

Open Access Theoretical Discussion

Beyond Appropriate Norms: Cultural Safety with Indigenous People in Canadian Neuropsychology

Reagan Gale, PhD^{1*}, Karlee Fellner, PhD^{2,5}, Garrett Tomlinson, LLM³, and David Danto, PhD^{4,6}

Citation: Gale, R., Fellner, K., Tomlinson, G. and Danto, D. (2022). Beyond Appropriate Norms: Cultural Safety with Indigenous People in Canadian Neuropsychology. *Journal of Concurrent Disorders*.

Founding Editor:
Masood Zangeneh, PhD

Editor: Cynthia Wesley-Esquiaux, PhD

Received: 03/10/2022
Accepted: 04/27/2022
Published: 05/04/2022



Copyright: ©2022
Gale, R., Fellner, K.,
Tomlinson, G. and
Danto, D. Licensee CDS
Press, Toronto, Canada.
This article is an open
access article distributed
under the terms and
conditions of the
Creative Commons
Attribution (CC BY)
license
(<http://creativecommons.org/licenses/by/4.0/>)

¹Department of Health and Social Services, Government of Yukon, Canada

²University of Calgary, Canada

³Metis Nation of Alberta, Canada

⁴MacEwan University, Canada

⁵ORCID: 0000-0002-6354-6073

⁶ORCID: 0000-0001-5223-3867

*Corresponding author: Reagan Gale, reagan.gale@gmail.com

Abstract: This paper introduces the concept of cultural safety in the context of neuropsychological practice in Canada. Cultural safety extends beyond cultural sensitivity (understanding the role and importance of the culture of the client) and cultural competence (the ability to provide psychological services in ways that are culturally sensitive and relevant to the client) to analyzing power imbalances and colonization as factors limiting clinical effectiveness with Indigenous clients. Cultural safety considers the historic context of health care in Canada, ongoing systemic racism, and seeks to equalize power between the psychologist and the client. In this paper, we illustrate several ways in which conventional approaches to neuropsychological assessment may be harmful for Indigenous Peoples in Canada, and offer as suggestions several “starting points” for preparing for culturally safe neuropsychological practice. A sample report is also included for the readers’ consideration on ways to approach and document an assessment that emphasizes cultural safety.

Keywords: Cultural Safety; Neuropsychological Practice; Indigenous; Systemic Racism.

Introduction

Lilienfeld's 2007 publication on psychological treatments that cause harm prompted, for many, the kind of self-reflection and self-assessment that is embedded in our code of ethics (Lilienfeld, 2007). A growing body of literature reflects an increasing awareness that psychological methods and applications are not value-neutral, and may actively harm (Barlow, 2010; Bracken et al., 2016; Castonguay et al., 2010). In this research, harm is identified and verified using objective measures and statistical approaches, as are treatment efficacy and benefit. Following this methodology, psychologists maintain an expert stance and assumption of knowing what is best for the people we serve. In contrast, there has been less investigation on the *subjective* experience of harm in psychological practice (e.g., Sherwood, 2001). The notion that the clients themselves may be best positioned to tell us what helps or harms can be uncomfortable for clinicians who have been trained in conventional expert-centric approaches. However, a substantial body of literature supports the critical importance of client or patient experiences in treatment efficacy (e.g., Doyle, Lennox, & Bell, 2013; Volpicelli Leonard et al, 2020). Further, both the APA and CPA codes of ethics prioritize beneficence and nonmaleficence, and working in the best interests of the client (American Psychological Association, 2017; Canadian Psychological Association, 2017).

Understanding clients' experiences with psychologists is even more crucial when serving people who belong to communities that are marginalized and oppressed. Many of these communities, including Indigenous peoples, have been directly oppressed and subjected to great harms through psychological assessment, treatment, and research (Canadian Psychological Association & Psychology Foundation of Canada, 2018; Duran, 2006; Fellner, 2016; "Full Apology to the Native American, Alaska Native, and Native Hawaiian People," 2016; LaFromboise, Trimble, & Mohatt, 1990; Trimble & Thurman, 2002). For instance, intelligence tests, such as the Binet-Simon, were used as evidence of intellectual inferiority of Indigenous and other racialized peoples (e.g., Davidson, 1992; Garth, 1921, 1923; Garth & Smith, 1937; Hunter & Sommermier, 1922; Jamieson & Sandiford, 1928; Telford, 1938; Whorton & Morgan, 1990), and were used to justify eugenics practices such as forced sterilization (Grekul, Krahn, & Odynak, 2004). Official statements and reports released by the national psychological associations in Canada, the United States, and Australia directly acknowledge these harms and the historical and ongoing breaches of the codes of ethics with Indigenous peoples (Aiello et al., 2020; American Psychological Association, 2021; Australian Psychological Society, 2021; Canadian Psychological Association & Psychology Foundation of Canada, 2018). These statements are a call to action for each of us to critically examine our practices with Indigenous people, including the research on which our approaches are based, and to shift our approaches toward cultural humility, relevance, and safety. The current paper specifically explores developing cultural safety in neuropsychology.

Cultural Safety in Practice

Cultural safety calls on providers to recognize barriers to clinical effectiveness and potential harms arising from the inherent power imbalance between provider and patient and provide better care through decolonising, being aware of difference, considering power relationships, implementing reflective practice, and allowing the patient to determine whether a clinical encounter is safe (Curtis et al., 2019, p.13; National Collaborating Centre for Aboriginal Health, 2013; Ramsden, 1990). Cultural safety necessitates that psychologists first recognize that their understanding is perspectival, identifying their own cultural values and privilege before they can understand and correct for their impact(s). As Smith (2021) writes: "Cultural safety, in effect, asks that we as psychologists step out of *our* cultural value system" (emphasis added). This approach is critical in reducing the "biases, attitudes, assumptions, stereotypes and prejudices that may be contributing to a lower quality of healthcare" for Indigenous clients (Curtis et al., 2019, p.13). Without cultural safety, we risk leaving those we serve feeling alienated, disrespected, and thereby harmed by our actions (Health Council of Canada, 2012).

In the Canadian healthcare landscape, cultural safety is becoming paramount in discussions of how to improve health outcomes for Indigenous Peoples. Cultural safety necessarily considers the social and historical context for the current Canadian health care system and the profound health inequities experienced by Indigenous people living in Canada (National Collaborating Center for Aboriginal Health, 2013; Canadian Psychological Association & Psychology Foundation of Canada, 2018). Cultural safety is not a way of learning about or understanding Indigenous cultures – though doing so may be helpful – but, rather, involves understanding the roots of inequities in health and healthcare (Curtis et al, 2019).

Inviting the client to determine what is helpful and harmful is essential in culturally safe practice. Doing so moves beyond cultural awareness (understanding the role and importance of the culture of the client and the psychologist) and cultural competence (the assumed ability to provide psychological services in ways that are culturally sensitive and relevant to the client; National Aboriginal Health Organization, 2009). This is an important shift. Cultural competence has been challenged given the potential for providers to inaccurately assume they have reached a level of competence with a population, when in reality, competence is an ongoing relational process with each particular client, family, and/or community (e.g., Lekas, Pahl, & Lewis, 2020). Culturally safe practice, on the other hand, is relational and specific to each clinical interaction, actively striving toward the equalization of power between the psychologist and the client. This marks a departure from historical discourses in psychology that have placed the psychologist-as-expert, and in so doing, have perpetuated harm

with Indigenous communities. In this article, we seek to illustrate several ways in which conventional approaches to neuropsychological assessment may be harmful for Indigenous people in Canada, and offer as suggestions several starting points for preparing a culturally safe practice. A sample report, based on an amalgam of several de-identified clients, is also included for readers' consideration on how to approach and document a culturally safe assessment (see Appendix A).

