Inuktut Vitality as a Protective Factor of Suicide Risk among Nunavut Inuit

by

Alexander Loggie

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We acknowledge and respect the Lək̓ʷəŋən (Songhees and Xʷsepsəm/Esquimalt) Peoples

on whose territory the university stands, and the Lək̓ʷəŋən and W̱SÁNEĆ Peoples

whose historical relationships with the land continue to this day.

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Supervisory Committee

Dr. Li-Shih Huang, Supervisor

Department of Linguistics, School of Languages, Linguistics and Cultures

Dr. Carmen Rodriguez de France, Co-Supervisor

Department of Indigenous Education

Abstract

This thesis examines the relationship between Inuktut language vitality and suicide rates among Inuit communities in Nunavut, exploring whether cultural continuity—particularly through language—serves as a protective factor against suicide risk. While previous research has linked Indigenous language knowledge to improved mental health outcomes, including reduced suicide rates, limited quantitative work has focused specifically on Inuit populations in Nunavut. This study draws on data from the 2016 Canadian census and suicide incidence reports from 1999 to 2014, using multiple regression analysis to assess the association between community-level measures of Inuktut vitality and suicide rates, while controlling for socio-economic variables including income, education, and employment. The analysis finds a modest but consistent, inverse relationship between changes in the use of Inuktut as a main language at home and changes in suicide rates, with gains in the former significantly associated with declines in the latter. These findings contribute to the growing body of evidence linking language vitality to well-being and underscore the importance of Indigenous language maintenance and revitalization as integral components of public health and community wellness strategies. Additionally, the study highlights methodological challenges in operationalizing language vitality and demonstrates the value—and limits—of using census data to explore complex relationships between culture and health in Indigenous contexts.

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Dedication

I would like to thank those who have made this research possible and helped me learn and grow along the way—especially Sarah, Tochka, and most especially my parents.

Chapter One: Introduction

This chapter introduces the theoretical and historical context for the present investigation into the relationship between Inuit language vitality and suicide. It is organized into three subsections, the first of which explores the interrelation of language with land as constitutive grounds of personal and collective identity and examines how colonial regimes across space and time have systematically disrupted these foundations, often through coordinated efforts to dispossess people of both territory and mother tongue with negative consequences for identity formation and well-being. The second section then narrows this focus to Inuit Nunangat, tracing how these colonial strategies aimed at disrupting Indigenous people's use of their lands and languages have specifically unfolded in Nunavut and contributed to the social, cultural, and psychological conditions of the ongoing suicide crisis there. The last section outlines the central research question of this thesis along with the rationale for this inquiry and its broader goals. The inclusion of these historical narratives and their interpretation in terms of their consequences for identity is necessary to situate the object of this study—the links between language vitality and well-being—within both global colonial patterns and the particularities of Inuit experience.

1.1: Theoretical and Historical Background: Land, Language, and Identity

Language is that faculty by which humans communicate, that is, *make common*. It is the *sine qua non* of human relations without which individuals' knowledge, experience, memory, intention, feeling, and meaning remain interior and inaccessible to others. In ways like land, language affords a space—a symbolic commons—that is the condition for all human activity. As land enables, connects, sustains, and reproduces life materially, language does likewise for the mental, social, and cultural life of humans. To inhabit a land is to be situated within a web of

relationships—spatial and material as well as historical and spiritual—with the other entities on that land (Zinga & Styres, 2011, p. 63); to speak a language is to share a code with which to navigate and develop those relationships, co-inhabit a perspective, draw from a collective memory, and participate in shared traditions (Ortiz, 2018, p. 87).

The coinciding of material and discursive life through land has been taken up elsewhere: Coulthard's (2014) concept of grounded normativity proposes an ethical framework that emerges out of the land from place-based practices and relationships, while Simpson (2017) asserts land as the basis of Indigenous freedom and radical resistance. The comparison does not end at analogy: Chiblow and Meighan (2022) assert that language *is* land—that both terms evoke a living, dynamic, shared space necessary for human life and replete with the life-giving resources and relationships to sustain our physical, mental, and spiritual well-being. Blenkinsop & Fettes (2020) similarly break down this distinction between land as a strictly material realm separate from the cultural sphere of language in their treatment of land as 'a first teacher':

> We have arrived on a scene where action and intelligence are already in full swing, and where our main task is to learn by observing and participating in the webs of relationship that carry both doing and thinking. This is what 'land as first teacher' means. Land teaches not simply by offering a place to live, or the food and material resources necessary for survival, but more fundamentally by showing us and letting us experience, continually and in myriad ways, what living relationships look like and feel like and how they weave together to make greater, more complex, self-sustaining and adaptive wholes. (p. 1037)

Land and language are thus also foundational for *identity* or what one *is the same as*: they are those grounds (physical and symbolic) that diverse individuals may hold in common, and thus they make possible a set of *persons* constituting an identifiable *people*. Schwartz, Luyckx and Vignoles (2011) offer a succinct definition of identity as "people's explicit or implicit responses to the question: 'Who are you?'" (p. 2). Land and language fundamentally condition those answers: as Schuster and Witkosky (2007; p. 79) elaborate, the two are not just elements of identity—answers to the question *who are you?*—but its very grounds: land and language make possible the question of identity in the first place by situating the subject in a world (i.e., a web of interdependent relationships) intelligible to themselves and to others. Just as one's place of origin on the Earth locates *where* they are from, one's language attributes to them *who* raised, nurtured, and taught them—if not only how to speak, then also how to live and practice their inherited culture. In this sense, land and language are also pedagogical: both situate learners within webs of reciprocal relationship, sustaining collective knowledge and cultural continuity (Corntassel & Hardbarger, 2019).

Frank T'Seleie of the Dene Nation gives a clear instantiation of how language and land intertwine in the formation and maintenance of identity:

> We know that our grandchildren will speak a language that is their heritage, that has been passed on from before time. We know they will share their wealth and not hoard it or keep it to themselves. We know they will look after their old people and respect them for their wisdom. We know they will look after this land and protect it and that five hundred years from now someone with skin my colour and moccasins on his feet will climb up the Ramparts and rest and look over the river and feel that he too has a place in the universe; and

> he will thank the same spirits that I thank, that his ancestors have looked after this land well, and he will be proud to be a Dene.
> (Kulchyski, 2005, p. 77)

Cheryl Savageau (2020) likewise evokes this inseparability of land, language, and identity, writing:

> When I listen to the old stories, I am struck by the attention the Ancestors gave to the world around them, and how that informs the old stories, how the Ancestors were reading the Land. The Land, for us, is epistemologically and ontologically primary. That is to say, we know what we know and we know who we are through the Land. We know what we know because the Ancestors paid attention and put it into stories. And through that attention to the Land, we know who we are because we recognize that our life is the life of the Land, the forest, the lakes, rivers, swamps, ocean—and further, that they are all alive, all persons. I am *Alnôbak*, an Abenaki woman—*Aben-aki*, Dawn Land. Our name describes us as the Land we are part of. (p. 22)

Through the shared symbolic space that it creates and the relationships of reciprocity on which it operates, language binds individuals to a group, giving them access to a cultural world—a nexus of inherited histories, collective values, and ways of seeing—that shapes both individual and collective identity (Ferguson & Weaselboy, 2020, p. 2). Without land or language, or when access to them is constrained, the formation of identity is destabilized—not only in terms of content (the possible answers to the question 'w*ho are you?*'), but also in terms of the conditions and resources—e.g., food, words—that make answering or even posing such a question possible in the first place. Just as land can be seized, privatized, or otherwise rendered

inaccessible through enclosure and dispossession, so too can language be restricted, outlawed, or lost—and these processes often occur through the same historical forces.

In those European settler colonial projects driven by a capitalist imperative toward continual expansion and resource extraction, the severing of peoples from their territories has gone hand-in-hand with the severing of peoples from their languages. Both are essentially acts of displacement: the physical dislocation from one's land is mirrored in the symbolic and social dislocation from one's language, resulting in a twofold loss of one's place in that network of relationships constitutive for identity. Coincident with those projects, the severing of Indigenous languages from their respective peoples and lands has thus allowed for areas with historical, place-based names to be re-labelled as 'wastelands' or 'unproductive', and for their inhabitants to be attributed new identities as 'uncivilized' or 'savage' (Chiblow & Meighan, 2022, p. 207). Such terms are not merely technical; they are ideological tools, rooted in a specifically European, capitalist cosmology and ordering of the world which has found itself at odds with every Indigenous system it has encountered along the historical and current trajectory of ongoing colonization.

As Kauanui (2016) reminds us, settler colonialism must be understood as a structure rather than an event: i.e., an ongoing system organized around the dispossession of Indigenous peoples from their lands and the erasure of Indigenous presence in order to facilitate extractive, capitalist accumulation. Like the appropriation of land, the restriction or destruction of language is not merely collateral to colonial projects but is part of its structure: it is instrumental insofar as it renders it easier to rationalize expropriation, demand labour, and impose compliance on a population that no longer speaks a language in which core tenets of capitalist expansion—*profit*,

price, *surplus value, marginal utility*, *economic growth*—may be alien, untranslatable, and conceptually incoherent. Linda Tuhiwai Smith (2021, pp. 75–93) offers a rich discussion of these conceptual incompatibilities between European and Indigenous views of land, people, knowledge, and spirituality. Whereas land is redefined within the European worldview as a set of extractable 'resources'—raw materials, property, factors of production—people, too, are recast not as relatives or co-inhabitants of a living world, but as 'labour,' 'producers,' or 'consumers,' identified by and valued for their utility in an economic order. The imposition of this worldview through schooling, governance, and renaming is not for the purpose of cross-cultural communication and shared understanding—it is about restructuring entire ways of understanding value, obligation, and life itself. In both cases—the loss of land and language—what is lost is not only material or functional, but constitutive of worldview, of personhood, of the very essences of things persisting through time (Styres, 2018, pp. 27–8). The consequences of such dispossession rupture the very conditions that make identity intelligible and experience shareable.

Examples of joint attacks on land and language by European colonial projects abound. While often associated with the so-called 'New World,' the exact methods of colonization via land appropriation and cultural suppression were first developed and refined much closer to home for the colonizing forces (Maeve, 2023). Tracing these patterns—from early expansions of European powers into neighboring territories such as Ireland and the Canary Islands through to overseas settler colonies in South Africa, New Zealand, and Chile, and finally to contemporary applications of the settler-colonial model operative in Palestine and Bangladesh—reveals the continuity of colonial logic across time and space. In each case, the dispossession of Indigenous or local peoples from both land and language has served as a foundational strategy in the consolidation of imperial power and wealth.

British colonial policy in Ireland at least from the Tudor conquests onward was animated by a desire to reconfigure Irish land as a profitable agricultural asset for imperial markets. Traditional Gaelic land tenure systems, which had supported diverse, small-scale farming rooted in communal obligations and seasonal cycles, were gradually dismantled (Kane, 2014). The imposition of English common law, enclosure, and the eventual rise of absentee landlordism displaced native patterns of sustainable farming with monocultural production—especially of grain, beef, and flax—destined for export (Montano, 2011). As Ó Tuathaigh (2007) explains, these transformative policies created a system where the Irish themselves were often pushed onto marginal land, increasingly dependent on the potato for subsistence while the country exported vast quantities of food. The result was a brittle agrarian system, tragically exposed during the Great Famine (1845–52), when over a million died and another million emigrated.

Parallel to this ecological displacement was the systematic erosion of Irish culture, and particularly language. Education policy played a key role in this transformation: the 1831 National School system required the exclusive use of English in the classroom, with school inspectors penalizing teachers who used Irish. 'Monitorial' teaching methods prioritized rote English literacy over practical or vocational knowledge. Students caught speaking Irish were subjected to corporal punishment. This policy was undergirded by an administrative system that exclusively used English in courts, government records, and commerce, thereby rendering Irish not just culturally devalued but useless in civic life. Linguistic loss translated into epistemic loss: entire legal, ecological, and social knowledge systems were delegitimized and suppressed under the colonial rationality of English modernity (Laukaitis, 2010).

The conquest of the Canary Islands by Castile in the 15th century stands as another one of the earliest examples (or prototypes) of European settler colonialism, serving as a laboratory for subsequent Spanish imperial projects in the Americas. The Guanche peoples—Indigenous communities of North African Berber origin with distinct ecological practices—were subjected to a multifaceted process of destruction that included warfare, disease, enslavement, and assimilation. Igor Pérez Tostado (2023) points out that the scope of this genocide was not limited to physical violence or demographic collapse but also included more ideological and institutional mechanisms of erasure. Christian missionaries, present on the islands since the 14th century, played a key role in advancing goals of religious conversion and linguistic assimilation. These early missionary incursions introduced a form of soft colonization, fostering a discourse of Guanche inferiority and spiritual deficiency that prefigured later justifications for military subjugation. Following conquest, the archipelago's volcanic landscape was rapidly transformed into a plantation economy centered on sugar cane production, with large-scale deforestation and terracing (Onrubia Pintado et al., 2016). As the Indigenous population declined, enslaved Africans were imported to sustain agricultural labor demands. Over time, Guanche language and culture were systematically extinguished through attrition, surviving only in place names and lexical remnants within Canarian Spanish.

This same logic that guided Castile's conquest and exploitation of the Canaries can be found much later in time in the Spanish state's treatment of other peripheral regions: economic restructuring for imperial benefit, and the subordination or erasure of inconvenient cultural-linguistic identities. In the Basque Country, for instance, the Spanish state's efforts to centralize and industrialize the national economy in the 20th century collided with a region whose economic and cultural life had long been organized around small-scale farming, fishing, forestry,

and localized artisanal production (Parejo Barranco, 2004). Meanwhile, the state's efforts to impose Castilian extended to education, bureaucracy, and signage, treating Euskara not just as politically subversive but economically irrelevant (Hooper, 2006). In the educational realm, the Franco regime outlawed the teaching and public use of Euskara. Schools were forbidden from using it even informally; children could be fined, humiliated, or beaten for speaking Basque in the playground (Kolås & Ibarra Güell, 2018). The education curriculum emphasized 'Spanishness' through a rigid, Catholic-nationalist worldview, and textbooks were printed exclusively in Castilian. Administrative policies extended the same logic: all government documents and signage were required to use Spanish, and knowledge of Basque was often penalized rather than rewarded by employers.

Though emerging in different historical moments and political contexts, the imposition of linguistic and territorial control in these different contexts reveals a colonial logic that recurs across disparate geographies. Whether under the banner of imperial conquest, nation-building, or settler colonialism, the strategic suppression of Indigenous or minoritized languages and the seizure or restructuring of land serve as central tools of domination. These processes are deeply intertwined: the erosion or restriction of language fractures collective identity, making communities more vulnerable to dispossession, while the loss of land destabilizes the social and cultural structures resting thereupon which sustain linguistic continuity. This logic is evident not just in Europe's internal peripheries, but in every place that has been stamped with the legacy of colonialism including the apartheid regimes of South Africa, the educational and linguistic policies imposed on Māori in Aotearoa (New Zealand), and the assimilationist strategies deployed against Mapuche communities in Chile. In each case, identity is not merely collateral

damage, but a targeted site of erasure undermined in ways that make territorial control more efficient and enduring.

In South Africa, colonial and apartheid systems were fundamentally structured around the extraction of mineral wealth—particularly gold and diamonds—from Indigenous land. The discovery of these resources in the 19th century intensified land dispossession and catalyzed the construction of a racially segregated labor regime. A series of legal mechanisms—most notably the 1913 Natives Land Act and the later implementation of the Bantustan system—confined Black South Africans to marginal 'homelands' with limited access to arable land, infrastructure, or services, thereby coercing them into migratory labor on white-owned farms and in mines under exploitative conditions (Evans, 2014).

Language was central to the maintenance of this racial-capitalist order. African languages were officially preserved within the homelands, but in highly fragmented, 'tribalised' forms that reinforced ethnic divisions and undermined collective political mobilization (Orman, 2008). The Bantu Education Act of 1953 institutionalized this linguistic stratification by mandating instruction in African languages for basic vocational training while reserving access to higher-order knowledge—science, administration, and critical inquiry—for the domains of English and Afrikaans. This was a strategy of "managed illiteracy" (Mihyo & Spoor, 2009, p. 160) in which language policy simultaneously maintained cultural visibility and political disempowerment. Bureaucratic systems such as passbooks and racial registration further abstracted and erased complex identities, segmenting the population into administratively defined categories. By promoting linguistic difference without linguistic equity, apartheid planners weaponized

multilingualism, transforming African language education into a means of containment rather than empowerment (Arndt, 2018).

British colonization in Aotearoa was driven by the desire to secure agricultural land for settler farming—particularly sheep and dairy production, which would supply wool and meat to imperial markets. Following the 1840 Treaty of Waitangi, many Māori were dispossessed of their land through dubious purchases, legal manipulations, and armed confiscations (especially after the New Zealand Wars of the 1860s) (Van Meijl, 2012). While Māori social structures are deeply linked to land (whenua) as both physical sustenance and genealogical identity, the settler colonial project converted vast swathes into monocultures, disrupting Māori economies and spiritual connections based on mixed horticulture, fishing, and seasonal mobility (Henare, 2018).

The state concurrently launched a full-scale linguistic assimilation program: from the mid-19th century onward, New Zealand's education system played a central role in the erosion of Māori language and culture. English was made the sole language of instruction in publicly funded schools starting in 1847, and the 1867 Native Schools Act mandated English-only education for Māori children. By the late 19th century, schooling became compulsory, and the use of te reo Māori was often met with corporal punishment. Over the next several decades, Māori children were schooled in English, leading to a sharp decline in fluent speakers of te reo Māori. While over 90% of Māori children still spoke the language in 1913, that number had dropped to less than 5% by 1975, placing it at risk of extinction (Rameka & Stagg Peterson, 2021). Alongside these policies, early 20th-century education practices reinforced racist ideas of Māori intellectual inferiority through biased IQ testing and psychological theories. By the 1960s and 70s, Māori children were framed as linguistically and culturally deficient, a view that

justified continued systemic discrimination aimed at creating a compliant, landless, English-speaking underclass (Berryman, 2008; Skerrett et al., 2019).

The colonization of Mapuche territory in southern Chile and parts of Argentina—known as Wallmapu—intensified in the late 19th century under the Chilean state's 'Pacification of Araucanía,' a violent military campaign aimed at incorporating Mapuche lands into the national economy. Prior to this conquest, Mapuche communities operated subsistence economies based on rotational agriculture, communal land tenure, and deep ecological knowledge of native species like pehuén and maqui (Cortés et al., 2019). The colonial and postcolonial state sought to transform this territory into a resource frontier: first it was wheat and cattle, then, from the late 20th century onward, industrial forestry. Vast tracts of native forest were clear-cut and replaced with monocultures of pine and eucalyptus for export. More recently, the expansion of lithium mining and hydroelectric projects—often with transnational backing—has brought new waves of dispossession. Nahuelpán et al. (2019) explain that, for the Mapuche, land and language are not merely material and cultural assets—they are ontological commitments, and these developments are not just seen as economic displacement but as a cosmic violence that threatens their relational cosmology, wherein land is not property but kin. A racialized language of development and civilization, rooted in 19th-century state policies and legal discourse, was deployed to delegitimize Indigenous land relations and epistemologies, replacing them with European settler conceptions of property, productivity, and modernity (Rioja, 2023).

Simultaneously with this 'development' of the land, the state continued to marginalize Mapudungun, the Mapuche language, treating it as irrelevant or even subversive in schools and state media. During the Pinochet dictatorship (1973 - 1981), Mapuche schools were forcibly

'Chileanized:' Mapudungun was replaced with Spanish, and textbooks portrayed Indigenous identity as backward and 'uncivilized' (de la Maza & Bolomey, 2019). In the era following the Pinochet years, bilingual education programs have remained underfunded and inconsistently applied (Figueroa, 2015). The bureaucratic machinery of the state—legal documents, property deeds, public signage—recognizes only Spanish, further disconnecting Mapuche people from placenames and traditional land-based epistemologies. Bacigalupo (2015) notes that spiritual practices conducted by machi among the Mapuche depend on precise place-based linguistic knowledge. Without institutional support for the language, the cosmology embedded in Mapudungun becomes increasingly difficult to transmit.

These cases demonstrate how settler-colonial regimes employ linguistic repression as a tool alongside territorial dispossession in rendering Indigenous languages subordinate to colonial ones in order to legitimize claims to land and erase Indigenous identity and ultimately presence. This dynamic is not confined to the historical past as it persists in contemporary nation-states that continue to consolidate land and power through the suppression of Indigenous linguistic and cultural sovereignty.

In the state of Israel, Arabic—spoken by over 20% of the population—was demoted from an official language to one of 'special status' with the passage of the 2018 Nation-State Law. This symbolic downgrading accompanies ongoing material processes: the expropriation of Palestinian land, the expansion of Jewish-only settlements, and the erasure of Arabic place names, all of which are buttressed by legal and bureaucratic frameworks conducted primarily in Hebrew. Language repression in this context is part of a broader strategy to affirm exclusive Jewish

sovereignty while displacing Palestinian claims to land, identity, and history (Arraf-Baker, 2019; Zreik & Dakwar, 2020).

In the Russian Federation, the Tundra Nenets people—nomadic reindeer herders of the Arctic—face acute threats to both language and territory. Russian-only educational policies, especially in boarding schools far from traditional lands, have severed generational transmission of Nenets as oil and gas infrastructure now slices through migratory routes, rendering traditional economies and cultural practices and unsustainable (Berezovskaya, 2024).

In Bangladesh, the Chakma and other Indigenous groups of the Chittagong Hill Tracts have long resisted a state project of cultural and linguistic homogenization under Bengali nationalism. The imposition of Bengali as the sole language of instruction, combined with state-sponsored resettlement of Bengali populations into Indigenous areas, has accelerated the dispossession of both Chakma land and identity. Schools routinely ignore Indigenous languages, and Indigenous place names are overwritten in official maps and documents, contributing to the ongoing denial of Indigenous land rights and political autonomy (Chakma & Sultana, 2024). Contemporary cases such as these evoke the same pattern under study: the repression of Indigenous languages not merely as a byproduct of modernization and globalization, but as a calculated means of dislocating Indigenous peoples from land, memory, and power.

In each case discussed, land was enclosed, privatized, or extracted from underfoot, severing communities from the spaces that sustained their economies and means of subsistence. Simultaneously, language suppression—through education policies, legal prohibitions, and cultural stigmatization—eroded the means by which oral traditions, intergenerational knowledge, and identity itself were transmitted. These twin erasures were not incidental. They formed the

scaffolding of a broader project designed to assimilate or eliminate Indigenous presence when it posed a barrier to economic exploitation and state consolidation. When populations could not be folded into the imperial order as labour or compliant citizens, their cultural disintegration or disappearance altogether became a strategic (if unspoken) goal. These narratives speak to how imperial expansion has consistently relied on severing Indigenous peoples at once from both the material and symbolic resources necessary for collective survival and persistence through time, thereby attacking the very fundaments of identity. Across all of these contexts, the consequences of these disruptions are not merely political or economic—they are existential. When communities are cut off from the land that grounds their history and sustains their subsistence, and from the language that encodes their knowledge systems, values, and collective memory, what is undermined is not just material subsistence and the things people need to physically survive, but the very framework through which people understand who they are.

Identity—that ongoing story of *who one is*—relies on the continuity through time and space of practices, social roles, relationships, and material resources that sustain a self-same narrative (Schwartz et al., 2011, p. 6). In their drive to seize land and erase the presence of the peoples dwelling on them, imperialist colonial projects systematically unravel that continuity. These processes are not accidental side effects of empire but necessary preconditions for its expansion and consolidation (Davis-Delano, 2022; Maddison, 2013; Wolfe, 2006). When people are forcibly detached from the spaces that give life meaning, and from the languages that encode their histories, values, and worldviews, the resulting trauma can be fatal both to individuals and to entire peoples. The undermining of land tenure and language vitality thus operates as a slow violence that intentionally destabilizes the continuity of Indigenous identity. What results is not merely a displacement (trading one homeland or language for a new one), but a profound

existential disruption—a dislocation of meaning, belonging, purpose, and sense of place in the world.

Alongside poverty, incarceration, homelessness, addictions, and poor health outcomes, suicide emerges across colonized contexts around the world as a social ill that disproportionately affects Indigenous peoples (Aho & Liu, 2010; Cousins, 2017; Stoor et al., 2015; Webster, 2016). This fact remains one of the most acute and recurring expressions of how empire's theft of land and suppression of language does not end at borders or treaties but continues within the very conditions of life. In this light, suicide is not merely a psychological response but a political and ontological one: an act that reveals the full weight of colonial disruption when a people can no longer locate a place—literal or symbolic—for themselves in the world (Barker et al., 2017; Gone, 2024; Stoor et al., 2015; Trout et al., 2018).

1.2: Nunavut: Contemporary Context

Nunavut offers one of the most striking and urgent manifestations of precisely these dynamics. As one of the last regions of North America to undergo formal settler colonization, and as the only Canadian political division with a majority Indigenous population, Nunavut is a site of both colonial disruption and ongoing Indigenous resistance and resurgence. The history of the Inuit in this region lays bare how the violent unravelling of land-based ways of life and the systematic suppression of Inuit languages were not isolated, incidental traumas but part of a coordinated effort to reorganize life according to the logic of the settler colonial state. Through forced relocations, residential schooling, and bureaucratic intrusions into traditional governance, the Canadian state sought to sever Inuit from both the land and language that had sustained their communities, economies, and identities for centuries. Today, Nunavut has some of the highest

rates of suicide in the world (Public Health Agency of Canada, 2025)—a devastating indicator of the depth of dislocation and loss experienced across generations. This case demonstrates with striking clarity the deliberate intersection of material and cultural dispossession with the disruption of identity and the dire consequences that follow when a people's ability to answer the question *who are you?* is damaged by state violence. But Nunavut is not only a story of loss: it is also a site of political reassertion and resurgence. Through historic land claims agreements and ongoing efforts to revitalize their languages across educational and governmental domains, Inuit in Nunavut have articulated new ways of asserting continuity amid disruption—reclaiming the resources through which life, meaning, and identity can endure.

Long before the formal onset of European colonization, Inuktut[1]—the languages of the Inuit—functioned as a central and resilient axis of Inuit identity, reflecting both the deep interconnection between Inuit communities and their environment and the specificity of their knowledge systems. As Dorais (1980) notes in his study of the language of Labrador Inuit, Inuktut served as a stable cultural-linguistic substrate even amid the significant social and cultural transformations introduced by regular European contact as early as the late 17th century. This linguistic continuity was not merely symbolic but functionally essential: Inuktut encoded the sophisticated ecological knowledge necessary for Arctic survival, including detailed terminology for ice conditions, place names linked to oral histories and subsistence patterns, and lexicons for animal behavior critical to hunting and navigation (Henri et al., 2020; Pearce et al., 2015).

[1] *Inuktut* refers to the group of Inuit languages spoken across Inuit Nunangat and should not be confused with *Inuktitut*, which is one specific language variety spoken primarily in Nunavut and parts of Nunavik.

As European presence in the region intensified through trade, whaling, and missionary activity, new languages—English, Russian, Danish, and others—entered Inuit lands, but they did not displace Inuktut. Instead, multilingualism emerged in many places as a practical response to engagement with outsiders, while Inuktut remained the primary medium of intra-community communication and knowledge transmission (Dorais, 1996; Patrick, 2003). However, this equilibrium was violently disrupted in the 20th century, when the Canadian state initiated two aggressive policies that reshaped Inuit life: the forced settlement of formerly nomadic and semi-nomadic communities, and the institutionalization of Inuit children through residential schools and hostels. These interventions fractured traditional patterns of land use and language transmission, and interrupted the generational transfers of environmental knowledge, care, and linguistic continuity that had long sustained Inuit survival, cultural coherence, and autonomy (Wright, 2014). The dislocation of Inuit from the land and the displacement of Inuktut by English in formal settings marked a profound rupture—both material and symbolic—in the Inuit world.

The forced relocation of Inuit communities in the mid-20th century represents one of the most egregious disruptions to Indigenous land-based lifeways in Canada, and its consequences continue to reverberate through Inuit society. Implemented under the guise of modernization and national sovereignty, these relocations dismantled long-established patterns of seasonal movement, subsistence, and ecological stewardship that had defined Inuit life for millennia. Entire families were uprooted from ancestral territories and resettled in unfamiliar, often ecologically incompatible locations—such as the High Arctic relocations of the 1950s—where survival itself was perilously uncertain. These movements were not voluntary; they were compelled by state agents and bureaucratic imperatives that disregarded Inuit knowledge,

consent, or connection to place (Tester & Kulchyski, 1994). In the process, traditional economies based on hunting and fishing collapsed, and the communal governance structures that had supported collective life were replaced with imposed administrative models designed for sedentary, settler populations (Anderson & Bonesteel, 2008).

The material environment changed dramatically: igloos and tents gave way to prefabricated houses unsuited to Arctic conditions, while dog teams were replaced with snowmobiles and rifles with imported food systems, entrenching economic dependency (Degen et al., 2024). Just as critically, Inuit cosmologies and relational modes of being—with the land, with each other, and with the wildlife that sustained them—were profoundly destabilized. Communities accustomed to mobility, flexibility, and autonomy found themselves clustered in cramped settlements under the surveillance of state officials and missionaries. This rupture undermined not only physical subsistence but also the social and cultural frameworks that had enabled Inuit to endure and adapt to the world's harshest environments. As land was made distant or inaccessible, and as the daily practices that reaffirmed relationship to it were interrupted by dispossession and relocation, language transmission too was negatively impacted with children being educated outside of their communities. The result was a landscape of cultural and existential dislocation, in which Inuit found themselves increasingly alienated from the very sources of knowledge, identity, and resilience that had defined them as a people (Ayeb et al., 2024; Searles; 2008).

