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The Validity of Self-Report Measures in Assessing Historical Knowledge: The Case of Canada's Residential Schools

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Abstract

The Truth and Reconciliation Commission of Canada (TRC) strives to increase public education regarding residential schools. A baseline measure of the public's residential school knowledge could be useful to evaluate the progress of the TRC. The National Benchmark Survey, Urban Aboriginal Peoples Study, and Canadian Public Opinion on Aboriginal Peoples Report are three existing surveys that provide such a baseline, though each use only self-report measures. We measured residential school knowledge of 2,250 non-Indigenous Canadian undergraduate students through self-report (subjective) and multiple-choice (objective) measures. Analyses revealed a statistically significant correlation between self-reported and objective knowledge of residential schools.

Keywords

residential schools, historical knowledge, public opinion, self-report measures

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The Validity of Self-Report Measures in Assessing Historical Knowledge: The Case of Canada's Residential Schools

Beginning in the mid-1800s, the Government of Canada operated church-run residential schools for the purpose of “civilizing” the Indigenous Peoples of Canada (Legacy of Hope Foundation, 2009; Miller, 1996; Milloy, 1999). As part of a larger colonial agenda, the government used these schools to attempt to extinguish Indigenous Peoples’ culture, language, and way of life. This assimilative and destructive process involved abuse, neglect, disease, and death. Although the last residential school closed in 1996, the schools continue to affect survivors and their communities deeply (Fontaine, 2010) and are largely responsible for the striking inequalities facing Indigenous Peoples today (Truth and Reconciliation Commission of Canada [TRC], 2015a). Despite the widespread impact, many Canadians are unaware of the systems and consequences of residential schools.

From its establishment in 2008 under the Indian Residential Schools Settlement Agreement, until its close in 2015, the Truth and Reconciliation Commission of Canada (TRC) strove to educate the Canadian public about the legacy of residential schools (TRC, 2012a, 2015b). The TRC viewed public education as “the key to reconciliation” (TRC, 2012a, p. 117) and continuously called on various bodies to increase public education, including provincial, territorial, and federal governments, grade schools, post-secondary institutions and programs, churches, and museums, among others. During its existence, the TRC delivered over 200 public presentations and numerous press releases, held youth conferences, and held annual national events (TRC, 2012b), reaching vast audiences. Without question, the TRC successfully prompted the education of many Canadians about residential schools. For example, the 2010 Winnipeg National Event attracted approximately 100,000 Indigenous and non-Indigenous attendees each day, and it marked the first time that many of the attendees learned about residential schools. The TRC webcasted this and other national events, which were collectively viewed over 93,350 times by Canadians and others worldwide (TRC, 2015b).

Despite these laudable public awareness efforts, many Canadians, especially non-Indigenous Canadians, still do not know or correctly understand the history of residential schools and their devastating intergenerational effects (TRC 2012b, 2015a). As a result, they are frequently disrespectful toward residential school survivors, often telling them to “get over it” (TRC, 2012b). Presumably, such attitudes are at least partially due to misconceptions and a lack of knowledge regarding residential schools. Indeed, until very recently Canadian schools have typically taught little, no, or inaccurate information about residential schools (TRC, 2015a). This is unfortunate because there is evidence that increasing awareness, understanding, and knowledge regarding residential schools can contribute to the reconciliation process. For example, a quarter of non-Indigenous Canadians reported that their impressions of Aboriginal Peoples have improved over the past few years, and a third of these attributed it to learning about the residential schools legacy (Environics Institute for Survey Research, 2016); non-Indigenous Canadians who were aware of residential schools and the TRC strongly believed that each Canadian has a role to play in reconciliation (Environics Institute for Survey Research, 2016); and non-Indigenous Canadians who are knowledgeable about residential schools are more likely to understand the schools’ current impact and have greater optimism for the healing role of the Settlement Agreement and the TRC (Environics Research Group, 2008).