Positivist “Brain Behaviour Relationships”

Neuropsychology may be defined as a field of psychology that focuses on relationships between “brain and behavior, particularly as these relationships can be applied to the diagnosis of brain disorder, assessment of cognitive and behavioral functioning and the design of effective treatment” (American Psychological Association, 2022). The authors support the position that there is a fundamental connection between the brain and behaviour, and that neuropsychological assessment is an important tool in evaluating cognitive performance. The biopsychosocial model is well-referenced in regard to psychological assessment. Nevertheless, it is often the case that neuropsychological assessments fail to include the full and dynamic context of the individual and instead prioritize organicity. Worse still, neuropsychological assessments often yield merely abstract quantitative results from various measurement tools. What is missed are rich descriptions of the participants' lifeworld, home environment, community, historical, social, political, and economic contexts, which also have profound impacts on behaviour. At the heart of this issue are two competing principles: on the one hand, we can attain a higher degree of control, methodological repeatability, and accuracy of measurement if we isolate the individual from various worldly variables. On the other hand, views that are consonant with Indigenous understandings of the person maintain that it is impossible to interpret behaviour in the absence of context. Indigenous epistemologies are likely to reject approaches that conceptualize a person unidimensionally, such as strictly through neuroanatomical structures or only through the outcomes of some particular measure or measures. This shift away from holistic description to reductionistic abstraction can be seen in the move towards logical positivism. For example:

During the late 19(th) century, measurement and quantification became part of the new rhetoric of science. Soon enough this affected psychology in general and neuropsychology in particular and neuropsychiatric assessment followed suit. It has changed little since except that now and again old tests and markers are replaced by more "reliable" ones and phenomenological data are squeezed out further. Its laudable enthusiasm for objectivity and truth was ab initio justified by 19(th) century Positivism... (p.3) (Berriors & Markova, 2002)

Epistemic Violence & (Neo)colonialism in Neuropsychology

For neuropsychologists, preparing for culturally safe practice requires explicit acknowledgement of a longstanding tendency to value one particular worldview over others. For decades, psychology as a field has privileged positivist and post-positivist paradigms of science and thought (Fellner, 2016; Ponterotto, 2003). Neuropsychological theory and practice remains deeply rooted in positivist assumptions and approaches (e.g., McKenna & Warrington, 1996; Reitan & Wolfson, 1996). This is perpetuated and supported by the common exhortation to use evidence-based practice (Canadian Psychological Association, 2012), evidence-based assessment (Hunsley & Mash, 2007) or empirically-derived tests and test batteries (e.g., the MMPI Instruments; see Ben-Porath, 2013) that privilege logical positivism and oppress and suppress Indigenous cosmologies and ways of knowing (Canadian Psychological Association & Psychology Foundation of Canada, 2018; Fellner, 2016; Gone, 2008). Our commitment to practicing as "scientist-practitioners" (Hannay et al., 1998) places neuropsychological study and practice on a firm foundation of Euro Western empiricism. Yet Indigenous scholars, colleagues, and clients have been telling us for years that this is a form of epistemic racism, or epistemic violence (Duran, 2006), and (neo)colonialism (Fellner, John & Cottell, 2016). For example, Wendt, Gone and Nagata (2015) wrote:

As several critical observers have noted, mainstream psychotherapeutic interventions typically are based on a Western cultural concept of the self as "agentic, rationalistic, monological, and univocal," and thus rely heavily on socialization to a Westernized worldview of individuality and interiorized identity and control (Kirmayer, 2007, p. 240; cf. Cushman, 1995). Such socialization often is construed as benign "psychoeducation" for clients with deficient "psychological mindedness," but there may be a fine line in some instances between pragmatic education and ethnocentric proselytization. Indeed, some researchers have considered evidence that clinicians act as "crypto-missionaries" (Meehl, 1959, p. 257) by subtly or inadvertently "converting" their clients to their own professional, social, and even moral values (see, for example, Slife, Smith, & Burchfield, 2003; Tjeltveit, 1986). pp. 348-349

A significant body of literature exists informing psychologists that the unswerving (and perhaps even unconscious) application of positivist and post-positivist epistemology often harms Indigenous clients, their communities, and broader health and social systems. For example, Stewart (2008) wrote:

Indigenous cultural understandings of mental health and healing are distinctly different from understandings that have prevailed in most North American provider settings, including counselling contexts. Counselling services in Canada and the United States are based almost exclusively on a Western paradigm of health that contrasts with an Indigenous world view (Gone 2004). These differences in paradigmatic perspectives can form a barrier to effective health promoting services for Native peoples who seek mental health support from formally trained counsellors, including those who may be trained in cross-cultural or multicultural approaches. Further, Duran (2006) suggests that counselling Indigenous individuals from a non-Indigenous perspective (i.e. Western perspective) is a form of continued oppression and colonization, as it does not legitimize the Indigenous cultural view of mental health and healing. (p.49)

A simple and brief review of the colonial history of the Americas (e.g., Dunbar-Ortiz, 2014; Gray 2011) and the literature by Indigenous scholars and psychologists (e.g., Duran & Duran, 1995; Fellner, 2016; Gone, 2008; McCabe, 2007; McCormick, 1996) easily reveals how and why conventional theory, interventions, and assessment in neuropsychology is oppressive and harmful to Indigenous people. This literature is only further supported by individual, community, and family accounts of their direct experiences with neuropsychologists. The imposition of Eurocentric worldviews onto the client applies and affirms the very approaches that have colonized and oppressed Indigenous people in the Americas since contact (Duran, 2006; Lavallée & Poole, 2009; McCabe, 2007) – “a therapeutic system that has its root metaphors deeply entrenched in the causes of the presenting problems themselves” (Duran & Duran, 1995, p. 18). The theory and applications of neuropsychology are based in the enforcement an imposition of Western Eurosettler ideals of “normalcy,” and thus are directly based on assimilation to the North American capitalist system that was violently forced upon the First Peoples of this continent (Fellner, 2016; Gone, 2008). Duran (2006) points out that this positions the mental health system as the contemporary manifestation of the social control that has been imposed on Indigenous peoples since the wake of the colonial project – a role that was historically relegated to missionaries and church- and government-run residential schools. Our assessments and interventions thus enforce adaptation to serious social issues, “[serving] to pacify and eliminate legitimate anger and political initiative” (LaFromboise et al., 1990, p. 634). This works in direct opposition to, and suppression of, Indigenous agendas of cultural and linguistic revitalization and resurgence

that actually foster individual and collective wellness among Indigenous people and communities (Alfred & Corntassel, 2005; Kirmayer et al., 2009).

Ways of Knowing in Neuropsychology

In addressing epistemic violence and (neo)colonialism in neuropsychology, it is crucial to consider the experiential foundations of positivist empiricism – that is, the assumption that what is knowable is only evident through physical sensory experience. The authors do not argue with the importance of grounding neuropsychological theory and practice in sensory experience, but rather suggest that there are experiences beyond those acknowledged within positivism/post-positivism that deserve equal attention and value. In this way, the approach we suggest aligns with the original intention of the term “empiricism”, which means grounded in experience (see Duignan et al., 2020), without limitations on what comprises that experience. Ironically, psychological study and practice has drifted down a path of greater abstraction from experience through increasingly prioritizing concepts of “rigour” that conform to practices in the hard sciences, often in the pursuit of statistical effect. Contrary to the assumptions inherent in this narrow approach, there are countless Indigenous approaches grounded in much broader experience that are methodical, rigorous, and scientific (e.g., Cajete, 2000; Kovach, 2009; Peat, 2006; Wilson, 2008). These paradigms of science incorporate metaphysical and other-than-human and more-than-human influences and factors, and speak to complex realities that are often inaccurately and harmfully pathologized in conventional psychological frameworks (Apffel-Marglin, 2011; Fellner, 2016).

Neuropsychology is an applied science, and for many of us, it is also a passion. Because of this, contemplating epistemic racism in our field can be uncomfortable, as it calls for shifts in how we understand ourselves and our work. Cultural safety requires a different worldview, or understanding, of the application of the science to which we have devoted our careers. In contrast with the sole focus of empiricism, Dr. Carol Hopkins, Executive Director of the Thunderbird Partnership Foundation, has taught that “helpers need training to develop belief” and that we must “think from a place of belief. Sacred knowledge is not open to debate.” (Hopkins, 2019). The joint Canadian Psychological Association and Psychological Foundation of Canada taskforce responding to the Truth and Reconciliation Commission writes:

Empirical evidence is based on cultural assumptions and particular ways of knowing that are often foreign to Indigenous Peoples. Quantification is an abstraction from experience, and [psychological services] should be validated in experience. For instance, communities have their own ways of determining the effectiveness of what is happening within them; these determinations are made from the consultation of Elders, leaders, and

members sharing their experiences and having conversations. Psychologists therefore need rigorous approaches to better understand a community's experience of a [psychological service] (i.e. what is working and what have people in the community experienced) (2018, p. 30)

Ethical practice thus marks a shift from epistemic violence through the imposition of colonial ways of knowing onto the people we serve, to epistemic pluralism, which acknowledges and upholds different ways of knowing as equally valid realities. It is in this shift to epistemic pluralism that cultural safety can be fostered. It is a professional and ethical imperative that we create a culturally safe experience for the Indigenous clients we see through inviting and supporting Indigenous ways of knowing, being, and doing (Canadian Psychological Association & Psychology Foundation of Canada, 2018).

One framework that has been put forth to help conventional researchers and clinicians move toward epistemic pluralism is two-eyed seeing (Bartlett, Marshall, & Marshall, 2012). Two-eyed-seeing allows us to acknowledge and embrace the strengths of both Western and Indigenous perspectives, such that they are mutually beneficial to one another. Neuropsychologists can learn more about the worldview of their clients by engaging in conversation and inviting dialogue with individuals and communities, seeking supervision from an Indigenous Elder or knowledge-holder, and through study of Indigenous ways-of-knowing and ways-of-being. "Leaning in" to the discomfort of change and uncertainty, and attempting to understand clients from their worldview as well as our own, is a potential way to increase cultural safety in neuropsychological practice. Many sources also point to the importance of understanding Indigenous language concepts in making these critical shifts (Canadian Psychological Association & Psychology Foundation of Canada, 2018; Fellner, 2016). For instance, the word client itself has an inherent power differential, whereas the Anishinaabe term *manitou* (for spirit, denoting that we are all spirits on a human journey; Richard Wright, Leech Lake Ojibwe Nation, lives in Minnesota, personal communication, October 2019) or the Cree term *okehokew* (for guest, indicating the treatment of a client as a relative and honoured guest; Larry Meechance, Red Pheasant Cree Nation, lives in Alberta, personal communication, November 2021) are inherently decolonial and provide neuropsychologists with an understanding of how a culturally safe clinical relationship can be created.