Alongside forced relocations, the residential school system further fractured Inuit society by severing the most intimate bonds of cultural transmission: those between parent and child. From the mid-20th century, Inuit children were sent—often forcibly and for long stretches of time—to state-run schools and hostels where they were immersed in English-language

instruction and subjected to strict regimens designed to replace Inuit worldviews with Canadian norms. These institutions prioritized literacy and vocational skills over the traditional competencies—such as hunting, toolmaking, and sewing—that were essential to life in the Arctic (Degen et al., 2024). In many cases, this educational agenda was directly tied to the Cold War economic vision of an Inuit labour force fit for industrial and defense projects which further alienated youth from their cultural roots while embedding them within settler economic infrastructures. Children returned to their communities unable to speak the language of their elders, unfamiliar with their kinship roles, and ill-equipped to survive on the land. Worse still, they often returned bearing the psychological scars of systemic neglect, physical abuse, and cultural denigration (Truth and Reconciliation Committee of Canada, 2016).

These experiences inflicted deep intergenerational trauma that compounded the damage done by the initial disruptions: tuberculosis outbreaks, alcoholism, and other forms of physical, social, and emotional suffering surged in the wake of school attendance, weakening both the linguistic vitality of Inuktut and the fabric of communal identity (Degen et al., 2024). Where once Inuit children learned through observation, storytelling, and embodied practice in the rhythms of daily life, they were now socialized in institutional settings that stripped away both cultural continuity and a sense of belonging. The residential school system, like forced relocation, was not simply a policy failure or cultural misunderstanding—it was a systematic attempt to assimilate Inuit lives and identities into a settler colonial state.

The creation of the territory of Nunavut in 1999 marked a turning point in Inuit political self-determination and brought with it a renewed institutional commitment to linguistic and cultural revitalization. Through the Nunavut Land Claims Agreement and accompanying legislation, Inuit were granted control over key areas of governance, including education, with

the explicit goal of re-establishing Inuktut as a central language of instruction, administration, and daily life. Territorial policies aimed to make Inuktitut (the largest of the Inuit languages spoken in Nunavut in terms of absolute number of speakers) the working language of government and public services, and federal programs now commit funding from the Canadian government toward Indigenous language education in the territory (Langlois & Turner, 2015). More than two decades later, however, the vitality of Inuktut remains precarious; in practice, English continues to dominate many professional and administrative spheres including as the de facto language of government and medium of instruction, and it retains prestige as the language of economic opportunity and postsecondary advancement (Narine, 2020).

Inuktut education faces additional structural hurdles. Recruiting and retaining Inuktut-speaking teachers, particularly in smaller communities, continues to be one of the most pressing barriers to full language resurgence (Bartlett, 2020). While early years instruction is more likely to occur in Inuktut, higher grades increasingly rely on English, due in large part to a chronic shortage of fluent educators, a scarcity of high-quality curricula, and a reliance on non-Inuit pedagogy and assessment tools that poorly reflect Inuit linguistic realities. One striking example is the continued use of Alberta's departmental exam for English—a benchmark assessment designed for L1 English students in a markedly different cultural context—as a major graduation requirement in Nunavut in order to make the territory's curriculum design compatible with post-secondary education in the rest of Canada (Preston, 2016). Such misalignments underscore the enduring challenge of building a school system in which Inuit students see themselves, their language, and their knowledge systems sincerely reflected, while affording them the means and opportunities for economic participation in the larger settler-colonial state. Despite innovative programs and projects that emphasize Inuit authorship and community-based approaches to

pedagogy (see Murasugi & Patrick, 2023), language revitalization remains a slow and contested process—especially in other regions of Inuit Nunangat such as Inuvialuit and Nunatsiavut, where language shift is more advanced.

Along with these threats to Inuit cultural and linguistic vitality, the ongoing suicide crisis among Inuit in Canada cannot be understood without situating it within the same historical context of colonial disruption. The forced relocations and residential schooling fractured kin networks undermined traditional roles, and interrupted intergenerational transmission of the knowledge and cultural continuity so integral to survival and identity. As Kral et al. (2012) argue, this top-down reshaping of Inuit life played a central role in the subsequent explosion of suicide among the Inuit beginning in the 1960s, especially among Inuit youth, who found themselves alienated from both traditional and modern systems of meaning, with no clear path forward.

This rise in suicide rates did not happen immediately but emerged within a generation of the upheavals experienced by Inuit in the 20th century. Prior to the 1970s, suicide among Inuit was rare but not unknown (Kwiatek, 2023). Beginning in the late 1960s, however, and sharply increasing in the 1980s and 1990s, Inuit communities—particularly in Nunavut and Nunavik—began experiencing unprecedented rates of suicide. Today, suicide rates in Inuit communities are more than 10 times the national average in Canada and are among the highest in the world (Public Health Agency of Canada, 2025). Among the most affected are young Inuit males, who are approximately 40 times more likely to die by suicide than their non-Indigenous Canadian peers (Hayward et al., 2020). Such figures are staggering, and their coincidence in time following the massive disruptions to Inuit ways of life is undeniable. What the scale of this crisis reflects is not just profound socioeconomic or geographic changes, but a comprehensive assault

on Inuit identity through the systematic undermining of the connections to their land, to their language, and to themselves.

Inuit languages carry with them not only vocabulary, but worldviews—relational epistemologies, survival knowledge, and spiritual cosmologies—that have been passed down orally for generations. As youth became increasingly detached from their linguistic heritage, they also became estranged from traditional values and from elders, who once served as cultural anchors. As such, Inuit Tapiriit Kanatami (2014; 2019)—the national Inuit organization that advocates for Inuit living in Canada—has explicitly identified language and culture as key assets in responding to the crisis of youth suicide, emphasizing the reclamation of Inuit identity and re-establishment of meaningful connections to land, community, and cultural knowledge in their framework for suicide prevention. These are not mere symbolic gestures but vital components of healing and resilience.

Inuit-led mental health initiatives have gained momentum in recent years, emphasizing community-based approaches that reflect Inuit worldviews and relational values. These include programs such as those offered by the Ilisaqsivik Society in Clyde River, focusing on language revitalization, on-the-land camps, youth-elder mentorships, and trauma-informed cultural healing practices. Such efforts reflect a growing recognition that the root causes of suicide in Inuit communities are not individual but structural and historical. As Kral et al. (2012) note, many healing practices occur outside of government-funded clinics—in homes, on the land, and in culturally grounded relationships. Mainstream psychiatric services, often rooted in western biomedical models, have frequently failed to engage effectively with Inuit youth, precisely because they do not address the cultural, historical, and relational dimensions of suicide.

While the crisis remains ongoing, the path forward is increasingly being charted by Inuit themselves, who are reclaiming their histories, languages, and systems of knowledge in the face of immense historical trauma. Suicide prevention in Inuit Nunangat, then, is not only a matter of mental health policy—it is a matter of cultural and linguistic survival. The legacy of the 1950s and 60s may have set in motion a tragic pattern, but the resilience and innovation of Inuit communities offer hope that the tide can be turned through culturally rooted, community-led responses that honor and revitalize Inuit identity.

1.3: Research Question and Goals

Against this backdrop of profound ecological and cultural disruption—through land appropriation, forced relocations, linguistic suppression, and the resulting breakdowns in identity formation—it becomes not only reasonable but imperative to ask whether the vitality of Inuit language today acts as a protective factor of Inuit well-being. More specifically, this study asks whether there is a measurable relationship between community-level Inuktut language vitality and community suicide rates across Nunavut. This question emerges not only from the epidemiological urgency of the suicide crisis itself but also from a broader recognition that, for Inuit and other Indigenous peoples, language is not a detachable element of culture, but a vital connection linking individuals to their community, history, land, and selves.

While numerous studies across Indigenous contexts in Canada and abroad have demonstrated correlations between language knowledge and health outcomes—most notably, lower suicide rates in communities with strong cultural continuity (e.g., Chandler & Lalonde, 1998; Hallett et al., 2007; Oster et al., 2014)—few have undertaken the same kind of quantitative analysis within the Inuit context, and none to date have done so at the territorial level in Nunavut. This is a notable omission given that Nunavut is unique in both its high levels of

Inuktut retention and its staggering suicide rates. This paradox—that language vitality appears comparatively high while suicide rates remain among the highest in the world—demands a closer empirical look. Are these overlapping but unrelated phenomena? Or, as the broader literature on cultural continuity and health would suggest, could fluctuations in language vitality within and between communities help to better understand some of the spatial variation in suicide rates across the territory?

The present study takes up this question through a two-point longitudinal, quantitative analysis, examining whether the changes observed in various community measures of language vitality across Nunavut from 2001 to 2016 predict corresponding trends in community suicide rates over this period. Informed by Indigenous research principles that emphasize relational accountability, community relevance, and strengths-based inquiry (Tsosie et al., 2024), this study does not approach suicide as a detached clinical category, but from a theoretical view of it as a deeply contextual indicator of cultural and social health tied inextricably to colonialism (Hallett, 2007). This study thus aims to assess whether communities that have gained or maintained stronger connection to traditional Inuit identity through language have experienced corresponding decreases in suicide rates—an understanding that, if supported by evidence, could inform culturally grounded approaches to suicide prevention and language planning alike. More broadly, this study seeks to advance this growing body of quantitative research aimed at exploring language vitality as a determinant of public health. In doing so, it also seeks to develop more robust, contextually grounded tools for measuring language vitality in ways that more meaningfully connect it to well-being.

1.4: Researcher Positionality and Rationale

As a non-Indigenous, settler researcher from New Brunswick (Mi'kma'ki), I recognize my position as an outsider to Inuit communities. My perspective has been shaped in part by time spent working as an English and health teacher in an Inuit community, where I began to see more clearly the deep interconnections between language, identity, and well-being. That experience left a lasting impression and has informed the way I have approached this project—with humility, care, and a commitment to framing Inuit communities in terms of their strength and self-determination. This approach aligns with Tsosie's (2012) advocacy for more strengths-based inquiry and Tuck's (2009) call for desire-based research frameworks in that it aims to resist deficit framings that portray Indigenous peoples primarily through damage and loss, instead highlighting the persistence, vitality, continuities, and futures that communities themselves emphasize.

This research emerged out of a sustained engagement with literature on Indigenous language vitality and well-being. Foundational studies, including Hallett et al. (2007) and Oster et al. (2014), offer evidence that Indigenous language is associated with lower rates of adverse health outcomes. These works helped me recognize a broader theoretical model linking cultural continuity to well-being—one that substantiates connections often understood within Indigenous communities but underappreciated in public health research and policy. However, in reviewing this literature, I also found a clear gap: little has been done in this domain to explore whether similar relationships hold in Inuit contexts, where both the sociolinguistic and public health landscapes are distinct. This gap raised important questions about whether the model proposed by previous research could be extended to Nunavut, where Inuktut remains relatively vital and suicide rates remain among the highest in the world.

The study uses an analytical lens to examine the situation in Nunavut, aiming to bring together population-level data in a way that foregrounds the ongoing vitality of Inuktut as a potential community-level protective factor. The intention is to contextualize suicide mortality in relation to cultural and linguistic strength—not to explain it in full, but to help make visible an empirical connection that has been observed elsewhere and may also be meaningful here. Rather than speaking for Inuit communities, this research attempts to synthesize data gathered from them in a way that respects their complexity and reflects the broader importance of language in cultural continuity and well-being.

Inuit Tapiriit Kanatami's National Inuit Strategy on Research (2018) also informs this work, particularly the call in Section 4.3 for responsible, equity-focused research that can contribute to informed, evidence-based policymaking. The strategy highlights major data gaps—such as the absence of information on suicide attempts—that limit the ability of governments and Inuit organizations to make effective policy decisions. In this context, even limited population-level research can contribute to addressing those gaps and supporting better outcomes for Inuit children, youth, and families. This project does not claim to offer solutions, but it aims to add to a growing body of evidence that affirms what many Inuit leaders, researchers, and community members have long emphasized: that language and cultural continuity matter—not just symbolically, but in ways that are measurable and urgently relevant to public health.

Chapter Two: Literature Review

This literature review synthesizes and critiques existing research on the relationship between cultural factors (particularly language) and well-being in Indigenous contexts. While grouping together contexts as diverse as Inuit, Anishinaabe, and Māori lands as ‘Indigenous contexts’ obscures important differences, there are nevertheless discernible patterns that emerge across Indigenous communities, many shaped by shared experiences of resisting cultural erosion under the pressures of colonial capitalism (Kirmayer, Tait & Simpson, 2009). This section first explores findings that relate Indigenous cultural vitality and well-being, drawing on key studies that have examined cultural and linguistic protective factors for a variety of health outcomes, especially suicide. It then turns to the specific case of cultural factors of Inuit health, critically examining the current research on this relationship and focusing on a limited but growing body of research on the relationship between Inuktut vitality and mental health.

This body of research illustrates in various ways how the continuity of traditional practices, forms of community participation, and intergenerational knowledge transmission constitute factors of Indigenous health and resilience. These themes have been explored variously as “cultural continuity” (Chandler & Lalonde, 1998; Firestone, 2022; Oster et al., 2014), “cultural persistence” (Hallett et al., 2007), “cultural connectedness” (Snowshoe, 2017), and “cultural resilience” (Granheim, 2021): all these terms are consolidated under ‘cultural continuity’ here. Attending to the existing scholarship on these interconnections between culture, identity, and well-being, this section provides a foundation for subsequent analysis of Inuktut vitality as a marker of cultural continuity and an assessment of its connections with Inuit well-being, while highlighting gaps and methodological issues in the literature that warrant further development and set the stage for the approach taken by the present study.

2.1: Culture and Well-Being

Indigenous people everywhere face tremendous challenges in resisting the manifold external pressures that erode their cultures and communities. In Canada, those pressures involve the lasting impacts of residential schools which sought to annihilate Indigenous cultures altogether, and systemic discrimination that continues to yield unjust, differential outcomes in health, education, and many measures of quality of life (Khawaja, 2021). Resistance to these pressures has emerged in diverse domains, not only through political action but also through the preservation and revitalization of cultural practices, which themselves have been systematically undermined for generations. Today, cultural continuity—understood as the ongoing integration of individuals into their culture through the transmission and maintenance of traditional knowledge and practices (Auger, 2016)—has emerged as an important, though variously measured factor in the well-being of both individuals and communities. Across multiple fields of study including Public Health (Gray & Cote, 2019; McIvor et al., 2009), Medicine (Frazer & Giles, 2023; Healey, 2008), Psychology (Chandler & Lalonde, 1998; Hallett et al., 2007), Education (Iwama et al., 2009; McIvor, 2013), and Linguistics (McCreery, 2024; Sullivan, 2018), a growing body of research identifies profound connections between culture and health among Indigenous people. This section reviews key studies that explore these links before moving to focus on research that has taken up language as an especially relevant form of culture to analyse in this context.

Chandler and Lalonde's (1998) study remains a landmark in Indigenous mental health research, not only for its striking empirical findings but for of its theoretical foundation linking cultural continuity with suicide. Rather than adopting a purely exploratory or data-driven

approach—combing through large datasets to identify statistically significant correlates of suicide—the authors begin from a premise grounded in suicidality theory: that a coherent sense of identity over time, or *self-continuity*, is a vital protective factor against suicide, particularly during the developmental turbulence of adolescence. On this basis, they hypothesize that community-level *cultural continuity*—that is, the sustained presence of institutions and practices that connect individuals to their cultural past and future—acts as a buffer against identity disruption and suicide risk.

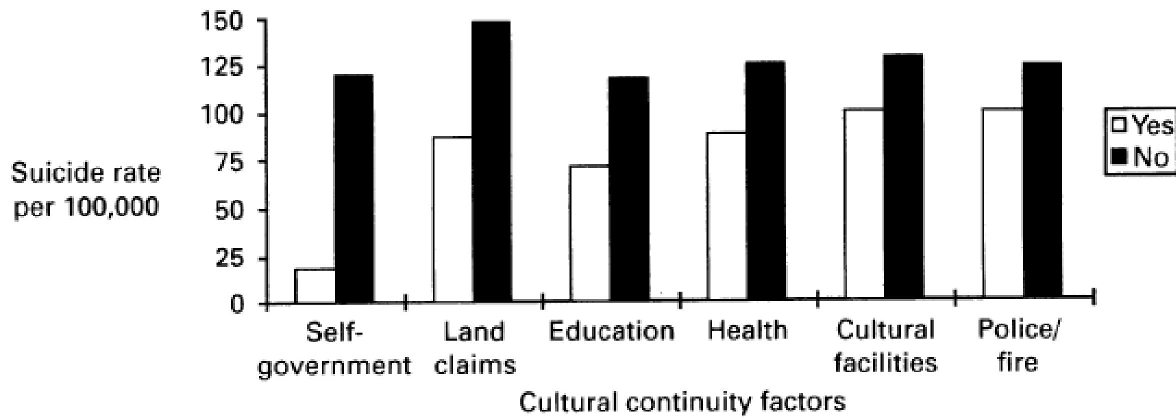
Guided by this theory linking identity disruption to colonialism to suicide risk, the authors identify six specific markers of cultural continuity: self-government, participation in land claims, control over education, on-reserve health services, cultural facilities, and local control of police and fire services. Their study then draws on data from 196 First Nations communities across British Columbia between 1987 and 1992 and uses a comparative regional analysis to control for population density, remoteness, and tribal affiliations. The authors categorize each community according to whether each cultural continuity factor is present or absent, enabling a comparison of suicide rates across differing levels of cultural continuity in terms of the six factors identified. Suicide rates vary dramatically across communities, with some bands reporting no youth suicides and others facing rates as high as 800 times the national average.

The results of their analysis are compelling: when communities are distinguished in terms of the presence/absence of these factors of cultural continuity, those with the factor present have consistently lower suicide rates than those without. Figure 1 highlights this protective effect of individual cultural continuity factors, showing substantially lower youth suicide rates in communities where the marker in question is present. Figure 2 builds on this by showing a

stepwise pattern: the more cultural continuity factors a community possesses, the lower its suicide rate, with communities that possess all six reporting virtually no youth suicides.

Figure 1

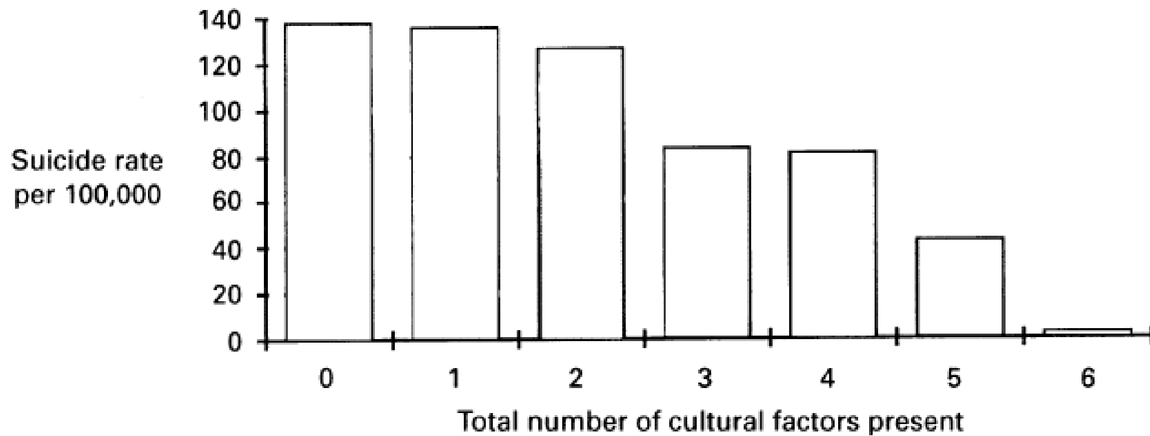
Youth Suicide Rates across BC First Nations by Presence/Absence of Cultural Continuity Factors



Note. Adapted from Chandler and Lalonde (1998). Each bar represents average suicide rates for bands with and without each of the following six factors: self-government, land claims, education, health services, cultural facilities, and police/fire services. Data from 196 BC First Nations communities, 1987–1992.

Figure 2

Youth Suicide Rates across BC First Nations by Number of Cultural Continuity Factors Present



Note. Adapted from Chandler and Lalonde (1998). X-axis shows number of cultural continuity factors present (0–6). Factors are: self-government, land claims, education, health services, cultural facilities, and police/fire services. Data from 196 BC First Nations communities, 1987–1992.

Bringing to bear the theoretical connections between colonial processes, identity disruption, and youth suicide allows Chandler and Lalonde to conduct a robust correlational study. Rather than merely documenting association, their work proposes a coherent framework for understanding *why* certain communities are more resilient than others and predicting where and how that resilience may manifest. Moreover, this study contributes to a discourse on Indigenous suicide that moves beyond a narrow focus on pathology, risk, and conventional correlates—often factors like housing, employment, or psychiatric diagnoses that are either intractable or externally imposed—by instead foregrounding cultural continuity, resilience, and strength. In doing so, it offers a framework that aligns more closely with Indigenous self-

determination and recognizes cultural assets as central to well-being. For the present study, which examines the relationship between language vitality and suicide in Nunavut, Chandler and Lalonde's (1998) model provides both a theoretical foundation and a methodological approach for identifying and measuring culturally grounded strengths—such as language vitality—and exploring whether variation in these positive cultural assets is meaningfully related to variation in health outcomes like suicide rates.

However, the study is not without limitations given that its correlational design means causality cannot be established, and its focus on binary, community-level indicators overlooks the full continuum and diversity of ways in which individuals and communities may meaningfully engage with their culture—many of which (including language) fall outside the rather narrow operationalization of' 'cultural continuity' used here. While the study gestures to the importance of language, linguistic vitality is not directly measured as one of the six continuity markers—a gap that subsequent research has sought to address. Hallett (2005) as well as Kirmayer, Tait, and Simpson (2009), rightfully critique the operationalization of 'cultural continuity' employed by Chandler and Lalonde (1998), arguing that many of the factors identified as markers of cultural continuity—such as involvement in municipal governance or formal education—do not necessarily reflect cultural traditionalism. Instead, Hallett (2005) suggests that "local control" is a more precise term (p. 18), emphasizing that the markers selected by Chandler and Lalonde (1998) reflect cultural adaptability and pluralism more than they do the maintenance of tradition. If 'cultural continuity' as a theoretical tool is intended to connect the reproduction of cultural forms through time with the formation and maintenance of identity, it is unclear how First Nations bands' involvement with fire services in their communities, for instance, is an optimal measure of that which gives individuals and

communities a sense of who they are. Although Chandler and Lalonde (1998) nevertheless provide crucial evidence of the impact of community-level factors (in this case perhaps more political than cultural in nature), the precise variables chosen in their research design are not those most aligned with that at which the concept of 'cultural continuity' aims. With this limitation in view, the present study aims to build on and nuance this approach by employing measures that better reflect cultural persistence and transmission in a more clearly cultural, rather than political, sense.

To a similar end of more faithfully measuring cultural continuity, subsequent research in this area has focused on refining the operationalization of cultural continuity by using more accurate indicators of cultural engagement. Snowshoe et al. (2017) investigate the relationship between 'cultural connectedness' and mental health outcomes among 290 First Nations youth from both urban and rural school settings in Saskatchewan and Southwestern Ontario. Motivated by the question of why some Indigenous youth demonstrate resilience in the face of significant adversity, the study aims to clarify the role of cultural factors in shaping psychological well-being. To do this, the authors employ the short version of the Cultural Connectedness Scale (CCS-S), a 10-item measure that groups items into three domains: identity, traditions, and spirituality. These items consist of differently weighted questions such as "I have spent time trying to find out more about being [Aboriginal/First Nations/Inuit/Métis], such as its history, traditions and customs," "I have a traditional person, Elder or Clan Mother who I talk to," and "The eagle feather has a lot of meaning to me" (p. 72). Using hierarchical multiple linear regression, the researchers assess statistical associations between CCS-S scores and self-report data for an array of mental health indicators, including self-efficacy, school connectedness, life satisfaction, and sense of self (present and future).

The results of this analysis demonstrate that higher levels of cultural connectedness (as measured by CCS-S scores) are significantly associated with better self-reported mental health outcomes, and in some cases, predict these outcomes over and above other demographic and social determinants of health such as age, gender, and stressful life events. However, while the study advances prior work like Chandler and Lalonde's (1998) by grounding 'cultural continuity' in a more culturally specific psychological scale, the conceptualization of 'culture' which this study employs remains limited. Most notably, the CCS-S entirely omits language as a dimension of cultural identity or practice, despite the foundational role language plays in cultural connectedness through knowledge transmission, reinforcement of identity, and sustenance of ceremonial and spiritual traditions, and despite the documented role of language as an important determinant of health for Indigenous people (McIvor, 2013). While the statistical method employed here is sound and the measurement of cultural connectedness a valuable step toward a more holistic operationalization, the absence of a language variable seriously weakens this measure's explanatory power, especially for contexts where language plays an important role in individuals' and communities' connection to their culture. In this light, the study reflects a move away from Chandler and Lalonde's (1998) indirect (political) proxies for cultural continuity like self-government, yet it still stops short of capturing core, measurable features of cultural engagement—particularly language.

Gray and Cote (2019) similarly investigate the relationship between cultural connectedness and health among the descendants of Indian Residential School (IRS) survivors in Canada. Their study draws on a randomly selected sample of 250 Anishinaabe adults aged 18–39 from a single community, aiming to understand whether cultural engagement is a protective factor against the intergenerational effects of colonial trauma. Participants complete a survey

including self-ratings of cultural connectedness and mental and physical health using Likert scales, along with an open-ended question: "What has helped you feel connected to your culture?" Common responses include hunting, fishing, trapping, ceremonies such as smudging, powwows and dancing, and learning or speaking the Anishinaabe language. Linear regression analysis reveals that higher self-ratings of cultural connectedness are associated with better mental health outcomes, particularly for those with a family history of IRS attendance: participants in this group who reported high levels of cultural connectedness were 31% more likely to report high mental health (95% *CI*: 7–54%). Cultural connectedness is also positively associated with physical health, though the effect was less strongly linked to IRS history.

While this study offers important evidence that cultural engagement may act as a buffer against intergenerational trauma, its operationalization of 'cultural connectedness' limits the precision of its findings. The study measures how connected participants *feel* to their culture using a Likert scale and then supplements this with an open-ended question asking *what* makes them feel connected. This design captures meaningful subjective experiences but ultimately links self-perceived cultural connectedness—not specific cultural practices or levels of engagement—to health outcomes. As such, it conflates the emotional experience of connection with the structural or behavioral dimensions that might underlie it. A more robust approach could involve a two-phase design: first, analysing the open-ended responses to identify the specific practices, relationships, and contexts that foster cultural connection; and second, measuring respondents' actual engagement with those identified elements (e.g., frequency of language use, participation in ceremonies, time spent on the land) to assess their relationships with health outcomes. Without this step, vastly different experiences—such as attending a single powwow, regularly hunting with family, or being a fluent speaker of Anishinaabe—are coded as functionally equivalent. As

a result, while the study affirms that cultural connectedness matters, it leaves underexplored how or why particular cultural elements contribute to resilience and healing.

Firestone et al. (2022) offer a more objective framework for studying culture and well-being—one that also, notably, includes language use as a key indicator of cultural continuity. Their study examines health outcomes among 915 Indigenous adults living in Toronto, drawing on data from the *Our Health Counts* (OHC) Toronto study. Using community-based participatory research and respondent-driven sampling to collect survey data, their method applies logistic regression analyses (adjusting for age and gender) to assess associations between mental health diagnoses and reported experiences of colonization, including residential school attendance, family separation, and experiences of discrimination. The authors also measure participation in cultural activities through binary (yes/no) questions asking whether respondents speak an Indigenous language, use traditional medicines, eat traditional foods, and participate in ceremony—a framework explicitly inspired by Chandler and Lalonde's (1998) model and modified to include more clearly cultural indicators of 'cultural continuity'.

The results indicate high rates of participation in these activities among those with a diagnosed psychological or mental health disorder (e.g., 46.8% reported speaking an Indigenous language). While the inclusion of language as a marker of cultural continuity improves on tools like Snowshoe et al.'s (2017) Cultural Connectedness Scale—where language is not measured at all—Firestone et al.'s (2022) operationalization has limitations of its own. First, as McIvor (2013, pp. 4–5) emphasizes, Indigenous languages are not simply reducible to one cultural activity among other, but are foundational institutions of cultural identity, worldview, and survival. Yet in Firestone et al.'s model, language is treated as a single binary variable, failing to

distinguish between speakers with different levels of fluency, frequency of use, or intergenerational transmission. Without specifying the nature, depth, or domain of language engagement, the results risk obscuring the dynamics of cultural continuity, identity, and resilience which they aim to illuminate.

Second, while Firestone et al. (2022) apply logistic regression analyses to relate the experiences of colonization (residential school attendance, family separation, and discrimination) with mental health outcomes, cultural activities are not given the same attention as the authors analyse these only descriptively through weighted population estimates, with no attempt to assess whether variation in these practices corresponds to variation in mental health outcomes. This limits the study's ability to empirically substantiate the protective role of cultural continuity, even as its framing suggests such a connection. A more analytically robust design might apply regression analyses to the cultural participation variables as well as the experiences of colonization, enabling stronger claims about the statistical relationship between cultural continuity and well-being. Thus, although this study documents meaningful co-occurrence of cultural engagement (including language use) alongside psychological distress, it does not clearly delineate whether or how culture and language interface with mental health challenges. While the study is valuable to the present inquiry insofar as it takes up language as a distinct and measurable facet of cultural continuity, its treatment of this variable signals a need for more nuanced and contextually appropriate methodologies that better reflect what is at stake in the relationship between Indigenous languages, identity, and well-being.

All these studies point to a measurable—if imprecisely defined—connection between participation in traditional cultural activities and improved mental health outcomes for

Indigenous peoples. However, their approaches to operationalizing cultural continuity through a broad and loosely grouped set of practices—ranging from ceremony to hunting to governance to (occasionally) language use—limits what conclusions can be drawn. By treating disparate forms of cultural participation as functionally equivalent, they obscure potentially significant differences in the depth, frequency, and significance of these practices to individual and collective identity and well-being. Taken together as a body of evidence, this scattershot methodology produces interesting correlations but falls short of clarifying which cultural elements are empirically protective or why. One element, however, repeatedly emerges in the literature as central: language. As a carrier of worldview, tradition, and intergenerational memory, there are good theoretical justifications for positing language as a potentially more precise and more powerful means of measuring cultural continuity. The next section turns to the empirical research that isolates measure of Indigenous language vitality to examine its specific impact on mental health and community well-being.

