Simply Research Services LLC Flossmoor, IL 60422 <u>www.simplyresearchsvcs.com</u> Phone: (708) 205-9900 Email: info@simplyresearchsvcs.com

SR Quest

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Live Freely

More than 113,000,000 articles were published about surveys conducted on 2020 New Year's resolutions. The studies contain the same results year after year. Among the top 10 are losing weight/getting more healthy, saving money/managing finances better, traveling, and socializing with friends/making new ones.

It is reasonable that a new year brings contemplation, and with it decisions and changes. But consistently, much of the same research shows that by the end of Q1, the resolutions have largely been abandoned. The theory is the commitments are based on social norms - societal expectations of our behaviors, sentiments, appearance, and etcetera, rather than what we want for ourselves.

So since New Year's resolutions do not make it past a quarter, let's say we start anew with something like seasonal resolutions. Perhaps we can try spring commitments, summer efforts, fall check-in, and maybe winter chillin'.

In the spring, we are likely able to think much more clearly than in the winter. The weather is warmer, the sun is brighter and shines more frequently, and the days are longer. These natural elements allow for clarity of thought through the breathing in of fresh air and the ability to walk lightly after having shed the heavy winter clothing. We can spend quite a bit of time outdoors in the summer when the weather is so much more consistently milder than it is even in the spring. We can host barbecues, attend outdoor concerts and play some softball or beach volleyball, all of which allows for socializing with friends in person and meeting new ones. We also get some natural exercise to boot!

In the fall, we can assess ourselves with respect to health and happiness. How are we doing? We can set aside some time each week to take care of the little things we overlooked when we were having a good time in the spring and summer. See our doctors for our annual check-ups, call or travel to visit loved ones, take a long weekend getaway alone to gather our thoughts.

Finally, winter chillin' can be the time for relaxing and sitting by the fire in our favorite chair with a good book. Wrapping ourselves in our heated blankets and putting on our favorite easy-listening music. Periodically, we will enjoy the hustle and bustle of the winter holidays, and afterwards, glide into spring – when we can again make new commitments on our own terms.

Continue to look at the surveys – they are fun. But let's just do our own thing!

Reba Chaisson, PhD Principal

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Let's Go Critique-ing: Evaluating Surveys without Calculations and Formulas

Years ago, a friend of mine who was a math teacher, explained to me how much can be learned about the subject by just reading the book. I looked at her cross eyed. 'You learn math by doing, don't you?' I asked. She retorted, "But you have to understand something about it before you do it." Now, that is some logic for you! It occurred to me that, well yeah - this is true with nearly everything we do. We read instructions before putting together a bicycle, building a table, or cooking a new meal. Why would this not apply to math? Perhaps, I never thought of it this way because from early on, math books greeted me with calculations and formulas before their logic and usefulness were ever introduced and discussed. Whether we have an aptitude for math or not, shouldn't we all understand its value before we try to work out a problem with pencil and paper?

This is the impetus for a talk about surveys. A survey is a research method used to describe a sample in terms of numbers. These can be in the form of ratings, rankings, percentages, averages, or any type of descriptive statistics. It is common today to learn about their results through traditional media outlets, social media posts, magazines, books, newspapers, and other reading materials. Sometimes, the topics make for fun and interesting discussions and we simply cannot knock this benefit. Often though, the findings of survey research are accepted as generalizable when they are not necessarily so. How then can we judge this about a survey when we do not have a background in research or statistics?

Below I discuss several measurements typically included in survey reporting that can help us do this. No need to be intimidated, as there are no formulas or calculations. All you must do is read - and you will be all set the next time you encounter some interesting survey results. But first, let us talk about the popularity of this research tool and then we will move on to some evaluative measures.

Surveys have exploded in popularity in recent years. The advent of the web and the development of online platforms like SurveyMonkey and Qualtrics have contributed to this. According to a study conducted by <u>Wells and Picou</u> this method comprised just under half of the social research published in the pre-1950 issues of the *American Sociological Review*. Between then and 1978, it had grown to be used in 80 percent of published studies. The researchers found that qualitative methods like in-depth interview (IDI), ethnography and content analysis were quite popular prior to the growth of survey. I weep for their diminished use because the data just does not get any richer than this. But I will save a discussion of these methods and my tears for another day. For now, let's talk a little bit about how to evaluate the generalizability of survey findings.

