on the information provided by the
328 authors and does not account for situations in which, for instance, research participants may have told
329 researchers that they want them to have greater involvement (unless specifically highlighted within
330 the article). Table 3 demonstrates the ranges for each level.

331 Table 3: Classification for community, consistency of participation, nature of participation and overall
332 scores.

	<i>Very low</i>	<i>Low</i>	<i>Medium low</i>	<i>Medium high</i>	<i>High</i>	<i>Very high</i>
<i>Community</i>	0-11	12-23	24-35	36-47	48-59	60-71
<i>Consistency of participation</i>	0-16	17-33	34-50	51-67	68-84	85-100

<i>Nature of participation</i>	0-7	8-15	16-23	24-31	25-32	33-48
<i>Overall score</i>	0-8	9-17	18-26	27-35	36-42	42-49

333

334 **3.2.2 Community**

335

336 To assess critical consideration of community, each article was scored based on whether it provided a
 337 definition for community (0 = none, 1 = partial, 2 = yes), consideration of who was excluded (0 =
 338 none, 1 = partial, 2 = yes), critical consideration of who was included (0 = none, 1 = partial, 2 = full)
 339 level of description of participants (0 = none / community, 1 = reports demographic information
 340 and/or uses terms such as ‘experts’ or ‘consultants’ 2 = reports *role* in community, 3 = reports role in
 341 community and participant’s interest in the research). The purpose of this section was not to assign
 342 low scores to projects which could replicate unequal power structures (e.g. through only including
 343 leaders), but to assess transparency which would allow readers to make their own inferences, as is
 344 standard in qualitative research (Noble and Smith, 2015). Qualitative notes were also recorded to note
 345 the definition of community (if provided) and the nature of critical consideration of the concept.

346

347 **3.2.3 Consistency of participants**

348

349 Drawing on work that contends that that maintaining the consistency of who participates can be
 350 important (e.g. Israel *et al.*, 2010; Smajgl and Ward, 2015), articles were scored based on the
 351 consistency of who was involved. Each article was assigned a value of 0-3 (0 = participants at each
 352 stage were completely different; 1 = participants at each stage varied but a few were the same; 2 =
 353 participants were mostly the same but some were different, and; 3 = participants at each stage where
 354 exactly the same). To ensure that the level of participation was accounted for, the level of consistency
 355 was multiplied by the number of phases that involved participants. This meant that if two studies both
 356 showed a high consistency of participants, the one with higher participation was scored more highly.

357 Articles with participation in one or fewer of the research phases were disregarded from this phase of
358 analysis.

359 3.2.4 Nature of participation

360

361 To assess nature of participation, David-Chavez and Gavin (2018)'s framework (fig. 2) was utilised
362 and applied to each phase of the research as follows: 0- Contractual/no participation, 1- Consultative,
363 2 – Collaborative, 3-Collegial, 4-Indigenous. To aid in assigning codes at each stage, Naylor *et al.*,
364 (2002) was used as a guide. Each article was subsequently assigned a score out of twenty (number of
365 phases multiplied by the highest possible score for each phase).

366



367

368 Fig. 2: Nature of participation. Source: David-Chavez and Gavin (2018).

369

370 3.2.5 Overall score

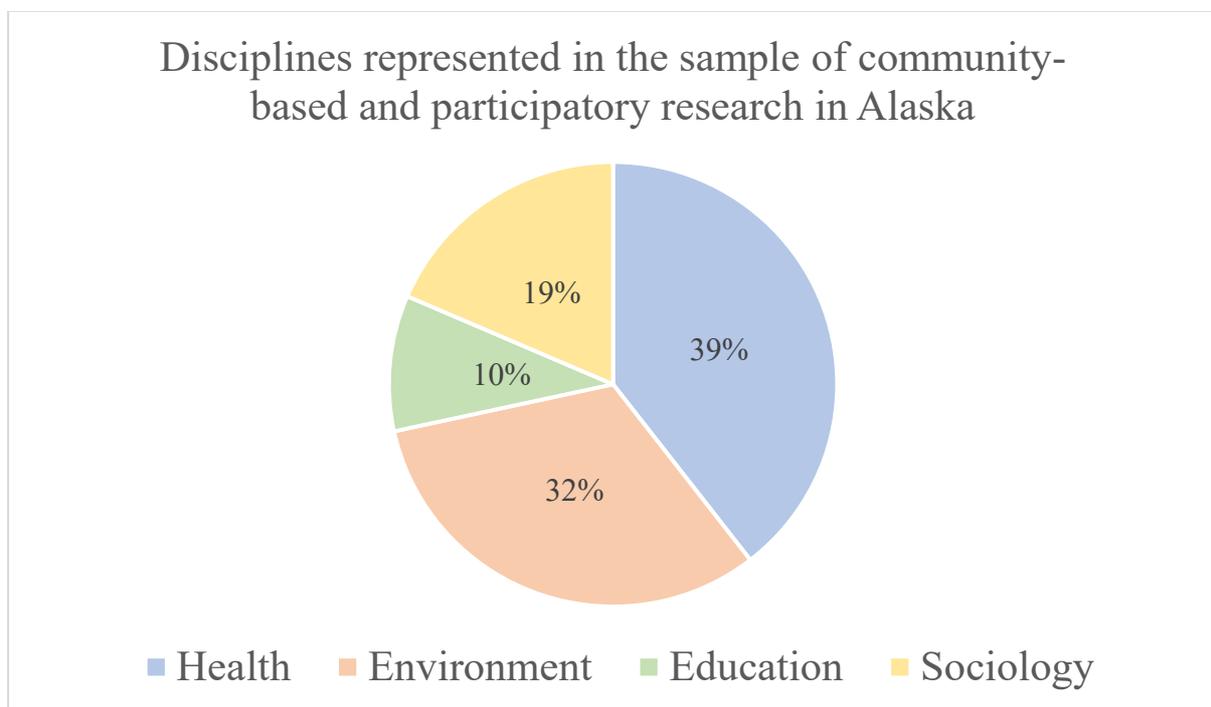
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372 To calculate the overall score for each article, each score was converted into a percentage. The
373 average across community, consistency and nature of participation were calculated, with this being
374 the final score. Where consistency of participation could not be calculated (due to participation in two

375 or fewer phases) the average between community and nature of participation was calculated only. The
376 highest score was then divided by six to create six groups that characterised the criticality of
377 community participation for each article.

378 4.0 Results

379 Ninety-one papers were retained for full analysis as meeting the inclusion criteria. The majority of
380 these were categorised under health sciences and environmental sciences (39% and 32%,
381 respectively). Others were in education (e.g. Leonard and Gilmore, 1999; Lipka, 1989) or in the
382 sociology (e.g. Caringi *et al.*, 2013; Picou, 2000).



383

384 Figure 3: Disciplines represented in the sample of 91 articles.

385 38% (n=35) papers were categorised as 'low' with regards to their consideration for both community
386 and participation. 9% (n=8) were categorised as very high, and 8% (n=7) were categorised as high
387 (for full scoring, see supplementary information). As well as demonstrating high levels of
388 participation throughout research, those that scored highly described who their participants were, how
389 they came to be a part of the project, and the complexity of their positions within the community and
390 the research. In terms of community, 88 of the 91 articles did not provide a definition. The remaining
391 three provided partial definitions, for instance by recognising that, although AN students are diverse,
392 their shared of experience of navigating two worlds provides some sense of community (Lopez *et al.*,

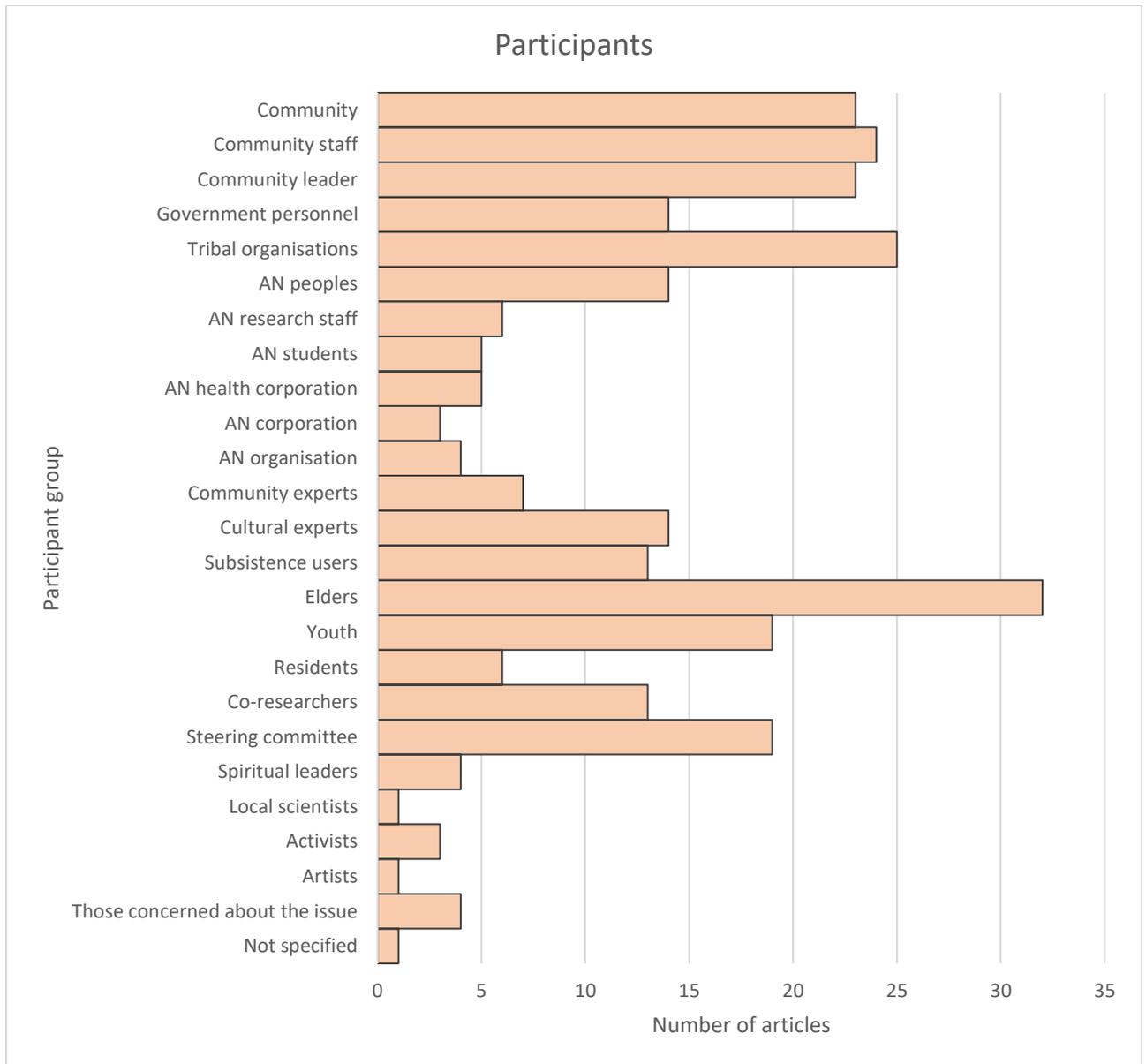
2012). 14 of the 91 articles critically considered who participants were and how they came to be involved in the research, whilst 77 did not. Critical consideration of participants was grouped into five themes: critique of demographic information, issues of representation, recognition of community heterogeneity, justification for inclusion of participant, and evidence of reflexivity. For examples of themes and corresponding articles, see supplementary materials. We additionally note that whilst we did not initially seek to specifically assess articles that looked at AN communities, all but one article (Brown and Donovan, 2013) focused on AN communities. One article (Natcher, 2004) considered who was excluded in the research, acknowledging that through including hunters they “failed to account for the everyday use of female landscapes [...], the social relations that shape that use [...], and female perspectives on the use, value and cultural significance of taking part in subsistence activities”. Three partially considered who was excluded. Caringi *et al.*, (2013) stated that they utilised consultants to capture youth voices, rather than directly involving youth. Flint *et al.*, (2011: 207) state that they could not engage all members of the community, “especially marginalised members, such as those who are housebound, disabled, or ostracised for various reasons”. Rasmus (2014) describes that parents could have been included but were not due to subsistence and employment commitments.