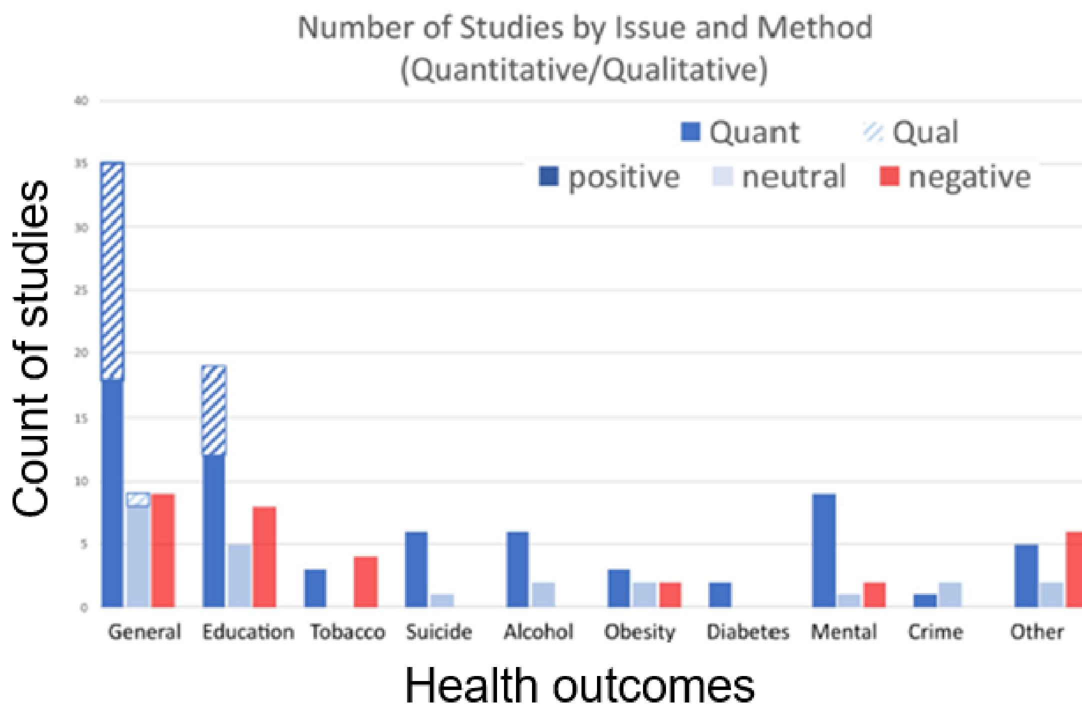
2.2: Language and Well-Being

Whalen et al. (2022) review the scholarship examining relationships between Indigenous language use or revitalization and health outcomes across Indigenous populations in the Americas, Australia, and New Zealand. Their review includes 130 publications selected from an initial pool of 3,508 from purposive bibliographic searches and forward citation chaining. These publications, encompassing both qualitative and quantitative research, focus on groups of Indigenous peoples who either use or learn their ancestral languages. The review applies a realist approach to identify positive, neutral, or negative effects of language use on mental and physical health, while considering potential confounding factors such as socioeconomic status and access to health care. The results of this meta-analysis (shown in Figure 3) show that 62.1% of the

studies surveyed find positive health effects associated with Indigenous language use or revitalization. Neutral effects account for 16.6%, while 21.4% of outcomes are negative or mixed, often linked to issues like cultural use of tobacco or educational testing in second languages. The authors conclude that Indigenous language use and revitalization serve as protective factors for health in a range of disparate contexts and thus advocate for language programs as cost-effective interventions to improve well-being in Indigenous communities.

Figure 3

Count of Studies Assessing Associations between Health Outcomes and Indigenous Language Use and/or Acquisition



Note. Adapted from Whalen et al. (2022), showing the number of studies examining correlations between Indigenous language use or revitalization and various health outcomes. Studies are grouped according to whether they report language use/revitalization as having a positive,

neutral, or negative effect on the outcome under study. Data from a review of 130 publications on Indigenous language and health outcomes.

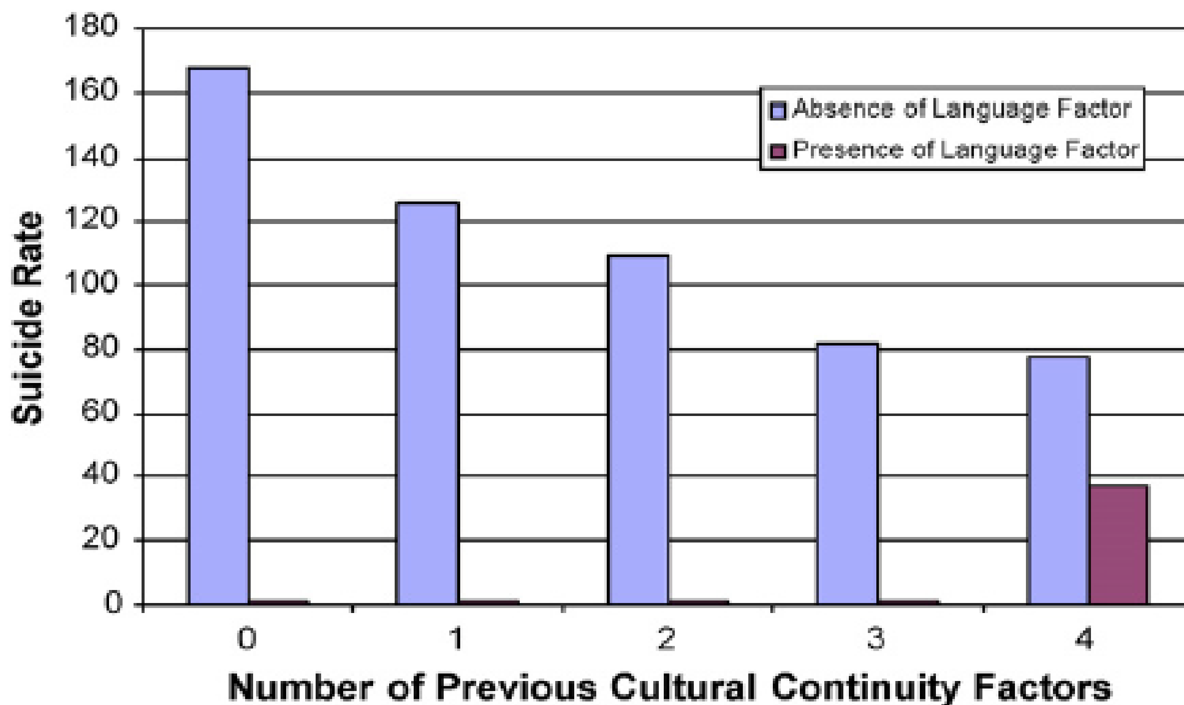
While comprehensive and broad in scope, the usefulness of this review is limited by the variation in study designs and measures of language ‘use’ and ‘revitalization’ across the included literature. Additionally, the aggregation of diverse Indigenous populations and health outcomes without clear differentiation may obscure important community- and issue-specific nuances. As has been evident, operationalizations of language engagement vary considerably—studies may group together distinct phenomena such as attending a language class and being raised in a home where the language is spoken, despite their likely divergent impacts. As such, this section turns to specific studies in this body of work, critically considering their methodologies to better inform the development of a robust research approach for meaningful examination of language as a determinant of well-being.

Hallett, Chandler, and Lalonde (2007) present a foundational study in this vein that builds directly on the work of Chandler and Lalonde (1998), reanalysing the 1996 Statistics Canada census data from 152 British Columbia First Nations communities. Seeking a more justified measure of cultural continuity, the researchers introduce Indigenous language—specifically, the proportion of a band’s population reporting ‘conversational knowledge’ of an Indigenous language—as a proxy indicator due to language’s role in shaping key factors underlying suicidality including identity, self-continuity, self-esteem, and social integration (Chandler et al., 2003). Communities are assigned a binary variable: those with over 50% of members reporting conversational knowledge are coded as ‘1’ (n = 16), and all others as ‘0’ (n = 136). The authors then analyse this variable in relation to suicide rates using principal components factor analysis.

The results (visualized in Figure 4) are striking: those communities with higher levels of language knowledge present dramatically lower suicide rates—averaging 13.00 per 100,000—compared to communities with lower language knowledge, which average 96.59 per 100,000. Indeed, only one youth suicide occurred among the 16 high-language communities during the six-year window studied, compared to 84 suicides among the 136 low-language communities.

Figure 4

Suicide Rates for BC First Nations With and Without the Traditional Language Factor



Note. Adapted from Hallett, et al. (2007). Y-axis represents the youth suicide rate per 100,000 population. X-axis shows the number of community-level cultural continuity factors present (i.e., self-government, land claims, education, health services, cultural facilities, and police/fire services) previously identified by Chandler and Lalonde (1998). For each level, suicide rates are grouped by presence or absence of the language factor (i.e., over 50% reporting conversational

knowledge). Suicide rates are consistently lower among bands with the language factor, with some dropping to zero. Data based on youth suicides reported in 152 BC First Nations communities between 1987–1992.

While the study demonstrates that language is a promising and measurable dimension of cultural continuity with strong predictive value for mental health outcomes—particularly suicide rates—its advancement in the operationalization of this factor invites critical reflection. Coding language knowledge as a dichotomous variable based on a 50% cut-off is blunt as far as statistical instruments go in that it risks obscuring significant variation among communities both above and below the threshold. Moreover, 'conversational knowledge' is a potentially misleading proxy for a person's or community's relationship with their language in that it fails to capture the experiences of 'silent speakers,' for instance, passive understanders, or those for whom the language plays a strong symbolic or identity-based role despite limited functional ability (Dauenhauer & Dauenhauer, 1998). Nonetheless, the present study draws inspiration from Hallett et al.'s methodological innovation but seeks to refine their approach by incorporating more nuanced and graded metrics of language use, identity, and knowledge.

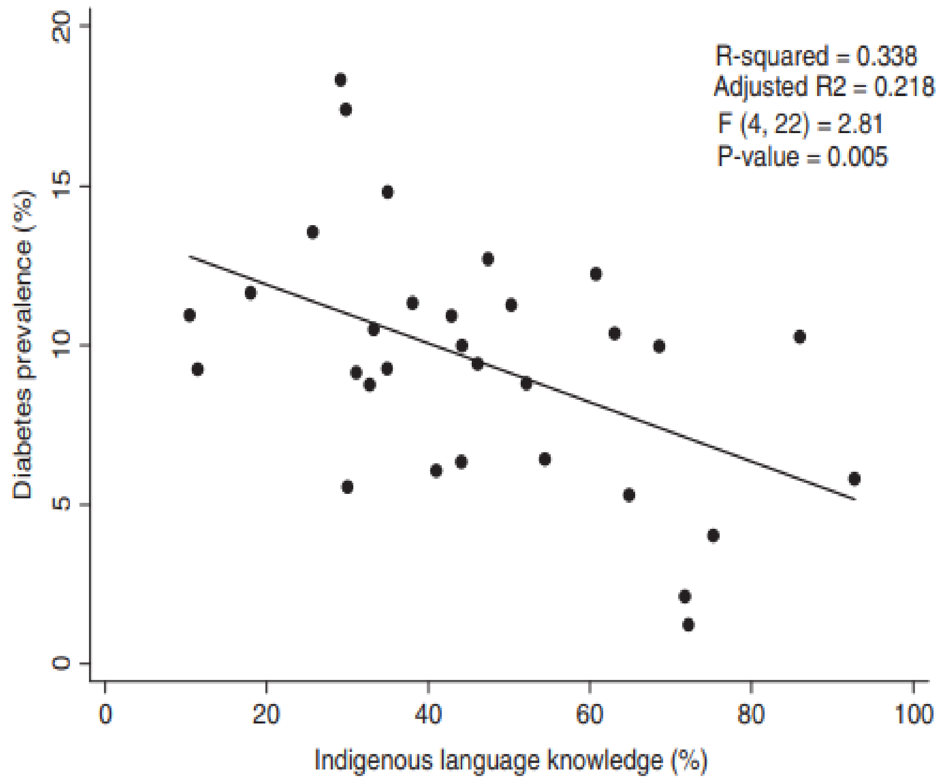
In their mixed-methods study designed to build on and re-apply Chandler and Lalonde's (1998) framework, Oster et al. (2014) examine the relationship between cultural continuity and type 2 diabetes among First Nations in Alberta. Their study consists of two phases. For the first qualitative phase, the authors conduct interviews with 10 Cree and Blackfoot leaders—members of Chief and Council from across Alberta—to develop a culturally grounded understanding of cultural continuity and its relevance to health. These leaders consistently link "being who we are" (cultural continuity) to individual and community well-being and describe self-

determination as emerging from that foundation. They also identify traditional language as a "crucial and inseparable piece of culture" that is fundamental to Blackfoot identity and well-being (p. 3).

Using the insights from this qualitative work to inform their selection of variables, the authors then move to a quantitative phase analysing provincial administrative health data and publicly available census data from 31 Alberta First Nations communities. Their analysis assesses the relationship between cultural continuity—operationalized as the proportion of each community reporting conversational knowledge of a traditional Indigenous language—and diabetes prevalence. In contrast to Hallett et al. (2007), Oster et al. treat this language knowledge as a continuous variable rather than a dichotomous one, allowing for more granular analysis. After adjusting for socio-economic variables, they find a statistically significant inverse relationship between language knowledge and diabetes prevalence (p = .007), with communities with higher proportions of language knowledge reporting generally lower rates of type 2 diabetes as visualized in Figure 5.

Figure 5

Crude Diabetes Prevalence by Aboriginal Language Knowledge for the Year 2005



Note. Adapted from Oster et al. (2014), communities are plotted on the y-axis according to diabetes prevalence rates, while the x-axis shows the proportion of the community reporting knowledge of an Indigenous language. P-value reflects results from a multiple linear regression adjusted for socio-economic factors. Based on data from 31 Alberta First Nations communities. Diabetes prevalence data were drawn from 2005 Alberta Health administrative databases; language knowledge data were drawn from the 2011 Aboriginal Affairs and Northern Development Canada (AANDC) dataset.

This study represents a major methodological advancement for its kind first by anchoring its use of language as a proxy for cultural continuity in community-derived, qualitative evidence

and then by avoiding the overly coarse, binary categorization used by Hallett et al. (2007) in favour of a continuum. The inclusion of socio-economic controls further strengthens the design, especially given the known associations between socioeconomic status and health outcomes, including suicide and diabetes. Nonetheless, Oster et al. point out some limitations to this approach, noting that "traditional language and cultural continuity are not equivalents," and that their decision to use community rates of conversational language knowledge was shaped by data availability (p. 8). Further, like Hallett et al. (2007), Oster et al. still restrict language measurement to self-reported conversational knowledge (albeit allowing for greater gradation than a binary scale), which may obscure or omit altogether other meaningful forms of linguistic identity such as passive comprehension or symbolic affiliation. Moreover, as the authors themselves acknowledge, this observed association between language vitality and lower diabetes prevalence may partly reflect mediating factors such as higher physical activity or traditional food consumption in communities with stronger cultural practices alongside higher rates of language knowledge.

Fuller-Thomson et al. (2020) also devote analytical attention to language as they explore factors associated with recovery from suicidal ideation among Indigenous peoples living off-reserve in Canada, They draw on data from the 2012 Aboriginal Peoples Survey, analysing responses from a nationally representative subsample of 2,680 Indigenous individuals who report having seriously considered suicide at some point in their life. The study compares those who have experienced suicidal ideation in the past year with those who no longer do, using Pearson chi-square tests and logistic regression analyses to identify key predictors of recovery (defined having been free of serious suicidal thoughts in the past year). One of these predictors is Indigenous language knowledge, operationalized through a self-report binary item: *"Do you*

speak an Aboriginal language, even if only a few words?" (p. 190). Respondents who answer yes are coded as 1; otherwise, they are coded as 0. Logistic regression analyses indicate that, among the population surveyed, being older, female, food secure, having at least a high school education, having a confidant, and speaking an Indigenous language are all positively associated with a greater likelihood of recovering from suicidal ideation.

The study's operationalization of language is methodologically limited in familiar ways. Asking whether respondents speak 'even a few words' creates a blunt instrument that flattens the depth, nuance, and variety of relationships individuals may have with their language, relationships constitutive for identity and well-being. Like Chandler and Lalonde (1998), the binary coding system obscures distinctions in fluency, usage contexts, intergenerational transmission, and emotional or cultural connection. As a result, while the study provides valuable evidence of a correlation between language knowledge and recovery from suicidality, it offers limited insight into the mechanisms at play.

Ritland et al. (2021) examine how child welfare interventions intersect with suicide risk among Indigenous women and analyse participants' relationship with Indigenous language as a measure of cultural continuity. Drawing on data from the Cedar Project, an Indigenous-governed cohort study, the authors analyse responses from 293 young Indigenous mothers in Vancouver and Prince George, BC, collected at six-month intervals between 2008 and 2016. The study assesses the relationship between recent child apprehension (defined as having a child taken into care since the last visit) and the likelihood of maternal suicide attempts. Several trauma-related variables—such as sexual assault, overdose, and residential school legacy—are included as covariates. Indigenous language is incorporated as a secondary cultural variable, interestingly

defined here not in terms of knowledge or proficiency, but through early exposure to language in the home. At each study visit, participants are asked, *"When you were growing up, how often was your traditional language spoken in your house?"* Response categories include 'always,' 'often,' 'rarely,' and 'never.' For analysis, a time-invariant binary variable is created: participants who *ever* respond 'always' or 'often' are coded as 'always/often'; those who *ever* respond 'rarely' or 'never' are coded as 'rarely/never.' The results indicate that participants who report recent child apprehension, violence, sexual assault, overdose, or intergenerational trauma (e.g., having a parent attend residential school) are more likely to attempt suicide. By contrast, those who report growing up in homes where an Indigenous language was spoken are roughly half as likely to attempt suicide (*HR* = 0.49, 95% *CI*: 0.23–1.01), suggesting a potential protective effect of Indigenous language use in the home at early ages.

This study offers a noteworthy shift in how language is operationalized: rather than focusing on individual fluency or self-reported ability, it considers language as part of a relational and environmental context—specifically, its presence in the home during formative years. This approach opens the door to more expansive definitions of language vitality that move beyond the individual to encompass intergenerational and affective dimensions. That said, language here is treated as a secondary variable and is not the focus of this analysis. A fuller development of this measurement tool could benefit from additional or complementary measures (e.g., use across different contexts, intergenerational transmission) to better understand the mechanisms at play. Still, the study adds important nuance to the growing body of evidence linking language presence to mental health outcomes and provides inspiration for more refined and culturally grounded approaches to studying these relationships.

Pezzia and Hernandez (2021) investigate the prevalence of suicidal ideation and its contributing factors in an ethnically mixed highland Guatemalan community in the context of concerns about rising suicide rates among Indigenous populations in Latin America. The study is based in Panajachel, a town in the Guatemalan highlands, and aims to better understand who is most at risk for suicidality and how factors like ethnicity, violence, and mental health intersect. The researchers collect both quantitative and qualitative data from a 15-month ethnographic field project (2010–2011), surveying a random sample of 350 residents using a combination of modules from the Mini-International Neuropsychiatric Interview, alongside additional questions on violence and mental health care access. Semi-structured interviews are also conducted with 13 self-selected participants reporting current suicidal ideation, allowing for deeper exploration of lived experiences and the social dynamics of distress.

Noteworthy for the purposes of this literature review, the study operationalizes ethnicity—and by extension, Indigenous identity—through language heritage *and* fluency, creating three categories: 1) Bicultural Maya (speak both a Mayan language and Spanish fluently; parents speak a Mayan language); 2) Indigenous antecedent (do not speak a Mayan language, but parents do); 3) Non-Indigenous (neither participant nor parents speak a Mayan language).This approach reflects local categorizations, where fluency in a Mayan language is central to being recognized as Maya. Importantly, the authors recognize that this linguistic threshold can exclude self-identified Indigenous individuals and may create a liminal identity status that increases acculturative stress.

Findings show that 15.7% of survey participants screen positive for suicidality. Suicidal ideation correlates significantly with ethnic identity, psychiatric illness, experiences of violence,

and gender. Notably, individuals with Indigenous heritage but without fluency in a Mayan language—those in the 'Indigenous antecedent' category—emerge as particularly vulnerable to suicidal ideation. The authors offer a compelling interpretation: loss of language fluency may contribute to a form of social exclusion or identity-based distress, further compounded by discrimination and barriers to acceptance in both Indigenous and non-Indigenous spheres. Language fluency, meanwhile, may buffer against suicidality not simply because of linguistic skill, but because it acts as a gateway to full community membership, belonging, and cultural continuity. While those without language fluency may retain Indigenous self-identification, the social recognition and psychological security that come with fluency may be missing. Qualitative interviews support this idea, as participants describe feelings of displacement, exclusion, and marginalization, regardless of their formal ethnic categorization.

While this study demonstrates important connections between language heritage and well-being at the individual level for the community under investigation, it leaves open the question of how or if this relationship extends to other communities (even in the same context), or how variations in language heritage across communities relate to community variations in suicidality. Nevertheless, the study's use of heritage language status as an objective ethnic marker is noteworthy—it, too, goes beyond binary indicators of language knowledge to consider relational and intergenerational dimensions of language loss, and in so doing presents yet another linguistic modality beyond knowledge with potentially important implications for research into the relationship between language and well-being.

Gibson et al. (2021) examine the relationship between community cultural continuity and suicide rates among Aboriginal and Torres Strait Islander youth in Queensland, Australia. This

study focuses on youth aged 15–24 and analyses suicide deaths recorded between 2001 and 2015 using data from the Queensland Suicide Register (QSR). The researchers aim to determine whether protective cultural factors—specifically including Indigenous language use—can mitigate elevated suicide risk in communities marked by high levels of discrimination, socioeconomic disadvantage, and geographical remoteness.

The analysis unfolds in three phases. First, the authors compare suicide rates in areas with high versus low levels of cultural continuity, defined through two indicators: the proportion of Aboriginal and Torres Strait Islander residents who speak an Indigenous language at home, and an index of cultural social capital measuring participation in cultural or community events and connection with family and friends (especially other Aboriginal and Torres Strait Islander people). Due to skewed distribution in language use, communities are classified as 'high' if at least 5% of the population reports speaking an Indigenous language at home. The second phase compares suicide rates in areas characterized by high versus low risk on three structural dimensions: racial discrimination, socioeconomic disadvantage, and remoteness. The third phase combines these categories to examine whether cultural connectedness moderates suicide risk in high-risk settings.

Results show that suicide rates for First Nations youth are 59% higher in areas with low cultural/social capital compared to those with high levels ($RR = 1.59$, $p < 0.01$). However, suicide rates do not differ substantially between areas of low and high Indigenous language use overall ($RR = 1.13$, $p = 0.47$). In high-risk communities (e.g., low socioeconomic resources), those with low cultural social capital exhibit suicide rates 57% higher than their culturally stronger counterparts ($RR = 1.57$, $p < 0.01$). In regional and remote communities, suicide rates

are higher where Indigenous language use is low (*RR* = 1.35, $p = 0.04$), although the corresponding difference for cultural social capital does not reach statistical significance. Among areas reporting high levels of racial discrimination, suicide rates are higher in communities with low cultural social capital (*RR* = 1.88, $p < 0.01$) and low Indigenous language use (*RR* = 1.53, $p = 0.04$) compared to communities with similarly high discrimination but stronger cultural indicators.

This study offers valuable insight by examining how cultural factors—namely Indigenous language use and cultural social capital—interact with broader socioeconomic and geographic risks to influence suicide rates. Although the binary high/low threshold set at 5% may oversimplify the relationship between continuity of traditional language and well-being (potentially masking subtler patterns in communities with small populations or where heritage language knowledge continues to exist more passively than through fluent use), measuring *how* language is used at the community level in this context provides meaningful insights. The design of the analysis allows for a nuanced understanding of how cultural continuity may buffer against elevated risk in disadvantaged or remote communities, revealing effects that might not be apparent when cultural factors are considered in isolation. Particularly noteworthy is the finding that protective cultural influences—including language—become more pronounced in high-risk environments, emphasizing a dynamic, context-sensitive role for culture in shaping mental health outcomes.

2.3: Inuit Culture and Well-Being

Culture and language have long been recognized as vital to Inuit well-being by Inuit themselves, particularly in relation to mental health and suicide. Inuit Tapiriit Kanatami, the organization representing Inuit in Canada, highlight culture and language in their 2014 report

Social Determinants of Inuit Health in Canada as key components of well-being for Inuit. They further note that, although most Inuit continue to speak an ancestral language, these numbers are declining, and rapid cultural and linguistic changes should be seen as challenges to Inuit well-being. The same organization's 2019 report *Promising Practices in Suicide Prevention Across Inuit Nunangat* emphasizes the effectiveness of programs like 'Learning Language and Loving It' in the Inuvialuit region and Language Nest programs in Nunatsiavut, which foster cultural connection and emotional development for young Inuit. These initiatives are seen as integral not only to broader language reclamation approaches, but also suicide prevention strategies.

Despite this recognition of culture's connection to health for Inuit, academic understandings of the topic are only emerging. Frazer and Giles (2023), for instance, explore the extent to which sport and traditional Inuit games are recognized as cultural tools for suicide prevention across Inuit Nunangat. Their analysis focuses on the National Inuit Suicide Prevention Strategy and three regional prevention frameworks from the Inuvialuit Settlement Region, Nunavut, and Nunavik (omitting Nunatsiavut due to the absence of a strategy there at the time of research). Employing a qualitative content analysis, they manually search for keywords related to sport and traditional games (e.g., sport, exercise, traditional games) and code for frequency and relevance. Out of six total appearances of these terms across all documents, only three are relevant to their research question—indicating a large gap in the authors' view in how such cultural activities are integrated into policy discourse on suicide prevention. The study does not directly operationalize language, nor does it assess outcomes; instead, it identifies an absence: that cultural forms of physical activity remain largely unrecognized within official strategies. While the work underscores the potential of sport and games to foster cultural continuity and psychosocial support, it does not provide evidence for their current effectiveness

or link these activities to mental health outcomes in Inuit communities. The findings suggest that although sport may be an underutilized avenue for promoting well-being, the methodological design—focused narrowly on keyword mentions in policy documents—limits the study's capacity to establish correlational links between traditional games and suicide prevention.

Healey (2008) undertakes an exploratory qualitative study to understand Inuit women's perspectives on health and well-being in one Nunavut community, with a particular focus on cultural determinants. Using a case study method and in-depth, face-to-face interviews, the research draws on a purposive sample of self-identified Inuit women. Participants were recruited until thematic saturation was reached at nine individual interviews. The interview guide focused on everyday life and broader health determinants, with participants reflecting on both their own experiences and those of women in their community. Data were analysed using the immersion/crystallization technique, allowing themes to emerge organically through iterative engagement with the transcripts.

Language emerges as a central element of identity and well-being in the narratives shared by participants, with Inuktitut described not only as a means of communication but also as a marker of belonging and cultural legitimacy. The women often link their ability—or inability—to speak Inuktitut with their sense of being "an Inuk," reporting emotional consequences such as grief, shame, and diminished confidence when language proficiency is lacking (p. 29). Several participants recount experiences where limited fluency led to social exclusion or internalized stigma, and many express concern about the younger generation's declining command of the language. As one participant put it: "I'm supposed to be Inuk and I can't speak my language fully. It kind of, I kind of got lost" (p. 29). Language, in this sense, is not directly measured but is

deeply felt and articulated as a fundamental axis of cultural continuity, tied to identity, self-worth, community belonging, and emotional health.

The study's qualitative approach offers rich, textured insight into the lived realities of Inuit women and the deeply embedded role of language in cultural identity and well-being. Unlike quantitative research, which may reduce language to surface-level metrics (e.g., individual proficiency levels, community proportions of speakers), this study illuminates its subjective significance and psychological impact. However, the design limits its ability to generalize findings or assess direct links to suicide or mental illness. As such, while it powerfully demonstrates the emotional toll of language loss, it does not attempt to isolate language as a discrete protective or risk factor for suicide. Nonetheless, it lays crucial groundwork for understanding the psychosocial consequences of cultural disruption and affirms the centrality of Inuktitut in the maintenance of Inuit well-being.

Research that specifically examines the relationship between Inuktut language vitality and well-being remains limited and herein lies the gap which this study intends to address. While some research has emerged from Inuit contexts in Kalaallit Nunaat (Greenland), the findings there have so far not been transferable to the context of Inuit living in Canada. Bjerregaard and Curtis (2002) conduct a quantitative investigation into the mental health of Inuit in Greenland and Denmark by examining the relationship between suicidal thoughts, socioeconomic and cultural variables including self-reported language abilities. Drawing on two large surveys from the 1990s—one conducted through in-person interviews in Greenland and the other by mail among Greenlandic Inuit living in Denmark—the study explores how mental health outcomes correlate with respondents' age, gender, childhood conditions, place of residence, and language proficiency.

Language here is treated as a multi-level variable based on fluency in Greenlandic and Danish, allowing for a finer distinction between proficiency levels among monolingual and bilingual individuals. Despite this more thorough operationalization, no degree of language proficiency emerges as a significant predictor of suicidal ideation among respondents in Greenland. In Denmark, there is a near-significant trend suggesting that those with bilingual competence experience lower rates of suicidal ideation compared to those with limited or no Greenlandic proficiency, though none of the categories reach statistical significance on their own. The analysis reveals that suicidal ideation is more common among younger people in both samples, especially in Greenland, where young women and residents of the capital Nuuk report the highest rates. Among migrants in Denmark, suicidal thoughts are more closely associated with a Danish childhood—an effect that varies with age—but again, not strongly tied to language. Meanwhile, language is more clearly associated with GHQ cases (i.e., general psychological distress), especially in Greenland, where bilingual or Danish-only speakers show better outcomes than those who speak only Greenlandic.