The Client is the *Community*

Consider the primary client of the neuropsychological assessment. Is the client the individual undergoing psychometric testing? Or is the client the referring body, such as the court, the physician, or an insurer? Typically, the primary client of a neuropsychological assessment has been the

individual undergoing neurocognitive testing. Crucially, Indigenous colleagues have clearly told us that the individual *in relation with* the community is *the only appropriate focus* (Fellner, 2016, 2019; Turcotte, 2012). Applying two-eyed seeing for culturally appropriate and relevant practice, it is essential to include community involvement in assessment, formulation, consultation, and treatment planning (Canadian Psychological Association & Psychology Foundation of Canada, 2018).

Conceptualizing the individual in relation with the community (rather than solely the individual) has significant implications for our practice. Increasing cultural safety for Indigenous people may mean addressing and negotiating data ownership, control, access, and possession (OCAP) with both the individual and their community (First Nations Information Governance Centre, 2021) at the outset of the assessment. Consider how neuropsychological practice would change with assessments as the property not only of the individual client, but of the broader Indigenous community. How might the neuropsychologist respond if an Indigenous client directed them to release their entire clinical record to all of the Elders in their community? Or how might one respond if another Indigenous person asked to attend a clinical interview as a matter of right, as it is indeed considered in some Indigenous cultures? Imagine that a First Nation served a neuropsychologist with notice that they are applying to a court for access to clinical records, including protected test protocols, as they consider these their property. Cultural safety thus involves necessary shifts in understandings of ethics. A comprehensive account of Indigenous ethics in psychology can be found in the Society of Indian Psychologists' (SIP's) *Commentary on the American Psychological Association's Ethical Principles of Psychologists and Code of Conduct* (García & Tehee, 2014).

Cultural Safety and Canadian Law

It is important to note here how Canadian health privacy laws are themselves at odds with Indigenous legal orders, customs, or particular traditions of individual Indigenous Nations. Provincial and Territorial privacy statutes invariably deem health information as being under the control of the individual to whom care is to be provided. Standards of practice for accessing psychological records, as operationalized by Canadian regulatory bodies, mirror this focus and place common law obligations on practitioners. That Canadian law has been a primary tool of cultural oppression of Indigenous people is a potential barrier to culturally safe practice. Complex legal systems based on custom, culture, and habit of thinking, existed among Indigenous Nations long before to colonization, and they continue in existence and in force and effect today (Finch, 2012). This is important for neuropsychologists to understand, as Indigenous clients and communities may value the obligations imposed upon them by the Indigenous legal orders of their own Nation, sometimes with more, or at least equal, weight to that of that of the colonial common law. The courts have weighed in on the topic of competing legal regimes in the context of

Aboriginal Rights and support an approach toward equal emphasis and authority: "...the only fair and just reconciliation is ... one which takes into account the aboriginal perspective while at the same time taking into account the perspective of the common law. True reconciliation will, equally, place weight on each" (*R. v. Van der Peet*, 1996).

Anishinaabe scholar Aaron Mills (Waabishki Ma'iingan) draws an indivisible connection between understanding Indigenous laws and understanding Indigenous ways of knowing and being: "Without having begun to internalize our lifeworld, one has no hope of understanding our law" (p.852, 2016). Moving towards culturally safe practice requires that neuropsychologists also broaden their understanding of what constitutes law and regulation by making efforts to understand, incorporate, and where appropriate, apply the relevant Indigenous legal orders of the communities in which they practice. It is important to recognize that law is more than a set of written statutes and regulations; a system of laws embodies the values, needs and social norms of a society. This is further emphasized among Indigenous Nations, where legal instruments go significantly beyond the written word (Finch, 2012).

While most Canadian health privacy statutes permit sharing the clinical record with other defined "health professionals" for certain purposes, in the interests of both reconciliation and cultural safety, legislators and psychological regulatory bodies must consider adding Indigenous groups or roles (e.g., Elders) to the list of persons with whom a psychological record may be shared. These changes should be supported and advocated by practitioners wherever possible, recognizing that such changes are essential for fulfilling the professional and ethical imperative of involving appropriate community members in community-based case conceptualization, assessment, and treatment planning (Canadian Psychological Association & Psychology Foundation of Canada, 2018).

Can Psychometric Testing Harm?

Neuropsychologists have the opportunity to hear from Indigenous people about how best to approach psychometric testing with their communities (Jacklin et al., 2019; Jacklin et al., 2020; Walker et al., 2021). Not surprisingly, these expressed preferences may be in conflict with our understanding of the ideal psychometric approach, which emphasizes standardized test protocols and maintaining an arms-length relationship between examiner and examinee: "standardized administration procedures ensure(s)... that each client is assessed in the same way regardless of setting" (National Association of Psychometrists, 2016). This is in fundamental contrast to the prioritization of good relationships in Indigenous cultures (Wilson, 2008), and in particular, the need for healthy relationship building that neutralizes power differentials and colonial trauma (Fellner, 2016). In comparison, the reader is directed to the recently published Canadian Indigenous Cognitive Assessment (CICA), which was developed in collaboration with Indigenous elders. The preamble to the

CICA sets out how Indigenous clients wish to be treated during assessment (Jacklin et al., 2019). For example, we should avoid using digital devices to record timing, avoid getting up and walking around (even to fetch new testing material) during testing, and, if a client appears to be enjoying a task, we should allow them to continue to do so even after allotted time has passed. The guidelines for the CICA further encourage assessors to use a soft tone of language and make questions less direct. Assessors are encouraged to connect with the people they are working with, sharing appropriate personal information about themselves such as who their parents are and where they are from. Further, congruent with the Indigenous terminology presented above, assessors are encouraged to think about and refer to the individuals seen for assessment as the “loved one” rather than a “client” or “patient” (Jacklin et al., 2019). These shifts are critical in offering culturally safe practice and beginning to mend the harms of conventional assessment practice with Indigenous people.

Beyond the information provided in the literature and cited earlier in this paper, the first author has learned first-hand that conventional psychometric testing processes pose psychological risks to Indigenous clients based. In testing, the neuropsychologist invariably holds more information and organizational power than the client. This is a direct reflection of colonial power differentials that have oppressed Indigenous people since contact (Fellner, 2016). Clients may experience this as power *over*, resulting in a sense of powerlessness, vulnerability, and incompetence. The possible emotional and cognitive sequelae of that experience for clients who have already experienced discrimination and lifelong systemic racism within healthcare can be damaging, and from a psychometric perspective, can invalidate results. This risk may be especially high when working with testing based on expert and “secret” knowledge, such as when the examiner is explicit with the client that they know more than the client does, and it's the client's task to figure it out (e.g., Wisconsin Cart Sorting Test [Heaton et al., 1993]). For an individual who has had a lifetime of discrimination and oppression, this testing experience could cause significant distress and harm and make the individual less likely to seek care in the future, thereby perpetuating unequal access to care and poorer health outcomes.

Neuropsychologists may be able to decrease the risk of harm to Indigenous clients by more actively involving the client in every aspect of the assessment, including determining which question(s) the assessment will seek to answer, which types of assessment tools will be used, and, at the very least, what to expect during the assessment. While this process appears to be the minimal ethical standard for informed consent under the code of ethics (Canadian Psychological Association, 2017), the authors suggest that Indigenous clients be additionally alerted to the fact that neurocognitive testing might cause them to feel like they are being mocked or disrespected. Fully informed consent requires that Indigenous clients are alerted to *more* than the fact that every person's limits are tested by these

measures and that their experience within the neuropsychological assessment process may be evocative or reminiscent of previous healthcare encounters when they have experienced discrimination or systemic racism. Alongside an acknowledgement that assessments are colonial tools, clients should also be informed how and why the assessment may be able to help them and support their personal goals in the context of the system, for example, by offering access to resources that require assessment results. This assures the client that the assessment will be done in a way that best serves their interests, and that it is not a tool to pathologize or oppress or assimilate them. The neuropsychologist then has the responsibility to ensure any documentation is culturally sensitive and to minimize deficit-based language and pathologizing.