In terms of consistency of participant composition throughout research, sixteen articles described participation in two or fewer phases, so were discounted in analysis of consistency of participation. 71 were retained for further analysis, with 33 attaining a low level of consistency. Five articles had the same participants at each stage of research in which participants were involved.

4.1 Who participated in the research?

Figure 4 shows participant groups across all articles and across all phases of research. Elders were the group that most frequently participated in research, followed by tribal organisations (e.g. tribal governments). Other groups that participated frequently in articles included community leaders and staff, the community, youth and steering committees. Of the 19 articles that involved steering

421 committees, thirteen did not describe who participants on the steering committee were. Thirteen
422 articles also defined at least one participant as a co-researcher.



423
424 Fig. 4: Participation of groups across articles. Note that studies used multiple groups.

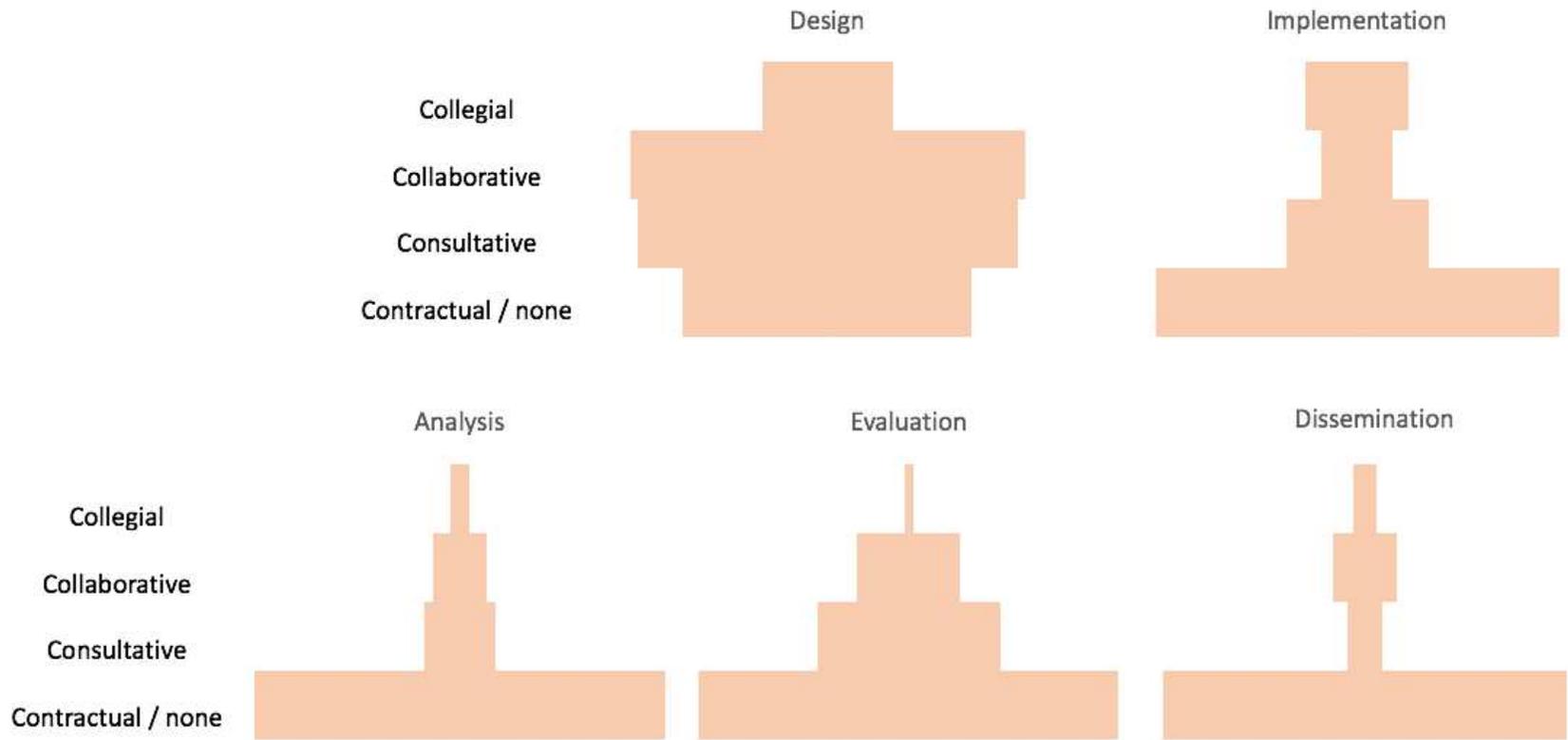
425 4.2 Nature of participation

426
427 Although no article demonstrated Indigenous nature of participation, collegial levels of participation
428 (i.e. where community members had primary authority over the process) were highest in research
429 design (fig. 5). These articles typically responded to research needs identified and requested by the
430 community (e.g. Burger *et al.*, 2009) or collaborated with pre-existing entities working towards the

431 same goal (e.g. Rasmus *et al.*, 2014). Collegial nature of participation was lower in research
432 implementation. Such articles generally demonstrated how research implementation was conducted
433 by participants in a way that led to benefits beyond just generating data. For example, cultural
434 consultants in Carinigi *et al.*, (2013) conducted healing ceremonies whilst also collecting data. Three
435 articles (Lopez *et al.*, 2012; Mohatt *et al.*, 2008; Sharma *et al.*, 2013) demonstrated collegial nature in
436 data analysis, with co-analysis workshops being held with their AN student participants. Only Berardi
437 and Donnelly (1999) met the criteria for collegial participation in evaluation, and this was through
438 constant evaluation throughout the project to decide whether it should continue. Two articles
439 demonstrated collegial nature of dissemination, for instance through participants providing health
440 education to the wider community, with decision-making power over what resources to use (Lardon *et*
441 *al.*, 2010).

442

Nature of participation



443

444 Fig. 5: Nature of participation identified across articles for each research stage. Note that no article achieved 'Indigenous' nature of participation.

445

446 **4.3 Challenges in community-based and participatory research**

447

448 Table 4 highlights results from coding of challenges identified in articles. Five overarching themes

449 were identified: institutional constraints, collaboration, community-level challenges, positionality and

450 logistics.

451 Table 4: Challenges identified in articles, grouped by categories and themes.

Theme	Category	Number of articles	Example
Institutional constraints	Tensions between institutions and CBPR principles	11	“[Participant] was drawing critical attention to how university research and funding processes work—and really saying this may not always be best for the participating communities” (Gonzalez and Trickett, 2013:121)
	Funding	17	Lack of control over how to spend budget (Cusack-McVeigh <i>et al.</i> , 2016)
	Publishing	3	Reviewers wanted more extensive quotes to be used (Leonard and Gilmore, 1999)
	Lack of understanding of qualitative and participatory methods	4	Funding panels are often made up of positivistic/quantitative paradigms-orientated researchers so the team was advised to include quantitative methods, which set back the team as AN members became concerned that researchers would co-opt the goals of the community (Mohatt <i>et al.</i> , 2004)
Collaboration	Disagreements within the collaboration	5	Some items were removed from research due to disagreements (Gonzalez and Trickett, 2013)
Community-level challenges	Cultural acceptability	8	Experience of trauma was dropped from the model due to cultural unacceptability. This meant research questions were determined by cultural acceptability (Allen <i>et al.</i> , 2014).
	Distrust of research	5	An Elder discontinued interview and withdrew from the study because they believed that researcher was visiting her to remove her from her family (Lewis, 2014).
	Working around participant schedules	9	Difficulty interviewing those who were employed or engaged in subsistence (Cueva <i>et al.</i> , 2018; Ebbesson <i>et al.</i> , 2006)
	Lack of engagement	8	Research fatigue (Boyer <i>et al.</i> , 2007); key stakeholders not interested (Brown and Donovan, 2013)
Positionality	Positionality	4	Researcher felt uncomfortable representing Yup’ik views as a non-Native (Fienup-Riordan, 1999).
	Inaccessible language	4	Use of jargon created a sense of a hierarchical power differential that makes communities uncomfortable (Mohatt <i>et al.</i> , 2004)
Logistics	Logistics	13	Time and multiple visits required to build trust (Eisner <i>et al.</i> , 2012; Flint <i>et al.</i> , 2011)

453 **5.0 Discussion**

454

455 This study conducted a systematic literature review of community-based and participatory research in
456 Alaska to examine how such research is operationalised. Whilst all articles emphasised the
457 importance of local level engagement in research, there were significant differences in the degree of
458 reporting of both community and participation, thus obfuscating the political nature of such
459 approaches. Nevertheless, it is noteworthy that insights derived from this review are subject to the
460 degree of detail and transparency in reporting, and we recognise that articles do not report the full
461 details of the research process. This reliance on the way in which the research process is reported,
462 then, must be regarded as an indicator or proxy of the state of community-based and participatory
463 research in Alaska. For example, different disciplines have different standards over what constitutes
464 good research practice, which is important given the interdisciplinary nature of this review.

465 Participatory approaches and community-based work have their roots in empowerment, feminist and
466 critical studies, yet styles of reporting (e.g. stating positionality, practising reflexivity and thick
467 description) are not standard across disciplines. Similarly, it is not standard practice to report fully on
468 the research process in all disciplines, which was reflected in some articles, which clearly required
469 extensive community engagement, yet did not provide details, resulting in them attaining lower scores
470 (e.g. Sakakibara, 2010). Nevertheless, findings suggest that reporting the research process with
471 greater transparency demonstrates that participation is not tokenistic, and further allows for the
472 complexity of both community and participation to be considered. Here, we discuss the implications
473 of our results, and, given that all but one study focused on AN communities, we further question the
474 use of Western sociological theory in AN contexts.