This study's strengths as a quantitative analysis lie in its use of detailed measurement and large, stratified sample. However, its findings highlight the challenge of using language proficiency as a stand-in for cultural integration or continuity. In Greenland, where virtually all Inuit speak Greenlandic and where the language holds official status and wide institutional support, its role in mental health may differ substantially from that in Indigenous contexts where the language is threatened. The authors themselves note that the nearly universal use of Greenlandic limits their ability to assess its potential protective role—a limitation that underscores the non-transferability of these findings to Inuit in Canada, where Inuit languages are under comparatively greater threat.

Following this study, Bjerregaard and Lynge (2006) likewise examine the dramatic rise in suicide among Inuit in Greenland in the decades following modernization parallel to the suicide crisis among Inuit living in Canada, with rates peaking among youth aged 15–24—especially young men, who die by suicide at rates of 400–500 per 100,000 person-years. Their study combines register-based analyses of all suicides in Greenland between 1968 and 1999 with survey data from Greenland (1993–1994) and among Inuit in Denmark (1997–1998), focusing on how suicidal ideation correlates with socio-economic factors, including language ability, urbanization, and childhood conditions.

The analysis of 1,203 registered suicides reveals regionally staggered suicide peaks (earlier in Nuuk, later in West Greenland, and highest in remote East Greenland at the time of publication), and identifies a strong relationship between suicidality and factors such as poor emotional environments, exposure to alcohol misuse and domestic violence—seen as facets of a broader 'modernization package' rather than as isolated causal mechanisms. Language proficiency is operationalized here using four categories: Greenlandic only, Greenlandic with some Danish, fully bilingual, and Danish only. In Greenland, no statistically significant association is found between language category and suicidal thoughts. In Denmark, however, Inuit who are fully bilingual (in Greenlandic and Danish) are somewhat less likely to have had suicidal thoughts than those who are Danish-dominant or only partially proficient in Danish ($OR = 0.6$, $p = 0.06$). This study thus demonstrates a nuanced attempt to quantify and categorize language proficiency rather than treating it as a binary variable. However, this approach measures engagement with language in terms of its communicative utility and as a socioeconomic boon relative to employment and material resources rather than exploring its symbolic or relational roles in Indigenous identity and well-being. Furthermore, the divergence

in findings between the Greenland and Denmark samples complicates attempts to extrapolate the results to a Canadian context, where the sociopolitical landscape, linguistic histories, and colonial trajectories differ. While bilingualism in Denmark appears to carry some protective benefit in the context of this study, this may reflect integration into a dominant culture more than connection to Inuit cultural continuity. The findings thus contribute to the broader discourse on language and health but raise questions about comparability and conceptual clarity across different regions of the Inuit homeland.

Granheim et al. (2021) investigate how suicidal thoughts and suicide attempts relate to socio-demographic, psychosocial, and environmental factors among Arctic Indigenous adolescents, with a focus on the role of Indigenous language competence. Recognizing that suicide is one of the leading causes of death among Indigenous youth—and that particularly high rates in the Arctic reflect pressing health and societal challenges—the study aims to build understanding by comparing statistical patterns among Sami and Greenlandic Inuit adolescents. Drawing on two large-scale adolescent health surveys—The Norwegian Arctic Adolescent Health Study (NAAHS) and Well-being among Youth in Greenland (WBYG)—the researchers analyse responses from 442 Sami and 399 Greenlandic Inuit youth, all aged 15–16.

Using multivariable logistic regression, the study explores how suicidal behaviour correlates with family background, school experience, peer relationships, exposure to suicide in close relations, and competence in an Indigenous language. Language is operationalized through self-assessment: participants who report speaking Sami or Greenlandic ‘well’ or ‘very well’ are classified as having Indigenous language competence, while those who indicate ‘with difficulty’ or ‘not at all’ are not.

The findings reveal a strong trend (*OR* = 2.51, *p* = 0.07) toward more suicide attempts among Sami youth who do not speak Sami, pointing to a possible protective effect of Indigenous language competence—an interpretation that echoes prior studies of Inuit migrants in Denmark and certain Canadian Indigenous contexts. For Greenlandic Inuit youth, however, the study finds no significant association between language competence and suicidal behaviour. The authors suggest this may be due to the near-universal fluency in Greenlandic among the study population, which limits the visibility of variation in language competence and its effects. They also note that the Sami population has had a longer historical period of adjustment to colonial and cultural change than the Inuit in Greenland, potentially contributing to differences in mental health outcomes and their relation to cultural factors.

While this study offers important comparative insight into Arctic Indigenous youth mental health, its relevance to the Canadian Inuit context is limited. The consistently high rates of Greenlandic fluency among participants, the differing colonial trajectories of the Sami and Inuit, and the structural differences between Greenland and Canada (such as language policies, education systems, and sociopolitical autonomy) all complicate the direct transfer of these findings to Inuit communities in Canada, where Inuktut language competence varies considerably by region and is often more precarious.

Haggarty et al. (2008) offer a (rare) quantitative investigation into the relationship between language preference, psychological distress, and suicidality within an Inuit community in Nunavut. This study surveys 111 Inuit adults, collecting demographic data (including age, gender, and preferred language for the survey) and administering standardized instruments to assess symptoms of depression, anxiety, and recent suicidal ideation and behavior. Suicidality is measured using four addressing recent thoughts, plans, and attempts. The data show strikingly

high rates of suicidality: nearly half of respondents report suicidal ideation in the past week, and 30% report attempting suicide in the previous six months. Younger respondents (under 35), those with elevated anxiety, and those who prefer English over Inuktitut show significantly higher risks of suicidal ideation and behavior. Language preference serves as a key variable of interest (and the only operationalization of cultural factors of suicide risk included in the study). The findings show that respondents who prefer Inuktitut are less likely to report a wish to die in the previous six months compared to English-preferring respondents (41% vs. 67%). Haggarty et al. interpret this trend as suggestive of the protective role that cultural orientation—or enculturation—may play in mitigating suicidality given that language preference, while a crude proxy, potentially reflects varying degrees of connection to Inuit traditions and identity.

Critically, the study contributes rare empirical evidence to the discourse on cultural continuity and mental health in Nunavut, particularly by incorporating language as a variable in individual-level analysis. However, the study's reliance on language preference as an indicator of cultural integration is methodologically limited given that it may capture educational background, institutional familiarity, or convenience, rather than deeper cultural embeddedness. The small sample size and focus on a single community also limit the generalizability of the findings. Still, the results align with broader literature suggesting that stronger ties to Inuit language and culture may serve as protective factors for mental well-being, reinforcing calls for culturally grounded approaches to suicide prevention across Inuit Nunangat.

Newell et al. (2020) offer another one of the few large-scale, quantitative studies to examine the relationship between cultural continuity and health outcomes among Inuit. Motivated by earlier work linking cultural continuity to reduced suicide rates in First Nations communities, the study aims to determine whether similar relationships can be observed in Inuit

populations, using self-rated health as the outcome variable. The sample combines data from the 2001 and 2006 Aboriginal Peoples Survey (APS) Arctic Supplements, yielding a weighted cohort of respondents aged 15 and older living in Inuvialuit, Nunavik, Nunavut, and Nunatsiavut. Across both survey waves, over 14,000 respondents identified as Indigenous, with response rates above 80%.

Cultural continuity is operationalized through two main indicators: (1) an index measuring access to services in an Aboriginal language, and (2) a set of variables specific to Inuit cultural life, such as harvesting and consuming country foods and satisfaction with local governance. Notably, access to services in an Indigenous language requires respondents to already speak an Aboriginal language—limiting the index to a subsample. The outcome measure—self-rated health—is dichotomized into 'positive' (excellent, very good, or good) and 'negative' (fair or poor) health statuses. Logistic regression models test the predictive power of cultural continuity on health, controlling for both general and Inuit-specific social determinants, and demonstrate a consistent, positive relationship between cultural continuity and self-rated health. Having access to at least one government service in an Aboriginal language is significantly associated with a 30% increase in the odds of reporting good health. Similarly, participation in traditional harvesting activities and higher levels of satisfaction with local governance are also positively linked to well-being. These findings hold across multiple models and remain robust after controlling for standard sociodemographic and geographic variables.

While this study contributes a rare and important baseline for relating measurements of cultural continuity with well-being among Inuit, its methodological approach raises several interpretive challenges. Access to services in an Indigenous language is a novel and policy-relevant measure, but it may reflect bureaucratic engagement more than cultural resilience per

se—capturing the extent to which institutions, rather than individuals, accommodate Indigenous languages. Moreover, while self-rated health has been validated as a predictor of morbidity in other populations, its efficacy in relation to mental health and suicide is limited given that individuals may report positive health perceptions while living amid disproportionate community rates of suicide, depression, or substance abuse, making the measure somewhat blunt in relation to the urgent health disparities in Inuit regions. Nonetheless, Newell et al. (2020) make a valuable contribution to the empirical literature on language and well-being, especially by modeling the interactions of cultural and structural factors with Inuit health outcomes.

The body of research reviewed here provides evidence for the notion that cultural continuity—particularly through the maintenance and transmission of Indigenous languages—is positively connected to individual and community well-being, and potentially protective against suicide in certain contexts. Although the literature focusing specifically on Inuit populations remains emergent, the evidence available from Nunavut, where Inuktut remains widely spoken, suggests that such a relationship between Inuktut vitality and Inuit well-being may extend to this context as well. The persistence of high suicide rates despite relatively strong language retention in some regions may, in fact, highlight the urgency of moving beyond simplistic correlations and toward more nuanced, multi-dimensional understandings of cultural continuity and its relationship to well-being.

This leads directly to the second major insight gained through this review: a closer look at the methodologies employed across studies reveals recurring limitations (in many instances due to differing research goals and constraints on the availability of data) that, if purposefully addressed, could significantly strengthen the research landscape. One key concern is how language is operationalized. Most studies rely on binary or categorical measures of language

‘knowledge’ or ‘proficiency’—such as whether participants report speaking an Indigenous language ‘well’ or ‘at all’—which can obscure more complex patterns of language use, identity, and engagement. As UNESCO (2003) defines it, the ‘vitality’ of a language may refer not only to the absolute number of speakers but also intergenerational transmission, usage across social domains, adaptability to new media, and the presence of educational and literacy resources. Very few studies capture this broader language ecology, and, in effect, language is often treated as a static attribute rather than a dynamic cultural practice that can change in meaning and function across generations.

Moreover, many of the studies analysed here rely on cross-sectional data, offering only a snapshot of a particular moment in time. This approach is ill-suited to understanding the generational, evolving nature of both cultural and mental health trajectories. Since language vitality and suicide risk are both shaped by long-term, generational processes—including colonial policies, displacement, and cultural revitalization efforts—longitudinal approaches are better positioned to trace the deeper patterns and turning points that matter most. In small and often statistically volatile populations, such as those in remote Indigenous communities, capturing these temporal dynamics is crucial for avoiding misleading or overly deterministic conclusions.

Other methodological limitations noted include the frequent absence of community-specific context, which can flatten diverse Indigenous realities into homogenized categories. Few studies account for regional variation in access to health services, the differing political status of Indigenous languages, or the impact of policies around land, schooling, or media—all of which shape the cultural environment in which youth develop. Finally, relatively little attention has been paid to how language interacts with other aspects of cultural continuity, such as

participation in land-based practices, ceremonial life, or kinship networks, which might jointly shape resilience and mental health outcomes. Together, these gaps signal the need for future research that not only treats language as a multi-faceted, dynamic construct, but considers the relationship between language and well-being against a backdrop of temporal change as linguistic and public health realities shift and evolve.

Chapter Three: Methods

This chapter outlines the methods employed by this study to investigate whether changes in Inuktut language vitality are associated with changes in suicide rates across Nunavut communities. Section 3.1 describes the research design, including the rationale for using a two-point longitudinal quantitative. Section 3.2 details the data sources and variables used in the analysis, including five measures of language vitality and aggregated suicide rates across two time periods. Section 3.3 explains the statistical procedures employed, including linear regression modeling and the tests used to assess assumptions of model validity. Throughout, the approach is informed by the goal of generating findings that are both methodologically rigorous and potentially meaningful to the communities from which the data were drawn.

The study's design also draws on strengths-based and desire-based approaches (Tsosie, 2012; Tuck, 2009). Rather than centering narratives of damage, deficit, or decline, this study emphasizes the vitality and resilience of Inuktut as a potential protective factor that supports Inuit well-being. A strengths-based methodology does not deny the reality of ongoing colonial harms, but it resists defining communities solely through those harms. Instead, it highlights the continuities, capacities, and knowledge systems that persist despite such pressures, ensuring that the research reflects not just risks but also resources and strengths that matter for Inuit futures.

3.1: Research Design

In response to the methodological challenges brought out in the review of the literature, this study employs a quantitative, two-point longitudinal correlational design to investigate whether changes in community-level measures of Inuktut language vitality predict changes in suicide rates among Inuit living in Nunavut between 1999 and 2016. A quantitative research approach is chosen in line with seminal studies such as Hallett et al. (2007) and Oster et al.

(2014) for its capacity to capture territory-wide trends and patterns in the relationship between language vitality and mental well-being. While qualitative methods such as those employed by Healey (2008) offer valuable insights into individual experiences and localized contexts, a quantitative framework is suited to identify the broad, population-level correlations that may inform territory-wide interventions, policies, and resource allocation. Moreover, findings from this approach may also help to shed light on avenues for more in-depth examination or potential points of interest for qualitative or mixed-methods research.

The concept of language vitality employed here follows from UNESCO's (2003), which defines a language's vitality not only in terms of its absolute number of speakers, but also with consideration of broader factors such as intergenerational transmission, the presence and use of the language across social domains, and the availability of language education. In light of the more limited operationalizations of language—often reduced to 'knowledge'—seen in other studies, and because community-level data in this context are readily available in these forms, this study operationalizes language vitality using three indicators: knowledge of Inuktut, mother tongue status, and home use. This conception of language vitality thus aims at capturing the degree to which individuals and communities have access to a shared linguistic heritage in a way that acknowledges (at least some of) the different modalities and dimensions through which language may contribute to cultural identity and well-being.

Another key consideration in employing this quantitative approach is the unique challenge of analysing suicide as a health outcome. Not only is the act of intentional self-harm and its accompanying ideation a complex and dynamic pathology often characterized by silent suffering (Institute of Medicine, 2002), but its most severe outcome—death—is irreversible, making it that much more challenging for researchers to engage with individuals experiencing its

effects (Affleck et al., 2022; McQuaid et al., 2017). As such, measuring annual community suicide rates serves as an operationalization of mental well-being for this study's purposes of measuring communities' relative vulnerability to this critical health issue. While qualitative studies provide depth in understanding individual narratives, they cannot adequately capture population-level prevalence and trends to inform systemic interventions. Thus, the use of quantitative data, including incidence rates for completed suicides, offers a pragmatic means of assessing mental well-being at a community level and correlating it with similarly overarching linguistic trends.

Furthermore, a two-point longitudinal design is adopted over a cross-sectional approach to better understand the temporal dynamics of the relationship between language vitality and mental well-being, as well as to account for known regional disparities in Inuktut language vitality across Nunavut, particularly the longer-standing presence of English in the Kitikmeot region. These disparities are not expected to manifest uniformly in suicide rates; rather, it is hypothesized that shifts in language vitality will correlate with shifts in suicide rates, given this study's theoretical assumption that language decline and suicide risk are connected by the colonial processes that have undermined Inuit identity and well-being. It is important to note that this study is not truly longitudinal in the traditional sense, as it examines changes between two points in time rather than continuous tracking over an extended period. This design enables the examination of how shifts in language use and maintenance correspond to changes in mental health outcomes over time (specifically, the 17-year period following Nunavut's establishment as a territory in 1999). It should further be noted that more recent community-level data on these variables is not currently available, limiting the analysis to this time frame. This is particularly critical in a context where the effects of cultural and linguistic interventions may unfold

gradually across generations and require sustained observation to fully appreciate their impact. By tracking these relationships over this time frame, this research aims to provide a nuanced understanding of the dynamic associations between language vitality and well-being. In summary, this study employs a quantitative two-point longitudinal approach to address its dual objectives: (1) to identify territory-wide patterns in the relationship between language vitality and mental well-being, and (2) to elucidate the temporal dynamics of this relationship.

3.2: Data Collection

The study analyses data from all 25 communities in Nunavut, using publicly available data on language vitality and suicide rates from two sources: (1) a Statistics Canada report titled *Evolution of the Language Situation in Nunavut, 2001 to 2016*, and (2) a report prepared by Jack Hicks (2015) for Nunavut Tunngavik Inc. entitled *Statistical Data on Death by Suicide by Nunavut Inuit, 1920 to 2014*. Additionally, control variables including median income, unemployment, and high school completion rates, were obtained from the Nunavut Bureau of Statistics to account for socioeconomic factors that may influence these outcomes.

Language Vitality Measures:

Based on the available data from the report, five measures of language vitality were gathered for each community at two time points (2001 and 2016):

1. Proportion of Inuit reporting knowledge of Inuktut.[2]
2. Proportion of Inuit reporting Inuktut as their mother tongue.

[2] Language 'knowledge' is defined in the Statistics Canada report as the ability to conduct a conversation: the term is contrasted with mere 'understanding' insofar as some individuals may be able to *understand* what someone says to them in a language while not having the 'knowledge' enabling them to actively participate in a conversation (Langlois et al., 2019, p. 24).

3. Proportion of Inuit reporting use of Inuktut at home.
4. Proportion of Inuit reporting use of Inuktut at home as a main language.
5. Proportion of Inuit reporting use Inuktut at home as a secondary language.

For each measure, the difference between the 2001 and 2016 values was calculated to determine the change in that aspect of language vitality over the 15-year period.

Suicide Measures:

Suicide rates were calculated per 100,000 individuals for each community across two time periods: 1999–2006 and 2007–2014. The rates were derived by dividing the number of reported suicides in each community by the population size for the corresponding year and multiplying by 100,000. To account for potential volatility in small populations, rates were aggregated over eight-year time periods for each community. The change in suicide rates between the two periods was then calculated to assess whether rates increased, decreased, or remained stable over time.

3.3: Data Analysis

The data were analysed using linear regression analysis through SPSS Statistics version 29. This method of data analysis examines the relationship between one or more independent variables and a dependent variable to assess whether changes in any of the five measures of language vitality were associated with changes in suicide rates across the 25 communities. The time frames for language vitality (2001–2016) and suicide rates (1999–2014) were roughly aligned to capture ongoing trends in both variables. This framing assumes that changes in language vitality and suicide rates occur gradually over time, and that the 15-year period for

language vitality and the 16-year period for suicide rates provide a reasonable basis for assessing associations between these variables. Although this alignment is not exact, it allows for a meaningful exploration of whether trends in language vitality correspond to trends in suicide rates. Five regression models were created with each language vitality measure used as the independent variable, with the change in suicide rates serving as the dependent variable in each model while controlling for median income, high school completion rates, and unemployment rates (means and ranges included in Appendix B) consistent with the same method used by Oster et al. (2014).

Linear regression analysis relies on several key assumptions relating to the data, each of which was examined to ensure validity of the results and their interpretation. First, the assumption of linearity—that the relationship between each language vitality variable and changes in suicide rates is approximately linear—was assessed through scatterplots (Appendix A1). Visual inspection of these plots for each of the five models indicated generally linear relationships. Next, homoscedasticity refers to the assumption that the errors or 'residuals' from a model vary constantly across all levels of the predicted values whether they be high or low relative to the general trend of the model. This assumption was checked by examining scatterplots of standardized predicted values against standardized residuals (Appendix A2). These plots showed a random scatter without a discernible pattern, suggesting that homoscedasticity was met. The assumption of independence of residuals (that the residuals from the model should not be related to each other across observations) was evaluated by assessing the Durbin–Watson statistic for each regression model (included in Appendix A3). The Durbin–Watson values ranged from 2.016 to 2.407, which are close to the ideal value of 2, indicating that the residuals were independent and free from autocorrelation. Finally, the assumption of

normality of residuals —that the residuals follow a roughly normal distribution—was assessed using both the Shapiro–Wilk test and Q–Q plots. The Shapiro-Wilk test generates two key values: W and p where the W-value measures how closely the residuals follow a normal distribution, with values closer to 1 indicating better fit, while the p-value tests the null hypothesis that the residuals are normally distributed. For each model, the Shapiro–Wilk W-values (Appendix A3) ranged from 0.926 to 0.953, with associated p-values all greater than 0.05, indicating no significant deviation from normality. Q–Q plots (Appendix A4) further confirmed this normal distribution, showing residuals that closely followed the expected diagonal line.

Chapter Four: Results

This chapter presents the results of linear regression analyses of the relationship between changes in Inuktut language vitality and changes in suicide rates across Nunavut communities. Section 4.1 provides an overview of the language and suicide data, describing changes in suicide rates as well as overall trends in Inuktut vitality over the study period. Section 4.2 then summarizes the results of the regression analyses, highlighting significant associations between changes in language vitality and changes in suicide rates.

4.1: Descriptive Overview

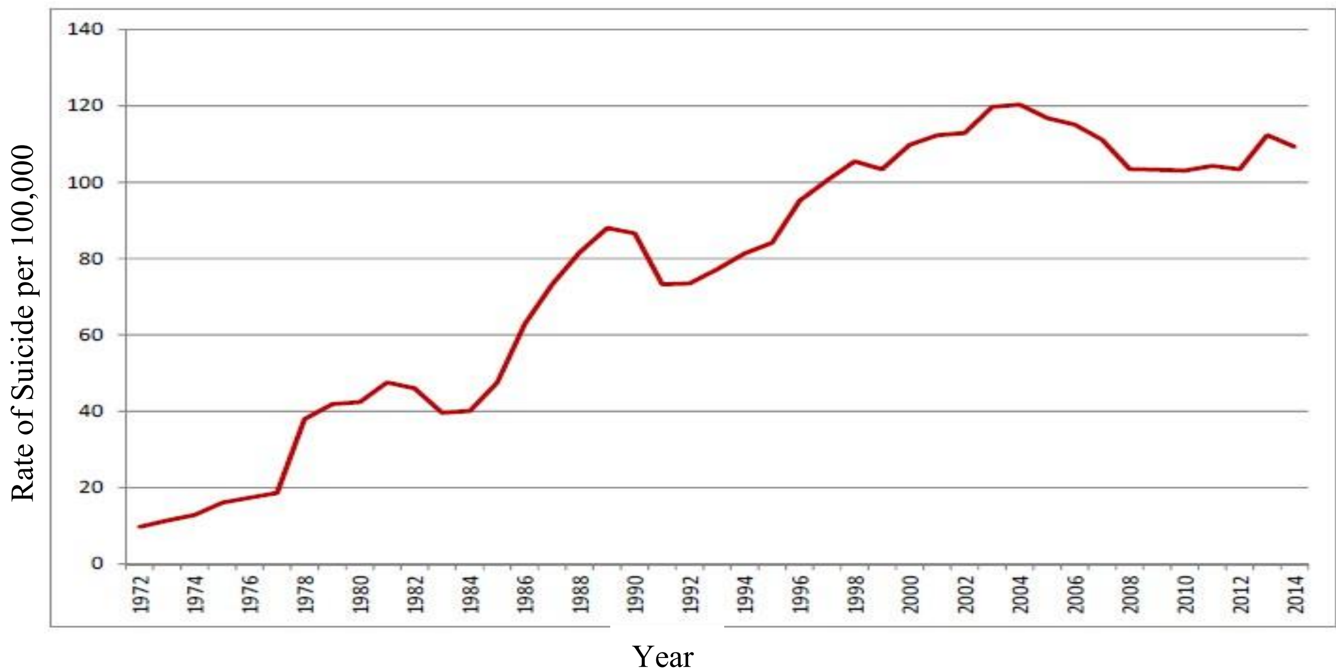
This section provides an overview of the descriptive statistics for language vitality and suicide rates in Nunavut over the study period both at the territorial and community level. The analysis examines trends in suicide rates over time, as well as trends in Inuktut knowledge, mother tongue status, and home use among Nunavut Inuit over a 15-year period.

4.1.1 Trends in Nunavut Community Suicide Rates (1999–2014)

The mean suicide rate for Nunavut during the period in question reached a peak of 120.3 per 100,000 in 2004. As seen in Figure 6, the territorial mean increased steadily from 1999 to 2004 before declining from 2005 to 2008, plateauing until 2012, and then rising again to 112.3 per 100,000 in 2013.

Figure 6

Rate of Death by Suicide by Nunavut Inuit, per 100,000, 5-year rolling average

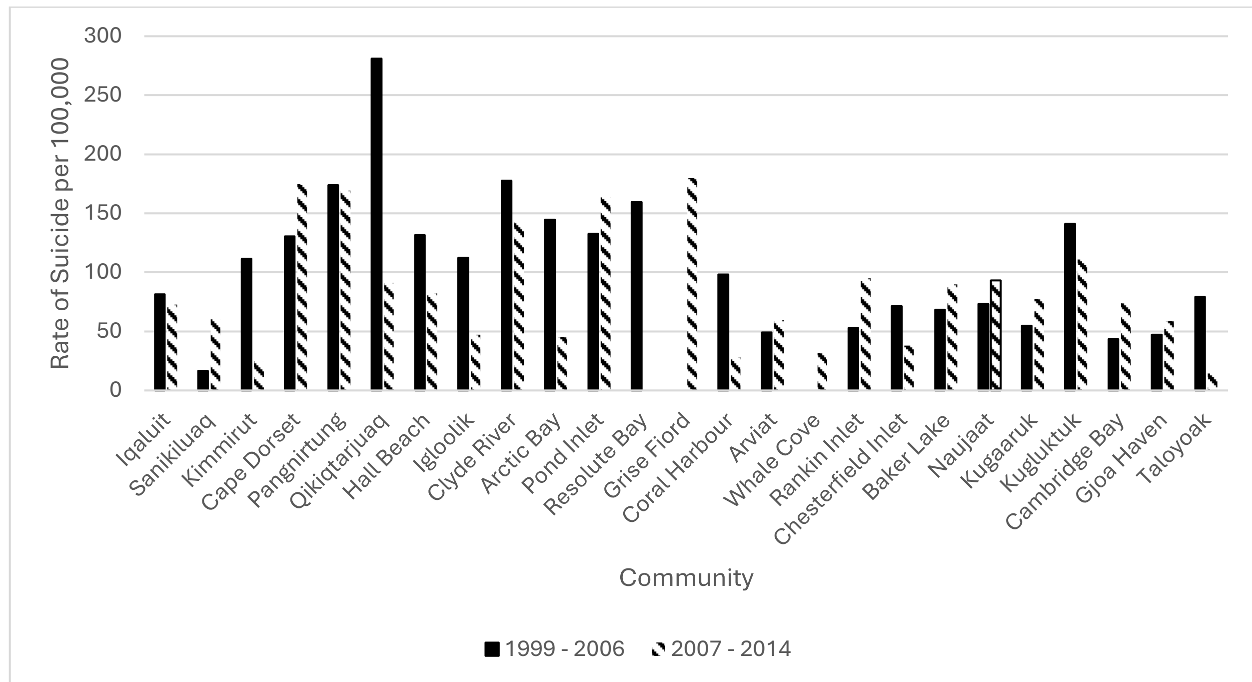


Note. From Statistical data on death by suicide by Nunavut Inuit, 1920 to 2014 (Hicks, 2015, p. 6).

Within the territory, suicide rates among Nunavut Inuit varied substantially between and even within communities during the two periods analysed, as is visualized in Figure 7.

Figure 7

Changes in Nunavut Community Suicide Rates (1999–2006 and 2007–2014)



Note. Based on data from *Statistical data on death by suicide by Nunavut Inuit, 1920 to 2014* (Hicks, 2015).

The mean community suicide rate decreased overall from 97.7 per 100,000 between 1999–2006 to 84.8 per 100,000 between 2007–2014.While the overall trend suggests a decline by about 13% (12.9 fewer per 100,000), the wide range of changes across communities and wide standard deviations shown in Table 1 indicate considerable variability, with some communities experiencing sharp declines while others saw increases: Cape Dorset, for instance, recorded a 33% increase in suicides between the two periods while Igloolik saw a 58% decrease.