When provided with this information, clients can provide *truly* informed consent: they are treated as equals and given the fair choice of whether to proceed with the assessment or not. In some circumstances, referrals for neuropsychological assessment are not even discussed with the client before they are made, and, when contacted, the client knows nothing about why the referral has been made or what the benefits of the assessment could be. In the first author's practice, Indigenous clients are not scheduled for assessment until the assessor has had the chance to discuss the risks of testing with the client, ask if there is anything the client would like to learn from the assessment, and negotiate how to proceed in a culturally safe manner. A frank discussion of the risks and benefits of assessment, as well as whether the assessment is appropriate for the *client's* (not only the referrer's) goals, is a way to help equalize power between neuropsychologist and client *before* the assessment is even scheduled. The assessment process should be a collaborative one and ideally, the client should both be able to 'see themselves' in the report and feel a sense of co-authorship over the final product. An example of this process is provided in the appended sample report.

When Diagnosis Harms

Neuropsychologists risk an ethical dilemma when deciding whether to provide diagnostic labels to Indigenous peoples who have told us that doing so is demeaning, devaluing, and harmful (Task Force on Responding to the Truth and Reconciliation Commission of Canada's Report, 2018). Before we diagnose, we must stop to ask what the meaning of the diagnosis will be to the client, as well as any potential consequences in their lives. Cultural safety requires that we involve the client and their community in discussing the meaning of diagnosis when they are comfortable doing so, and *always* before a diagnosis is offered. It is also critical to consider the deep impact of diagnosis from Indigenous perspectives. Indigenous clinical psychologist Eduardo Duran (2006, 2019) writes of diagnosis as a naming ceremony, which speaks to the power of such labels to oppress, suppress, and impose pathology that can be experienced as a disabling self-fulfilling prophecy. Moreover, diagnosis should occur as part of a concrete

description of the larger context of the client, including an articulation of the risks and benefits of that diagnosis under these particular circumstances. What is the function of documenting a neurocognitive profile if the client is unlikely to have reasonable access to supportive services, care, or accommodations in their community of origin? Are either neuropsychological assessment or diagnoses ethical when a client's basic needs (e.g., clean water, housing, education) will not likely be met? *Who are we diagnosing for? And why?*

Neuropsychologists should consider the weight given to the social determinants of health in informing the diagnostic formulation (Loppie Reading & Wien, 2009). In addition to looking for patterns of performance across a neurocognitive profile, neuropsychologists must consider the effect of other social determinants of health, including intergenerational trauma, poverty, hunger, violence, grief, and insecure housing. Neuropsychologists must also actively seek and document relative strengths beyond the cognitive data, including survivance (Vizenor, 1999), resilience, connection, hope, compassion, wellness practices, and include those in the diagnostic formulation. Special attention should be given to the Canadian Psychological Association & Psychology Foundation of Canada Task Force Report on the Truth and Reconciliation Commission, which includes multiple recommendations on how best to approach assessment with Indigenous clients (see p.16-20). These recommendations include adopting culturally grounded assessment approaches, empowering clients, reconsidering confidentiality, adopting alternative methodologies, and reconsidering outcomes.

What Does Your Office Smell Like?

The physical environment is a critical part of cultural safety with Indigenous people as well (Fellner, 2016). Consider the testing environment of hospital systems and large institutions in which many neuropsychologists work. When we see clients for assessment within our large buildings and institutions, we risk evoking memories of other institutional experiences, including residential or day schools. Residential schools operated in Canada until 1996 (Truth and Reconciliation Commission [TRC], 2015), and a disproportionate number of Indigenous children and youth continue to be involved in the child welfare and criminal justice systems (National Collaborative Centre for Aboriginal Health, 2013; Denow, 2007; Government of Canada, 2021). In these environments, many Indigenous people experience(d) physical, sexual, and/or emotional abuse alongside overt oppression of their cultures and languages (TRC, 2015).

The first author, who has worked in large institutions in the north, has worked with clients who speak about the sounds of the building(s), the feeling of the neon lights, and the smells of the industrial cleaner. These physical sensations may evoke traumatic flashbacks or, at the very least, emotionally disturbing memories of times during which the clients had little to no power (e.g., in residential school, during medical treatments, etc.).

When these environmental cues are part of the testing experience, especially when the client has little or no power over what, when, or why tests are given, the neuropsychological assessment may not only be invalid, but can magnify a client's pre-existing trauma. Neuropsychologists should reflect on the physical attributes of their office and testing space, and look to the work of Indigenous scholars and psychologists on how to make the professional environment actively safe and welcoming (see Fellner, 2016 for detailed recommendations).

Neuropsychological Constructs

Multiple domains of cognition are assessed in a comprehensive neuropsychological assessment, from performance validity to intellectual functioning. Yet how often do neuropsychologists consider the validity and universality of the constructs themselves? How many neuropsychologists endeavour to find the best fitting appropriate normative sample(s) as the "solution" when working with Indigenous clients and communities? Crucially, Indigenous colleagues and clients have been clear that these constructs are not universal and are inappropriate for use with many Indigenous clients (Canadian Psychological Association & Psychology Foundation of Canada, 2018). Neuropsychologists must be mindful of the potential risk of harm when we unquestioningly apply Western Eurocentric concepts of cognition in assessments with Indigenous people.

It is important for neuropsychologists who conduct medico-legal assessments to know that Canadian courts have not been silent on this issue. As recently as 2018, the Supreme Court of Canada has determined that it was inappropriate to use psychological assessment tools with potential cultural bias when working with Indigenous persons (*Ewert v Canada*, 2018). The *Ewert* decision may create particular risk for neuropsychologists who use standardized tests in medicolegal assessments, and without taking steps to verify the accuracy of these tools for Indigenous persons (Evans & Dobson, 2021). Recall that the absence of evidence is not the same as the evidence of absence: in other words, it should not be assumed that an absence of research demonstrating inapplicability of Western Eurocentric cognitive constructs and tests for Indigenous populations can be considered justification for their ongoing application.

When practicing through the lens of cultural safety, neuropsychologists should also be aware of context in medico-legal or forensic risk assessments. Even though specific measures may be 'valid' statistically, assessment results must be addressed in terms of the larger socio-political landscape of colonialism. If this contextualization is not included in these assessments, this is an explicit injustice and creates a false clinical picture that centres the pathology within an individual who is presented at the same theoretical baseline as all other individuals when this is very often not the case.

The vast majority of popular neurocognitive assessment measures have neither appropriate normative samples for comparative purposes, nor

do they necessarily have the same cultural meaning as they may have had for the available normative sample(s). Henrich, Heine, and Norenzayan (2010) discuss the issues inherent in basing research on Western, Educated, Industrialized, Rich, and Democratic (WEIRD) people and societies. Thus, as explicitly stated in the Canadian Psychological Association & Psychology Foundation of Canada Task Force Report (2018), neuropsychologists must develop new approaches to assessment in partnership with Indigenous communities. This will likely require a step away from assessing performance in comparison to a normative sample, an approach that is incongruent with Indigenous ways of knowing, being, and doing. It will require significant resources, commitment, and time, and the process itself must be negotiated first with Indigenous communities. While some colleagues have suggested that this work begin with focus groups of Indigenous peoples to explore and discuss concepts related to cognition, the authors believe instead that the way forward requires that psychologists *partner* with Indigenous communities to determine (1) what questions should be asked, (2) what types of information should be considered, and (3) how decisions will be made. The interested reader is directed towards the recent publication by Gould, MacQuarrie, O'Connell, and Bourassa (2020) for a description of how community-based, participatory research methods can be successfully and safely applied within Canadian Indigenous communities. While we await this work, we recommend that standardized tests be used with caution and with explicit caveat that they may best be viewed as a suboptimal and potentially misleading approximation of the hypothesized cognitive variables. The interested reader is referred to Gould's "Mismeasure of Man" for a more detailed treatment of the risks of approaching neurocognitive testing and psychological "constructs" from a determinist, positivist perspective.

Cultural Safety in Neuropsychology

Neuropsychologists practice in a culturally safe way when attention is paid to the roots of health care inequities, which includes understanding how psychology has harmed and continues to harm, Indigenous people in Canada (Association of Canadian Psychology Regulatory Organizations, 2021). Actively practicing cultural safety requires a critical deconstruction of our own beliefs, histories, and the way we practice, with the understanding that the manner in which we work can negatively impact Indigenous people referred for assessment. This may lead us to feel uncomfortable, uncertain, or even distressed, a normal and expected response that can and should be met with self-compassion and a desire to do better. We do not know what we do not know, yet once these areas are highlighted and we come to realize what we do not know, we have a responsibility to move forward with this knowledge in a good way.

Preparing for culturally safe neuropsychological practice in Canada includes acknowledging a longstanding tendency to value some types of knowledge more than others. It means that we have to become learners, co-

creators, and advocates with and for clients, in addition to being content “experts”. Culturally safe practice must be defined by the client and by Indigenous communities more broadly. Neuropsychologists should be formally prepared to understand, respect, and integrate Indigenous ways of knowing and being and to being formally mentored in culturally safe practice. This includes but extends far beyond using culturally appropriate normative samples.