475

476 **5.1 Community**

477

478 There were overall few definitions or considerations for what a community was, with Picou (2000)
479 highlighting the Native Village of Eyak as a symbolic community that is dispersed within and around
480 the town of Cordova. Both Hiratsuka *et al.*, (2012) and Sharma *et al.*, (2013) do not identify their

481 community under study as place-based, but rather as AN/AI peoples across Alaska who, although
482 diverse, hold some unique, shared characteristics. Nevertheless, no article fully provided a definition
483 for community, and many used the term interchangeably with geographical entities or cultural groups.
484 Whilst research with AN/AI occurs in the context of the history of invasion, thus providing some
485 basis for this being a community in and of itself (based on shared history) (Waterworth *et al.*, 2014),
486 this does not account for the heterogeneity of AN/AI nor social change that has occurred more
487 recently (e.g. Ganapathy, 2011).

488

489 Divides across gender were noted by several articles, which ranged from reporting participant
490 demographics and being critical of the lack of representation of women (Brown and Donovan, 2013)
491 through to adjusting data collection (e.g. composition of focus groups) by gender and circumstance to
492 allow for differences to emerge from the data (Sharma *et al.*, 2013). Given evidence of increased
493 gender inequality within AN communities (Shearer, 2012), it is important that this is considered.
494 Issues of gender arose not only in framing of the community under study, but also at later stages of
495 the research. For instance, Ford *et al.*, (2012) noted that different approaches (e.g. group size) were
496 needed when working collaboratively with men and women, and changed their methods accordingly.
497 Furthermore, Natcher (2004) acknowledges that by involving only male hunters, resultant maps
498 created did not include how women value subsistence resources, nor how women use the landscape.

499

500 However, gender is only one of many axes across which power operates, and it appears that those
501 pertaining to social status (including how this has changed) were only acknowledged by Lipka (1989).
502 Interestingly, this is also the oldest article in the sample, indicating that no community-based or
503 participatory research in Alaska has made explicit intra-community power structures since 1989. Even
504 when considering elements of the review that did not concern community specifically, only one
505 article (Flint *et al.*, 2011) mentions marginalised peoples, although this is in the context of being
506 unable to access this group, and does not concern who these groups are, why there are marginalised,
507 or how this could influence (or be influenced by) results. Therefore, there is clearly an absence of
508 critical consideration of community, particularly in relation to power structures. This, then, suggests

509 that community-based and participatory research appears to work within existing power structures in
510 Alaska, potentially reproducing underlying inequalities. Whilst this review only assessed projects that
511 were carried out in academic settings, this is in line with findings from other studies in Alaska that
512 evaluate decisions and actions made by various agencies (e.g. Jacobs and Brooks, 2011; Spaeder,
513 2005; Walsey and Brewer, 2018).

514

515 The low consideration for community heterogeneity can be interpreted differently, however, when
516 considering the complexity of researching in Alaska Native contexts (Balestrery, 2011). It is possible
517 that highlighting divides within a community could undermine self-determination, particularly when
518 outside researchers are involved, and when it is considered that a part of self-determination surrounds
519 how Indigenous peoples choose to represent themselves to outsiders (Abolson and Willett, 2004). In
520 line with participatory principles, a high proportion of articles went through community review, so
521 those consulted may not have wanted aspects about their community to be made public, particularly
522 given historically harmful research. This is in line with Alaska Federation of Natives and Alaska
523 Native Science Commission's sovereign scientific research guidelines, which state that AN should be
524 collaborative partners and that decision-making should be founded on consensus (Balestrery, 2011).
525 This is a phenomenon Cleaver (1999: 605) describes as "dangerous", in that the fear by researchers
526 and practitioners in critiquing local practices leads to too much emphasis on local power structures,
527 encouraging elite capture. Thus, there appears to be tension between reporting about communities to
528 the critical level called for in academia, and the guidelines established for research with Indigenous
529 peoples. It is noteworthy that many of the critiques surrounding the concept of community were
530 derived from Western sociological framings, and thus this review represents a Western sociological
531 critique of community. This in turn raises questions surrounding the appropriateness of applying
532 Western constructs of community to AN peoples, as highlighted by Coombes *et al.*, (2012) and Smith
533 (2007). For instance, whilst they acknowledge that discourse around community can protect economic
534 interests of elites, they also warn against always viewing communities as regressive, particularly
535 when outsiders are using the term in ways that mask the dynamism and fluidity of social groups. For
536 example, some Indigenous scholars (e.g. Coombes *et al.*, 2012) call for research into how

537 communities motivate resistance to neoliberalism, which addresses the importance of exogenous
538 forces on communities, as recently proposed in Western sociological literature (Barrett, 2015). It is
539 neither the purpose nor the place of this paper to make recommendations surrounding AN community
540 structure. Nevertheless, we question the applicability of Western sociological literature around
541 community, as this has not been developed in a colonised context (Abolson and Willett 2004; Go,
542 2013; hooks 1992). Whilst there is no simple approach that satisfies everyone, we encourage
543 researchers working with communities to carefully consider how they conceptualise communities in
544 their work, looking towards Indigenous scholars (if possible, from the communities they work with),
545 and what the possible implications of this are prior to conducting research.

546

547 **5.2 Participation**

548

549 Qualitative research, particularly with hard to reach populations, relies on purposive sampling in
550 which participants are selected based on their ability to speak on behalf of groups (Denzin and
551 Lincoln, 2005). Whilst this was widespread throughout the review, as demonstrated by reliance on
552 cultural and community consultants, few papers acknowledged the potentially culturally inappropriate
553 nature of this in Alaska (Jacobs and Brooks, 2011). When considering participants in community-
554 based research, researchers are essentially concerned with selecting who is speaking on behalf of a
555 community. For example, reliance on leaders can result in interests of elite being addressed,
556 potentially marginalising those not considered to be the local elite. Notwithstanding that researchers
557 often ask leaders to identify experts (e.g. Henderson *et al.*, 2017), there are issues when using cultural
558 and community consultants, as expertise is defined based on deeply-seated assumptions about the
559 validity of different types of knowledge (Hitomi and Loring, 2018; Nader, 1996; Yeh, 2016). Thus,
560 using ‘consultants’ (e.g. Caringi *et al.*, 2013; Gonzalez and Trickett, 2014) or ‘experts’ (e.g. Allen *et*
561 *al.*, 2009; Lewis *et al.*, 2014; Wilson, 2014), without detailing how these were chosen can be
562 problematic. Also consistent with critiques of Hitomi and Loring (2018), Elders were the group that
563 were most frequently included articles. Whilst there is no doubt that this group offers important
564 perspectives, overreliance can serve to marginalise some voices. Although Hitomi and Loring (2018)

565 were concerned with environmental research, this review highlights that Elders are disproportionately
566 consulted across other concerns too, such as health (Allen *et al.*, 2018), education (Hugo *et al.*, 2013),
567 and sociology (Gram-Hanssen, 2018). Several papers did, however, consider this through justifying
568 why their participants were best positioned to participate (e.g. Cueva *et al.*, 2018; Rivkin *et al.*, 2013),
569 and Legaspi and Orr (2007) specifically highlight that cultural consultants do not speak for the entire
570 community. Thus, as with reporting around community, we suggest that authors use thick description
571 in reporting around sampling in community-based and participatory research, with a particular
572 sensitivity to issues of power (including the positionality of the researcher).

573

574 **5.2.2 Nature of participation**

575

576 It is pertinent to note that across each stage, articles that transparently exemplified how their practice
577 led to increased participant control over the research scored more highly. For example, Mohatt *et al.*,
578 (2004) demonstrates how decision-making by consensus led to a change in focus from substance
579 abuse to sobriety, whilst Gonzalez and Trickett (2018) describe continuous disagreement within their
580 collaboration surrounding whether questions of trauma should be included. Decisions around what to
581 research are power-laden and often reflect the worldview of researchers (Atleo, 2004), yet Mohatt *et*
582 *al.*, (2004) and Gonzalez and Trickett (2018) show how involving participants in research design can
583 result in their worldview being reflected. These are in contrast with numerous articles that used vague
584 descriptions of engagement, such as providing guidance. Transparency in reporting of participatory
585 research should be welcomed, as it can provide a way to demonstrate that participation is not
586 tokenistic. This is important in an Alaskan context, as Jacobs and Brooks (2011) and Shearer (2007)
587 have both critiqued how Alaska Native representatives are often asked to attend meetings and concur
588 with agency decisions, rather than being listened to and considered in decision-making.

589

590 Overall, research design had most participation compared with other phases. This suggests that,
591 broadly, projects were grounded in local concerns and relevant to the community. This is supported
592 by the fact that articles that demonstrated relevance of the research to the studied community

593 generally scored highly for participation in research design. This was particularly the case where
594 communities had approached the researchers with an issue (e.g. Burger *et al.*, 2009), where
595 researchers were directed by community members to work with a pre-existing committee addressing a
596 pre-determined area of concern (e.g. Rasmus *et al.*, 2014), and where there was extensive description
597 of how research was adapted to local concerns and contexts (e.g. Burger *et al.*, 2009). Articles where
598 community-based organisations, leaders, steering committees and other groups were able to select
599 participants scored highly (e.g. Henderson *et al.*, 2017). Additionally, where organisations were able
600 to choose their level of involvement, as well as of participating groups (e.g. Lewis *et al.*, 2018) scored
601 highly, as this demonstrated that potential collaborators could engage in research on their own terms
602 in ways that did not impede their ongoing activities. However, if this is done without consideration of
603 who collaborators are this can be problematic, despite this being regarded as best practice in
604 participatory research. This further indicates a tension between critical consideration of community
605 and participation in research, suggesting that the tenets of participatory research may be in conflict
606 with agendas of self-determination (Cargo *et al.*, 2008). Thus, we emphasise that there is no tidy
607 approach to conducting community-based and participatory research. It is an iterative process that
608 requires flexibility and negotiation, in which researchers should be attuned to power dynamics.

609

610 When implementing research, the highest scoring articles for participation gave space for participants
611 to engage in culturally relevant practices that provided some benefit to participants beyond aims of
612 the research. For example, in Caringi *et al.*, (2013) cultural consultants conducted healing ceremonies
613 and reported back successes to researchers. This is especially interesting, as it implies that participants
614 could evaluate what determined success on their own terms (Anderson *et al.*, 2012). However, this
615 was also directly critiqued by other articles evaluated. For instance, Lopez *et al.*, (2012) highlighted
616 that AN students perceived such practices as means by which White researchers were trying to make
617 their methods appear more “Native”. Thus, the ways in which such practices are implemented in
618 research warrants careful consideration of individual and collective positionality.