Table 1

Trends in Community Suicide Rates across Nunavut (1999–2006 vs. 2007–2014)

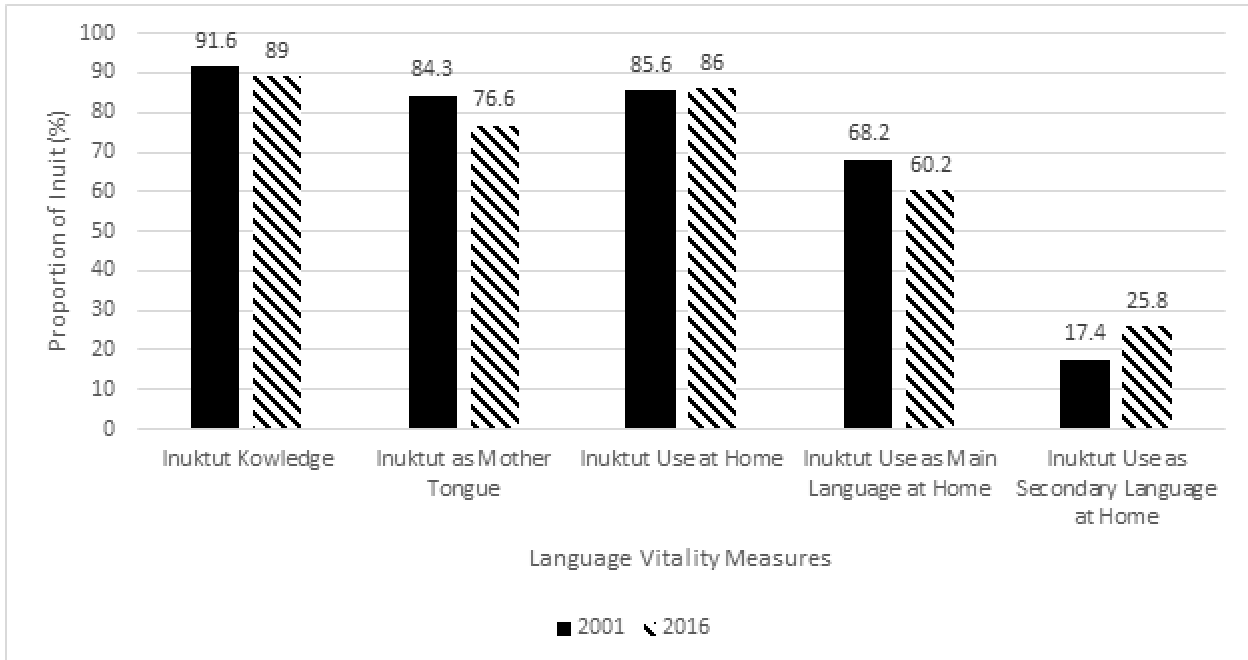
	Mean ± *SD* (per 100,000)	Range (per 100,000)
Suicide Rates for 1999 - 2006	97.7 ± 69.1	0.0–280.9
Suicide Rates for 2007 – 2014	84.8 ± 48.7	0.0 – 179.9
Change in Suicide Rates (1996–2006 to 2007-2014)	-12.9 ± 79.31	-189.70 – 179.9

4.1.2: Trends in Inuktut Vitality in Nunavut (2001–2016)

As Figure 8 shows, all measures of Inuktut language vitality (with the notable exception of Inuktut Use as a Secondary Language at Home) declined across Nunavut between 2001 and 2016, though with substantial variation between communities.

Figure 8

Changes in Language Vitality Measures among Nunavut Inuit (2001 and 2016)



Note. Based on data from *Evolution of the language situation in Nunavut, 2001 to 2016* by Lepage et al. (2019). See Appendix C for corresponding breakdowns for each measure visualised by community.

- **Inuktut Knowledge:** The mean community proportion of Inuit reporting knowledge of Inuktut declined from 92.8% in 2001 to 90.8% in 2016. Some communities differed substantially from the mean decrease of -2.0%, with changes ranging from -13.7% in Kugaaruk to +4.7% in Kugluktuk.
- **Inuktut as Mother Tongue:** A more pronounced decline occurred in the proportion of Inuit reporting Inuktut as their mother tongue, which fell on average by -6.7%, with some communities recording declines of up to -27.2% as in the case of Baker Lake. Only three communities recorded increases of this metric: Cape Dorset (+0.4%); Qikiqtarjuaq (+1.1%); and Arctic Bay (+2.3%).

- **Inuktut Use at Home:** This measure remained relatively stable, rising slightly from a mean of 87.3% in 2001 to 88.1% in 2016. The mean change of +0.8% ranged from -12.8% to +12.5%, indicating that while some communities experienced declines (Iqaluit, Resolute Bay, Grise Fiord, Whale Cove), others (especially ones in the Kitikmeot region such as Kugluktuk, Gjoa Haven, and Taloyoak) saw a growth in home use. However, the apparent stability of this aggregate metric belies important internal shifts: in some communities (e.g. Cambridge Bay), declines in main use were offset by increases in secondary use. This suggests that some households experienced language demotion, where Inuktut use shifted from main to secondary status while registering no change to overall use. Conversely, in other communities (such as Kimmirut), parallel increases in both main and secondary use point to language promotion, with Inuktut newly introduced or reinforced in the home.
- **Inuktut Use as Main Language at Home:** The proportion of Inuit who reported speaking Inuktut as their primary home language varied widely across communities with an overall decrease from a mean of 71.2% to 63.8%. Of 25 communities, 15 recorded declines in Main Use, with the steepest drops in Coral Harbour (-37.6%), Baker Lake (-25.4%), and Chesterfield Inlet (-23.6%). Increases in this metric were more modest—the largest was recorded by Pond Inlet with +3.2%.
- **Inuktut Use as Secondary Language at Home:** In contrast to—and, perhaps in some cases, in consequence of—the declines in main use, secondary use at home increased overall from a mean of 16.1% in 2001 to 25.6% in 2016. Iqaluit, for instance, recorded -15.9% drop in Inuktut use as a main language coincident with a +10.2% increase in secondary use, suggesting that gains in the latter came at the

expense of the former as Inuktut fell from main to secondary status in some households. Cape Dorset, meanwhile, recorded slight rises in both Main Use (+1%) and Secondary Use (+0.7%), indicating that some households there saw the introduction of Inuktut as a secondary language in the home during this time.

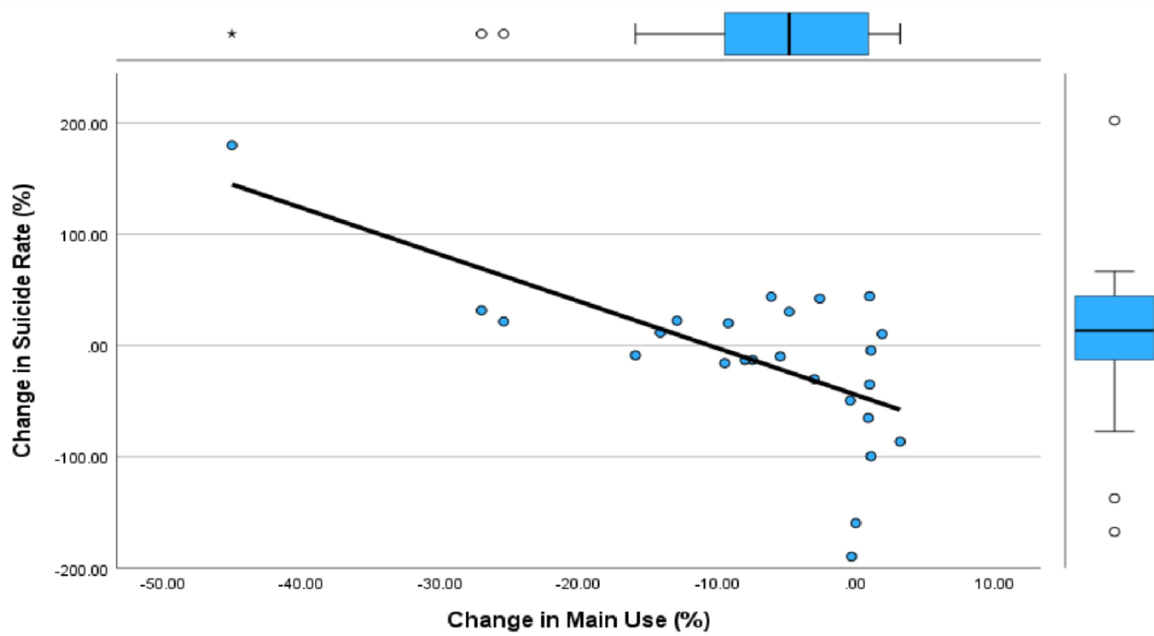
4.2: Key Findings

Regression analyses indicate that, of those language vitality measures modeled as predictors of changes in suicide rates, only changes in Inuktut as the main language at home are significantly associated with changes in suicide rates across Nunavut communities for the period analysed, (R^2 = 0.429, β = –4.217, p = 0.001). This inverse, negative relationship suggests that declines in the proportion of Inuit reporting Inuktut as their primary home language are associated with increases in suicide rates at the community level and vice-versa, and this association remains significant even after accounting for socioeconomic control variables (p = 0.003) and. In contrast, none of the other four language variables were significantly associated with changes in suicide rates. Changes in knowledge of Inuktut were not a significant predictor in either the unadjusted model (p = 0.318) or the model with controls (p = 0.486), nor were changes in the status of Inuktut as a mother tongue (p = 0.956; with controls, p = 0.734). Overall Inuktut use at home was also not significantly related to suicide rates (p = 0.658; with controls, p = 0.854). Although speaking Inuktut as a secondary home language was marginally associated with higher suicide rates in the unadjusted model (p = 0.068), this association was attenuated and remained nonsignificant after adjusting for control variables (p = 0.099). Appendix D gives a full summary of regression analysis results for each model (with and without adjustment for socioeconomic control variables) as well as a breakdown and contextualization of the statistical

information and terms contained therein. The significant relationship between changes in suicide and changes in main use is visualized in Figure 9.

Figure 9

Changes in Community Suicide Rates (1999–2014) by Changes in Main Use of Inuktut at Home (2001–2016)



Chapter Five: Discussion

This section interprets and discusses the study's findings relating to language vitality, mental health, and social determinants of well-being. While the findings contribute to ongoing research on cultural continuity and well-being, they also shed light on some of the limits inherent to quantitative studies of the same nature and method as this one. Those contributions and limitations are explored here along with the future directions for research to which they point. It is worth noting that the undertaking of this research and its interpretation have been guided throughout by principles relevant to Indigenous research including relational accountability, community relevance, and strengths-based inquiry (Tsosie et al., 2024). Rather than treating language vitality as a neutral or static variable, this study approaches it as a cultural asset—an expression of Inuit identity, intergenerational knowledge, and relational strength. By focusing on language use within the context of suicide prevention, the research seeks to illuminate a potential protective factor rooted in Inuit lifeways, not simply to theorize about its statistical significance but to contribute something of possible value back to the communities from which the data originate. This approach rejects the notion of knowledge as an extractive or externalized academic product, instead framing the work as accountable to the lived realities and aspirations of Inuit communities. In this light, the findings are offered not just as contributions to scholarly literature, but as possible tools for supporting Inuit-led strategies that foreground cultural strength, local knowledge, and community resilience in the face of an ongoing suicide crisis.

5.1: Interpretation of the Results

This study identifies important variation with respect to how different dimensions of Inuktut language vitality are related to changes in suicide rates across communities in Nunavut. Among the five language vitality indicators examined, the changes in Inuktut use as the main

language in the home yielded a statistically significant association with suicide rate changes (β = –4.217, $p = 0.001$; $R^2 = 0.429$). This result remains robust when controlling for key socioeconomic variables—median income, unemployment rate, and high school completion rate—suggesting a stable, inverse relationship between increasing home use of Inuktut and declining suicide rates (β = –3.733, $p = 0.003$; adjusted $R^2 = 0.478$). This finding lends support to the idea that home language use reflects cultural transmission and a means of identity formation, both of which can contribute to psychological resilience (Hallett et al., 2007).

In contrast, other language indicators exhibited weaker or non-significant associations with suicide rates. Changes in mother tongue and knowledge of Inuktut produced negative but statistically non-significant coefficients, regardless of whether socioeconomic controls were applied. Similarly, changes in overall home use showed no meaningful relationship with suicide rates, with very low R^2 values and high *p*-values across both models. Notably, secondary use of Inuktut displayed a positive coefficient that approached statistical significance (β = 2.076, $p = 0.068$; $R^2 = 0.137$), though this association weakened slightly when controls were introduced (β = 2.270, $p = 0.099$). While not conclusive, this trend-level finding may point to differing dynamics associated with secondary rather than primary language use in the home and may warrant further investigation.

These results suggest that not all markers of language vitality capture aspects of linguistic practice that are potentially pertinent to suicide rates at the community level, a finding which reaffirms that not all dimensions of language relate to well-being in the same way. These null findings also point to limitations in how language vitality is currently assessed and operationalized in studies such as this one. It is possible, for instance, that measurements of language knowledge (self-reported or otherwise) create overly broad categories which are too

blunt to detect meaningful differences at the community level. In Nunavut, where Inuktut remains relatively widespread, measurements of domain-specific practices based on observable behaviours rather than self-assessed ability or perceived proficiency may more precisely capture real trends, helping to distinguish between diverse linguistic situations rather than collapsing them into a single, undifferentiated category.

Alternatively, the variation in significance across models may reflect real differences in how different facets of language connect (or fail to connect) with suicide risk, suggesting a differentiated relationship between language vitality and well-being. The differences in significance between models may reflect the relative proximity of each indicator to actual intergenerational transmission and the routine enactment of cultural practices that shape identity and resilience. The most intimate and consistent form of language practice—daily use in the home—may be more immediately tied to intergenerational transmission, family relationships, and identity formation than, say, self-reported proficiency or occasional use in institutional contexts.

While this study focuses on statistical associations, it bears acknowledging that these findings are situated within a broader context in which language loss and suicide risk share common structural and historical roots. Indeed, many of the same structural and historical forces that have contributed to declines in Inuktut language transmission and use in Nunavut—such as the intergenerational impacts of residential schooling, forced relocations, economic marginalization, and environmental stressors (Amano et al., 2014)—are also recognized as key drivers of suicide risk in Indigenous communities (Kirmayer et al., 2011; Kirmayer, Fletcher & Watt, 2009; Kral, 2013; Kwiatek, 2023). Thus, these findings must be read within a context that acknowledges this shared causality, and which understands language loss and suicide not as

discrete phenomena in Nunavut but as related outcomes of historical and ongoing colonial disruption. As such, this study reinforces the importance of understanding language not only as a communicative tool, but also as a dimension of cultural continuity linked to collective well-being.

5.2: Implications

The findings of this study contribute to the growing literature linking cultural continuity—especially language vitality—to community-level well-being (e.g., Sullivan, 2018; Whalen et al., 2022). At the same time, they offer a more differentiated view of that relationship. While language retention is often treated as a uniform indicator of cultural resilience, this study shows that different dimensions of language vitality do not relate equally to changes in suicide rates.

5.2.1: Empirical Implications

In the context of Nunavut, where Inuktut remains relatively strong in terms of number of speakers compared to other Indigenous languages in Canada, the results of this study suggest that *how* and *where* a language is used is at least as important as whether it is retained in general. Given that only the change in main use of Inuktut in the home showed a statistically significant relationship with changes in suicide rates, habitual use of language in family life—where identity is formed, emotional bonds are shaped, and cultural transmission takes place—may be particularly relevant to mental health outcomes compared to other language metrics in this context. In contrast, other indicators such as language knowledge, mother tongue identification, or occasional (secondary) use showed either weak or non-significant associations. These distinctions challenge more simplified or aggregate measures of language vitality that may obscure important variation in lived linguistic practice. The near-significant, positive association

between changes in secondary home use and suicide rates further highlights a need for more domain-specific investigation. This result, though not definitive, raises the possibility that different patterns of bilingual or partial home use may not offer the same protective benefits—or may reflect communities in different stages of language shift or stress.

Altogether, these findings point to the empirical importance of disaggregating language vitality into specific domains of use, and of paying closer attention to the *function* of language in daily life rather than only its presence or absence. Future research in other Indigenous contexts could benefit from similar distinctions, especially in regions where language revitalization efforts focus on institutional settings (e.g., schools, signage, media) but do not necessarily extend into the home. By demonstrating that not all expressions of language vitality carry the same weight in relation to well-being, this study reinforces calls for more fine-grained, context-sensitive approaches to measuring and supporting Indigenous language use. It also emphasizes the value of community-level analyses that recognize more dimensions of language practice than knowledge alone.

5.2.2: Methodological Implications

The mixed results in this study also draw attention to some of the methodological limitations in this field of study. Quantitative indicators such as self-reported knowledge or use may be too blunt to capture the cultural and emotional significance of language in daily life. That only the main use variable reached statistical significance underscores the need for contextually grounded and theoretically informed measures. Broader evaluative frameworks—such as UNESCO's (2003) indicators of language vitality, which include intergenerational transmission and domain-specific trends—provide a more nuanced and appropriate basis for the development of such measurement tools.

This study also illustrates the constraints of short-term longitudinal and aggregate-level analyses. Although it attempts to assess change over time, the available data remain limited in scope and granularity. Future work would benefit from longitudinal datasets that track both language use and health outcomes over multiple decades. Combining these with qualitative approaches and community-led insights could offer a richer, more contextualized understanding of how language intersects with well-being.

5.2.3: Practical (Policy) Implications

From a policy perspective, these findings support existing efforts to integrate cultural and linguistic revitalization into public health and suicide prevention frameworks—but with important caveats. The significant association between increased home use of Inuktut and lower suicide rates affirms the importance of supporting language use in the most immediate and relational contexts, especially the family. This reinforces the value of community-based programs that foster intergenerational transmission and everyday use of Inuktut in domestic life—not just its presence in schools or institutions. However, the lack of significance across other language indicators suggests that policy approaches cannot assume that all forms of language promotion will yield equal benefits for well-being. Programs that focus exclusively on formal education, translation of services, or symbolic recognition of language rights may not be sufficient so long as they do not also nurture spaces for daily, relationally grounded language use.

In this light, ongoing policy initiatives such as *Inuusivut Annirnaqtut 2024–2029* and the *National Inuit Suicide Prevention Strategy* remain vital. Both emphasize cultural continuity and language as central pillars of public health and community well-being. This study finds evidence that supports the idea that investments in family language programs, early childhood immersion,

and community-controlled media may prove especially effective in strengthening the kinds of language practices most closely associated with well-being, and that supporting Inuktut language use at home and in public life is not merely a cultural preservation effort but a critical component of long-term community resilience and suicide prevention in Nunavut.

5.3: Limitations

An important limitation of this study lies in the data itself. Suicide data is often underreported or misclassified due to the stigma and taboos surrounding suicide in many communities or from the difficulty in distinguishing suicides from accidental deaths (Chachamovich et al., 2015; Hicks, 2007). The underreporting of suicide or the misclassification of causes of death may lead to inconsistencies in the data, which could affect the results and limit the reliability of the study's conclusions.

Another limitation arises from the use of community-level data. This approach aggregates information for entire populations, which can be useful for identifying broad patterns, but it lacks the granularity needed to understand individual experiences or the variability within communities (Drawson et al., 2017). Within a single community, some individuals may experience high levels of connection with ancestral language and cultural continuity, while others may not, yet the community is categorized based on an overall percentage. This aggregation can obscure nuances such as the protective effects of language use at an individual or family level, which might be more clearly understood through more specific data.

Alongside the limitations of its primary data, the study's reliance on control variables such as median household income, high school completion, and unemployment rates cannot fully capture the complex socioeconomic and cultural factors that mediate both language transmission

and suicide rates. Important variables such as access to healthcare, housing conditions, food security, the availability of cultural programs, and environmental connection could also affect the outcomes (Richmond & Ross, 2008) but were not included due to data limitations. Moreover, the standard measures of socioeconomic status used in this study (median income, high school completion, and employment) may not reflect the unique economic and educational realities in remote Inuit communities, where informal economies and traditional forms of education play an important role but are not captured by these conventional metrics (Harder& Wenzel, 2012; Wenzel, 2009).

A further limitation must be noted regarding the study's use of the R^2 statistic, which does not account for causality. While R^2 can reveal the strength of the association between variables, it cannot explain the underlying mechanisms or causative factors at play (Freedman, 2009). This makes it difficult to draw definitive conclusions about how changes in language use directly influence suicide rates, particularly in the presence of other known contributing factors such as historical trauma and socioeconomic stressors.

The longitudinal scope of the study is also conditioned by the availability of data, with suicide rates spanning from 1999 to 2014 and language use data from 2001 to 2016. While these data points are valuable, they may not capture long-term trends, or the effects of policies contributing to the erosion or revitalization of Inuktut over multiple generations. Cultural and linguistic change is often slow and unfolds over decades (Nettle & Romaine, 2000), meaning that a more extended time frame would provide a clearer picture of the long-term impact of these policies on language retention and mental health outcomes.

In addition to these temporal considerations, there is also a limit to the geographic and cultural generalizability of the study's findings. This research is specific to Inuit communities in Nunavut which itself is host to disparate regional language situations (Langlois et al., 2019), and generalizing the results to other Indigenous populations or even to Inuit populations in different parts of Inuit Nunangat (such as Greenland or Alaska) is not immediately possible given the substantial differences in the linguistic landscape and the varied cultural, historical, and political contexts of different Inuit groups and other Indigenous populations (Grenoble et al., 2018). As such, the study’s findings may not be directly transferable to other regions or groups without careful consideration of their local contexts.

Finally, this study relies entirely on quantitative analysis, which necessarily limits the scope of insight into the lived experiences and nuanced social and domestic contexts that shape the relationship between language, cultural continuity, and mental health. While scholars such as Nyman and Carriere (2014) and Kral (2011) have emphasized the importance of qualitative approaches—particularly in Indigenous research contexts—for uncovering personal narratives, intergenerational trauma, and the complex social meanings of language, it is also important to recognize the methodological and ethical challenges of studying suicide qualitatively (Hicks, 2023). Suicide remains a profoundly sensitive and stigmatized topic, and in small, closely connected communities such as those in Nunavut, in-depth qualitative research may pose risks around confidentiality, retraumatization, and research fatigue (Kirmayer, Fletcher & Watt, 2009). While such approaches are crucial for deepening our understanding beyond what statistical trends alone can show, their feasibility must be carefully balanced with community-led protocols and ethical safeguards.

By addressing these limitations, future studies can build upon this work and contribute to a more comprehensive understanding of the complex relationships between language use, culture, and mental health outcomes in Indigenous communities.

5.4: Future Directions

Future research could benefit from exploring different ways of operationalizing language vitality in Indigenous communities, especially by distinguishing between measures that more accurately reflect cultural continuity and those that are more accurately understood as measures of political autonomy or economic opportunity. As Kirmayer et al. (2011) highlight, cultural continuity is not simply about the preservation of language, but also about the broader dimensions of cultural engagement, including traditional practices, values, and self-governance. Future studies could refine the tools used to assess language vitality by differentiating between (while still making use of) these two components. For instance, distinguishing between 'language use as 1) a means of cultural transmission and 2) as a vehicle for community-based decision-making or governance can provide more specific insights into how language vitality contributes to mental health outcomes. Additionally, devising ways of measuring both cultural continuity and political autonomy in tandem could allow for a more comprehensive understanding of how these factors interrelate and contribute to well-being.

Moreover, the study underscores the importance of granularity in data collection, suggesting that measuring 'language knowledge' alone may miss important links between cultural continuity and well-being. The current study, which employs broad categories of language vitality, such as overall language knowledge as measured through self-report census data, may obscure more intricate dynamics at play. While knowledge of a language is certainly

important, it does not necessarily translate to cultural engagement or emotional connection with that language (Fishman, 1991). Even finer-grained categories like ‘main use’ may still fail to capture the full picture, as this aggregates complex factors and household or individual dynamics that influence both language vitality and well-being. Future studies could explore more specific measures, such as frequency and context of language use, and examine whether certain domains of language use (e.g., at home, work, and school, in cultural ceremonies, or in community governance) are more strongly linked to mental health outcomes. Using more nuanced and context-sensitive metrics could provide a clearer understanding of how language shapes and is shaped by the mental health of Indigenous communities.

More critical consideration of the metrics used in this kind of research also raises a need to prioritize community-originated instruments for measuring language vitality. While standardized definitions of what counts as ‘language use’ or ‘well-being’ can offer valuable, transferable insights, they can overlook local variations in how language is understood and valued within a community or misrepresent the true extent of the health inequities present (Smylie & Firestone, 2016). In Indigenous contexts, where language plays a unique role in cultural identity and well-being, it would be beneficial to develop culturally and language community specific definitions of language knowledge and vitality. By working with communities to co-create metrics that align with local priorities, researchers can better capture the dynamic relationship between language use, cultural continuity, and health (McCarty et al., 2018). This approach would ensure that the measures reflect not only linguistic fluency but also how language is embedded within social structures, community life, and cultural practices.

As noted in the limitations of this study, there remains a need for qualitative insights into this relationship between cultural continuity and mental well-being—particularly in suicide research involving Indigenous communities. While quantitative data are essential for identifying broad trends and statistically significant associations, they cannot fully illuminate the lived experiences, historical contexts, or social dynamics that influence both language use and mental health outcomes (Bennett & Koptie, 2016; Kral, 2011). However, adopting a mixed-methods approach is not always the default or most feasible path forward. Research design should be driven by specific questions, and while integrating qualitative methods—such as interviews, ethnography, or community-based participatory research—can offer powerful insights, doing so in the context of suicide presents significant ethical and methodological challenges as mentioned earlier in this section. That said, when carefully designed in collaboration with communities and governed by culturally appropriate ethical frameworks, qualitative or mixed-methods research can help to uncover how individuals and communities experience language loss or revitalization, and how these experiences may shape resilience, identity, and mental health. Future research would benefit from continued attention to context-specific methodologies that are both rigorous and sensitive to the realities of Inuit life. When feasible and community-supported, an integrated approach combining statistical patterns with personal and cultural narratives has the potential to not only deepen understanding of the links between language and well-being, but also to guide more effective and locally grounded interventions.

Additionally, future research could improve or extend the longitudinal scope of this study to better capture and represent the trends occurring in language and well-being in Nunavut. The effects of policy changes since Nunavut became a territory in 1999—especially those aimed at reversing the damage done by assimilationist practices like residential schools—may take

decades to become fully apparent, and so a long-term approach would allow researchers to trace the trajectory of both language use and mental health outcomes over multiple generations. This would provide a more comprehensive view of how language revitalization and cultural continuity relate to well-being over the course of individuals' lifetimes.

Finally, this study also points towards the importance of expanding Inuit-led research on language vitality and well-being. While this analysis has drawn on publicly available data and has aimed to contribute respectfully, it remains the product of a non-Indigenous researcher. As outlined in *Inuit Tapiriit Kanatami's National Inuit Strategy on Research* (2018), advancing Inuit self-determination in research requires not only community control over research governance but also sustained investment in Inuit research capacity (Sections 1.1–1.4). Encouraging and supporting Inuit youth and community members to lead future investigations is essential to ensuring that research reflects Inuit priorities, ways of knowing, and lived experiences. Without a broader shift in who designs, conducts, and interprets research, the documentation of Inuit realities risks continuing to be shaped primarily through non-Inuit perspectives.

5.5: Conclusion

This thesis has examined the relationship between shifts in Inuktut language vitality and changes in suicide rates across Nunavut communities between 2001 and 2016. The analysis reveals that among several language vitality indicators, only increases in main use of Inuktut in the home are statistically associated with declines in suicide rates. Other dimensions—such as knowledge of Inuktut, mother tongue status, and overall or secondary home use—did not demonstrate a significant relationship. These results complicate generalized claims about

language as a uniformly protective factor and point instead to the importance of examining how language is used in specific domains of daily life.

Beyond the statistical associations themselves, the patterns observed here reflect the deeper structural conditions that shape both language loss and suicide risk in Inuit communities. The historical forces that disrupted intergenerational transmission of Inuktut—residential schools, forced relocations, and broader patterns of colonial marginalization—are the same forces implicated in the emergence of the suicide crisis. In this sense, language vitality and suicide are not merely correlated, but linked through shared historical trajectories. The observed relationship between home language use and suicide rates may be less about the protective effects of language *per se*, and more about the underlying conditions that enable or erode both linguistic continuity and collective well-being.

This study therefore underscores the need for more precise, contextually grounded understandings of both *language vitality* and *cultural continuity*. Measures that capture only self-reported knowledge or institutional presence may miss critical aspects of how language functions in people's lives—particularly in domains like the home, where identity, kinship, and memory are embedded. Similarly, broad frameworks for assessing cultural continuity must account for local histories, practices, and sociopolitical realities. If cultural continuity is to remain a meaningful analytic concept, it must be operationalized in ways that reflect the complexity and specificity of lived experience.

In Nunavut, where Inuktut remains relatively strong in national terms, but vulnerable in everyday practice, this research suggests that fine-grained, community-level approaches are essential—not only for scholarly analysis, but for developing a fuller understanding of the

intertwined histories of language, culture, and well-being. To speak of "language vitality" without attention to where, how, and with whom language is used risks flattening the very processes we seek to understand. By looking more closely at these relationships, we can begin to see not just the outcomes of colonial disruption, but the subtle forms of resilience and change that emerge within it.

References

Aho, K. L.-T., & Liu, J. H. (2010). Indigenous suicide and colonization: The legacy of violence and the necessity of self-determination. *International Journal of Conflict and Violence*, *4*(1), 124–133. https://doi.org/10.4119/ijcv-2819

Amano, T., Sandel, B., Eager, H., Bulteau, E., Svenning, J.-C., Dalsgaard, B., Rahbek, C., Davies, R. G., & Sutherland, W. J. (2014). Global distribution and drivers of language extinction risk. *Proceedings of the Royal Society. B, Biological Sciences, 281*(1793), 20141574–20141574. https://doi.org/10.1098/rspb.2014.1574

Anderson, E. & Bonesteel, S. (2008). *Canada's relationship with Inuit: A history of policy and program development*. Indian and Northern Affairs Canada.

Arndt, J. S. (2018). Struggles of land, language, and identity in post-apartheid South Africa: The case of the Hlubi. *Journal of the Middle East and Africa*, *9*(1), 1–26. https://doi.org/10.1080/21520844.2018.1449448

Arraf-Baker, S. (2019). The nation-state law and the deprivation of the Arabic language from official status in Israel. *Palestine-Israel Journal of Politics, Economics, and Culture*, *24*(3/4), 181–189.

Auger, M. D. (2016). Cultural continuity as a determinant of Indigenous peoples' health: A metasynthesis of qualitative research in Canada and the United States. *International Indigenous Policy Journal*, *7*(4), 1–24. https://doi.org/10.18584/iipj.2016.7.4.3

Ayeb-Karlsson, S., Hoad, A., & Trueba, M. L. (2024). 'My appetite and mind would go': Inuit perceptions of (im)mobility and wellbeing loss under climate change across Inuit

Nunangat in the Canadian Arctic. *Humanities & Social Sciences Communications*, *11*(1), 277–20. https://doi.org/10.1057/s41599-024-02706-1

Bacigalupo, A. M. (2015). Graphism, multitemporality and texts as objects of power in the biography of a Mapuche's Machi in Chile. *Revista Chilena de antropología*, *31*, 11–30. https://doi.org/10.5354/0719-1472.2015.40604

Barker, B., Goodman, A., & DeBeck, K. (2017). Reclaiming Indigenous identities: Culture as strength against suicide among Indigenous youth in Canada. *Canadian Journal of Public Health*, *108*(2), e208–e210. https://doi.org/10.17269/CJPH.108.5754

Bartlett, A. K. (2020). Literacy instruction in Nunavut: Initial findings. *Antistasis*, *11*(1), 32 –37.