In working to increase cultural safety for our clients, neuropsychologists must negotiate with our clients and emphasize our commitment to providing what they need in order to feel safe, respected, and a valued partner with the neuropsychologist in the assessment process. We must ask new questions, be willing to increase our vulnerability, and, depending on what the client tells us they need in order to feel safe and respected, accept the risk of having to change our practice. We must embrace the challenge of re-examining our practice assumptions in order to practice in a manner that respects the cultural safety of our Indigenous clients.

“Take this story. It’s yours. Do with it what you will. Make it the topic of a discussion group at a scholarly conference. Put it on the Web. Forget it. But don’t say in the years to come that you would have lived your life differently if only you had heard this story. You’ve heard it now.”

(Thomas King, *The Truth About Stories*, 2003)

Declaration of conflict of interest

The authors have no conflict of interest to disclose.

References

- Aiello, M., Bismar, D., Casanova, S., Casas, J. M., Chang, D., Chin, J. L., Comas-Diaz, L., Salvo Crane, L., Demir, Z., Garcia, M.A., Hita, L., Leverett, P. Mendez, K., Morse, Skawennio, G., shodiya-zeumault, s., O'Leary Sloan, M., Weil, M.C., & Blume, A.W. (2021) "Protecting and Defending our People: Nakni tushka anowa (The Warrior's Path) Final Report. APA Division 45 Warrior's Path Presidential Task Force (2020). *Journal of Indigenous Research*: 9(2021). DOI: <https://doi.org/10.26077/2en0-6610>.
- Alfred, T., & Corntassel, J. (2005). Being Indigenous: Resurgences against contemporary colonialism. *Government and Opposition*, 40, 597-614.
- American Psychological Association (2021). Apology to people of color for APA's role in promoting, perpetuating, and failing to challenge racism, racial discrimination, and human hierarchy in the US. Retrieved from <https://www.apa.org/about/policy/racism-apology>
- American Psychological Association (2017). Ethical Principles of Psychologists and Code of Conduct. Retrieved from <https://www.apa.org/ethics/code>
- American Psychological Association (2022). Clinical Neuropsychology. Retrieved from <https://www.apa.org/ed/graduate/specialize/neuropsychology>
- Apffel-Marglin, F. (2011). *Subversive Spiritualities: How Rituals Enact the World*. New York: Oxford University Press.
- Association of Canadian Psychology Regulatory Organizations. (2021). An Apology to Indigenous People and a Pledge to Be Anti-Racist. <https://acpro-aocrp.ca/an-apology-to-indigenous-people-and-a-pledge-to-be-anti-racist/>
- Australian Psychological Society. (2021). The APS Apology to Aboriginal and Torres Strait Islander people. <https://psychology.org.au/about-us/who-we-are/reconciliation-and-the-aps/aps-apology>
- Barlow, D.H. (2010). Negative effects from psychological treatments: A perspective. *American Psychologist*, 65(1):13-20. <https://doi.org/10.1037/a0015643>.
- Bartlett, C., Marshall, M., & Marshall, A. (2012). Two-eyed seeing and other lessons learned within a co-learning journey of bringing together indigenous and mainstream knowledge and ways of knowing. *Journal of Environmental Studies and sciences*, DOI 10.1007/s13412-012-0086-8
- Ben-Porath, Y. S. (2013). The MMPI instruments. In S. Koffler, J. Morgan, I. S. Barron, & M. F. Greiffenstein (Eds.), *Neuropsychology: Science and practice*, I (pp. 256–284). Oxford University Press.
- Berrios, G.E., Marková, I.S. (2002). Assessment and measurement in neuropsychiatry: a conceptual history. *Seminars in Clinical Neuropsychiatry*, 7(1): 3-10. doi: 10.1053/scnp.2002.30375.
- Bracken, P., Giller, J., & Summerfield, D. (2016). Primum non nocere. The case for a critical approach to global mental health. *Epidemiology and Psychiatric Sciences*, 25(6): 506–510. <https://doi.org/10.1017/S2045796016000494>
- Cajete, G. (2000). *Native science: Natural laws of interdependence*. Sante Fe, NM: Clear Light.
- Canadian Psychological Association. (2012). Evidence-Based Practice of Psychological Treatments: A Canadian Perspective. Retrieved from https://cpa.ca/docs/File/Practice/Report_of_the_EBP_Task_Force_FINAL_Board_Approved_2012.pdf

- Canadian Psychological Association. (2017). Canadian code of ethics for psychologists, 4th Edition. Retrieved from https://cpa.ca/docs/File/Ethics/CPA_Code_2017_4thEd.pdf
- Canadian Psychological Association & Psychology Foundation of Canada. (2018). Psychology's Response to the Truth and Reconciliation Commission of Canada's Report: A report of the Canadian Psychological Association and the Psychology Foundation of Canada. Retrieved from [https://cpa.ca/docs/File/Task_Forces/TRC Task Force Report_FINAL.pdf](https://cpa.ca/docs/File/Task_Forces/TRC_Task_Force_Report_FINAL.pdf)
- Castonguay, L. G., Boswell, J. F., Constantino, M. J., Goldfried, M. R., & Hill, C. E. (2010). Training implications of harmful effects of psychological treatments. *American Psychologist*, 65(1), 34–49. <https://doi.org/10.1037/a0017330>
- Curtis, E., Jones, R., Lipene-Leach, D., Walker, C., Loring, B., Paine, S., & Reid, P. (2019). Why cultural safety rather than cultural competency is required to achieve health equity: A literature review and recommended definition. *International Journal for Equity in Health*. 18(174). <https://doi.org/10.1186/s12939-019-1082-3>
- Davidson, K. L. (1992). A comparison of Native American and white students' cognitive strengths as measured by the Kaufman Assessment Battery for children. *Journal on Gifted Education*, 14(3), 111-115.
- Denow, M. (2007). Youth justice and children's rights: Transformation in Canada's youth justice system. The rights of the child in Canada: A retrospective. K. Covell and B. Howe (eds.), pp.153-178. Waterloo, ON: Wilfred Laurier University Press.
- Doyle C, Lennox L, Bell D. A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. *BMJ Open*, 3: e001570. Doi:10.1136/bmjopen-2012- 001570.
- Duignan, B., Fumerton, R., Quinton, A.M., & Quinton, B. (2020). "Empiricism". *Encyclopedia Britannica*. <https://www.britannica.com/topic/empiricism>
- Duran, E. (2006). *Healing the soul wound: Counseling with American Indians and other native peoples*. New York: Teachers College Press.
- Duran, E. (2019). *Healing the soul wound: Trauma-Informed Counseling for Indigenous Communities*. (2nd Edition). New York: Teachers College Press.
- Duran, E., & Duran, B. (1995). *Native American postcolonial psychology*. Albany, NY: State University of New York Press.
- Evans, D.R., & Dobson, K.S. (2021). *Law, standards, and ethics in the practice of psychology*, 4th Edition. Toronto: Thomson Reuters.
- Fellner, K. D. (2019). Iskotew & crow: Reigniting narratives of Indigenous survivance & trauma wisdom in the classroom. In S. Carr-Stewart & J. Ottmann (Eds.), *Knowing the Past, Facing the Future: Indigenous education in Canada* (pp. 143-170). University of British Columbia Press.
- Fellner, K. D., John, R., & Cottell, S. (2016). Counselling Indigenous peoples in a Canadian context. In N. Gazzola, M. Buchanan, O. Sutherland, & S. Nuttgens (Eds.). *Canadian handbook of counselling and psychotherapy* (pp. 123-147). Canadian Counselling and Psychotherapy Association.
- Finch, L. S. (2012). The Duty to learn: Taking account of indigenous legal orders in practice. *Indigenous Legal Orders and the Common Law*, 2.1. https://www.cerp.gouv.qc.ca/fileadmin/Fichiers_clients/Documents_deposes_a_la_Commission/P-253-pdf
- Ewert v. Canada, (2018) 2 SCR 165 (SCC). <https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/17133/index.do>