619

620 Participation in analysis was low across papers, possibly owing to the complexity of qualitative data
621 analysis, with time and funds needed to train and pay those that analyse data, which was identified as
622 an obstacle to inclusion by Burger *et al.*, (2009). It is thus no surprise that studies engaged in co-
623 analysis worked with those for whom such training would be useful in the future, such as university
624 students (Sharma *et al.*, 2013; Lopez *et al.*, 2012). Analysis is, however, important, as it allows
625 participants to interpret data based on their own worldviews, as well as confronting, modifying and
626 honing researchers' interpretations (Smith, 1994). The purpose of assessing the level and nature of
627 participation in evaluation was intended to ascertain whether and how participants engage in
628 interpretation of research that do not fall neatly into formal data analysis techniques (e.g. coding).
629 Although more articles demonstrated collaborative participation in evaluation, only Berardi and
630 Donnelly (1999) engaged in collegial review through continuous review where the community had
631 the power to terminate the study. Thus, in terms of both formal analysis and less formal involvement
632 in interpretation of findings, there continues to be significant power imbalance. This is particularly
633 concerning given the high number of articles engaging co-researchers, as co-researchers in particular
634 should be (at the very least) engaged in reflexive dialogue during these phases (Finlay, 2002). The
635 low involvement of participants reported in both analysis and evaluation, suggests that this has not
636 been the case in Alaskan community-based and participatory research.

637

638 **5.2.3 Micropolitics of participation**

639

640 A fundamental component of qualitative research, in which participatory approaches have their roots,
641 is the recognition that the researcher is a research instrument (Mantzoukas, 2005). Meanings are
642 negotiated between the researcher and the researched in participatory approaches, meaning that
643 different researchers will reveal different stories: they will elicit different responses from participants,
644 they will ask different questions and interpret data differently (Finlay, 2002). Additionally,
645 participatory approaches are concerned with power, which questions not only the privileged position
646 of researchers, but also the micropolitics of collaboration (Ferreira, 2006). While only 11%
647 considered their positionality in the research (see supplementary materials), there is also uncritical

648 involvement of collaborators, such as co-researchers, steering committees and community-based
649 organisations.

650

651 The highest scoring articles defined who co-researchers were and how they came to be involved in the
652 research. For example, Lopez *et al.*, (2012) describes how a focus group was initially conducted to
653 explain research, with interested students subsequently volunteering to join the team. Similarly,
654 Wexler (2006) describes co-researchers as those who were willing to contend with the paradox of
655 familiarity. Through this, both articles demonstrate the willingness of participants to be involved, with
656 Wexler (2006) additionally considering the complex identity of co-researchers, thus addressing some
657 concerns surrounding the lack of nuance in reporting about co-researchers (Greene *et al.*, 2009).

658 Nevertheless, the majority of articles did not reveal this level of detail about their collaborators. This
659 is concerning, as the use of co-researchers has been widely critiqued in the participatory research
660 literature, for instance, through recognition of shifting identities and elevated positions as participants
661 become co-researchers (Petersen, 2010). Furthermore, through engaging some participants more
662 collaboratively in research, those participants are potentially made more vulnerable (McCartan *et al.*,
663 2012; Smith *et al.*, 1999). Other articles identified their co-researchers as Indigenous, but did not
664 elaborate on whether they were from the same community (e.g. Mohatt *et al.*, 2004; Weinronk *et al.*,
665 2017) whilst others made explicit that their co-researchers were not from the community. In these
666 instances, it is pertinent to consider the positionality of the co-researchers in relation to participants,
667 which was not evident here. This harks back to critiques made by Smith (2013), about Indigenous
668 researchers being considered *de facto* the same as Indigenous participants. However, this was not the
669 case across all articles that included AN or AI on the research team, as demonstrated by Carpluk and
670 Leonard (2016), who acknowledge the separate status of AN students and researchers, due to their
671 affiliation with universities. A more transparent account about the commonalities and differences
672 between co-researchers and the community (including how this may have changed as a community
673 member becomes a co-researcher) would elucidate and refine the co-researcher's role more clearly,
674 and allow for further consideration of diversity of experiences and viewpoints within and between
675 certain groups (Chouinard, 2000; Kobayashi, 1994; Valentine, 2003).

676

677 Similarly, although steering committees are advocated for when non-Indigenous peoples research in
678 Indigenous contexts (Louis, 2007), there is still a need to consider how the composition of the steering
679 group may influence research. Some projects gave extensive description of those on their steering
680 committees. A notable example is Allen *et al.*, (2013) who, similar to other articles engaged the
681 People Awakening Coordinating Council (PACC) but, unlike other articles, provided description of
682 who made up PACC, including members' roles in grassroots sobriety movements. Mohatt *et al.*,
683 (2008) also used PACC, yet recognised the heterogeneity between representatives of cultural groups
684 on PACC. Other articles demonstrated transparency in how steering committees were created. For
685 example, through indicating that composition of steering committees was decided by local leadership
686 (Henderson *et al.*, 2017). Although this potentially causes problems in terms of elite capture, the
687 transparency with which this is reported at the very least makes this known, as is required in
688 qualitative research (Noble and Smith, 2015). Pertinent to aforementioned critiques of communities is
689 whether it is the same people on steering committees. Whilst this is not something that is clear from
690 the review, the statement by Rivkin *et al.*, (2013) that all participants knew each other, as they had
691 previously worked together, suggests there could be volunteer sector elites, or at least the same few
692 people who represent community issues. This is also corroborated by Jacobs and Brooks (2011) and
693 Spaeder (2005), who highlight similar issues in co-management of natural resources in Alaska. This
694 review, then, suggests that there could be issues of volunteer sector elites beyond co-management,
695 possibly in healthcare research (Rivkin *et al.*, 2013), which could be problematic as volunteer sector
696 elites have been shown to increase health disparities (Paterson, 2010).

697

698 Overall, there was little discussion of the micropolitics involved in collaboration, which could
699 understandably be born of the desire to protect collaborators and the collaboration, particularly where
700 research is ongoing. Nevertheless, all participatory and collaborative research require researchers to
701 enter a community at some level, or via a particular person, which is inherently a political process
702 (Smith *et al.*, 2011). Thus, whilst collaboration is fundamental to participatory and community-based
703 research, the micropolitics of collaboration need to be considered more critically (Mauthner and

704 Doucet, 2008). One way in which this is done in qualitative research is by ensuring there is
705 transparency in collaboration, from research development through to reporting research (Auberbach
706 and Silverstein, 2003; Mauthner and Doucet, 2008). Thick description of this process can also be a
707 means of enhancing validity of collaborative approaches, which was only done by Caringi *et al.*,
708 (2013). Again, there is no tidy approach to addressing these issues in a manner that satisfies all.
709 However, we urge researchers to recognise that research cannot be apolitical, but through careful
710 decision-making and reporting, enough information can be provided to better understand the
711 contested nature of collaboration.

712

713 **5.3 Critiques of community-based and participatory approaches**

714

715 Institutional constraints were frequently mentioned in studies in various contexts. Some concerned
716 how activities important for trust-building would not be funded, whilst others highlighted direct
717 conflicts between institutional procedures and participatory principles. For example, Boyer *et al.*,
718 (2007) highlight conflict between how participatory research should be reported back to participants
719 (i.e. results should be reported to those who participated), versus how the National Bioethics Advisory
720 Commission recommends findings should be reported (i.e. only once findings are scientifically valid,
721 and findings have significant implications for subject health and a course of action/treatment is
722 available and appropriate medical advice or referral is provided). This exemplifies how adhering to
723 institutional structures can promote extractive research, cause harm, and foster distrust between
724 researchers and participants, consistent with previous studies that highlight the incompatibility of
725 participatory research with institutional requirements (Ferreya, 2006).

726

727 Nadasdy (2003) and Vaudry (2011) posit that where power is not fully devolved, state power is
728 strengthened, possibly under the guise of decentralisation and empowerment. Recent sudden shifts in
729 the political and economic climate in Alaska, for example, have resulted in deep budget cuts to
730 Alaskan universities (Rosen, 2019), where the majority of articles were completed (see supplementary
731 materials). Thus, even where projects are completed to high standards, their placement within a

732 politically dominant settler society renders them vulnerable to action by those at higher levels, which
733 ultimately can lead to cessation of projects. Community-based and participatory research in these
734 contexts could be considered neoliberal progressive spaces (Bargh and Otter, 2009), whereby research
735 has accountability to people (community and participants), but also to institutions.

736

737 At the local level, cultural acceptability, distrust and lack of engagement were frequently mentioned
738 as challenges. Lack of engagement was linked to research and meeting fatigue (Boyer *et al.*, 2005;
739 Boyer *et al.*, 2007), consistent with previous research within Alaska (Jacobs and Brooks, 2011;
740 Spaeder, 2005) and elsewhere (Clark, 2008; Mandel, 2003). In these contexts, participation in
741 research could be a burden to the community, raising questions about the appropriateness of extensive
742 participation in research, as well as appropriateness of research topic. Interestingly, in their article on
743 substance abuse and suicide, Rasmus (2014) attribute dwindling participation to the community no
744 longer being in crisis. This is, of course, a positive outcome, yet it appears to conflict with academic
745 expectations to complete projects beyond resolving locally-defined problems.

746

747 Several articles alluded to power structures in research that hampered collaboration. For example,
748 Mohatt *et al.*, (2004) highlights how the use of jargon alienated participants by creating a sense of
749 hierarchical power. Furthermore, when considering Spaeder (2005) and Walsey and Brewer (2018),
750 where the burden of travelling for meetings in which AN peoples often had to defend local realities to
751 non-Indigenous peoples, whilst acting in culturally appropriate ways and making their knowledge
752 palatable for Western institutions, it was difficult not to be critical of articles that had hosted events in
753 Western institutions in population centres, where AN participants were expected to voice their
754 perspectives. For instance, Driscoll *et al.*, (2016) hosted a colloquium at the University of Alaska
755 Anchorage for community leaders from various Alaskan villages. Although this was not critiqued by
756 the authors, there are questions about the cultural acceptability of formal meetings in Western
757 population centres, particularly given that a key critique of participatory approaches being that, to
758 become empowered, Indigenous peoples must agree to Western norms, such as meetings (Jacobs and
759 Brooks, 2011). Other articles that engaged multiple communities may have overcome this through

760 hosting their meetings in regional hubs that were primarily Alaska Native, such as Nome (Ebbesson *et*
761 *al.*, 2006) and Utqiagvik (Sigman *et al.*, 2014). We note, however, that this is a generalisation and
762 may not apply to every context, as numerous factors are likely to be considered concerning meeting
763 location.