In order to assess whether the efforts of the TRC, governments, and other bodies are in fact increasing public awareness about residential schools (and if so, to what extent), it is necessary to establish an initial baseline understanding of the public's knowledge of residential schools. We have identified three nationally representative surveys that can help establish such a baseline: The National Benchmark Survey (EnviroNics Research Group, 2008), the Urban Aboriginal Peoples' Study (EnviroNics Research Group, 2010), and the Canadian Public Opinion on Aboriginal Peoples Report (EnviroNics Institute for Survey Research, 2016). Each of these surveys assessed knowledge of residential schools by asking respondents, "Have you read or heard anything about residential schools" (yes/no)? The National Benchmark Survey surveyed 1,503 non-Indigenous Canadians and found that 51% reported reading or hearing something about residential schools. The Urban Aboriginal Peoples Study surveyed 2,501 non-Indigenous Canadians and found that 54% reported reading or hearing something about residential schools. Finally, the Canadian Public Opinion on Aboriginal Peoples surveyed 2,001 non-Indigenous Canadians and found that 66% reported reading or hearing something about residential schools.

A common and notable feature of these surveys is that they each assessed knowledge of residential schools using self-report measures (i.e., measures that respondents answer by offering their subjective feelings and opinions). Such self-report measures may be valid in a variety of contexts, but in this case may be problematic because respondents may not be able to accurately estimate what they know about residential schools. Specifically, some respondents may incorrectly estimate what they know because over-confidence and reliance on cognitive heuristics (i.e., mental shortcuts) affect even relatively simple judgments in everyday life (Chabris & Simon, 2011; Taleb, 2010; Tversky & Kahneman, 1974). For example, relatively naïve respondents may report feeling knowledgeable because they do not understand the complexity of the issue and fail to account for the many details they have yet to learn. In contrast, other more knowledgeable respondents may report knowing less than they actually do precisely because they are aware of the truly broad scope of the issue. Other respondents may overestimate what they know because they want to appear informed. Such a reaction could be motivated by social desirability bias, which is the tendency to want to provide favorable answers in order to be perceived positively by other people (Beins, 2009). Social desirability bias occurs through impression management and self-deception. Impression management is the tendency for respondents to purposefully answer in ways they believe will lead the researcher to view them favorably—even if that means answering dishonestly. Impression management is particularly likely when the issue is politically sensitive, as in the topic of residential schools. By contrast, self-deception occurs without awareness, when people view themselves more positively than they should (Beins, 2009). Self-deception is more likely to occur with issues that are important to respondents because they are, for example, relevant to their values, aspirations, or ideology, as may be the case for Canadians and the issue of residential schools. For these reasons, in this article, we sought to investigate the extent to which a self-report measure provides a valid estimate of what people objectively or factually know about residential schools.

Method

Procedure

At the beginning of the 2011 to 2012 academic year, we surveyed 2,452 non-Indigenous first-year students from the University of Manitoba. All respondents completed our measures as part of a larger omnibus survey for their Introductory Psychology course. We excluded 202 respondents who did not

complete any of our measures or filled out the answer sheet incorrectly. Thus, our final sample consisted of 2,250 students ($M = 19.00$ years old, $SD = 2.60$ years; 58.1% female, 36.0% male, 5.9% undeclared; 60.3% White/European, 13.1% undeclared, 9.4% Filipino, 5.9% Chinese, 3.6% South Asian, 3.1% Black, <1% each Arab/West Asian, Japanese, Korean, Latin American, and South East Asian).

Measures

We assessed respondents' self-report knowledge of residential schools with the item, "How much do you feel you know about the Indian Residential School system in Canada?" (1 = *nothing*, 10 = *everything*).¹ We assessed respondents' objective knowledge of residential schools using 15 multiple-choice items (Cronbach's $\alpha = .42$). For example, "When did the Canadian government begin operating Indian Residential Schools?" (a = 1600s, b = 1700s, c = 1800s, d = 1900s; see Table 1 for complete list of items). We constructed these items by identifying details or facts that seemed "testable" (i.e., associated with discrete, uncontroversial answers) and collectively provided a reasonable summary (e.g., who, what, when) of the history of residential schools. Although Indigenous Peoples were not directly involved in constructing the items, our initial pool of potential items was explicitly derived by reviewing materials developed by Indigenous organizations such as the Legacy of Hope Foundation (2009) and the TRC (2012b).

