Ontario Chiropractic Association

Attitudes of Ontarians Toward Chiropractic Care

Environics Survey 2019: Methodology Summary

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For those members interested in the methodology used in the survey, *Attitudes of Ontarians Toward Chiropractic Care*, produced by Environics Research in 2019, Marg Harrington prepared this summary.

Methodology factors

Some factors to consider when assessing the quality of a survey:

- The purpose of the survey
- The method in which data was collected
- The sampling technique
- Survey/statistical analysis

> "*Quality requirements vary for different types of surveys, from surveys for official statistics to ad hoc surveys to opinion polls and market research."* (Svensson, 2013)

The intended use of a survey helps guide decisions about the methodology. Surveys to collect data that will ultimately contribute to a body of research about patient care, and subsequently guide clinical decisions, are different than market research or opinion polls.

The purpose of the survey

The purpose of the Environics survey 2019, *Attitudes of Ontarians Toward Chiropractic Care*, is to gather information about awareness, perceptions, utilization and media recall. This purpose informed decisions about data collection methods. This is a key point to keep in mind when considering the methodology and results.

Survey research:

- Gather information about target market or customers

Survey research has its roots in applied social research, market research, and election polling. The purpose is to gather information about your target market.

The method in which data was collected

Data Collection Method (Sue & Ritter, 2012)

Survey Type	Advantages	Disadvantages
Mail	Low cost, Wide geographic reach, No interview bias, Anonymity allows sensitive questions	Low response rate, Lengthy response period, Contingency questions not effective, Don't know who is responding to the survey
Telephone	Limited coverage Speedy responses Can ask complex questions Wide geographic reach	Confusion with sales calls Intrusive Call screening No visual support
Face-to-Face Interview	Good response rate Can ask complex questions Long interviews tolerated	Limited geographic reach Time-consuming Expensive Interview bias Sensitive topics difficult to explore
Online	Low cost Fast, Efficient, Convenient Contingency questions effective Direct data entry (reduces error) Wide geographic reach	Coverage bias Reliance on software Don't know who is responding

Each method of data collection has advantages and disadvantages. Decisions about which method to collect data are based on a number of factors including, but not limited to, budget, availability of other resources, the timeline, and the nature of the questions being asked.

Online surveys are good when you want:

- Wide geographic coverage
- A large sample
- Structured data collection
- When a relatively quick timeline is vital; and
- When interviewer interaction with respondents is not necessary

The sampling technique

Web Panels:

- A sample database of potential respondents who declare they will cooperate for future data collection if selected (International Standards Organization, 2009)
- A fast and cost efficient method in market surveys (Svensson, 2014)
- Standardization of data collection makes them easy to replicate (Hays, Liu & Kapteyn, 2016)
- Being used due to the growing non-response problem (Svensson, 2013)

Most quantitative research conducted by Environics is done through online surveys using web panels. A web panel is defined as an access panel of people willing to participate in web surveys. Previous versions of this study used online panels and this consistency helps validate responses. One of the reasons for the use of online panels in market research is the growing problem of non-responses associated with other methods.

Web Panels - Advantages/Disadvantages (Svennson, 2013):

- Advantages: Uncomplicated, inexpensive, fast
- Disadvantages: self-selection; undercoverage, difficulty assessing the quality of the results

Advantages	Disadvantages
Uncomplicated Inexpensive Fast	Self-selection Potential under coverage Difficulty assessing the quality of the results

There are advantages and disadvantages with web panels.

Advantages:

- The approach gives easy access to large groups of potential respondents once the web panels have been set up
- It is inexpensive to design a survey panel
- A survey can be launched and finished very quickly

Some disadvantages are:

- There could be bias due to self-selection of individuals to participate. This is true with all methods of data collection
- People without internet will never be selected for web surveys and may differ from those with internet, causing under coverage. However, this potential bias decreases as the number of people using the internet increases
- Some literature about web panels suggested there could be difficulty of assessing the quality of the results. This criticism is often focussed on the use of web panels for official statistics, such as that collected by Statistics Canada. The criticism is that the non-probability nature of the sample makes it difficult to estimate sampling error or confidence intervals. For national statistics, it is generally considered essential to use probability sampling.

However, it is important to keep in mind the intended purpose of this Environics 2019 survey. It is about public opinion and utilization. It does not require the rigor of research that is required to guide clinical decision-making or census data for government decisions about resource allocation.

Solutions to Limitations:

- Large panels from which to select sample
- Post-stratification adjustments to reflect population distributions (statistical weighting of web panel) (Hays, Liu, & Kapteyn, 2015)

There are ways to address the limitations of web panels.

- Some criticisms about web-panels have been due to size of the initial panel from which to draw the survey sample. **This Environics survey was drawn from a large web panel of ~98,000 Ontarians.**

There are ways to address the issue of a non-probability sample.

- The challenges related to the use of convenience panels to represent the general population can be addressed through post-stratification adjustments (or analytic weights) to compensate for non-response and un-equal selection probability.

The sample was stratified to reflect the 2016 consensus data for gender, age and regions. Since all the sampling targets were hit, **there was no need for Environics to weight the results to reflect the consensus data.**

Statistical Analysis

- Validity & Reliability (Streiner, Norman & Cairney, 2015)
- Sample Size: you want your survey instrument to be valid and reliable.

Validity - two types:

- Face validity - on the face of it, does the instrument appear to be assessing what you are trying to measure. Face validity is when an assessment or test appears to do what it claims to do: **YES, this survey meets that test**
- Content validity - an assessment of whether the survey instrument samples all the relevant content or domains; **this is not relevant for the focus of the survey**

In terms of reliability, the survey question was used in other surveys and found fairly similar results. The 2016 Environics survey showed the utilization at 20%, with a margin of error of +/- 1.39% (large omnibus survey of 4,941 people).

- 2016 survey utilization range: 18.61% – 21.39%

This 2019 Environics survey showed the utilization rate at 26%, with a margin of error of +/- 2.53%.

- 2019 survey utilization range: 23.47% – 28.53%

The sample of the population is true 19 times out of 20. If the study was run 100 times, 95% of those times, we would get the results that are +/- 2.53%.

While the utilization results are higher with this survey, the results are not widely dissimilar.

Sample Size:

- A power analysis determined that for a 95% Confidence Interval, the sample size needed was 1500.
- **For the purpose of market research, these survey results can be considered accurate.**

For further information, please contact Marg Harrington at **mharrington@chiropractic.on.ca.**

Resources

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