764

765 **6.0 Conclusion**

766 Systematic reviews of qualitative research are contested, yet they can open up space for new insights
767 and understandings to emerge (Walsh and Downe, 2005). This review has done so by examining
768 usage of participation and community in research across disciplines in Alaska, systematically
769 identifying and assessing how research operationalises these concepts. Findings show that there is
770 overall a lack of consideration of the heterogeneity of ‘communities’, with little consideration of
771 intra-community power structures that can marginalise some and privilege others. Given recent social
772 change in Alaska, not considering these power structures potentially leads to the replication of
773 unequal power relations in research outcomes, particularly with the drive for community-based and
774 participatory research to produce tangible outcomes that empower participants.

775

776 There was more consideration around participation, with more transparency around how participants
777 participated than around who participants were. In line with best practice in participatory research, co-
778 researchers, steering committees, and tribal governments were extensively involved in the research
779 process. However, these were largely considered uncritically, potentially leading to elite capture or
780 placing co-researchers in vulnerable positions. Nevertheless, the use of co-researchers, community-
781 based organisations, and steering committees is encouraged in Alaska when working with AN
782 peoples.

783

784 Despite AN institutions advocating for community-based and participatory approaches, both
785 participation and community are Western constructs. What is interesting is that for critical
786 consideration of community, in which there is consideration of internal power structures, who
787 participated (and their potential interests), who was excluded and transparency around these can be in

788 conflict with elements of participatory research on Indigenous terms. For example, review of a study
789 by a steering committee, who could represent the local elite, may result in some elements being
790 omitted that may be sensitive or cast the community in a negative light. Given that participatory
791 approaches are supported by Indigenous institutions (Peterson, 2010), this review raises questions
792 about constructs of community in Indigenous contexts. For example, the applicability of community,
793 as a Western sociological construct transferred to a colonised context, is questioned. Therefore,
794 although this review problematises community and participation, it also raises questions about the
795 appropriateness of Western sociological constructs in AN contexts.

796

797 We recognise that this review has problematised community-based and participatory research whilst
798 providing few alternatives. In part, this is intentional, as we recognise that this sort of research
799 requires flexibility. Nevertheless, we conclude that in terms of *reporting* community-based and
800 participatory research, authors could utilise a number of key considerations to avoid their research
801 being tokenistic and/or uncritical:

- 802 1. Describing positionality of researcher(s) and how this may influence the research. If a team of
803 researchers is collaborating, both individual and collective positionality should be considered.
- 804 2. Describing how researchers approach the concept of community, including some description
805 of who was included and also who was excluded, and how this then relates to the researcher's
806 conceptualisation of community. This could include description of how participants were
807 chosen and what the implications are of this. For instance, if researchers chose participants
808 based on their level of expertise in a certain area, researchers could reflect on what they deem
809 expertise to be and what assumptions they are. In terms of those who are excluded from the
810 research (intentionally or otherwise), authors could give more attention to how the lack of
811 those voices has influenced the research.
- 812 3. Thick description of the collaborative process and of the nature of participation. This could
813 include description of the background of collaborators and how they came to be involved in
814 the research, the specific goals of collaborators (and how they aligned and/or differed from
815 those of the researchers), challenges that arose (and their solutions), and any pre-existing

816 relationships between researchers and collaborators or between collaborators. Specifically
817 where co-researchers are involved, researchers should reflect on the identity of the co-
818 researcher, how this changes through the research process, and how this then influences
819 research.
820

References

821

822

823 Absolon, K. and Willett, C., 2004. Aboriginal research: Berry picking and hunting in the 21st
824 century. *First Peoples Child & Family Review*, 1(1), pp.5-17.

825

826 Adhikari, K.P. and Goldey, P., 2010. Social capital and its “downside”: the impact on
827 sustainability of induced community-based organizations in Nepal. *World Development*, 38(2),
pp.184-194.

828

829 Agrawal, A. and Gibson, C.C., 1999. Enchantment and disenchantment: the role of
community in natural resource conservation. *World development*, 27(4), pp.629-649.

830

831 Allen, J., Mohatt, G.V., Fok, C.C.T., Henry, D., Burkett, R. and Team, P.A., 2014. A
protective factors model for alcohol abuse and suicide prevention among Alaska Native
832 youth. *American journal of community psychology*, 54(1-2), pp.125-139.

833

834 Allen, J., Rasmus, S.M., Fok, C.C.T., Charles, B., Henry, D. and Team, Q., 2018. Multi-level
cultural intervention for the prevention of suicide and alcohol use risk with Alaska Native youth: a
835 nonrandomized comparison of treatment intensity. *Prevention science*, 19(2), pp.174-185.

836

837 Altamirano-Jimenez, I. 2007. “Indigenous Peoples and the Topography of Gender in Mexico
and Canada.” In *Remapping Gender in the New Global Order*, ed. Cohen, Marjorie
838 Griffin and Brodie, Janine. New York: Routledge

839

840 Anderson, C., Chase, M., Johnson III, J., Mekiana, D., McIntyre, D., Ruerup, A. and Kerr, S.,
2012. It is only new because it has been missing for so long: Indigenous evaluation capacity
841 building. *American Journal of Evaluation*, 33(4), pp.566-582.

842

Atleo, R. 2004. *Tsawalk: A Nuu-chah-nulth worldview*. Vancouver, BC: UBC Press.

843

844 Auerbach, C. and Silverstein, L.B., 2003. *Qualitative data: An introduction to coding and
analysis*. NYU press.

845

846 Balestrery, J.E., 2010. The bureaucratic Iditarod: Navigating the terrain of social policy and
research in Alaska and beyond. *Journal of Policy Practice*, 9(2), pp.132-153.

847

848 Bargh, M. and Otter, J., 2009. Progressive spaces of neoliberalism in Aotearoa: A genealogy
and critique. *Asia Pacific Viewpoint*, 50(2), pp.154-165.

849 Barrett, G., 2015. Deconstructing community. *Sociologia Ruralis*, 55(2), pp.182-204.

850 Battiste, M., and J. Youngblood Henderson. 2000. Protecting Indigenous knowledge and
851 heritage: A global challenge. Saskatoon, SK: Purich Publishing Ltd.

852 Berardi, G. and Donnelly, S., 1999. Rural participatory research in Alaska: the case of
853 Tanakon village. *Journal of Rural Studies*, 15(2), pp.171-178.

854 Berrang-Ford, L., Pearce, T. and Ford, J.D., 2015. Systematic review approaches for climate
855 change adaptation research. *Regional Environmental Change*, 15(5), pp.755-769.

856 Boyer, B.B., Mohatt, G.V., Lardon, C., Plaetke, R., Luick, B.R., Hutchison, S.H., Antunez de
857 Mayolo, G., Ruppert, E. and Bersamin, A., 2005. Building a community-based participatory research
858 center to investigate obesity and diabetes in Alaska Natives. *International journal of circumpolar
859 health*, 64(3), pp.281-290.

860 Boyer, B.B., Mohatt, G.V., Pasker, R.L., Drew, E.M. and McGlone, K.K., 2007. Sharing
861 results from complex disease genetics studies: a community based participatory research
862 approach. *International Journal of Circumpolar Health*, 66(1), pp.19-30.

863 Brewer II, J.P., Vandever, S. and Johnson, J.T., 2018. Towards energy sovereignty: biomass
864 as sustainability in interior Alaska. *Sustainability Science*, 13(2), pp.417-429.

865 Brint, S., 2001. Gemeinschaft revisited: A critique and reconstruction of the community
866 concept. *Sociological theory*, 19(1), pp.1-23.

867 Brown, G.G. and Donovan, S., 2013. Escaping the national forest planning quagmire: using
868 public participation GIS to assess acceptable national forest use. *Journal of Forestry*, 111(2), pp.115-
869 125.

870 Buggy, L. and McNamara, K.E., 2016. The need to reinterpret “community” for climate
871 change adaptation: a case study of Pele Island, Vanuatu. *Climate and Development*, 8(3), pp.270-280.

872 Burger, J., Gochfeld, M. and Pletnikoff, K., 2009. Collaboration versus communication: the
873 Department of Energy's Amchitka Island and the Aleut Community. *Environmental research*, 109(4),
874 pp.503-510.

875 BurnSilver, S., Magdanz, J., Stotts, R., Berman, M. and Kofinas, G., 2016. Are mixed
876 economies persistent or transitional? Evidence using social networks from Arctic Alaska. *American*
877 *Anthropologist*, 118(1), pp.121-129.

878 BurnSilver, S. and Magdanz, J., 2019. Heterogeneity in mixed economies: Implications for
879 sensitivity and adaptive capacity. *Hunter Gatherer Research*, 3(4), pp.601-633.

880 Caldwell, J.Y., Davis, J.D., Du Bois, B., Echo-Hawk, H., Erickson, J.S., Goins, R.T., Hill, C.,
881 Hillabrant, W., Johnson, S.R., Kendall, E. and Keemer, K., 2005. Culturally competent research with
882 American Indians and Alaska Natives: findings and recommendations of the first symposium of the
883 work group on American Indian Research and Program Evaluation Methodology. *American Indian*
884 *and Alaska Native Mental Health Research: The Journal of the National Center*, 12(1), pp.1-21.

885 Cargo, M., Delormier, T., Lévesque, L., Horn-Miller, K., McComber, A. and Macaulay, A.C.,
886 2008. Can the democratic ideal of participatory research be achieved? An inside look at an academic–
887 indigenous community partnership. *Health Education Research*, 23(5), pp.904-914.

888 Caringi, J.C., Klika, B., Zimmerman, M., Trautman, A. and van den Pol, R., 2013. Promoting
889 youth voice in Indian country. *Children and Youth Services Review*, 35(8), pp.1206-1211.

890 Carpluk, L. and Leonard, B., 2016. Engaging Indigenous Communities in Higher Education:
891 An Analysis of Collaboration and Ownership in Alaska Native Teacher Preparation. *Engaged Scholar*
892 *Journal: Community-Engaged Research, Teaching, and Learning*, 2(1), pp.71-88.

893 Cass, B. and Brennan, D., 2002. Communities of support or communities of surveillance and
894 enforcement in welfare reform debates. *Australian Journal of Social Issues*, The, 37(3), p.247.

895 Castleden, H., T. Garvin, and Huu-ay-aht First Nation. 2008. Modifying photovoice for
896 community-based participatory Indigenous research. *Social Science & Medicine* 66(6): 1393– 1405.

897 Castleden, H., Morgan, V.S. and Lamb, C., 2012. “I spent the first year drinking tea”:
898 Exploring Canadian university researchers’ perspectives on community-based participatory research
899 involving Indigenous peoples. *The Canadian Geographer/Le Géographe canadien*, 56(2), pp.160-
900 179.

901 Chambers, R., 1994. The origins and practice of participatory rural appraisal. *World*
902 *development*, 22(7), pp.953-969.

903 Chouinard, V., 2000. Getting Ethical: For Inclusive and Engaged Geographies of
904 Disability. *Ethics, Place and Environment*, 3, pp.70-79.