Bennett, M., & Koptie, S. (2016). Decolonizing research and restoring Indigenous health and wellness: An examination of the health impact of Canada's residential school system and the significance of Indigenous knowledge in restoring health and well-being. *Aboriginal Policy Studies*, *5*(1). https://doi.org/10.5663/aps.v5i1.23904

Berezovskaya, P. (2024). Tundra Nenets: a heritage language in its own land? Linguistic identity and language loss. *Languages*, *9*(11), 348. https://doi.org/10.3390/languages9110348

Biddle, N., & Swee, H. (2012). The relationship between wellbeing and Indigenous land, language and culture in Australia. *Australian Geographer*, *43*(3), 215–232. https://doi.org/10.1080/00049182.2012.706201

Bjerregaard, P., & Curtis, T. (2002). Cultural change and mental health in Greenland: The association of childhood conditions, language, and urbanization with mental health and

suicidal thoughts among the Inuit of Greenland. *Social Science & Medicine 54*(1), 33–48. https://doi.org/10.1016/S0277-9536(01)00005-3

Bjerregaard, P., & Lynge, I. (2006). Suicide: a challenge in modern Greenland. *Archives of Suicide Research*, *10*(2), 209–220. https://doi.org/10.1080/13811110600558265

Blenkinsop, S., & Fettes, M . (2020). Land, language and listening: The transformations that can flow from acknowledging Indigenous land. *Journal of Philosophy of Education*, *54*(4), 1033–1046. https://doi.org/10.1111/1467-9752.12470

Callan, M. (2023). A savage and sacrilegious race, hostile to God and humanity: Religion, racism, and Ireland's colonization. *Journal of Medieval Religious Cultures*, *49*(1), 1–27. https://doi.org/10.5325/jmedirelicult.49.1.0001

Chachamovich, E., Kirmayer, L. J., Haggarty, J. M., Cargo, M., McCormick, R., & Turecki, G. (2015). Suicide among Inuit: Results from a large, epidemiologically representative follow-back study in Nunavut. *Canadian Journal of Psychiatry*, *60*(6), 268–275. https://doi.org/10.1177/070674371506000605

Chakma, U., & Sultana, S. (2024). Colonial governmentality and Bangladeshis in the anthropocene: Loss of language, land, knowledge, and identity of the Chakma in the ecology of the Chittagong Hill tracts in Bangladesh. *Ethnicities*, *24*(4), 560–580. https://doi.org/10.1177/14687968231219521

Chandler, M. J., & Lalonde, C. (1998). Cultural continuity as a hedge against suicide in Canada's First Nations. *Transcultural Psychiatry*, *35*(2), 191–219. https://doi.org/10.1177/136346159803500202

Chandler, M. J., Lalonde, C. E., Sokol, B. W., & Hallett, D. (2003). Personal persistence, identity development, and suicide: A study of Native and Non-Native North American adolescents. *Monographs of the Society for Research in Child Development*, *68*(2).

Chiblow, S., & Meighan, P. J. (2022). Language is land, land is language: The importance of Indigenous languages. *Human Geography*, *15*(2), 206–210. https://doi.org/10.1177/19427786211022899

Corntassel, J., & Hardbarger, T. (2019). Educate to perpetuate: Land-based pedagogies and community resurgence. *International Review of Education, 65*(1), 87–116. https://doi.org/10.1007/s11159-018-9759-1

Cortés, J., Ugalde, I., Caviedes, J., & Ibarra, J. T. (2019). Semillas de montaña: recolección, usos y comercialización del piñón de la araucaria (Araucaria araucana) por comunidades Mapuche-Pewenche del sur de los Andes. *Pirineos*, *174*, 48-e048 . https://doi.org/10.3989/pirineos.2019.174008

Coulthard, G. S. (2014). *Red skin, white masks: Rejecting the colonial politics of recognition*. University of Minnesota Press. https://doi.org/10.5749/j.ctt9qh3cv

Cousins, S. (2017). Suicide in Indigenous Australians: A "catastrophic crisis." *The Lancet (British Edition)*, 389(10066), 242–242. https://doi.org/10.1016/S 01406736(17)30137-X

Dauenhauer, N. M., & Dauenhauer, R. (1998). Technical, emotional, and ideological issues in reversing language shift: Examples from Southeast Alaska. In L. A. Grenoble & L. J. Whaley (Eds.), *Endangered Languages: Language Loss and Community Response* (pp. 57–98). Cambridge University Press.

Davis-Delano, L. R., Strother, S. L., & Gone, J. P. (2022). Perceived indicators of American Indian identity in everyday interaction: navigating settler-colonial erasure. *Ethnic and Racial Studies*, *45*(11), 2025–2048. https://doi.org/10.1080/01419870.2021.1992468

Degen, A. A., Dana, L.-P., & Degen, L. M. (2024) . The Inuit: From igloos and tents and nomadic subsistence hunting and fishing to permanent settlements and heated homes. In *Lifestyle and Livelihood Changes Among Formerly Nomadic Peoples* (pp. 319–338). Springer Nature, Switzerland. https://doi.org/10.1007/978-3-031-51142-4_15

de la Maza, F., & Bolomey, C. (2019). Mapuche political, educational and linguistic demands and public policy in Chile. *British Journal of Sociology of Education*, *40*(4), 458–474. https://doi.org/10.1080/01425692.2019.1572493

Dorais, L.-J. (1980). *The Inuit language in southern Labrador from 1694-1785*. National Museums of Canada.

Drawson, A. S., Mushquash, A. R., & Mushquash, C. J. (2017). First Nations community well-being research and large data sets: A respectful caution. *International Journal of Indigenous Health*, *12*(2), 15–24. https://doi.org/10.18357/ijih122201717782

Dumas, D. (2023). Place them on a stamp: Inuit, banal colonialism, and the “pioneer experiment” of the High Arctic Relocations. *Political Geography*, *105*, 102919-. https://doi.org/10.1016/j.polgeo.2023.102919

Evans, L. (2014). Resettlement and the making of the Ciskei Bantustan, South Africa, c.1960-1976. *Journal of Southern African Studies*, *40*(1), 21–40. https://doi.org/10.1080/03057070.2014.889359

Firestone, M., McConkey, S., Beaudoin, E., Bourgeois, C., & Smylie, J. (2022). Mental health and cultural continuity among an urban Indigenous population in Toronto, Canada. *Canadian Journal of Public Health*, *115*(Suppl 2), 263–272. https://doi.org/10.17269/s41997-022-00709-6

Fishman, J. A. (1991). *Reversing language shift: Theoretical and empirical foundations of assistance to threatened languages.* Multilingual Matters.

Frazer, H., & Giles, A. R. (2023). Are sport and traditional Inuit games identified as tools in current Inuit suicide prevention strategies?: A content analysis. *International Journal of Circumpolar Health, 82*(1), 1-8. https://doi.org/10.1080/22423982.2023.2276983

Freedman, D. A. (2009). *Statistical models: Theory and practice* (rev. ed.). Cambridge University Press.

Fuller-Thomson, E., Sellors, A. E., Cameron, R. E., Baiden, P., & Agbeyaka, S. (2020). Factors associated with recovery in Aboriginal people in Canada who had previously been suicidal. *Archives of Suicide Research*, *24*(2), 186–203. https://doi.org/10.1080/13811118.2019.1612801

Gibson, M., Stuart, J., Leske, S., Ward, R., & Vidyattama, Y. (2021). Does community cultural connectedness reduce the influence of area disadvantage on Aboriginal & Torres Strait Islander young peoples' suicide? *Australian and New Zealand Journal of Public Health, 45*(6), 643–650. https://doi.org/10.1111/1753-6405.13164

Gone, J. P. (2024). Suicide in US Indigenous persons: Reframing the etiology and solutions. *Annals of Internal Medicine*, *177*(1), 97–98. https://doi.org/10.7326/M23-3218

Granheim, I. P. H., Silviken, A., Larsen, C. V. L., & Kvernmo, S. (2021). Socio-demographic, psychosocial and environmental factors associated with suicidal behaviour in Indigenous Sami and Greenlandic Inuit adolescents; the WBYG and NAAHS studies. *International Journal of Circumpolar Health*, *80*(1), 1913939-. https://doi.org/10.1080/22423982.2021.1913939

Gray, A. P., & Cote, W. (2019). Cultural connectedness protects mental health against the effect of historical trauma among Anishinabe young adults. *Public Health* (London), *176*, 77–81. https://doi.org/10.1016/j.puhe.2018.12.003

Grenoble, L. A., Huss, L., Roche, G., & Hinton, L. (2018). Arctic Indigenous languages: Vitality and revitalization. In *The Routledge handbook of language revitalization* (1st ed., pp. 345–354). Routledge. https://doi.org/10.4324/9781315561271-44

Haggarty, J. M., Cernovsky, Z., Bedard, M., & Merskey, H. (2008). Suicidality in a sample of arctic households. *Suicide & Life-Threatening Behavior*, *38*(6), 699–707. https://doi.org/10.1521/suli.2008.38.6.699

Hallett, D. (2005). *Aboriginal identity development, language knowledge, and school attrition: An examination of cultural continuity* [Doctoral dissertation, University of British Columbia]. University of British Columbia Library

Hallett, D., Chandler, M. J., & Lalonde, C. E. (2007). Aboriginal language knowledge and youth suicide. *Cognitive Development*, *22*(3), 392–399. https://doi.org/10.1016/j.cogdev.2007.02.001

Harder, M. T., & Wenzel, G. W. (2012). Inuit subsistence, social economy and food security in Clyde River, Nunavut. *Arctic, 65*(3), 305–318. https://doi.org/10.14430/arctic4214

Hayward, A., Cidro, J., Dutton, R., & Passey, K. (2020). A review of health and wellness studies involving Inuit of Manitoba and Nunavut. *International Journal of Circumpolar Health*, *79*(1), 1779524-. https://doi.org/10.1080/22423982.2020.1779524

Healey, G. K. (2013). Tradition and culture: An important determinant of Inuit women's health. *International Journal of Indigenous Health, 4*(1), 25–33. https://doi.org/10.18357/ijih41200812312

Henare, M. (2018). "Ko te hau tēnā o tō taonga…": The words of Ranapiri on the spirit of gift exchange and economy. *Journal of the Polynesian Society*, *127*(4), 451–463. https://doi.org/10.15286/jps.127.4.451-463

Henri, D. A., Carter, N. A., Irkok, A., Nipisar, S., Emiktaut, L., Saviakjuk, B., Salliq Project Management Committee, Arviat Project Management Committee, Ljubicic, G. J., Smith, P. A., & Johnston, V. (2020). Qanuq ukua kanguit sunialiqpitigu? (What should we do with all of these geese?) Collaborative research to support wildlife co-management and Inuit self-determination. *Arctic Science*, *6*(3), 173–207. https://doi.org/10.1139/as-2019-0015

Hicks, J. (2007). The social determinants of elevated rates of suicide among Inuit youth. *Indigenous Affairs*, *4*(4) 30–37. International Work Group for Indigenous Affairs.

Hicks, J. (2015). *Statistical data on death by suicide by Nunavut Inuit, 1920 to 2014*. Nunavut Tunngavik. https://www.tunngavik.com/files/2015/09/2015-09-14-Statistical-Historical-Suicide-Date-Eng.pdf

Hooper, J. (2006). *The new Spaniards*. London: Penguin.

Inuit Tapiriit Kanatami (2014) *Social determinants of Inuit health in Canada.* https://www.itk.ca/wp-content/uploads/2016/07/ITK_Social_Determinants_Report.pdf

Inuit Tapiriit Kanatami. (2018). *National Inuit strategy on research*. https://www.itk.ca/wp-content/uploads/2018/04/ITK_NISR-Report_English_low_res.pdf

Inuit Tapiriit Kanatami (2019) *Promising practices in suicide prevention across Inuit Nunangat: NISPS research and data collection project.* https://www.itk.ca/wp-content/uploads/2019/07/20190611-NISPS-ScanOfPromisingPractices-FINAL-EN.pdf

Institute of Medicine (US) Committee on Pathophysiology and Prevention of Adolescent and Adult Suicide. (2002). *Reducing suicide: A national imperative*. Washington, DC: National Academies Press.

Iwama, M., Marshall, M., Marshall, A., & Bartlett, C. (2009). Two-Eyed-Seeing and the language of healing in community-based research. *Canadian Journal of Native Education 32*(2), 3-23.

Kane, B. (2014). Ordinary violence? Ireland as emergency in the Tudor state. *History* (London), *99*(336), 444–467. https://doi.org/10.1111/1468-229X.12061

Kauanui, J. K. (2016). "A structure, not an event": Settler colonialism and enduring indigeneity. *Lateral: Journal of the Cultural Studies Association, 5*(1). https://csalateral.org/issue/5-1/forum-alt-humanities-settler-colonialism-enduring-indigeneity-kauanui/

Khawaja, M. (2021). Consequences and remedies of Indigenous language loss in Canada. *Societies* (Basel, Switzerland), *11*(3), 89. https://doi.org/10.3390/soc11030089

Kirmayer, L. J., Dandeneau, S., Marshall, E., Phillips, M. K., & Williamson, K. J. (2011). Rethinking resilience from Indigenous perspectives. *Canadian Journal of Psychiatry, 56*(2), 84-91. https://doi.org/10.1177/070674371105600205

Kirmayer, L. J., Fletcher, C., & Watt, R. (2009). Locating the ecocentric self: Inuit concepts of mental health and illness. In L. J. Kirmayer & G. G. Valaskakis (Eds.), *Healing traditions: The mental health of Aboriginal peoples in Canada* (pp. 289-314). UBC Press. https://doi.org/10.59962/9780774815253

Kirmayer, L. J., Simpson, C., & Cargo, M. (2003). Healing traditions: Culture, community and mental health promotion with Canadian Aboriginal peoples. *Australasian Psychiatry*, *11*(s1), S15-S23. https://doi.org/10.1046/j.1038-5282.2003.02010.x

Kirmayer, L. J., Tait, C. L., & Simpson, C. (2009). The mental health of Aboriginal peoples in Canada: Transformations of identity and commnity. In L. J. Kirmayer & G. G. Valaskakis (Eds.), *Healing traditions: The mental health of Aboriginal peoples in Canada* (pp. 3-35). UBC Press. https://doi.org/10.59962/9780774815253

Kolås, A., & Ibarra Güell, P. (2018). *Sovereignty revisited: the Basque case* (1st ed.). Routledge. https://doi.org/10.4324/9781315158341

Kral, M. J. (2011). Postcolonial suicide among Inuit in Arctic Canada. *Culture, Medicine and Psychiatry, 35*(2), 306–320. https://doi.org/10.1007/s11013-011-9214-y

Kral, M. J. (2013). The weight on our shoulders is too much, and we are falling. *Medical Anthropology Quarterly*, *27*(1), 63–83. https://doi.org/10.1111/maq.12016

Kral, M. J., Links, P. S., & Bergmans, Y. (2012). Suicide studies and the need for mixed methods research. *Journal of Mixed Methods Research, 6*(3), 236–249. https://doi.org/10.1177/1558689811423914

Kulchyski, P. K. (2005). *Like the sound of a drum: Aboriginal cultural politics in Denendeh and Nunavut*. University of Manitoba Press. https://doi.org/10.1515/9780887553356

Kwiatek, G. (2023). Canadian federal policies and the Inuit youth suicide crisis trauma and reconciliation. *Ad Americam*, *24*(24), 57–70 https://doi.org/10.12797/AdAmericam.24.2023.24.04

Langlois, S. & Turner, A. (2015). *Aboriginal languages and selected vitality indicators in 2011*. Statistics Canada. https://www150.statcan.gc.ca/n1/pub/89-655-x/89-655-x2014001-eng.htm

Langlois, S., Lepage, J., & Turcotte, M. (2019). *Evolution of the language situation in Nunavut, 2001 to 2016.* Statistics Canada. https://www150.statcan.gc.ca/n1/pub/89-657-x/89-657-x2019010-eng.htm#shr-pg0

Laukaitis, J. (2010). The politics of language and national school reform: The Gaelic League's call for an Irish Ireland, 1893-1922. *American Educational History Journal*, *37*(1), 221-.

Maddison, S. (2013). Indigenous identity, "authenticity" and the structural violence of settler colonialism. *Identities* (Yverdon, Switzerland), *20*(3), 288–303. https://doi.org/10.1080/1070289X.2013.806267

Martin, I. (2017). *Inuit language loss in Nunavut: Analysis, forecast, and recommendations*. Government of Nunavut. https://assembly.nu.ca/sites/default/files/TD-307-4(3)-EN-Inuit-Language- Loss-in-Nunavut-Analysis-Forecast-and-Recommendations.pdf

McCarty, T. L., Huss, L., Roche, G., & Hinton, L. (2018). Community-based language planning: Perspectives from Indigenous language revitalization. In *The Routledge handbook of language revitalization* (1st ed., pp. 22–35). Routledge. https://doi.org/10.4324/9781315561271-4

McCreery, D. (2024). *Narratives of language, health, and identity: Pursuing well-being through Indigenous language revitalization* [Doctoral dissertation, University of Victoria]. https://dspace.library.uvic.ca/items/e3efd6f2-e7c1-6bf-8d6d-eeae8904642b

McIvor, O. (2013). Protective effects of language learning, use and culture on the health and wellbeing of Indigenous people in Canada. In *Proceedings of the 17th FEL conference*. *FEL XVII: Endangered Languages Beyond Boundaries: Community Connections, Collaborative Approaches and Cross-Disciplinary Research.* Ottawa, ON (pp. 123-131). Foundation for Endangered Languages in association with Carleton University.

McIvor, O., Napoleon, A., & Dickie, K. M. (2009). Language and culture as protective factors for at-risk communities. *International Journal of Indigenous Health*, *5*(1), 6-25.

Mihyo, P. B., & Spoor, M. (2004). Local governance and rural poverty in Africa. In M. Spoor (Ed.), *Globalisation, poverty and conflict* (pp. 155–175). Springer. https://doi.org/10.1007/1-4020-2858-X_9

Montano, J. P. (2011). *The roots of English colonialism in Ireland*. Cambridge University Press.

Murasugi, K., & Patrick, D. (2023). The evolution of Inuktut dictionary-making: From historical documentation to Inuit authorship and collaborations. *Dictionaries* (Terre Haute, Ind.), *44*(2), 7–27. https://doi.org/10.1353/dic.2023.a915063

Nahuelpán, H., Antimil, J., Lehman, K. (2019). Mapuchezugun ka Mapuche kimün: Confronting colonization in Chile (nineteenth and twentieth centuries). In E. McKinley, L. Smith (Eds.), *Handbook of Indigenous education*. Springer, Singapore. https://doi.org.ezproxy.library.uvic.ca/10.1007/978-981-10-3899-0_24

Narine, S., (2020). Change required in Official Languages Act: Inuktut thriving, yet English remains language of public services in Nunavut. In *The Canadian Press*. Canadian Press Enterprises Inc.

Nettle, D., & Romaine, S. (2000). *Vanishing voices: The extinction of the world's languages.* Oxford University Press.

Newell, S. L., Dion, M. L., & Doubleday, N. C. (2020). Cultural continuity and Inuit health in arctic Canada. *Journal of Epidemiology and Community Health*, *74*(1), 64–70. https://doi.org/10.1136/jech-2018-211856

Nyman, A., & Carrière, J. (2014). “It’s our issue too”: Youth engagement in suicide prevention in an Aboriginal community in Canada. *Canadian Journal of Community Mental Health, 33*(1), 79–91. https://doi.org/10.7870/cjcmh-2014-008

Onrubia Pintado, J., González Marrero, M. C., Montón-Subías, S., Ruiz Martínez, A., & Cruz Berrocal, M. (2016). The archaeology of the early Castilian colonialism in Atlantic Africa: The Canary Islands and Western Barbary (1478–1526). In *Archaeologies of early modern Spanish Colonialism* (pp. 119–151). Springer International Publishing. https://doi.org/10.1007/978-3-319-21885-4_6

Orman, J. (2008). *Language policy and nation-building in post-apartheid South Africa*. Springer. https://doi.org/10.1007/978-1-4020-8891-9

Ortiz, S. (2018). Indigenous sustainability: Language, community wholeness, and solidarity. In M. Nelson (Ed.), *Traditional ecological knowledge* (pp. 85–94). Cambridge University Press. https://doi.org/10.1017/9781108552998.006

Oster, R. T., Grier, A., Lightning, R., Mayan, M. J., & Toth, E. L. (2014). Cultural continuity, traditional Indigenous language, and diabetes in Alberta First Nations: a mixed methods study. *International Journal for Equity in Health*, *13*(1), 92–92. https://doi.org/10.1186/s12939-014-0092-4

Ó Tuathaigh, G. (2007). *Ireland before the famine, 1798-1848.* Gill Books.

Parejo Barranco, A. (2004). Industrialization of the Spanish regions during the first and second technological revolution: Andalusia, Catalonia, Basque Country (1830-1975). *Revista de historia económica, 22*(3), 669–706.

Pearce, T., Ford, J., Willox, A. C., & Smit, B. (2015). Inuit Traditional Ecological Knowledge (TEK), subsistence hunting and adaptation to climate change in the Canadian arctic. *Arctic*, *68*(2), 233–245. https://doi.org/10.14430/arctic4475

Pezzia, C. & Hernandez, L.M. (2021). Suicidal ideation in an ethnically mixed, highland Guatemalan community. *Transcultural Psychiatry*, *59*(1):93–105.

Phillips, J., & Phillips, C. R. (2010). The struggle for the Spanish soul: Republic, civil war, and dictatorship. In *A concise history of Spain* (pp. 246–280). Cambridge University Press. https://doi.org/10.1017/CBO9780511780400.008

Preston, J. P. (2016). Situating educational issues in Nunavut: Perceptions of school leaders and teachers. *Northern Review* (Whitehorse), *42*, 109–129. https://doi.org/10.22584/nr42.2016.007

Public Health Agency of Canada. (2025). *Suicide, self-harm and suicide-related behaviours in Canada: Suicide mortality*. Public Health Agency of Canada. https://healthinfobase.ca-nada.ca/mental-health/suicide-self-harm/suicide-mortality.html?wbdisable=true

Rameka, L., & Stagg Peterson, S. (2021). Sustaining Indigenous languages and cultures: Māori medium education in Aotearoa New Zealand and Aboriginal Head Start in Canada. *Kōtuitui*, *16*(2), 307–323. https://doi.org/10.1080/1177083X.2021.1922466

Richmond, C. A. M., & Ross, N. A. (2009). The determinants of First Nation and Inuit health: A critical population health approach. *Health & Place*, *15*(2), 403-411. https://doi.org/10.1016/j.healthplace.2008.07.004

Ritland, L., Thomas, V., Jongbloed, K., Zamar, D. S., Teegee, M. P., Wenecwtsin-Kukpi., C., Richardson, C. G., Guhn, M., Schechter, M. T., Spittal, P. M., & Cedar Project Partnership. (2021). The Cedar Project: Relationship between child apprehension and attempted suicide among young Indigenous mothers impacted by substance use in two Canadian cities. *PLOS One*, *16*(6), https://doi.org/10.1371/journal.pone.0252993

Rioja, R. G. (2023). Land and the language of race: State colonization and the privatization of Indigenous lands in Araucanía, Chile (1871–1916). *The Americas*, *80*\1), 69–99. https://doi.org/10.1017/tam.2021.143

Rohrer, J. M. (2018). Thinking clearly about correlations and causation: Graphical causal models for observational data. *Advances in Methods and Practices in Psychological Science*, *1*(1), 27-42. https://doi.org/10.1177/2515245917745629

Romaine, S. (2017). Language endangerment and language death: The future of language diversity. In A. F. Fill & H. Penz (Eds.), *The Routledge Handbook of Ecolinguistics,* 40-55. Routledge.

Savageau, C. (2020). Stories, language, and the land. *English Language Notes*, *58*(1), 21–39. https://doi.org/10.1215/00138282-8237388

Schwartz, S. J.; Luyckx, K.; Vignoles, V. L., (Eds.). (2011). *Handbook of identity theory and research*. New York, NY: Springer New York. doi:10.1007/978-1-4419-7988-9.

Schuster, K., & Witkosky, D. (2007). *Language of the land : policy, politics, identity*. Information Age Pub.

Searles, E. (Ned). (2008). Inuit identity in the Canadian arctic. *Ethnology*, *47*(4), 239–255.

Simon, H. (2023). "E Pā To Hau": philosophy and theory on dispossession, elimination, grief, trauma and settler colonialism in Aotearoa New Zealand. *Settler Colonial Studies*, *13*(3), 371–397. https://doi.org/10.1080/2201473X.2023.2195062

Simpson, L. B. (2017). *As we have always done: Indigenous freedom through radical resistance*. University of Minnesota Press. https://doi.org/10.5749/j.ctt1pwt77c

Smith, L. T. (2021). *Decolonizing methodologies: Research and Indigenous peoples* (Third edition.). Zed.

Skerrett, M., Smith, L. T., & McKinley, E. A. (2019). Colonialism, Māori early childhood, language, and the curriculum. In E. McKinley & L. Smith (Eds.), *Handbook of Indigenous education.* (pp. 483–504). Springer, Singapore. https://doi.org/10.1007/978-981-10-3899-0_17

Smylie, J., & Firestone, M. (2016). Back to the basics: Identifying and addressing underlying challenges in achieving high-quality and relevant health statistics for Indigenous populations in Canada. *Statistical Journal of the IAOS*, *32*(1), 37-46. https://doi.org/10.3233/SJI-160909

Snowshoe, A., Crooks, C. V., Tremblay, Paul. F., & Hinson, R. E. (2017). Cultural connectedness and its relation to mental wellness for First Nations youth. *The Journal of Primary Prevention, 38*(1–2), 67–86. https://doi.org/10.1007/s10935-016-0454-3

Stoor, J. P. A., Kaiser, N., Jacobsson, L., Renberg, E. S., & Silviken, A. (2015). "We are like lemmings": making sense of the cultural meaning(s) of suicide among the Indigenous Sami in Sweden. *International Journal of Circumpolar Health*, *74*(1), 27669–27669. https://doi.org/10.3402/ijch.v74.27669

Styres, S. D. (2011). Land as first teacher: A philosophical journeying *Reflective Practice*, *12*(6), 717–731. https://doi.org/10.1080/14623943.2011.601083

Sullivan, D. (2018). *The connection between health and well-being and Indigenous language use and learning – An annotated bibliography.* NEȾOLṈEW̱.

Tester, F. J., & Kulchyski, P. K. (1994). *Tammarniit (mistakes): Inuit relocation in the Eastern Arctic, 1939-63.* UBC Press. https://doi.org/10.59962/9780774854795

Tester, F. J., & McNicoll, P. (2004). Isumagijaksaq: mindful of the state: social constructions of Inuit suicide. *Social Science & Medicine*, *58*(12), 2625–2636. https://doi.org/10.1016/j.socscimed.2003.09.021

Tostado, I. P. (2023). The Spanish destruction of the Canary Islands: A template for the Caribbean genocide. In B. Kiernan (Ed.), *The Cambridge world history of genocide* (pp. 594–621). https://doi.org/10.1017/9781108655989.026

Trout, L., McEachern, D., Mullany, A., White, L., & Wexler, L. (2018). Decoloniality as a framework for Indigenous youth suicide prevention pedagogy: Promoting community conversations about research to end suicide. *American Journal of Community Psychology*, *62*(3–4), 396–405. https://doi.org/10.1002/ajcp.12293

Truth and Reconciliation Commission of Canada. (2016). *The Inuit and Northern experience.* McGill-Queen's University Press.

Tsosie, R. (2012). Indigenous peoples and epistemic injustice: Science, ethics, and human rights. *Washington Law Review, 87*(4), 1133–1201.

Tsosie, R. L., Wu, K., Grant, A. D., Harrington, J., Chase, S. T., Thomas, A., Chase-Begay, D., Hill, S. B., Belcourt, A., & Plenty Sweetgrass-She Kills, R. (2024). A growing willow: The six Rs Indigenous research framework—stories of the Native American faculty journey in STEM. *Rural Sociology*, *89*(S1), 620–637. https://doi.org/10.1111/ruso.12576

Tuck, E. (2009). Suspending Damage: A Letter to Communities. Harvard Educational Review, *79*(3), 409–428. https://doi.org/10.17763/haer.79.3.n0016675661t3n15

UNESCO Ad Hoc Expert Group on Endangered Languages. (2003). *Language vitality and endangerment.* International Expert Meeting on UNESCO Programme Safeguarding of Endangered Languages

Van Meijl, T. (2012). Changing property regimes in Māori society: A critical assessment of the settlement process in New Zealand. *Journal of the Polynesian Society, 121*(2), 181–208. https://doi.org/10.15286/jps.121.2.181-208

Webster, P. C. (2016). Canada's Indigenous suicide crisis. *The Lancet* (British Edition), *387*(10037), 2494–2494. https://doi.org/10.1016/S0140-6736(16)30836-4

Wenzel, G. W. (2009). Canadian Inuit subsistence and ecological instability—If the climate changes, must the Inuit? *Polar Research*, *28*(1), 89-99. https://doi.org/10.1111/j.1751-8369.2009.00098.x

Wexler, L., Silveira, M. L., & Bertone-Johnson, E. (2012). Factors associated with Alaska Native fatal and nonfatal suicidal behaviors 2001-2009: Trends and implications for prevention. *Archives of Suicide Research*, *16*(4), 273–286. https://doi.org/10.1080/13811118.2013.722051

Whalen, D. H., Lewis, M. E., Gillson, S., McBeath, B., Alexander, B., & Nyhan, K. (2022). Health effects of Indigenous language use and revitalization: A realist review. *International Journal for Equity in Health*, *21*(1), 1–169. https://doi.org/10.1186/s12939-022-01782-6

Whalen, D. H., Moss, M., & Baldwin, D. (2016). Healing through language: Positive physical health effects of Indigenous language use. *F1000 Research*, *5*, 852-. https://doi.org/10.12688/f1000research.8656.1

Wolfe, P. (2006). Settler colonialism and the elimination of the native. *Journal of Genocide Research*, *8*(4), 387–409. https://doi.org/10.1080/14623520601056240

Wright, S. (2014). *Our ice is vanishing = Sikuvut nunguliqtuq: A history of Inuit, newcomers, and climate change*. McGill-Queen's University Press.