- First Nations Information Governance Centre. (2021). The First Nations Principles of OCAP. <https://fnigc.ca/ocap-training/>
- Full Apology to the Native American, Alaska Native, and Native Hawaiian People (2016 December 5). The Psychoanalytic Activist. <https://psychoanalyticactivist.com/2016/12/05/full-apology-to-the-native-american-alaska-native-and-native-hawaiian-people/>
- García, M.A. & Tehee, M. (2014). Society of Indian Psychologists Commentary on the American Psychological Association's (APA) Ethical Principles of Psychologists and Code of Conduct. nativepsychs.org
- Garth, T. R. (1921). The results of some tests on full and mixed blood Indians. *Journal of Applied Psychology*, 5, 359-372. doi: 10.1037/h0071643
- Garth, T. R. (1923). A comparison of the intelligence of Mexican and mixed and full blood Indian children. *Psychological Review*, 30, 388-401.
- Garth, T. R., & Smith, O. D. (1937). The performances of full-blood Indians on language and non-language intelligence tests. *The Journal of Abnormal and Social Psychology*, 32, 376-381.
- Godefroy, O., Duhamel, A., Leclerc, X., Saint Michel, T., Hénon, H., & Leys, D. (1998). Brain-behaviour relationships. Some models and related statistical procedures for the study of brain-damaged patients. *Brain*, 121 (8):1545-56. doi: 10.1093/brain/121.8.1545.
- Gone, J. P. (2008). 'So I can be like a whiteman': The cultural psychology of space and place in American Indian mental health. *Culture Psychology*, 14, 369-399.
- Gould, B., MacQuarrie, C., O'Connell, M.E., & Bourassa, C. (2020). Mental wellness needs of two Indigenous communities: Bases for culturally competent clinical services. *Canadian Psychology*, 26(3), 213-226.
- Gould, S. J. (1996). *The mismeasure of man*. New York: W.W. Norton & Company, Ltd.
- Government of Canada (2021 June 7). Reducing the number of Indigenous children in care. <https://www.sac-isc.gc.ca/eng/1541187352297/1541187392851>
- Gray, L. (2011). *First Nations 101: Tons of stuff you need to know about First Nations people*. Vancouver, BC: Adaawx.
- Grekul, J., Krahn, H., & Odynak, D. (2004). Sterilizing the "feeble-minded": Eugenics in Alberta, Canada, 1929-1972. *Journal of Historical Sociology*, 17(4), 358-384.
- Hannay, H. J., Bieliauskas, L., Crosson, B., Hammeke, T., Hamsher, K., and Koffler, S. (eds.) (1998). *Proceedings of the Houston Conference on Specialty Training and Education in Clinical Neuropsychology*. *Archives of Clinical Neuropsychology*, 13, 157-250.
- Health Council of Canada. (2012). *Empathy, dignity and respect: Creating cultural safety for Aboriginal people*. Ottawa: Health of Council of Canada. <https://learningcircle.ubc.ca/files/2014/05/Empathy-dignity-and-respect-Creating-cultural-safety-for-Aboriginal-people-in-urban-health-care.pdf>
- Heaton, R. K., Chelune, G. J., Talley, J. L., Kay, G. G., & Curtis, G. (1993). *Wisconsin card sorting test manual: Revised and expanded*. Odessa, TX: Psychological Assessment Resources.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, doi: 10.1017/S0140525X0999152X
- Hopkins, C. (2019, April 3). Empowering First Nations to Address Opioid Misuse [Conference Session]. Assembly of First Nations Wellness Forum, Winnipeg, Manitoba.
- Hunsley, J., & Mash, E.J. (2007). Evidence-based assessment. *Annual Review of Clinical*

- Psychology, 3, 29-51. <https://doi.org/10.1146/annurev.clinpsy.3.022806.091419>
- Hunter, W. S., & Sommermier, E. (1922). The relation of degree of Indian blood to score on the Otis intelligence test. *Journal of Comparative Psychology*, 2(3), 257-277.
- Jacklin, K., Pitawanakwat, K., Blind, M., Warry, W., Walker, J.D., O'Connell, E., Smith, K., Logiudice, D., & Flicker, L. (2019). Canadian Indigenous Cognitive Assessment (CICA) Guideline. <https://www.i-caare.ca/cica>.
- Jacklin, K., Pitawanakwat, K., Blind, M., O'Connell, M.E., Walker, J., Lemieux, A. M., & Warry, W. (2020). Developing the Canadian Indigenous Cognitive Assessment for use with Indigenous older Anishinaabe adults in Ontario, Canada. *Innovation in Aging*, 4(4), <https://doi.org/10.1093/geroni/igaa038>.
- Jamieson, E., & Sandiford, P. (1928). The mental capacity of Southern Ontario Indians. *Journal of Educational Psychology*, 19, 536-551.
- King, T. (2003). *The truth about stories: A Native narrative*. University of Minnesota Press.
- Kirmayer, L. J., Tait, C. L., & Simpson, C. (2009). The mental health of Aboriginal peoples in Canada: Transformations of identity and community. In L. J. Kirmayer & G. G. Valaskakis (Eds.), *Healing traditions: The mental health of Aboriginal peoples in Canada* (pp. 3-35). Vancouver, BC: UBC Press.
- Kovach, M. (2009). *Indigenous methodologies: Characteristics, conversations, and contexts*. Toronto, ON: University of Toronto Press.
- LaFromboise, T. D., Trimble, J. E., & Mohatt, G. V. (1990). Counseling intervention and American Indian tradition: An integrative approach. *The Counseling Psychologist*, 18, 628-654.
- Lavallée, L. F., & Poole, J. M. (2009). Beyond recovery: Colonization, health, and healing for Indigenous people in Canada. *International Journal of Mental Health and Addiction*, 8, 271-281.
- Lekas, H., Pahl, K., & Lewis, C.F. (2020). Rethinking Cultural Competence: Shifting to Cultural Humility. *Health Services Insights*, 13, 1-4. doi: 10.1177/1178632920970580
- Lilienfeld, S. O. (2007). Psychological treatments that cause harm. *Perspectives on Psychological Science*, 2(1), 53-70. <https://doi.org/10.1111/j.1745-6916.2007.00029.x>
- Loppie Reading, C., & Wien, F. (2009). *Health inequalities and social determinants of Aboriginal peoples' health*. Prince George, BC: National Collaborating Centre for Aboriginal Health.
- McCabe, G. (2007). The healing path: A culture and community-derived Indigenous therapy model. *Psychotherapy: Theory, Research, Practice, Training*, 44(2), 148-160.
- McCormick, R. (1996). Culturally appropriate means and ends of counselling as described by the First Nations people of British Columbia. *International Journal for the Advancement of Counselling*, 18, 163-172.
- McKenna, P., & Warrington, E.K. (1996). The analytical approach to neuropsychological assessment. In I. Grant & K.M. Adams (Eds.), *Neuropsychological assessment of neuropsychiatric disorders* (pp. 43-57). Oxford University Press.
- Mills, A. (2016). The lifeworlds of law: On revitalizing indigenous legal orders today. *McGill Law Journal*, 61(4), 847-882. <https://doi.org/10.7202/1038490ar>
- National Aboriginal Health Organization. (2009). *Cultural competency and safety in First Nations, Inuit and Métis health care: Fact sheet*. Ottawa: National Aboriginal Health Organization. www.naho.ca/documents/naho/english/factSheets/culturalCompetency.pdf
- National Association of Psychometrists (2016). *Official Statement of the National Association of*

- Psychometrists. <https://napnet.org/statement>
- National Collaborating Centre for Aboriginal Health (2013). Cultural safety in First Nations, Inuit, and Metis public health: Environmental Scan of Cultural Competency and Safety in Education, Training, and Health Services. https://www.nccih.ca/495/Cultural_Safety_in_First_Nations,_Inuit_and_M%C3%A9tis_Public_Health.nccih?id=88
- National Collaborating Centre for Aboriginal Health (2013). The rights of First Nations Children in Canada. <https://www.ccnsa-nccah.ca/docs/health/FS-RightsFNChildren-Bennett-Auger-N.pdf>
- Negri, A., Andreoli, G., Belotti, L., Barazzetti, A., Martin, E.H. (2019). Psychotherapy trainees' epistemological assumptions influencing research-practice integration. *Research in Psychotherapy: Psychopathology, Process and Outcome*, 22(3): 344-358. doi: 10.4081/ripppo.2019.397.
- R. v. Van der Peet, (1996) 2 S.C.R. 507 (SCC). <https://scc-csc.lexum.com/scc-csc/scc-scsc/en/item/1407/index.do>
- Ramsden, I. (1990). Cultural Safety. *The New Zealand Nursing Journal*. Kai Tiaki, 83(11), 18-19.
- Smith, P. (2021). Moving beyond cultural competence. *InPsych*, 43, <https://psychology.org.au/formembers/publications/inpsych/2021/february-march-issue-1/by-peter-smith-maps>
- Reitan, R.M., & Wolfson, D. (1996). Theoretical, methodological, and validation bases of the Halstead-Reitan Neuropsychological Test Battery. In I. Grant & K.M. Adams (Eds.), *Neuropsychological assessment of neuropsychiatric disorders* (pp. 3-42). Oxford University Press.
- Sherwood, T. (2001). Client experience in psychotherapy: What heals and what harms?, *Indo-Pacific Journal of Phenomenology*, 1(2), 1-16, DOI: 10.1080/20797222.2001.11433867
- Smith, P. (2021). Cultural Safety. *InPsych*, 43(1). Retrieved from <https://psychology.org.au/formembers/publications/inpsych/2021/february-march-issue-1/by-peter-smith-maps>
- Stewart, S. L. (2008) Promoting Indigenous mental health: Cultural perspectives on healing from Native counsellors in Canada, *International Journal of Health Promotion and Education*, 46(2), 49-56, DOI: 10.1080/14635240.2008.10708129
- Task Force on Responding to the Truth and Reconciliation Commission of Canada's Report (2018). Psychology's Response to the Truth and Reconciliation Commission of Canada's Report: A report of the Canadian Psychological Association and the Psychology Foundation of Canada. (2018). Retrieved from https://cpa.ca/docs/File/Task_Forces/TRC_Task_Force_Report_FINAL.pdf
- Telford, C. W. (1938). Comparative studies of full and mixed blood North Dakota Indians. *Psychological Monographs*, 50(5), 116-129.
- Trimble, J. E., & Thurman, P. J. (2002). Ethnocultural considerations and strategies for providing counselling services to Native American Indians. In P. B. Pederson, J. G. Draguns, W. J. Lonner, & J. E. Trimble (Eds.), *Counseling across cultures* (5th ed., pp. 53-91). Thousand Oaks, CA: Sage.
- Turcotte, S. (2012, November 17). Aboriginal psychotherapy [Video file]. Retrieved February 10, 2016, from <https://www.youtube.com/watch?v=MZF5oyn9Avq>
- Valtonen, J., Ahn, W. K., & Cimpian, A. (2021). Neurodualism: People assume that the brain affects the mind more than the mind affects the brain. *Cognitive science*, 45(9), e13034. <https://doi.org/10.1111/cogs.13034>