905 Christens, B. and Speer, P.W., 2006. Review essay: tyranny/transformation: power and
906 paradox in participatory development. In *Forum Qualitative Sozialforschung/Forum: Qualitative*
907 *Social Research* 7(2).

908 Clark, T., 2008. We're Over-Researched Here! Exploring Accounts of Research Fatigue
909 within Qualitative Research Engagements. *Sociology*, 42(5), pp.953-970.

910 Cleaver, F., 1999. Paradoxes of participation: questioning participatory approaches to
911 development. *Journal of International Development: The Journal of the Development Studies*
912 *Association*, 11(4), pp.597-612.

913 Cochran, P.A., Marshall, C.A., Garcia-Downing, C., Kendall, E., Cook, D., McCubbin, L.
914 and Gover, R.M.S., 2008. Indigenous ways of knowing: Implications for participatory research and
915 community. *American Journal of Public Health*, 98(1), pp.22-27.

916 Cohen, A.P., 2013. *Symbolic construction of community*. Routledge.

917 Coleman, J. S. 1961. *The Adolescent Society*. New York: Free Press.

918 Cooke, B. and Kothari, U. 2001. *Participation: The new tyranny?*. Zed books.

919 Coombes, B., Johnson, J.T. and Howitt, R., 2012. Indigenous geographies I: Mere resource
920 conflicts? The complexities in Indigenous land and environmental claims. *Progress in Human*
921 *Geography*, 36(6), pp.810-821.

922 Cueva, K., Cueva, M., Revels, L., Lanier, A.P., Dignan, M., Viswanath, K., Fung, T.T. and
923 Geller, A.C., 2019. A framework for culturally relevant online learning: Lessons from Alaska's tribal
924 health workers. *Journal of Cancer Education*, pp.1-7.

925 David-Chavez, D.M. and Gavin, M.C., 2018. A global assessment of Indigenous community
926 engagement in climate research. *Environmental Research Letters*, 13(12), p.123005.

927 De Beer, F., 2012. Community-based natural resource management: living with Alice in
928 Wonderland?. *Community Development Journal*, 48(4), pp.555-570.

929 DeLyser, D. and Karolczyk, P., 2010. Fieldwork and the "Geographical Review:" Retrospect
930 and possible prospects. *Geographical Review*, 100(4), pp 465-475.

931 Denzin, N.K. and Lincoln, Y.S. eds., 2011. *The Sage handbook of qualitative research*. Sage.

932 Dodman, D. and Mitlin, D., 2013. Challenges for community-based adaptation: discovering
933 the potential for transformation. *Journal of International Development*, 25(5), pp.640-659.

934 Driscoll, D.L., Sunbury, T., Johnston, J. and Renes, S., 2013. Initial findings from the
935 implementation of a community-based sentinel surveillance system to assess the health effects of
936 climate change in Alaska. *International journal of circumpolar health*, 72(1), p.21405.

937 Driscoll, D.L., Mitchell, E., Barker, R., Johnston, J.M. and Renes, S., 2016. Assessing the
938 health effects of climate change in Alaska with community-based surveillance. *Climatic
939 change*, 137(3-4), pp.455-466.

940 Ebbesson, S., Laston, S., Wenger, C.R., Dyke, B., Romenesko, T., Romenesko, T., Swenson,
941 M., Fabsitz, R., MacCluer, J., Devereux, R. and Roman, M., 2006. Recruitment and community
942 interactions in the GOCADAN study. *International journal of circumpolar health*, 65(1), pp.55-64.

943 Egan, B. and Place, J., 2013. Minding the gaps: Property, geography, and Indigenous peoples
944 in Canada. *Geoforum*, 44, pp.129-138.

945 Eisner, W.R., Jelacic, J., Cuomo, C.J., Kim, C., Hinkel, K.M. and Del Alba, D., 2012.
946 Producing an indigenous knowledge Web GIS for Arctic Alaska communities: challenges, successes,
947 and lessons learned. *Transactions in GIS*, 16(1), pp.17-37.

948 Estrella, M. and Gaventa, J. 1997. *Who counts reality? Participatory monitoring and
949 evaluation: a literature review (draft)*, Brighton: Institute of Development Studies

950 Eversole, R., 2003. Managing the pitfalls of participatory development: some insight from
951 Australia. *World development*, 31(5), pp.781-795.

952 Ferreyra, C., 2006. Practicality, positionality, and emancipation: reflections on participatory
953 action research with a watershed partnership. *Systemic Practice and Action Research*, 19(6), pp.577-
954 598.

955 Fienup-Riordan, A., 1999. Collaboration on display: A Yup'ik Eskimo exhibit at three
956 national museums. *American Anthropologist*, 101(2), pp.339-358.

957 Finlay, L., 2002. "Outing" the researcher: The provenance, process, and practice of
958 reflexivity. *Qualitative health research*, 12(4), pp.531-545.

959 Flint, C.G., Robinson, E.S., Kellogg, J., Ferguson, G., BouFajreldin, L., Dolan, M., Raskin, I.
960 and Lila, M.A., 2011. Promoting wellness in Alaskan villages: integrating traditional knowledge and
961 science of wild berries. *EcoHealth*, 8(2), pp.199-209.

962 Flynn, M., Ford, J.D., Pearce, T., Harper, S.L. and IHACC Research Team, 2018.
963 Participatory scenario planning and climate change impacts, adaptation and vulnerability research in
964 the Arctic. *Environmental Science & Policy*, 79, pp.45-53.

965 Fontaine, N., 2002. Aboriginal Women's Perspective on Self-Government. *Canadian*
966 *Dimension*, 6, pp.10-11.

967 Ford, J.D., Stephenson, E., Cunsolo Willox, A., Edge, V., Farahbakhsh, K., Furgal, C.,
968 Harper, S., Chatwood, S., Mauro, I., Pearce, T. and Austin, S., 2016. Community-based adaptation
969 research in the Canadian Arctic. *Wiley Interdisciplinary Reviews: Climate Change*, 7(2), pp.175-191.

970 Ford, T., Rasmus, S. and Allen, J., 2012. Being useful: achieving indigenous youth
971 involvement in a community-based participatory research project in Alaska. *International journal of*
972 *circumpolar health*, 71(1), p.18413.

973 Ford, J.D., Sherman, M., Berrang-Ford, L., Llanos, A., Carcamo, C., Harper, S., Lwasa, S.,
974 Namanya, D., Marcello, T., Maillet, M. and Edge, V., 2018. Preparing for the health impacts of
975 climate change in Indigenous communities: The role of community-based adaptation. *Global*
976 *environmental change*, 49, pp.129-139.

977 Foucault, M., 1988. *Technologies of the self: A seminar with Michel Foucault*. Univ of
978 Massachusetts Press.

979 Foucault, M., 2003. The subject and Power. I The essential Foucault: Selections from The
980 Essential Works of Foucault 1954-1984, Rabinow of Rose red.

981 Foucault, M., Davidson, A.I. and Burchell, G., 2008. *The birth of biopolitics: lectures at the*
982 *Collège de France, 1978-1979*. Springer.

983 Fuller, E.D. and Kitchin, R. 2004. Radical theory/Critical praxis: Making a difference beyond
984 the academy?. Edited by: Fuller, D. and Kitchin, R. 1–20. ACME e-book series

985 Gaillard, J. C., & Mercer, J. (2013). From knowledge to action: Bridging gaps in disaster risk
986 reduction. *Progress in Human Geography*, 37(1), 93-114.

987 Ganapathy, S., 2011. Alaskan Neo-Liberalism Conservation, Development, and Native Land
988 Rights. *Social Analysis*, 55(1), pp.113-133.

989 Gaziulusoy, A.I., Ryan, C., McGrail, S., Chandler, P. and Twomey, P., 2016. Identifying and
990 addressing challenges faced by transdisciplinary research teams in climate change research. *Journal*
991 *of Cleaner Production*, 123, pp.55-64.

992 Glass, K.C. and Kaufert, J., 2007. Research ethics review and Aboriginal community values:
993 can the two be reconciled?. *Journal of Empirical Research on Human Research Ethics*, 2(2), pp.25-
994 40.

995 Go, J., 2013. For a postcolonial sociology. *Theory and Society*, 42(1), pp.25-55.

996 Gombay, N., 2014. 'Poaching'—What's in a name? Debates about law, property, and
997 protection in the context of settler colonialism. *Geoforum*, 55, pp.1-12.

998 Gonzalez, J. and Trickett, E.J., 2014. Collaborative measurement development as a tool in
999 CBPR: Measurement development and adaptation within the cultures of communities. *American*
1000 *journal of community psychology*, 54(1-2), pp.112-124.

1001 Gram-Hanssen, I., 2018. Leaving, staying or belonging: exploring the relationship between
1002 formal education, youth mobility and community resilience in rural Alaska. *Polar Geography*, 41(1),
1003 pp.1-25.

1004 Greene, S., Ahluwalia, A., Watson, J., Tucker, R., Rourke, S.B., Koornstra, J., Sobota, M.,
1005 Monette, L. and Byers, S., 2009. Between skepticism and empowerment: the experiences of peer
1006 research assistants in HIV/AIDS, housing and homelessness community-based research. *International*
1007 *Journal of Social Research Methodology*, 12(4), pp.361-373.

1008 Guijt, I. and Shah, M.K., 1998. Waking up to power, conflict and process. *The myth of*
1009 *community: Gender issues in participatory development*, 228, p.242.

1010 Guta, A., Flicker, S. and Roche, B., 2013. Governing through community allegiance: a
1011 qualitative examination of peer research in community-based participatory research. *Critical public*
1012 *health*, 23(4), pp.432-451.

1013 Haslam, S.A. and McGarty, C., 2014. *Research methods and statistics in psychology*. Sage.

1014 Henderson, T.L., Dinh, M., Morgan, K. and Lewis, J., 2017. Alaska Native grandparents
1015 rearing grandchildren: A rural community story. *Journal of Family Issues*, 38(4), pp.547-572.

1016 Hiratsuka, V., Brown, J. and Dillard, D., 2012. Views of biobanking research among Alaska
1017 native people: the role of community context. *Progress in community health partnerships: research,*
1018 *education, and action*, 6(2), pp.131-139.

1019 Hitomi, M.K. and Loring, P.A., 2018. Hidden participants and unheard voices? A systematic
1020 review of gender, age, and other influences on local and traditional knowledge research in the
1021 North. *Facets*, 3(1), pp.830-848.

1022 hooks, b. (1992). *Black looks: Race and representation*. Toronto: Between The Lines

1023 Hugo, R.C., Smythe, W.F., McAllister, S., Young, B., Maring, B. and Baptista, A., 2013.
1024 Lessons learned from a geoscience education program in an Alaska native community. *Journal of*
1025 *Sustainability Education*, 5.

1026 Inaba, Y., 2013. What's wrong with social capital? Critiques from social science. In *Global*
1027 *perspectives on social capital and health* (pp. 323-342). Springer, New York, NY.