Zinga, D., & Styres, S. (2011). Pedagogy of the land: Tensions, challenges, contradictions. *First Nations Perspectives 4*(1), 59-83.

Zreik, R., & Dakwar, A. (2020). What's in the apartheid analogy? Palestine/Israel refracted. *Theory & Event*, *23*(3), 664–705. https://doi.org/10.1353/tae.2020.0039

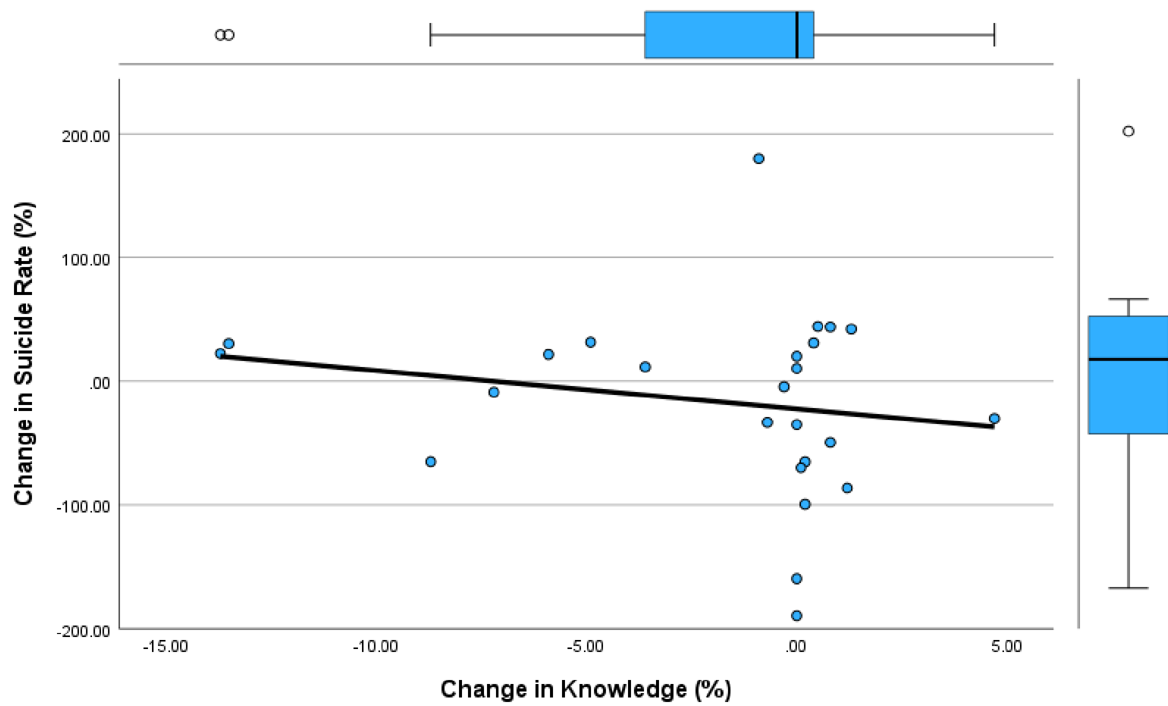
Appendices

Appendix A: Assumption Checks for Linear Regression

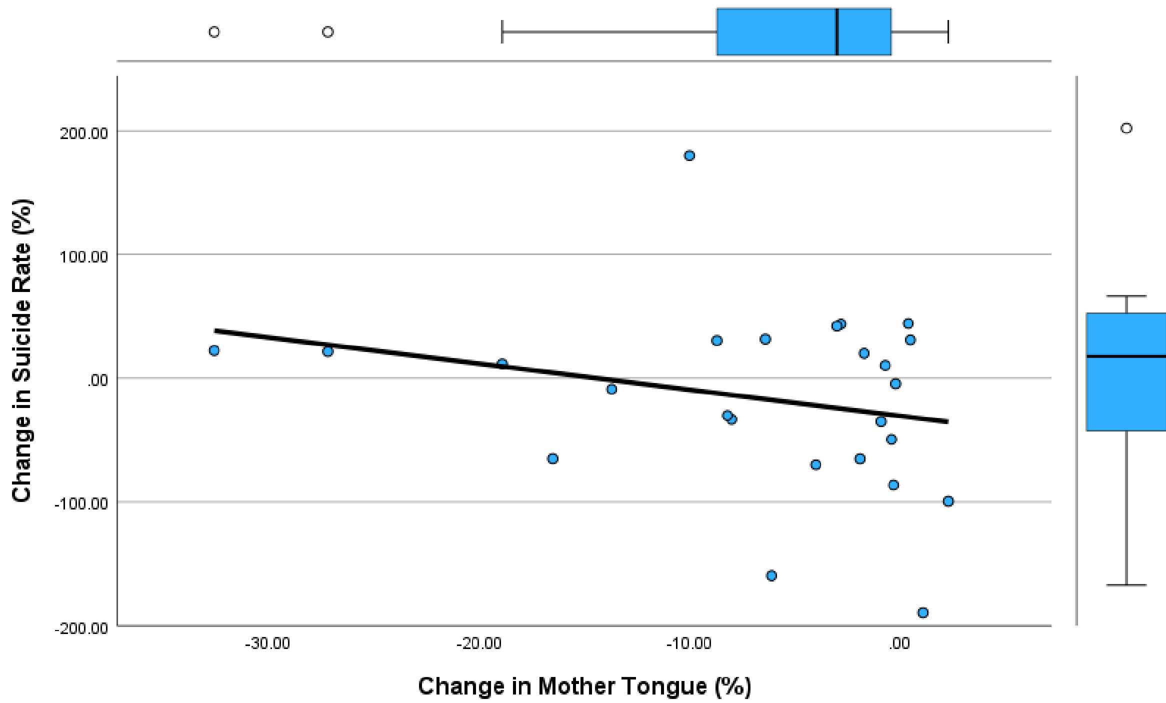
A1: Scatterplots of Change in Suicide Rates vs. Change in Language Vitality Variables

A1.1: Scatterplot of Change in Suicide Rates vs. Change in Inuktut Knowledge

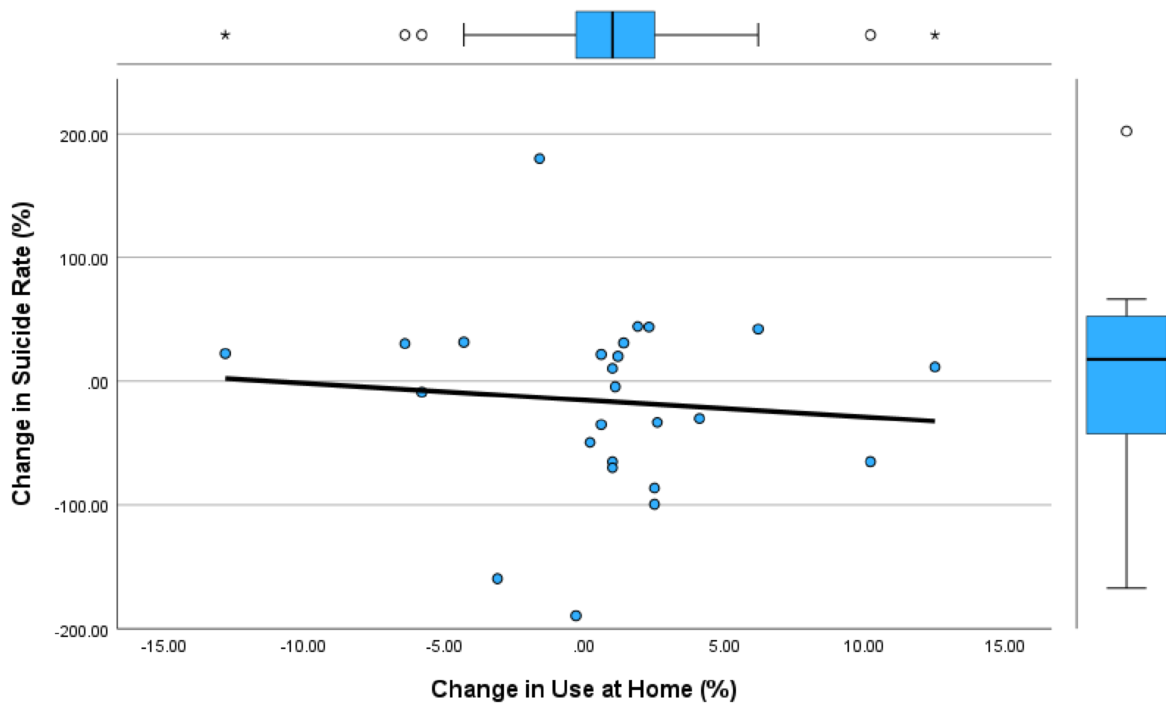
Append



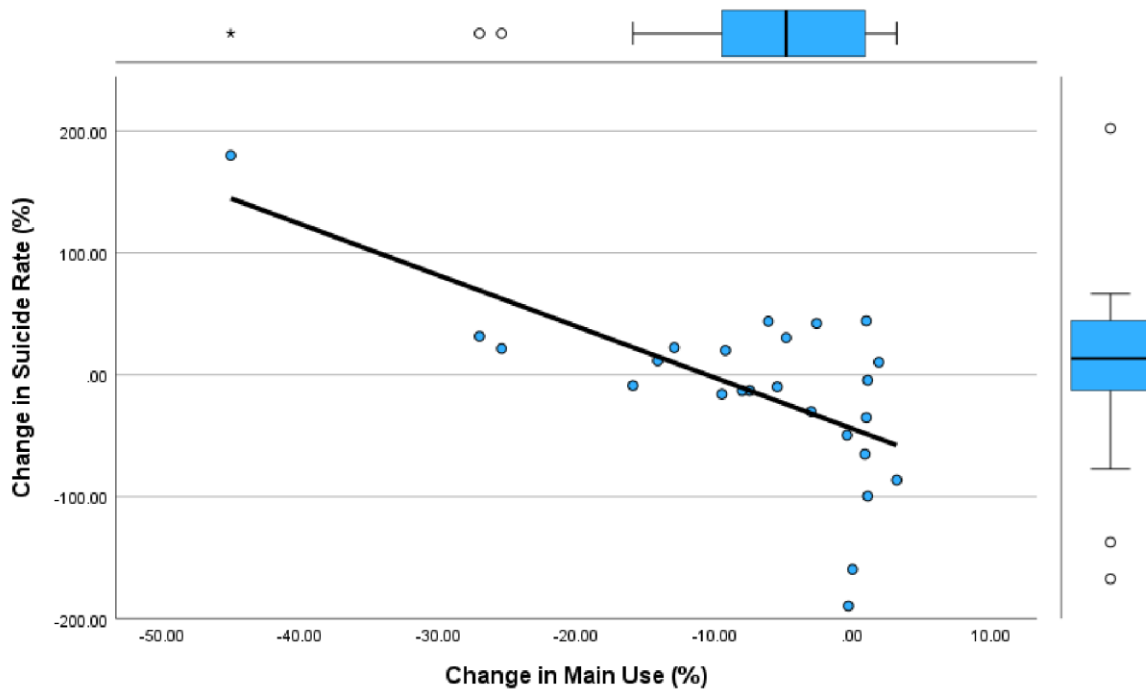
A1.2: Scatterplot of Change in Suicide Rates vs. Change in Inuktut as Mother Tongue



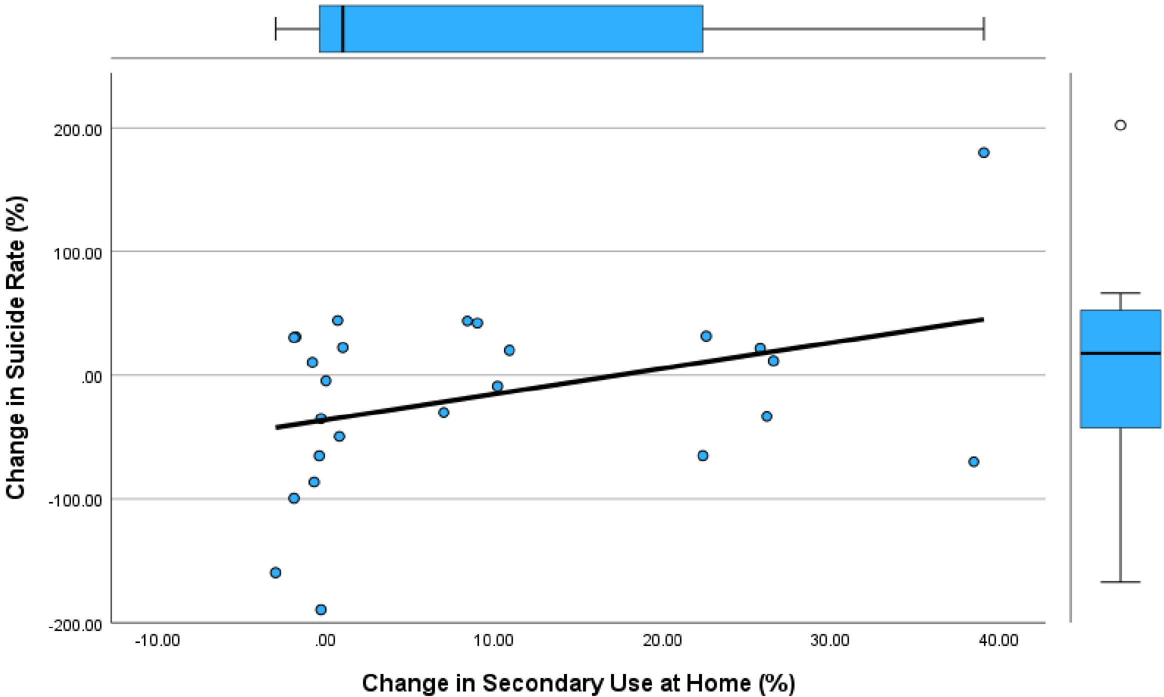
A1.3: Scatterplot of Change in Suicide Rates vs. Change in Inuktut Use at Home



A1.4: Scatterplot of Change in Suicide Rates vs. Change in Inuktut Use as Main Language at Home

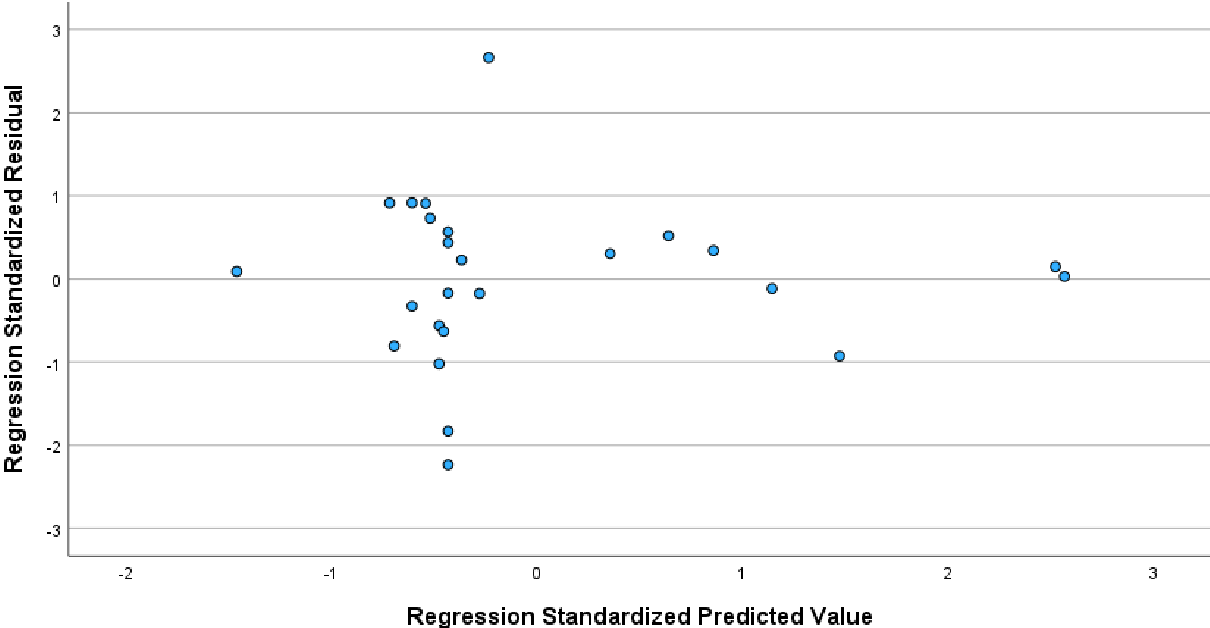


A1.5: Scatterplot of Change in Suicide Rates vs. Change in Inuktut Use as Secondary Language at Home

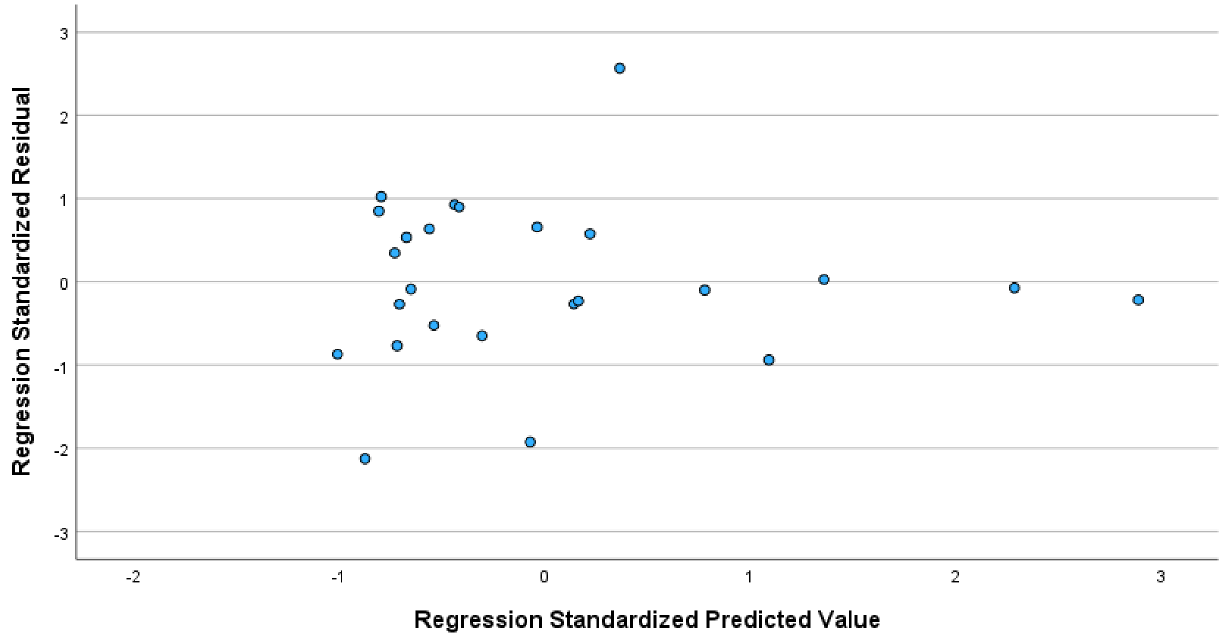


Appendix A2: Scatterplots of Standardized Predicted Values against Standardized Residuals

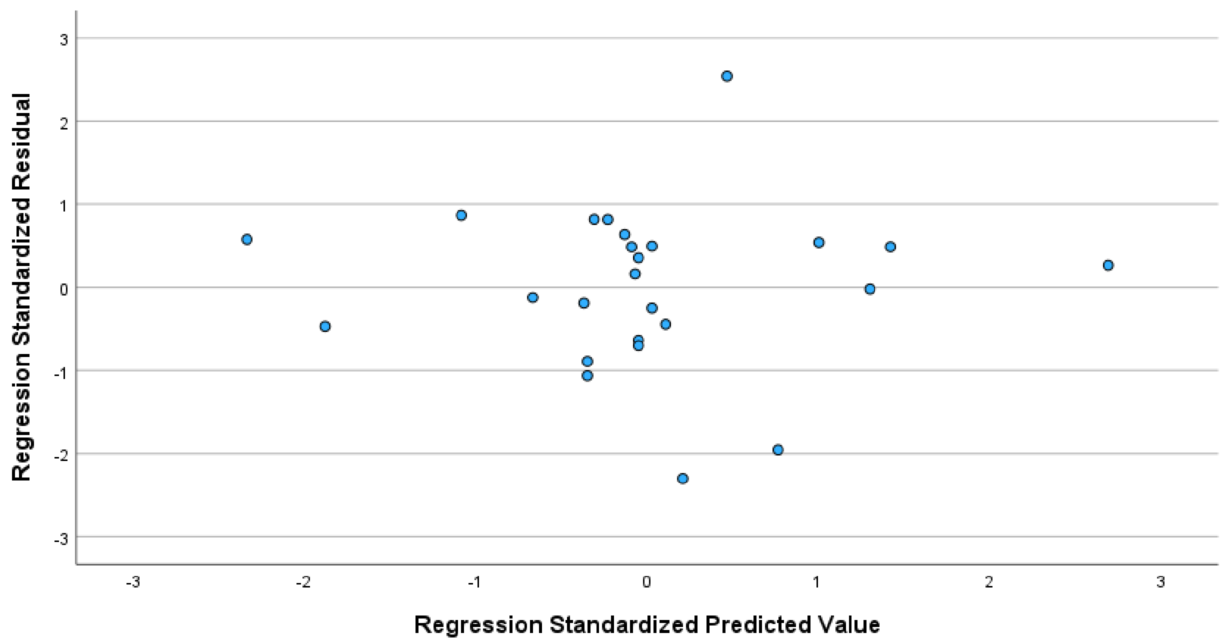
A2.1: Scatterplot of Standardized Predicted Values vs. Standardized Residuals — Change in Inuktut Knowledge



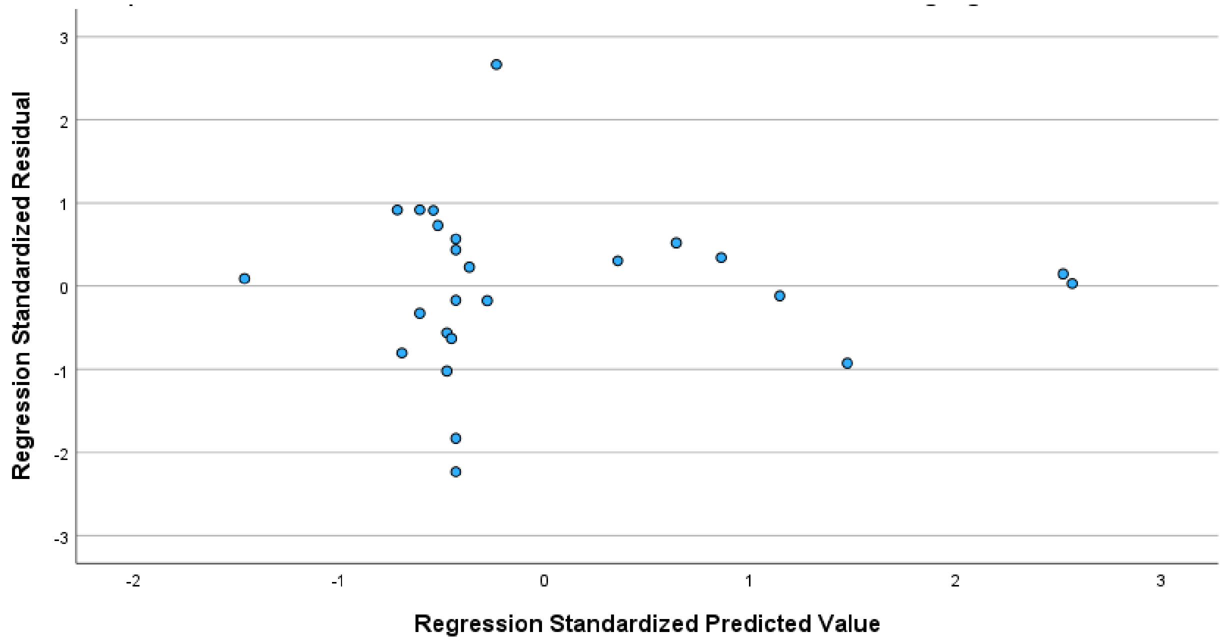
A2.2: Scatterplot of Standardized Predicted Values vs. Standardized Residuals — Change in Inuktut as Mother Tongue



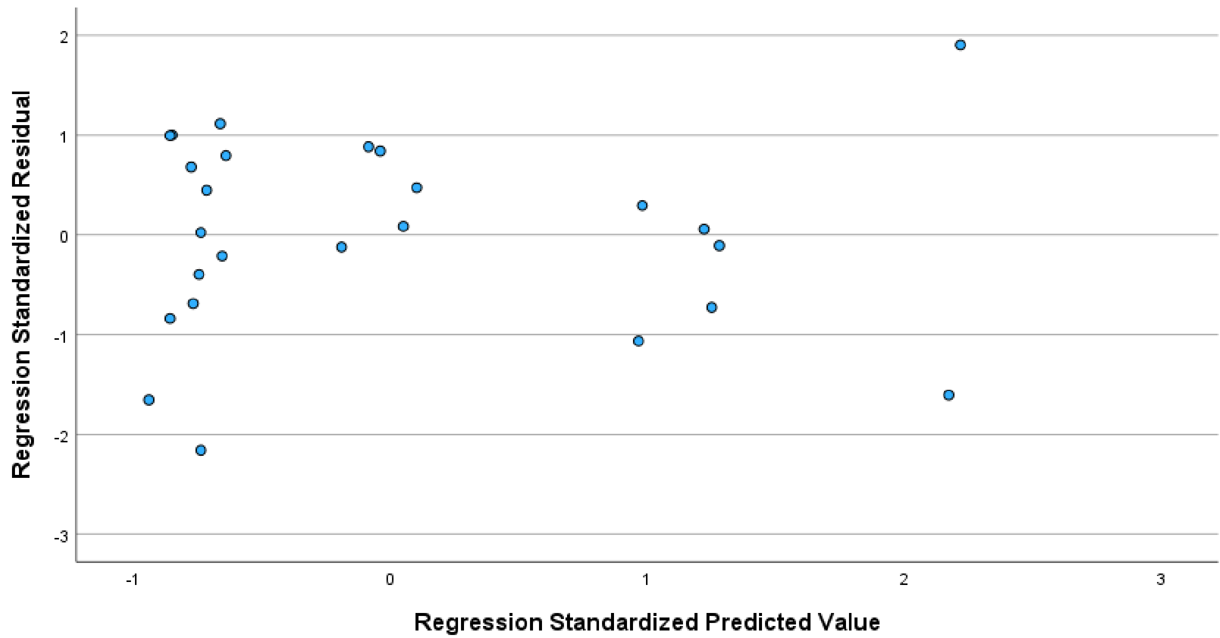
A2.3: Scatterplot of Standardized Predicted Values vs. Standardized Residuals — Change in Inuktut Use at Home



A2.4: Scatterplot of Standardized Predicted Values vs. Standardized Residuals — Change in Inuktut Use as Main Language at Home



A2.5: Scatterplot of Standardized Predicted Values vs. Standardized Residuals — Change in Inuktut Use as Secondary Language at Home