Results

The average response on the self-report knowledge scale (i.e., "How much do you feel you know about the Indian Residential School system in Canada?" 1 = *nothing*, 10 = *everything*) was only 3.38 ($SD = 2.29$; $min = 1$, $max = 10$). The average score on the 15-item objective knowledge test was a mere 32.0% ($SD = 15.1\%$; $min = 0\%$, $max = 86.7\%$) and, in fact, the vast majority of respondents (88.4%) ultimately "failed" the test by conventional (< 50%) standards (see Table 1 for item-by-item results). The correlation between self-reported knowledge and objective knowledge was positive and statistically significant ($r = .25$, $p < .001$) and of small-to-medium size according to conventional standards (Cohen, 1988).

¹ We chose to use a continuous rather than a dichotomous scale because we believe the former possesses more desirable psychometric properties. For example, the National Benchmark Survey (EnviroNics Research Group, 2008) also asked respondents, "How familiar are you with the issue of residential schools?" (1 = *very familiar*, 4 = *not at all familiar*). Compared to the 51% of National Benchmark Survey respondents who reported hearing or reading something about residential schools, only 30% of National Benchmark Survey respondents reported being *somewhat familiar* with the issue of residential schools among Aboriginal Peoples, and a mere 6% reported being *very familiar* with this issue. Thus, it appears that simply asking whether or not someone has read or heard anything about residential schools (i.e., yes or no) may not adequately capture the variability in people's awareness and therefore may potentially inflate the observed proportion of knowledgeable respondents (Owen & Froman, 2005). In fact, the National Benchmark Survey did include an open-ended measure that assessed the number of details about residential schools each respondent could recall. The data was analyzed in terms of how many respondents mentioned each specific detail (e.g., 37% could recall abuse or molestation of Aboriginal students; EnviroNics Research Group 2008). Although this sort of analysis does provide a holistic understanding of how residential schools are represented in the public eye, it fails to tell us how much the average non-Indigenous Canadian knows about residential schools.

Table 1. Item-by-Item Results of the Residential School Objective Knowledge Test

Item	Responses (%)					
	a.	b.	c.	d.	DK	ITC
1. When did the Canadian government begin operating Indian Residential Schools?						
a. 1600s						
b. 1700s	6.1	15.1	40.0	33.7	5.1	.03
c. 1800s						
d. 1900s						
2. In total, how many Indian Residential Schools were established in Canada?						
a. 25						
b. 130	14.5	42.2	30.9	6.8	5.6	.19
c. 640						
d. 1,180						
3. What was the name of the report that led the Canadian government to ultimately adopt a residential schools system?						
a. Davin Report						
b. Gladue Report	15.7	15.5	38.3	21.8	8.8	.00
c. Royal Proclamation Report						
d. Midwest Report						
4. What was the most common cause of death in the Indian Residential School system?						
a. Measles						
b. Tuberculosis	19.6	32.6	33.6	7.6	6.6	.05
c. Influenza						
d. Diabetes						
5. When did the last Indian Residential School close?						
a. 1850						
b. 1923						
c. 1972	3.6	17.7	44.0	27.5	7.2	.19
d. 1996						
6. Which former head of Indian and Northern Affairs was famously quoted as wanting to "get rid of the Indian problem?"						
a. Duncan Campbell Scott						
b. Neil Walker	30.4	16.2	28.7	15.5	9.3	-.02
c. Sir Charles Metcalfe						
d. David Mills						
7. Mortality rates in some Indian Residential Schools reached what percentage?						
a. 10%						
b. 25%	6.8	33.1	34.6	16.9	8.6	.09
c. 50%						
d. 80%						

Note. Correct answers are bolded. DK means the respondent did not provide an answer; in such cases, the item was scored as incorrect. ITC is the corrected item-total correlation.