1028 Irlbacher-Fox, S., 2010. *Finding Dahshaa: Self-government, social suffering, and Aboriginal*
1029 *policy in Canada*. UBC Press, Vancouver.

1030 Israel, B.A., Schulz, A.J., Parker, E.A., Becker, A.B., Allen, A.J., Guzman, J.R. and
1031 Lichtenstein, R., 2017. Critical issues in developing and following CBPR principles. *Community-*
1032 *based participatory research for health: Advancing social and health equity*, pp.31-46.

1033 Israel, B.A., Parker, E.A., Rowe, Z., Salvatore, A., Minkler, M., López, J., Butz, A., Mosley,
1034 A., Coates, L., Lambert, G. and Potito, P.A., 2005. Community-based participatory research: lessons
1035 learned from the Centers for Children's Environmental Health and Disease Prevention
1036 Research. *Environmental health perspectives*, 113(10), pp.1463-1471.

1037 Israel, B.A., Coombe, C.M., Cheezum, R.R., Schulz, A.J., McGranaghan, R.J., Lichtenstein,
1038 R., Reyes, A.G., Clement, J. and Burris, A., 2010. Community-based participatory research: a
1039 capacity-building approach for policy advocacy aimed at eliminating health disparities. *American*
1040 *journal of public health*, 100(11), pp.2094-2102.

1041 Jacobs, M.B. and Brooks, J.J., 2011. Alaska Native peoples and conservation planning: a
1042 recipe for meaningful participation. *Native Studies Review*, 20(2), pp.91-135.

1043 Jewkes, R. and Murcott, A., 1998. Community representatives: Representing the
1044 “community”?. *Social Science & Medicine*, 46(7), pp.843-858.

1045 Kobayashi, A., 1994. Coloring the field: Gender, “race,” and the politics of fieldwork. *The*
1046 *professional geographer*, 46(1), pp.73-80.

1047 Kobayashi, A. and De Leeuw, S., 2010. Colonialism and the tensioned landscapes of
1048 Indigeneity. *The Sage handbook of social geographies*, pp.118-138.

1049 Kral, M.J., 2014. The relational motif in participatory qualitative research. *Qualitative*
1050 *Inquiry*, 20(2), pp.144-150.

1051 Kuokkanen, R., 2011. From indigenous economies to market-based self-governance: A
1052 feminist political economy analysis. *Canadian Journal of Political Science/Revue canadienne de*
1053 *science politique*, 44(2), pp.275-297.

1054 Lane, M.B. and McDonald, G., 2005. Community-based environmental planning: operational
1055 dilemmas, planning principles and possible remedies. *Journal of environmental planning and*
1056 *management*, 48(5), pp.709-731.

1057 Lardon, C., Soule, S., Kernak, D. and Lupie, H., 2010. Using strategic planning and
1058 organizational development principles for health promotion in an Alaska Native community. *Journal*
1059 *of prevention & intervention in the community*, 39(1), pp.65-76.

1060 Lavell, A. (1994) ‘Prevention and Mitigation of Disasters in Central America: Vulnerability
1061 to Disasters at the Local Level’. In A. Varley (ed.) *Disasters, Development and Environment*. John
1062 Wiley and Sons, Chichester. pp. 49–63.

1063 Legaspi, A. and Orr, E., 2007. Disseminating research on community health and well-being: a
1064 collaboration between Alaska Native villages and the academe. *American Indian and Alaska Native*
1065 *Mental Health Research: The Journal of the National Center*, 14(1), pp.24-43.

1066 Leung, M.W., Yen, I.H. and Minkler, M., 2004. Community based participatory research: a
1067 promising approach for increasing epidemiology's relevance in the 21st century. *International journal*
1068 *of epidemiology*, 33(3), pp.499-506.

1069 Le, T.N., Arifuku, I., Vuong, L., Tran, G., Lustig, D.F. and Zimring, F., 2011. Community
1070 mobilization and community-based participatory research to prevent youth violence among Asian and
1071 immigrant populations. *American journal of community psychology*, 48(1-2), pp.77-88.

1072 Lewis, J., 2014. What successful aging means to Alaska Natives: Exploring the reciprocal
1073 relationship between the health and well-being of Alaska Native Elders. *International Journal of*
1074 *Ageing and Society*, 3(1), pp.2160-1909.

1075 Lewis, J.P., Boyd, K., Allen, J., Rasmus, S. and Henderson, T., 2018. “We Raise our
1076 Grandchildren as our Own:” Alaska Native Grandparents Raising Grandchildren in Southwest
1077 Alaska. *Journal of cross-cultural gerontology*, 33(3), pp.265-286.

1078 Lipka, J.M., 1989. A cautionary tale of curriculum development in Yup'ik Eskimo
1079 communities. *Anthropology & Education Quarterly*, pp.216-231.

1080 Lopez, E.D., Sharma, D.K.B., Mekiana, D. and Ctibor, A., 2012. Forging a new legacy of
1081 trust in research with Alaska Native college students using CBPR. *International journal of*
1082 *circumpolar health*, 71(1), p.18475.

1083 Louis, R. P. 2007. Can you hear us now? Voices from the margins: Using Indigenous
1084 methodologies in geographic research. *Geographic Research* 45(2): 130–139.

1085 Lynam, T., De Jong, W., Sheil, D., Kusumanto, T. and Evans, K., 2007. A review of tools for
1086 incorporating community knowledge, preferences, and values into decision making in natural
1087 resources management. *Ecology and society*, 12(1)

1088 Mandel, J.L., 2003. Negotiating expectations in the field: Gatekeepers, research fatigue and
1089 cultural biases. *Singapore Journal of Tropical Geography*, 24(2), pp.198-210.

1090 Mansuri, G. and Rao, V., 2012. *Localizing development: Does participation work?*. The
1091 World Bank.

1092 Mantzoukas, S., 2005. The inclusion of bias in reflective and reflexive research: A necessary
1093 prerequisite for securing validity. *Journal of Research in Nursing*, 10(3), pp.279-295.

1094 Marston, C., Hinton, R., Kean, S., Baral, S., Ahuja, A., Costello, A. and Portela, A., 2016.
1095 Community participation for transformative action on women’s, children’s and adolescents’
1096 health. *Bulletin of the World Health Organization*, 94(5), p.376.

1097 Martin, G.P., 2012. Public deliberation in action: Emotion, inclusion and exclusion in
1098 participatory decision making. *Critical Social Policy*, 32(2), pp.163-183.

1099 Mason, A., 2002. The rise of an Alaskan Native bourgeoisie. *Études/Inuit/Studies*, 26(2),
1100 pp.5-22.

1101 Mauthner, N.S. and Doucet, A., 2008. Knowledge Once Divided Can Be Hard to Put
1102 Together Again! An Epistemological Critique of Collaborative and Team-Based Research
1103 Practices. *Sociology*, 42(5), pp.971-985.

1104 Mawani, R., 2009. *Colonial proximities: Crossracial encounters and juridical truths in
1105 British Columbia, 1871-1921*. UBC Press.

1106 McCartan, C., Schubotz, D. and Murphy, J., 2012. The self-conscious researcher—Post-
1107 modern perspectives of participatory research with young people. In *Forum Qualitative
1108 Sozialforschung/Forum: Qualitative Social Research* 13(1).

1109 McMillan, A.D. and Yellowhorn, E., 2004. *First peoples in Canada*. D & M Publishers.
1110 Vancouver

1111 McNeeley, S.M., 2012. Examining barriers and opportunities for sustainable adaptation to
1112 climate change in Interior Alaska. *Climatic Change*, 111(3-4), pp.835-857.

1113 Miller, P. and Rose, N., 2008. *Governing the present: Administering economic, social and
1114 personal life*. Polity.

1115 Minkler, M., Vásquez, V.B. and Shepard, P., 2006. Promoting environmental health policy
1116 through community based participatory research: a case study from Harlem, New York. *Journal of
1117 Urban Health*, 83(1), pp.101-110.

1118 Mohatt, G.V., Hazel, K.L., Allen, J., Stachelrodt, M., Hensel, C. and Fath, R., 2004. Unheard
1119 Alaska: Culturally anchored participatory action research on sobriety with Alaska Natives. *American
1120 Journal of Community Psychology*, 33(3-4), pp.263-273.

1121 Mohatt, G.V., Rasmus, S.M., Thomas, L., Allen, J., Hazel, K. and Marlatt, G.A., 2008. Risk,
1122 resilience, and natural recovery: a model of recovery from alcohol abuse for Alaska
1123 Natives. *Addiction*, 103(2), pp.205-215.

1124 Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P. and
1125 Stewart, L.A., 2015. Preferred reporting items for systematic review and meta-analysis protocols
1126 (PRISMA-P) 2015 statement. *Systematic reviews*, 4(1), p.1.

1127 Mowbray, M., 2004. Practice review: Community development the third way: Mark Latham's
1128 localist policies. *Urban policy and research*, 22(1), pp.107-115.

1129 Mulligan, M., 2015. On ambivalence and hope in the restless search for community: How to
1130 work with the idea of community in the global age. *Sociology*, 49(2), pp.340-355.

1131 Nadasdy, P., 2003. Reevaluating the co-management success story. *Arctic*, pp.367-380.

1132 Nader L. 1996. Naked science: anthropological inquiry into boundaries, power, and
1133 knowledge. Routledge, New York City, New York.

1134 Nagar, R. and Ali, F., 2003. Collaboration across borders: Moving beyond
1135 positionality. *Singapore Journal of Tropical Geography*, 24(3), pp.356-372.

1136 Natcher, D.C., 2004. Implications of fire policy on Native land use in the Yukon Flats,
1137 Alaska. *Human Ecology*, 32(4), pp.421-441.

1138 Naylor, P.J., Wharf-Higgins, J., Blair, L., Green, L. and O'Connor, B., 2002. Evaluating the
1139 participatory process in a community-based heart health project. *Social Science & Medicine*, 55(7),
1140 pp.1173-1187.

1141 Nielsen, M.R. and Meilby, H., 2013. Quotas on narwhal (*Monodon monoceros*) hunting in
1142 East Greenland: trends in narwhal killed per hunter and potential impacts of regulations on Inuit
1143 communities. *Human ecology*, 41(2), pp.187-203.

1144 Noble, H. and Smith, J., 2015. Issues of validity and reliability in qualitative
1145 research. *Evidence-based nursing*, 18(2), pp.34-35.

1146 Pearce, T., Ford, J., Duerden, F., Smith, T., Andrachuk, M., Smit, B. and Westlake, M., 2009.
1147 What we know and don't know about climate change vulnerability and adaptation in the Inuvialuit
1148 Settlement Region (ISR): A systematic review of the literature. In *2009 ArcticNet Annual Scientific
1149 Meeting Conference Programme and Abstracts* (pp. 124-124). ArcticNet Inc..