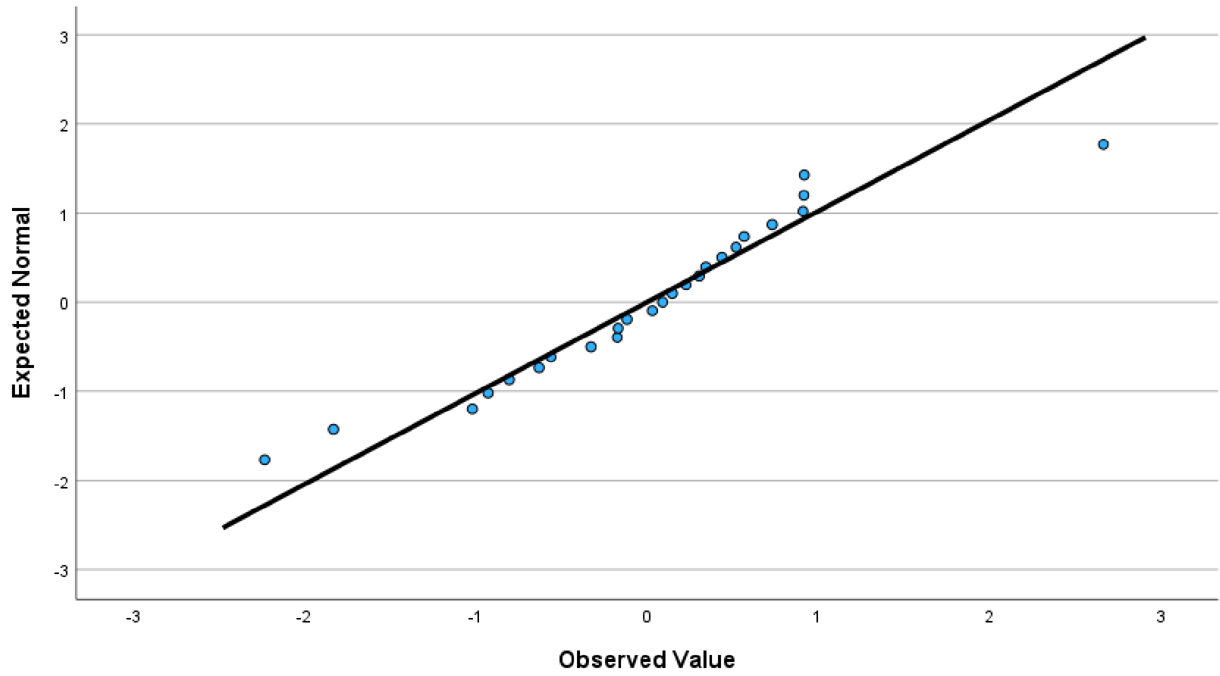


Appendix A3: Results of Durbin-Watson and Shapiro-Wilk Statistical Tests

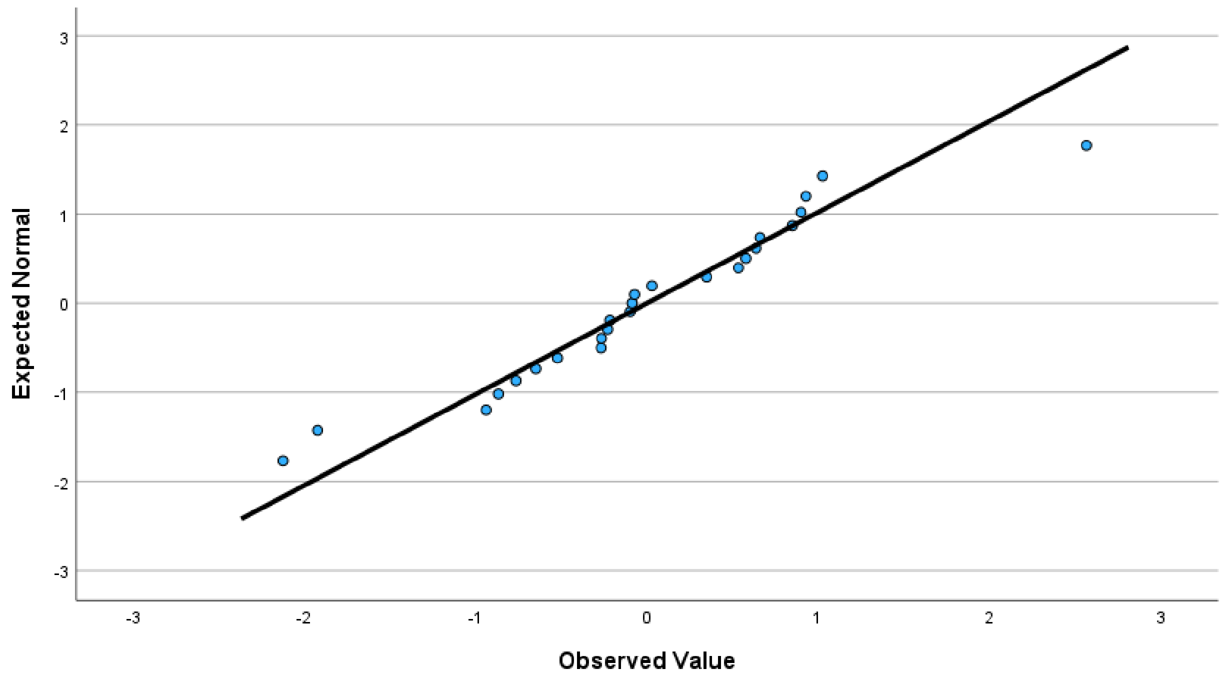
		Shapiro-Wilk Statistics	
Independent Variable	Durbin-Watson Statistic	*W*-value	*p*-value
Change in Inuktut Knowledge	2.165	0.943	0.250
Change in Inuktut as Mother Tongue	2.292	0.943	0.250
Change in Inuktut Use at Home	2.016	0.950	0.340
Change in Inuktut Use as Main Language at Home	2.369	0.926	0.352
Change in Inuktut Use as Secondary Language at Home	2.407	0.953	0.388

Appendix A4: Q-Q Plots of Standardized Residuals

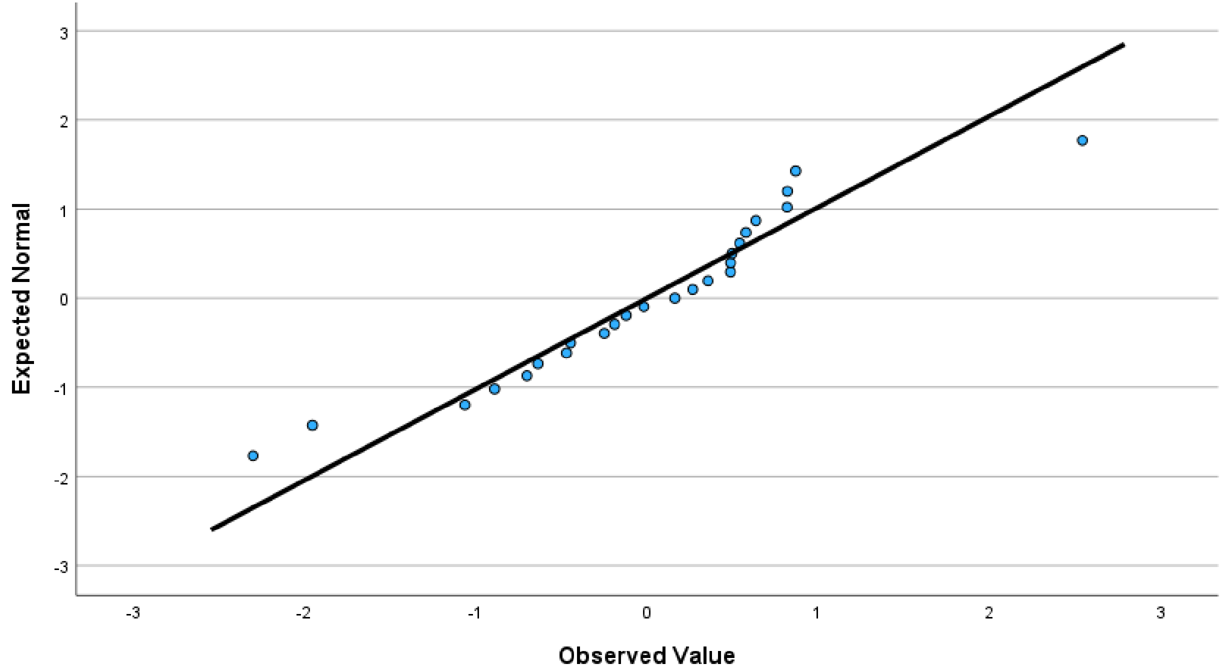
A4.1: Q-Q Plot of Standardized Residuals — Change in Inuktut Knowledge



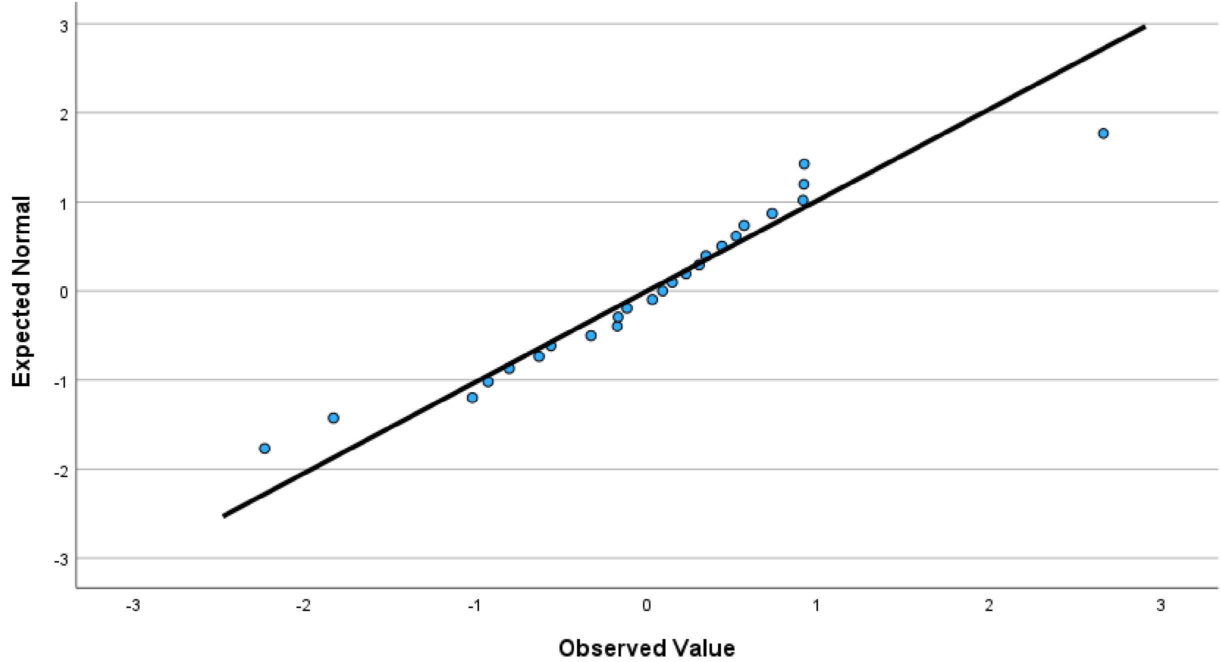
A4.2: Q-Q Plot of Standardized Residuals — Change in Inuktut as Mother Tongue



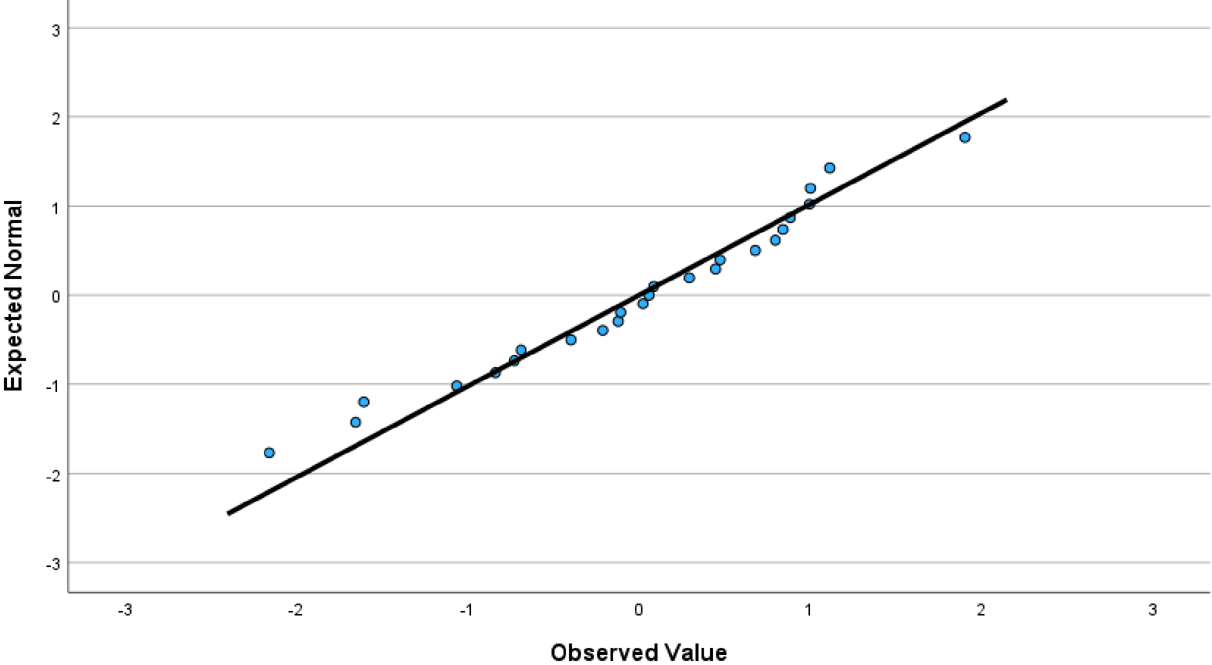
A4.3: Q-Q Plot of Standardized Residuals — Change in Inuktut Use at Home



A4.4: Q-Q Plot of Standardized Residuals — Change in Inuktut Use as Main Language at Home



A4.5: Q-Q Plot of Standardized Residuals — Change in Inuktut Use as Secondary Language at Home

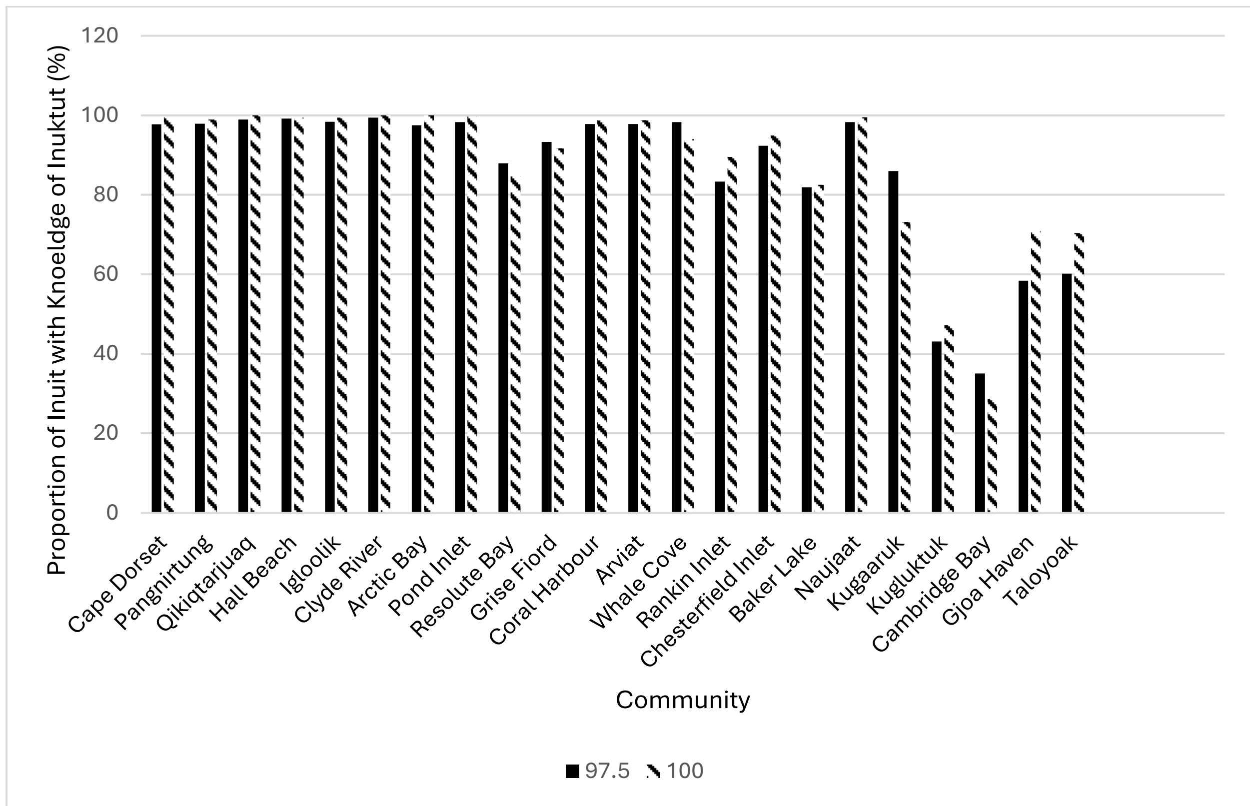


Appendix B: Summary of Socioeconomic Controls

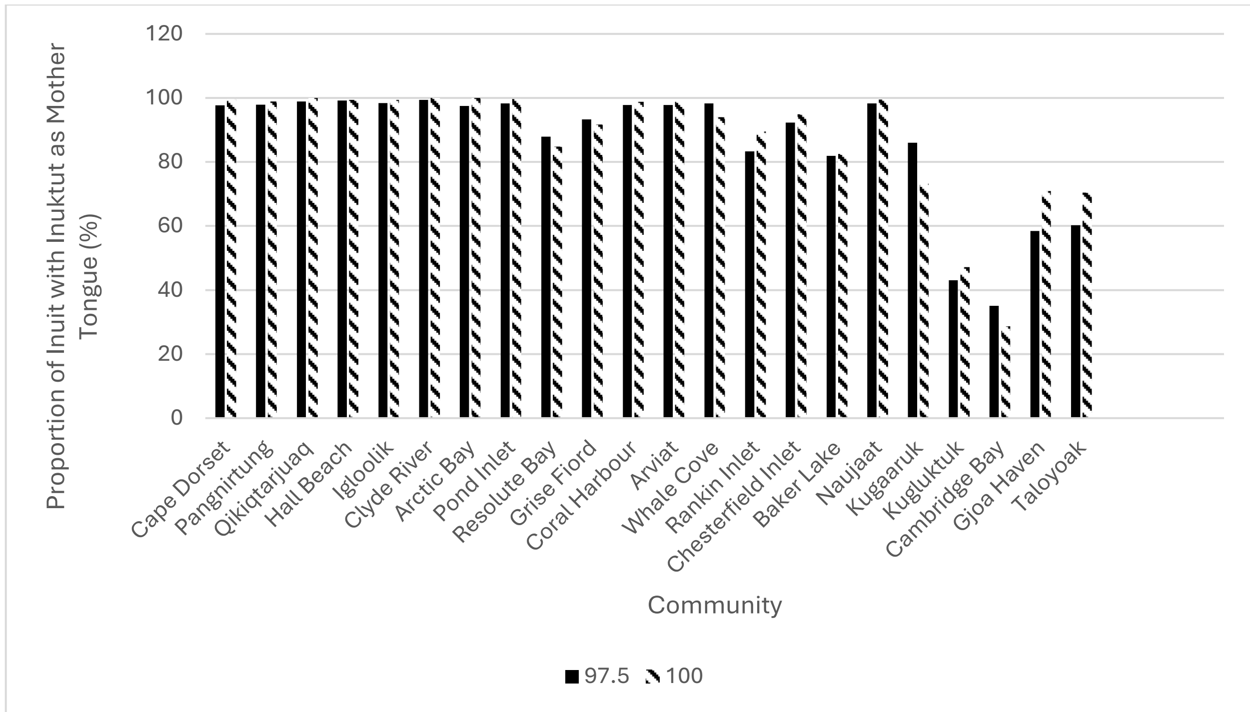
Factor	Mean (range)	β	Std. Error	P-value	R^2	Adjusted R^2	F-statistic
Median Household Income (2016)	30,981 (20,250–$49,729)	-0.001	0.001	0.680	0.12	-0.040	0.237
Unemployment Rate (2016)	19.17 (7.90–35.20)	-1.999	2.316	0.399	0.001	-0.051	0.026
High School Completion Rate (2016)	45.92 (30.90–73.50)	0.813	1.615	0.620	0.033	-0.017	0.658

Appendix C: Inuktut Vitality Statistics for Nunavut by Community (2001 and 2016)

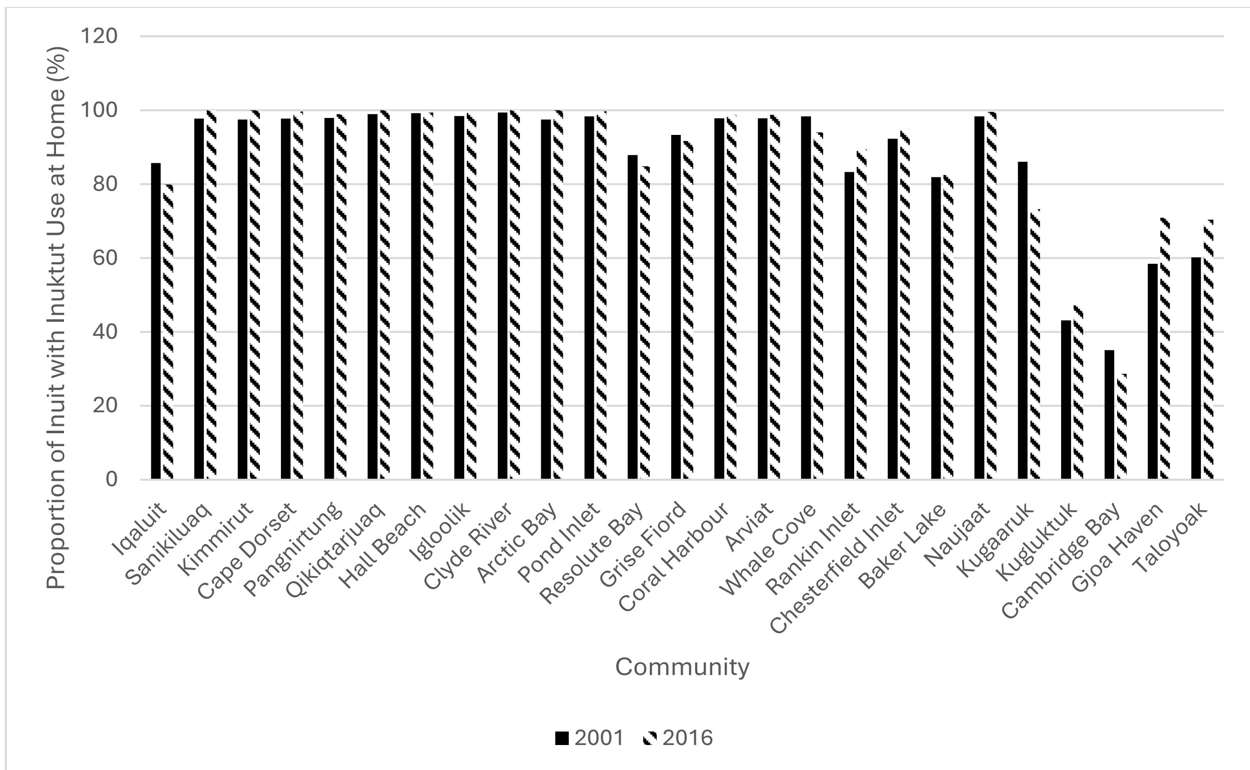
Appendix C1: Changes in Inuktut Knowledge by Community (2001 and 2016)



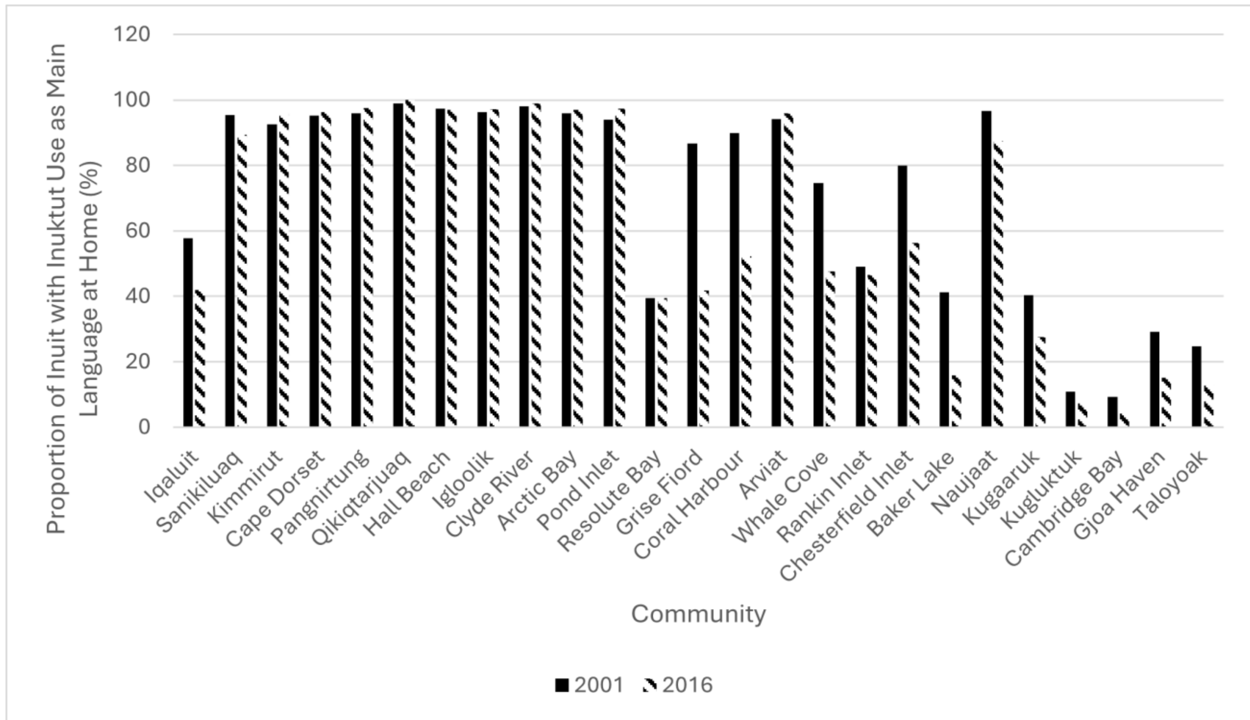
Appendix C2: Changes in Inuktut Mother Tongue Status by Community (2001–2016)



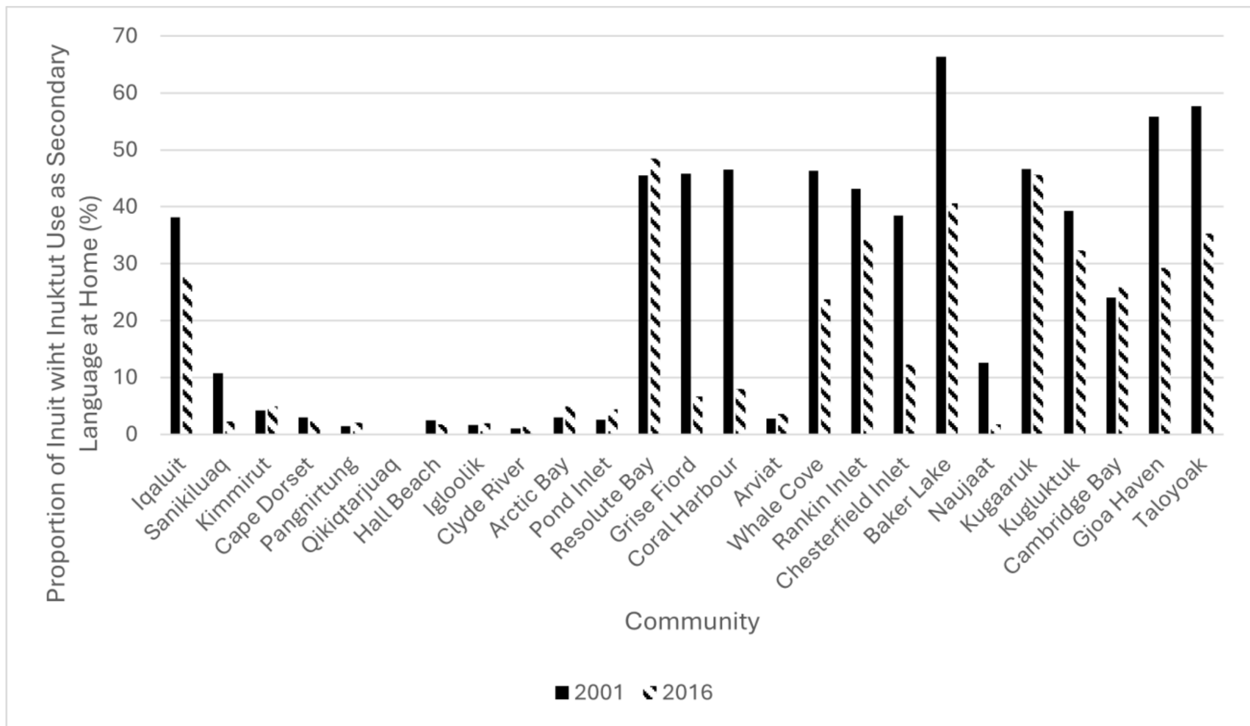
Appendix C3: Changes in Inuktut Home Use by Community (2001–2016)



Appendix C4: Changes in Inuktut Use as Main Language at Home by Community (2001–2016)



Appendix C5: Changes in Inuktut Use as Secondary Language at Home by Community (2001–2016)



Appendix D: Summary of Linear Regression Analyses of Language Vitality Variables as Predictors of Changes in Suicide Rates

Independent Variable	*β*	Std. Error	*p*-value	R^2	Adjusted R^2	*F*-statistic
Change in Knowledge	-3.097	3.347	0.364	0.036	0.006	0.856
“ with controls	-2.564	3.289	0.445	0.259	0.110	1.744
Change in Mother Tongue	-2.113	1.682	0.222	0.064	0.024	1.578
“ with controls	-1.638	1.626	0.326	0.273	0.128	1.877
Change in Overall Use	-1.360	3.082	0.663	0.008	-0.035	0.195
“ with controls	-2.814	3.328	0.408	0.262	0.115	1.779
Change in Main Use	-4.217	1.117	0.001**	0.429	0.398	14.248
“ with controls	-3.733	1.086	0.003**	0.582	0.478	5.579
Change in Secondary Use	2.076	1.085	0.068	0.137	0.100	3.661
“ with controls	2.270	1.295	0.099	0.333	0.167	2.000

This table provides a summary of the results from a series of linear regression analyses that tested whether changes in five Inuktut language vitality variables are related to changes in suicide rates across Nunavut communities. Each language variable appears twice in the table: once for a basic model without control variables, and once for a model that includes socioeconomic factors (median income, high school completion, and unemployment rates) as controls. The table includes the regression coefficient (β), which shows the direction and strength of the relationship between each language variable and suicide rates (negative values suggest a decrease in suicide rates as the language variable increases). The standard error gives an indication of how precise or stable the estimate is. The p-value shows whether the relationship is statistically significant—that is, unlikely to have occurred by chance (values less than .05 are typically considered grounds for rejecting the null hypothesis that there is no relationship between the variables, and thus are significant). The R^2 and adjusted R^2 values indicate how much of the variation in suicide rates is explained by the model; higher values mean the model fits the data better. Finally, the F-statistic tests whether the regression model as a whole provides a better fit to the data than a model with no independent variables, with a larger F-statistic (and a corresponding small p-value) suggests that the model explains a significant amount of variance overall.