Table 1. Item-by-Item Results of the Residential School Objective Knowledge Test (continued)

Item	Responses (%)					
	a.	b.	c.	d.	DK	ITC
8. Which former National Chief of the Assembly of First Nations brought issues in Indian Residential Schools to light by publicly sharing his own personal stories of abuse and sexual assault?						
a. Shawn Atleo	16.8	15.6	21.0	37.4	9.1	.11
b. Ovide Mercredi						
c. Matthew Coon Come						
d. Phil Fontaine						
9. Which Canadian Prime Minister offered the first official apology for survivors of Indian Residential Schools?						
a. Sir John A. Macdonald						
b. Stephen Harper	15.2	28.5	18.7	30.7	6.8	.01
c. Jean Chretien						
d. Pierre Elliot Trudeau						
10. What is the value of the Indian Residential Schools Settlement Agreement?						
a. 1 million						
b. 150 million	11.6	38.1	31.2	10.3	8.8	.15
c. 2 billion						
d. 5 billion						
11. Which of the following churches was NOT involved in the operation of Indian Residential Schools?						
a. Anglican						
b. Catholic	10.6	14.5	45.5	21.7	7.7	.10
c. Mennonite						
d. United						
12. In all, approximately how many Aboriginal children attended Indian Residential Schools?						
a. 10,000						
b. 80,000	10.3	23.4	32.3	25.8	8.3	.24
c. 150,000						
d. More than 400,000						
13. Which of the following Aboriginal groups did NOT attend Indian Residential Schools?						
a. First Nations						
b. Inuit	3.9	27.7	18.0	42.9	7.5	.09
c. Métis						
d. They all attended						

Note. Correct answers are bolded. DK means the respondent did not provide an answer; in such cases, the item was scored as incorrect. ITC is the corrected item-total correlation.

Table 1. Item-by-Item Results of the Residential School Objective Knowledge Test (continued)

Item	Responses (%)					
	a.	b.	c.	d.	DK	ITC
14. Approximately how many Indian Residential Schools survivors are living today?						
a. Less than 1,000						
b. 10,000	34.4	32.5	17.1	7.5	8.6	.19
c. 80,000						
d. More than 250,00						
15. As part of the Indian Residential Schools Settlement Agreement, the Truth and Reconciliation Commission of Canada will be holding a series of national events to engage the Canadian public and provide education about the history of the Indian Residential Schools system. The first of these national events took place in June 2010. In which Canadian city was the event held?						
a. Ottawa						
b. Toronto						
c. Winnipeg	50.5	11.7	22.5	6.7	8.6	.06
d. Vancouver						

Note. Correct answers are bolded. DK means the respondent did not provide an answer; in such cases, the item was scored as incorrect. ITC is the corrected item-total correlation.

Discussion

The purpose of this research was to assess the validity of a self-report measure of historical knowledge; specifically, we wanted to investigate whether people’s self-reports of residential school knowledge accurately reflect how much they truly know about residential schools (i.e., their objective knowledge). Among a large non-Indigenous Canadian student sample, we observed a statistically significant positive correlation between self-reported and objective knowledge, suggesting that in this context a self-report measure does seem to reflect—at least to some small extent—factual or objective knowledge.

Limitations

One limitation of this research concerns the content of the multiple-choice test used to assess respondents’ knowledge of residential schools. Although we based our items on materials developed by the Legacy of Hope Foundation (2009) and Truth and Reconciliation Commission of Canada (TRC, 2012b), our questions may not fully or accurately represent what happened in residential schools, especially because some details are still being documented and debated (e.g., how many residential schools existed). Further, the multiple-choice test focused on objective knowledge, such as statistics and dates, which reflects a Western epistemological perspective. The test did not assess knowledge typically associated with Indigenous ways of knowing, such as storytelling or experiential knowledge, which are undoubtedly an important piece in understanding the residential schools experience. That said, we consciously constructed our test to focus on objective knowledge of residential schools so as to maintain consistency with previous national surveys, which also focused on objective knowledge.