- Volpicelli Leonard, K., Robertson, C., Bhowmick, A., & Herbert, L. B. (2020). Perceived treatment satisfaction and effectiveness facilitators among patients with chronic health conditions: A self-reported survey. *Interactive journal of medical research*, 9(1), e13029. <https://doi.org/10.2196/13029>
- Walker, J.D., O'Connell, M.E., Pitawanakwat, K., Blind, M., Warry, W., Lemieux, A., Patterson, C., Allaby, C., Valvasori, M., Zhao, Y., & Jacklin, K. (2021). Canadian Indigenous Cognitive Assessment (CICA): Inter-rater reliability and criterion validity in Anishinaabe communities on Manitoulin Island, Canada. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*, 13:e12213. <https://doi.org/10.1002/dad2.12213>
- Whorton, J. E., & Morgan, R. L. (1990). Comparison of the test of nonverbal intelligence and Wechsler Intelligence Scale for Children – Revised in rural Native American and White children. *Perceptual and Motor Skills*, 70(1), 12-14.
- Wilson, S. (2008). *Research is ceremony: Indigenous research methods*. Black Point, NS: Fernwood Publishing.

Appendix A

Sample neuropsychological assessment

Client Name: **Client Identifier (e.g., Health Card or File number)****Client date of birth:** **Referral Source:****Date(s) of Testing:** **Date of Report:****INTRODUCTIONS**

Anne Carter is a licensed clinical psychologist registered with the College of Province or Territory. Her area of practice is Clinical Psychology and Neuropsychology. Anne is the daughter of Jean, wife to Nathan, and mother of two. She resides on the traditional territory of the First Nation NAME. Anne does not identify as Indigenous but sees herself as an ally and advocate. Along with the Association of Canadian Psychology Regulatory Organizations, Anne understands that, as a profession, psychology has relied on methods and epistemologies that may have been harmful to the rights and dignities of Indigenous people. Anne stands in respect and in support of those who encourage efforts to weave Indigenous knowledge systems and ways of being into professional psychological practice, including assessment.

Edward Smith (*Indigenous Name*) is a 76-year-old Indigenous Elder from the ABC First Nation. He is a member of the Wolf Clan. He is the son of Thecla, husband to Rhonda, father of two, grandfather to nine, and great-grandfather to three. Edward has twice been elected chief of his First Nation and is a respected story-teller, knowledge-keeper, and language teacher. Edward describes himself in relation to the land, water, and all fellow creatures.

REFERRAL**Presenting Issues**

Edward recently experienced a Middle Cerebral Artery (MCA) Infarction (stroke) and has been recovering in hospital for several weeks. His medical history is notable for diabetes mellitus, high blood pressure, high cholesterol, and kidney disease. His hospital care team referred Edward for neuropsychological assessment to document his neurocognitive profile and assess his mood. His care team, including the hospital nursing staff and his physician, observed periods of “emotional lability” (e.g., tearfulness), reported shortness of breath that could not be validated using the pulse oximeter, slurred and slowed speech, and memory lapses as evidenced by asking the same question multiple times to hospital staff. Referral for neuropsychological assessment was not discussed with Edward before it was made.

Anne met with Edward to discuss the referral and discuss his goals and desires, if any, for a neuropsychological assessment. Edward was initially frustrated that his care team had not shared their observations with him and was not interested in a comprehensive neuropsychological assessment. With additional discussion, Edward indicated that he was interested to see if his stroke had affected his ability to remember traditional stories and knowledge, and to share these with people in his community. He initially agreed to assessment of his memory, only. Anne invited him to consider her perspective, which was that many different types of “thinking abilities” actually affect memory. Anne used the metaphor of a bank deposit to explain how attention and executive functioning can affect memory: if something gets in the way of making that bank deposit, there will be nothing to “take out” from the account later, and the brain doesn’t offer “overdraft”. Anne also explained to Edward that neuropsychological assessment tools would not allow for comment on his “long term” memory (such as traditional teachings he has known for many years), but only on his ability to make new memories (“new deposits into the bank account”). Edward laughed and, after some time to consider, agreed to participate in screening of his attention and executive functioning as well as use of the memory assessment

tools that Anne had. Anne explained to Edward that the assessment would examine whether the results were accurate and meaningful, and Edward agreed that this was important.

Edward declined to participate in formal screening of his mood, indicating his preference to speak with Anne about the traditions and history of his community. Anne gladly agreed and time was booked for an initial meeting.

Visual Description

Anne met with Edward in his private hospital room. All of the lights were off in his room and his blinds were open, allowing natural light to come in. He wore loose jeans, a red plaid button-down long sleeve shirt, and had shoulder-length grey hair. He wore glasses. There was stubble on Edward's chin and neck. Edward lay on his bed, his face turned to look out the window. Edward's TV was playing quietly in the room, tuned to APTN, an episode of "North of 60." On Edward's bedside table was a glass of water, a small hide bag with a beautiful brightly-beaded flower, and a framed picture of Edward (as a younger man) with a dark haired woman and three children. Edward tended to maintain his gaze on the window as he and Anne spoke.

Edward's Account

Edward told Anne that he had a "big stroke" and that his doctor told him he might not drive again "I lost my license, I can't drive my truck." This was understandably upsetting to him. He expressed a strong desire to return to his home community as soon as possible: "I wish things would get better real soon, I need to be home!" Edward stated that he "feels trapped [at the hospital]" and, that while he sometimes worries about having a heart attack, he knows he "[doesn't] have long to live" and wants to be with his family and community in the time he has left. Edward reported that it was sometimes difficult to look after his diabetes as well as "they want me to." Edward expressed that [the City in which the hospital is located] is "too fast, too loud... no one can listen..."

Edward went on to say that something was "bothering him" and that people around him "seemed real upset" sometimes. He stated that he felt "hurt" that he couldn't move his body in the same way as before: "I can't pick up a penny!" and that he "should be at home with [his wife.]" Edward also shared that he was worried the stroke may have impacted his ability to remember traditional teachings and stories, which were very important to him.

Edward reported that he was troubled by the smell of his bedroom and the bright lights reminded him of time in residential school ("It's like I can hear the children crying when I wake up!"). He stated that he wakes up frequently in the night and this makes it harder to "think my thoughts." He expressed to Anne that this was one of the most challenging things about being in the hospital.

Edward told Anne that he had been married to his wife for 53 years and that they had met at a dance. He told Anne that he and his wife had had "some real tough times" but they had gotten through it and raised their family. He stated that he "needs to be the best person [he] can, and be happy with who [he] is." Edward reported that he had been taught his traditional language by an Uncle after he returned home from residential school at age 14, and he was very thankful to be able to speak it and teach others in his community. Edward reported that he most enjoys being out on the land of his traditional territory, "doing cultural work helps my mind!"

ASSESSMENT PROCESS

At their initial meeting, Edward explained the cultural protocol of his community and explained how to approach their work together in a good way. In keeping with the protocol of meeting with Elders, Anne returned to Edward's room the next day with a gift for him (he

requested a box of donuts; Anne informed his care team that she would be leaving these in his room). Edward shared traditional teaching about the ceremony that would be appropriate, and Anne then also purchased tobacco and made an offering of it at sunrise. Edward had Anne practice which words to speak for the ceremonial offering.

Having observed this protocol and completed the ceremony, Anne met with Edward in his room. He expressed that he would prefer to stay in his room where he felt comfortable rather than accompanying Anne to a testing room. (*Note to reader: testing could also have been done in his home in the community*). Prior to the cognitive testing, Anne explained to Edward that the tests may lead him to feel frustrated, stupid, or like she was judging him. Edward commented that he often felt this way when he was meeting with a “doctor”. Anne apologized to Edward and explained that she held him in great respect. She stated that standardized tests were, so far, the best way to measure thinking skills from a Western perspective. Two three-hour appointments took place until Edward and Anne agreed that Edward had shared all of the information he wished, and Anne completed the abbreviated cognitive assessment. Edward shared much of his personal history through story-telling, which included sharing knowledge about the land, the creator, and his community. Anne collected additional collateral data from Edward’s hospital caregivers, and had a separate meeting with Edward’s wife, one of his adult daughters and a community Elder. With his permission, Anne also reviewed Edward’s medical records.