1150 Peterson, J.C., 2010. CBPR in Indian country: tensions and implications for health
1151 communication. *Health Communication*, 25(1), pp.50-60.

1152 Picou, J.S., 2000. The “talking circle” as sociological practice: Cultural transformation of
1153 chronic disaster impacts. *Sociological Practice*, 2(2), pp.77-97.

1154 Platteau, J.P., 2004. Monitoring elite capture in Community-Driven
1155 development. *Development and change*, 35(2), pp.223-246.

1156 Rasmus, S.M., 2014. Indigenizing CBPR: evaluation of a community-based and participatory
1157 research process implementation of the Elluam Tungiinun (towards wellness) program in
1158 Alaska. *American journal of community psychology*, 54(1-2), pp.170-179.

1159 Rasmus, S.M., Allen, J. and Ford, T., 2014. “Where I have to learn the ways how to live:”
1160 Youth resilience in a Yup’ik village in Alaska. *Transcultural psychiatry*, 51(5), pp.713-734.

1161 Renfrew, D., 2011. The curse of wealth: Political ecologies of Latin American
1162 neoliberalism. *Geography Compass*, 5(8), pp.581-594.

1163 Rieder, J. 1988. *Canarsie: The Jews and Italians of Brooklyn against Liberalism*. Cambridge,
1164 MA: Harvard University Press.

1165 Rivkin, I., Trimble, J., Lopez, E.D., Johnson, S., Orr, E. and Allen, J., 2013. Disseminating
1166 research in rural Yup’ik communities: challenges and ethical considerations in moving from discovery
1167 to intervention development. *International journal of circumpolar health*, 72(1), p.20958.

1168 Rose, G., 1997. Situating knowledges: positionality, reflexivities and other tactics. *Progress*
1169 *in human geography*, 21(3), pp.305-320.

1170 Rosen, Y. 2019. Deep budget cuts put University of Alaska in crisis mode, ‘grappling for
1171 survival’. Reuters. Accessed 18/11/2019. <[https://www.reuters.com/article/us-alaska-politics/deep-
1172 budget-cuts-put-university-of-alaska-in-crisis-mode-grappling-with-survival-idUSKCN1UH2H0](https://www.reuters.com/article/us-alaska-politics/deep-budget-cuts-put-university-of-alaska-in-crisis-mode-grappling-with-survival-idUSKCN1UH2H0)>

1173 Sakakibara, C., 2017. People of the Whales: Climate Change and Cultural Resilience Among
1174 Iñupiat of Arctic Alaska. *Geographical Review*, 107(1), pp.159-184.

1175 Scheyvens, R., 2002. *Tourism for development: Empowering communities*. Pearson
1176 Education.

1177 Sharma, D.K.B., Lopez, E.D., Mekiana, D., Ctibor, A. and Church, C., 2013. “What makes
1178 life good?” Developing a culturally grounded quality of life measure for Alaska Native college
1179 students. *International journal of circumpolar health*, 72(1), p.21180.

1180 Shearer, A.M., 2007. Implementing government-to-government relationships between federal
1181 agencies and Alaska Native tribes. *Alaska Journal of Anthropology*, 5

1182 Shearer, C., 2012. The political ecology of adaptation assistance: Alaska Natives,
1183 displacement, and relocation. *Journal of Political Ecology* 19:174–183

1184 Sigman, M., Dublin, R., Anderson, A., Deans, N., Warburton, J., Matsumoto, G.I., Dugan, D.
1185 and Harcharek, J., 2014. Using large marine ecosystems and cultural responsiveness as the context for
1186 professional development of teachers and scientists in ocean sciences. *Journal of Geoscience*
1187 *Education*, 62(1), pp.25-40.

1188 Smajgl, A. and Ward, J., 2015. Evaluating participatory research: framework, methods and
1189 implementation results. *Journal of Environmental Management*, 157, pp.311-319.

1190 Smith, G., 1996. Ties, nets and an elastic bund: community in the postmodern
1191 city. *Community Development Journal*, 31(3), pp.250-259.

1192 Smith, J.A., 1994. Towards reflexive practice: Engaging participants as co-researchers or co-
1193 analysts in psychological inquiry. *Journal of community & applied social psychology*, 4(4), pp.253-
1194 260.

1195 Smith, L., Chambers, D.A. and Bratini, L., 2009. When oppression is the pathogen: The
1196 participatory development of socially just mental health practice. *American Journal of*
1197 *Orthopsychiatry*, 79(2), pp.159-168.

1198 Smith, L., Bratini, L., Chambers, D.A., Jensen, R.V. and Romero, L., 2010. Between idealism
1199 and reality: Meeting the challenges of participatory action research. *Action research*, 8(4), pp.407-
1200 425.

1201 Smith, L.T., 2007. The native and the neoliberal down under: Neoliberalism and ‘endangered
1202 authenticities’. *Indigenous experience today*, 2, p.333.

1203 Smith, L.T., 2013. *Decolonizing methodologies: Research and indigenous peoples*. Zed
1204 Books Ltd..

1205 Somerville, M. and Perkins, T., 2003. Border work in the contact zone: Thinking
1206 indigenous/non-indigenous collaboration spatially. *Journal of Intercultural Studies*, 24(3), pp.253-
1207 266.

1208 Spaeder, J.J., 2005. Co-management in a landscape of resistance: the political ecology of
1209 wildlife management in western Alaska. *Anthropologica*, pp.165-178.

1210 State of Alaska. 2018. Alaska Population Overview: 2018 Estimates. Alaska Department of
1211 Labor and Workforce Development. Accessed 24/02/2020. Available at <
1212 <http://live.laborstats.alaska.gov/pop/estimates/pub/18popover.pdf>>

1213 State of Alaska. 2019. 2019 Population Estimates by Borough, Census Area, and Economic
1214 Region. Accessed 24/02/2020. Available at < <http://live.laborstats.alaska.gov/pop/>>

1215 Thurman, P.J., Allen, J. and Deters, P.B., 2004. The Circles of Care evaluation: doing
1216 participatory valuation with American Indian and Alaska Native communities. *American Indian and*
1217 *Alaska Native Mental Health Research The Journal of the National Center*, 11(2), pp.139-154.

1218 Titz, A., Cannon, T. and Krüger, F., 2018. Uncovering community: challenging an elusive
1219 concept in development and disaster related work. *Societies*, 8(3), p.71.

1220 Tobias, J.K., Richmond, C.A. and Luginaah, I., 2013. Community-based participatory
1221 research (CBPR) with indigenous communities: producing respectful and reciprocal research. *Journal*
1222 *of Empirical Research on Human Research Ethics*, 8(2), pp.129-140.

1223 Trainor, S.F., Stuart Chapin III, F., Huntington, H.P., Natcher, D.C. and Kofinas, G., 2007.
1224 Arctic climate impacts: environmental injustice in Canada and the United States. *Local*
1225 *Environment*, 12(6), pp.627-643.

1226 Valentine, G., 2003. Geography and ethics: in pursuit of social justice ethics and emotions in
1227 geographies of health and disability research. *Progress in Human Geography*, 27(3), pp.375-380.

1228 Vaudry, S., 2016. Conflicting Understandings in Polar Bear Co-management in the Inuit
1229 Nunangat: Enacting Inuit Knowledge and Identity. In *Indigenous Peoples' Governance of Land and*
1230 *Protected Territories in the Arctic* (pp. 145-163). Springer, Cham.

1231 Wallerstein, N.B. and Duran, B., 2006. Using community-based participatory research to
1232 address health disparities. *Health promotion practice*, 7(3), pp.312-323.

1233 Walsey, V. and Brewer, J., 2018. Managed out of existence: over-regulation of Indigenous
1234 subsistence fishing of the Yukon River. *GeoJournal*, 83(5), pp.1169-1180.

1235 Walsh, D. and Downe, S., 2005. Meta-synthesis method for qualitative research: a literature
1236 review. *Journal of advanced nursing*, 50(2), pp.204-211.

1237 Washington, W.N., 2004. Collaborative/participatory research. *Journal of Health Care for the*
1238 *Poor and Underserved*, 15(1), pp.18-29.

1239 Waterworth, P., Rosenberg, M., Braham, R., Pescud, M. and Dimmock, J., 2014. The effect
1240 of social support on the health of Indigenous Australians in a metropolitan community. *Social science*
1241 *& medicine*, 119, pp.139-146.

1242 Weinronk, H., Wexler, L., Trout, L., Rowlett, K., Klakegg, I., Zhen, S., Valenzuela, S.,
1243 Henry, I. and Moses, J., 2018. New understandings of communities and ourselves: community-based
1244 participatory research with Alaska Native and Lower 48 youth. *Educational Action Research*, 26(3),
1245 pp.439-455.

1246 Westoby, P. and Dowling, G., 2013. *Theory and practice of dialogical community*
1247 *development: International perspectives*. Routledge.

1248 Wexler, L.M., 2006. Inupiat youth suicide and culture loss: Changing community
1249 conversations for prevention. *Social Science & Medicine*, 63(11), pp.2938-2948.

1250 Widdowson, F. and Howard, A., 2008. *Disrobing the Aboriginal industry: The deception*
1251 *behind Indigenous cultural preservation*. McGill-Queen's Press-MQUP.

1252 Wilson, E., Kenny, A. and Dickson-Swift, V., 2018. Ethical challenges of community based
1253 participatory research: exploring researchers' experience. *International Journal of Social Research*
1254 *Methodology*, 21(1), pp.7-24.

1255 Willow, A.J., 2015. Collaborative conservation and contexts of resistance: new (and
1256 enduring) strategies for survival. *American Indian Culture and Research Journal*, 39(2), pp.29-52.

1257 Wilson, N.J., 2014. Indigenous water governance: Insights from the hydrosocial relations of
1258 the Koyukon Athabascan village of Ruby, Alaska. *Geoforum*, 57, pp.1-11.

1259 Wilson, N.J., Mutter, E., Inkster, J. and Satterfield, T., 2018. Community-Based Monitoring
1260 as the practice of Indigenous governance: A case study of Indigenous-led water quality monitoring in
1261 the Yukon River Basin. *Journal of environmental management*, 210, pp.290-298.

- 1262 Wiseman, J., 2006. Local Heroes? Learning from Recent Community Strengthening
1263 Initiatives in Victoria 1. *Australian Journal of Public Administration*, 65(2), pp.95-107.
- 1264 Wong, S., 2010. *Elite capture or capture elites? Lessons from the 'counter-elite' and 'co-opt-*
1265 *elite' approaches in Bangladesh and Ghana* (No. 2010, 82). Working paper//World Institute for
1266 Development Economics Research.
- 1267 Yeh ET. 2016. 'How can experience of local residents be "knowledge"?' Challenges in
1268 interdisciplinary climate change research. *Area*, 48: 34–40. DOI: 10.1111/area.12189