A second limitation of this study concerns the representativeness of our sample. Given the nature of our sample (i.e., a student sample), we must acknowledge that our conclusions might not be generalizable beyond this particular cohort of first-year University of Manitoba students who took Introductory Psychology during the 2011 to 2012 academic year. However, we see this as only a minor limitation because the foremost purpose of this research was to assess the relationship between self-report and objective measures of knowledge, which is ultimately an issue of internal rather than external validity and therefore less affected by our choice of sample.

Further, we find that the proportion of self-reported “unknowledgeable” respondents in our sample is similar to those observed in region-specific subsamples in previous nationally representative polls. In our study, 28% of respondents reported they knew “nothing” about residential schools. This value is close to that of the Urban Aboriginal Peoples Study Winnipeg subsample (24% said they had not read or heard anything about residential schools; Environics Research Group, 2010) and the National Benchmark Survey Western Canada subsample (28% said they had not read or heard anything about residential schools; Environics Research Group, 2008). Thus, our findings may be at least somewhat representative and therefore of direct interest and use to educators and policymakers, at least at the regional level. It is also worth noting that even if our young, university educated sample is not representative of the entire Canadian population, advocates and policymakers may still care about these results given that public education is often aimed explicitly at reaching the “next generation.” That said, it would be important to replicate our findings using a more representative sample. From a theoretical standpoint, it would also be important to replicate our findings in differing social and political contexts to examine whether our conclusions generalize to other historical and current events.

Conclusion and Recommendations

By monitoring the success of public education, we can ensure that we are continuously moving towards reconciliation. In this article, we observed a statistically significant positive correlation between self-reported and objective knowledge about residential schools. This observation allows us at least some confidence in the validity of the data produced by the relevant knowledge questions included in the National Benchmark Survey (Environics Research Group, 2008), the Urban Aboriginal Peoples Study (Environics Research Group, 2010), and the Canadian Public Opinion on Aboriginal Peoples Report (Environics Institute for Survey Research, 2016). In other words, it suggests that those interested in tracking the progress of public education efforts (e.g., the TRC and provincial and territorial governments) could rely, at least to a small extent, on the data provided by the self-report questions included in these surveys.

It is critical to emphasize that the correlation we observed between self-reported and objective knowledge was nonetheless of only small-to-medium size, meaning self-report measures are certainly not a perfect substitute for objective, fact-based measures. To have more confidence in interpreting trends over time, it may be useful for groups tracking public opinion and awareness to consider more

objective ways to measure the public's residential schools knowledge.² For example, it might be helpful to use multiple-choice questions that require respondents to identify details about residential schools, as we did in this study. An alternative strategy might be to use open-ended questions that require respondents to recall details about residential schools; however, as our respondents were barely able to accurately identify details about residential schools, it might be unreasonable to expect them to be able to accurately recall specific details or facts. One can also imagine many other indices of public education that are important to measure and track. For instance, some have called for measures of relationships that emerge between Indigenous Peoples and non-Indigenous Canadians, or non-Indigenous Canadians' empathy towards Indigenous Peoples (Starzyk, 2016). Another potentially important indicator of public education is Canadians' acknowledgement of the harm done by residential schools, which is likely related to but different from knowledge of residential schools. Indeed, there are many Canadians who know relatively little about residential schools, yet still acknowledge that history and are fully supportive of reconciliation. Others may know the facts yet deny their relevance and the need for redress. It might also be important to measure knowledge of the underlying colonial mentality ultimately responsible for the residential school system. Regan (2010), for example, challenges Canadians to "confront the Indian residential school narrative as part of a broader decolonization project without falling into the multiple traps that replicate colonizing attitudes and behaviours" (p. 13); we challenge ourselves and readers to do the same.

² If a self-report measure is necessary, due to time or space concerns for example, we recommend phrasing the question in a way that primes respondents to be as objective as possible. For example, "If you were given a test about the details of residential schools, what percentage of questions do you think you could answer correctly?"

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