A separate feedback appointment was booked with Edward and his wife, which lasted approximately two hours. This feedback is reflected throughout the report, and is as valuable as the standardized test results. While Anne drafted the initial report, Edward reviewed the draft and contributed as a co-author with revisions both stylistic and substantive. Edward requested that a copy of his report be provided to the Elders Committee in his community, in addition to himself, which was done as soon as Edward and Anne had agreed the report was in its final form.

Edward and his wife also called Anne several times in the weeks following to discuss the assessment and Edward’s ongoing recovery.

HISTORY (Here redacted for client privacy)

Documentation Reviewed

(here)

INTERVIEW (Here redacted for client privacy)

(here use client’s words verbatim as much as possible)

Personal History

Early History, including Residential School Experience

Education and Vocational history

Relationship History

Medical History

Current Medications

Current Concerns

Concerns about Assessment

Goals for Assessment

Collateral Report

Current concerns

Concerns about Assessment

Behavioural Observations

Goals for Assessment

Results

Results were compared to those obtained by individuals of similar age (and educational history when possible). Of note, given Edward's ethnocultural history, an exact match for comparative purposes was not possible. His performance on tests was compared to the performance of Canadian and American individuals who were overwhelmingly non-Indigenous, and his results should therefore be interpreted with caution.

Edward passed a formal measure of performance validity, and there were no observed threats to the validity of the assessment. Edward told Anne that he enjoyed the tests and that he had tried his best.

Estimates of Edward's premorbid functioning based on demographic variables were in the average range, and consistent with his performance on a test of nonverbal abstract reasoning. Importantly, these estimates are based on an American sample and may not accurately approximate Edward's baseline cognition.

Edward knew where he was, the date, and why he was in hospital. On formal testing, his basic auditory attention span fell in the below average range, as did his auditory working memory. Edward's visuospatial working memory was somewhat stronger, falling in the low average range. Neither Edward nor his wife felt that his attention had changed since his stroke, and they described a longstanding pattern where Edward felt more comfortable working with his body on the land than he did communicating using English.

On formal testing, Edward's ability to learn and remember new verbal information was a challenge for him. His initial verbal learning was exceptionally low, while retrieval and recognition were somewhat stronger (at the low end of the below average score range). He did not appear to benefit from contextual encoding cues. A similar pattern of relatively weaker initial learning with stronger retrieval and recognition was observed on a visuospatial learning task. Edward agreed that his memory wasn't "the same" as it had been prior to his stroke. His primary concern remained his ability to recall stories and traditional knowledge, and his language. In discussion with Edward, his wife, and adult daughter, there was consensus among them that Edward retained this knowledge and stories, and the additional suggestion that he may remember even *more* since his hospitalization (please see discussion of Edward's mood, below).

Edward agreed to take part in measures of his mental planning, organization, and his mental "brakes" (e.g., inhibition). His performance across these measures was classified in the exceptionally low range. Neither Edward nor his wife felt that these results reflected his daily functioning either in the hospital, or in his home community. He stated "I'm just the same as the day I got off the train home when I was 14... I've always been this way."

As noted above, Edward declined to participate in formal screening of his mood. Respecting his expressed wishes, Anne did not ask any questions relating to his mood symptoms. Instead, Edward spoke with Anne about the traditions and history of his community, including how many members of his First Nation had been forced to go to Federal Indian Hospitals when they were sick. Edward taught Anne that many of the loved ones who were forced to go to these hospitals never returned to their home community, and their parents, spouses, children, and friends never knew what happened to them but had assumed they died. Edward made it clear to Anne that many of these patients would have been young children who had been forced into treatment without the comfort of a parent or loved one. It seemed to Edward that admission to hospital was similar to Residential School.

Edward expressed to Anne that he was feeling, in his body, many of the feelings that those patients had felt when they were admitted to hospital. This "felt sense" of previous generations was focused around his lungs, with a heaviness in his chest. He stated that the tears that he cried

were the tears of the children who had been forced into treatment and died without a parent or loved one to comfort them. In this way, Edward confirmed that what he felt was not *his* sadness, but rather the sadness of his relations throughout time, and the tears that he cried were not *his* tears, but rather the tears of those relations. Edward was concerned about these loved ones and expressed that these feelings of heaviness and tearfulness would abate when he was able to return to his community and perform the appropriate ceremonies and make the required offerings. Only then would these loved ones throughout time be honoured and be at peace. Edward's wife and daughter shared these convictions and were already working with Edward's home community to ensure the ceremonial objects and offerings would be ready for him upon his discharge from hospital.

SUMMARY AND CONCLUSION

Edward was referred to Anne for neuropsychological assessment following a stroke. Edward's hospital caregivers reported that Edward asked the same question(s) repeatedly and that his speech was slurred and slow. This may suggest a change in his cognition subsequent to his major stroke. Anne and Edward agreed on an assessment plan that respected Edward's goals, including brief cognitive testing, review of his medical records, and an interview with Edward's family.

Edward is a 76-year-old Indigenous Elder and Knowledge keeper. His primary concerns were the effect of his stroke on his ability to remember traditional teachings and stories. Edward was educated in a remote and northern environment, at a Residential school (from age 3 to 14). This history presents a challenge when selecting an appropriate normative group against which to compare his performance on objective testing. Whenever possible, his performance on tests was compared to other individuals of his age, although most normative data is derived from North American adults who were not of First Nation Ancestry. As such, it is necessary to interpret his results with significant caution.

There were no concerns about performance validity; the results of Edward's tests were accurate and meaningful. Based on Edward's demographic, vocational, and educational factors, it is estimated that his premorbid functioning fell in the average range. In other words, before his stroke, Edward's thinking abilities were likely similar to most other men his age. Edward's performance on the tests administered after his stroke suggested that there had been a change in some of his thinking abilities. His performance on tests of his ability to pay attention and focus, his ability to hold information in his mind, his ability to learn new information, his ability to plan and organize his thoughts, and his "mental brakes" was lower than would be expected from a man with Edward's background. His ability to retrieve things from memory (make withdrawals from his memory bank) was stronger than his ability to initially learn them (make deposits in the bank). It is, however, important to note that the assessment measures had neither a well-matched normative group for comparative purposes, nor did the tests have the same cultural meaning as they may have had for the available normative sample. Edward's pattern of performance on these standardized tests may best be viewed as an imperfect approximation of his current cognitive abilities.

Edward and his family did not feel that the standardized assessment of his attention or executive functioning (with below-average to exceptionally low results) was accurate. Edward's concerns were not about the test validity but rather that the results did not match his everyday thinking, which seemed to him and his family to be largely unchanged. Edward and his family agreed that his memory was somewhat different than it was before his stroke, but this included an *improvement* in his ability to remember cultural stories and experiences. This was evidenced

in Edward's "felt sense" of the experiences of children and adults who had been forced to go to Federal Indian Hospitals (see Indian Residential School History and Dialogue Centre, <https://irshdc.ubc.ca/learn/indian-residential-schools/indian-hospitals-in-canada/>, for more detail). Edward and his family felt that this was a gift to him and his community, and were actively preparing for ways to honour and care for the "loved ones" whose experiences Edward was experiencing through tearfulness and a tightness in his chest.

Anne, Edward, and his family discussed the Western-Eurocentric understanding of vascular disease, including the recommendation that Edward actively manage his secondary risk factors. Given Edward's complex health history, from a Western-Eurocentric perspective, he is at increased risk for future stroke. Anne encouraged Edward to involve trusted loved ones in activities and decisions that involve new learning, strong reliance on memory, or are very complex. Anne discussed planning strategies with Edward, such as the creation of an Advance Directive, to make sure his wishes are honoured if he is re-hospitalized in future. Although there were no concerns expressed by Edward or his family, Anne also shared that many people who have had a stroke like Edward's may benefit from a loved one's help in managing complex financial matters. Anne shared that she often recommends people create an Enduring Power of Attorney so that supports are in place *before* they are needed.

Despite the hospital staff's concerns about Edward's mood, Edward and his family felt that his tearfulness and felt sense of "heaviness" were a *gift*. They agreed that these experiences deserved attention and had a community-based plan on how to honour them. Edward and his family felt that it was inappropriate and unhelpful to conceptualize these "symptoms" as problematic and referral for psychopharmacological treatment would be unhelpful if not actively harmful. Edward requested that this feedback be provided to his hospital care team, and suggested that the team meet with Indigenous knowledge keepers to better understand future Indigenous patients.

As noted above, Edward read and provided meaningful feedback on this report before it was finalized. Anne is grateful for the opportunity meet with Edward and learn from him and his family, and hopes that this assessment was helpful.

Anne Carter, PhD., C. Psych.