Representativeness of the Sample

A survey's value is in its ability to make reliable generalizations about the population under study. But it hinges in part on the degree to which the sample respondents are representative of that group. For example, if I wanted to undertake a study on professional baseball players, I would administer the survey to a sample of professional baseball players, not a sample of musicians or high school athletes. I can only learn something about professional baseball players by studying people who are representative of that population – other professional baseball players. This is what is meant by representativeness of a sample. Does the sample resemble the study population and to what degree? This is important because only then can the survey results tell you anything about the group you are interested in learning about. So, when evaluating survey findings, pay close attention to the description of the sample and how it reflects the group the researcher sought to study.

Response Rate

Response rate is one of several measures commonly used to ensure that survey results are reliable. It is the percentage of completed questionnaires returned from the total number distributed. Sixty percent or higher is considered very acceptable because it indicates that enough responses were received for the researcher to infer something about the study population from the sample. Note that this is not a hard and fast number. It is challenging and at times expensive getting people to respond to surveys, so a response rate Copyright 2020, Simply Research Services LLC

Let's Go Critique-ing (continued)

as low as 50 percent is sometimes begrudgingly accepted in social research. A lower rate of return is often considered insufficiently robust to gain any meaningful or substantial insights about the questions that prompted the study.

Standard Error and Confidence Interval Testing

Standard error is a measure of the unpredictable elements or uncertainty in survey results. Also referred to as sampling error, some amount of standard error exists in every survey because we study representative samples of the population we want to learn about, not the entire population. Doing this would be expensive, time consuming and never ending. Instead, we diligently select a sample of people that reasonably represent the population we want to study. Indeed, the statistical sciences was borne out of the need to learn about populations by doing just that – making estimates about populations based on carefully drawn samples of them.

Standard error approximates the closeness of survey responses to those of the study population. Think of it like a standard deviation, which is the average distance of the data from the mean. The term, standard error, is used to distinguish it as a sample rather than a population.

Through repeated sampling, probability theory has proven that 95% of sample data, when drawn from a representative sample and with a good response rate, will fall within 2 standard errors of the population parameter. This is good to know because generally, we would like to be able to say that we are 95 percent confident in our results. By plugging in sample size and our other results into the calculation, we are able to determine the number of standard errors in our data. If we are within 2 standard errors, this indicates that data obtained from the sample reflects what would likely be found in about 95% of the population that is represented in the sample. But in order to boast such a high confidence level, we want to also qualify it by performing confidence interval tests.

Confidence interval tests allow us to quantify the margin of error (MOE) in the responses. Usually represented as plus or minus some number (i.e. +/- 5%), it conveys how close the survey findings are to the theoretical population. Let's say a key variable in the reporting is average income and the findings show it was \$38,500. After plugging this into the formula along with standard error (or standard deviation if it is known) and the confidence level equivalent for 95%, we find that the range is \$37,345 to \$39,655. These are referred to as confidence limits. Good news – our average is within these limits.

This is not always the case as the size of the standard error and the confidence level researchers select can affect this. If they did, you would likely not be reading such a report. Since it is fine in this example, then either the confidence limits or the MOE of +/-3% will be included with the survey findings. Both convey how closely the sample data aligns with the actual study population. Making note of this information allows us to determine for ourselves how reliable the findings are. The questions then become, how big is our sample and what does it consist of?

Sample Size and Composition

Yes, we must also be cognizant of sample size. The larger the sample size, the more closely we can approximate the population parameters we are interested in studying. Makes sense, right? The more people we have in our sample that look like our study population, then the more likely their responses will reflect it. It is no wonder then that sample size is a factor in the calculation of standard error; indeed, it is the divisor. Intuitively then, the smaller the sample size, the larger the standard error. The larger the sample size, the smaller the standard error. Of course, the latter is preferred.

Let's Go Critique-ing (continued)

Probability theory shows that we reach a point of diminishing returns when sample size increases beyond a certain number. In other words, we do not gain much in learnings beyond some point. So, in market research, we don't spend a lot of time and money expanding our pool of survey participants simply because a larger number would look good in the final report. Four hundred is generally considered enough to make reasonable inferences about the study population. However, some clients do prefer a certain number of responses. In cases such as these, we would field more survey questionnaires to better ensure we reach the client's sample size requirement.

Sample composition is articulated in the research plan, and survey respondents are selected based upon the characteristics and attributes of the study population. These are typically revealed in the report in the form of variable distributions and central tendencies. For example, percentage of racial/ethnic and gender groups represented in the sample data, along with average income, education level, and other key variables are all included in the analysis. Understanding these relative to the study population will help us further discern representativeness of the sample.

Sample Selection

Finally, I mentioned earlier that researchers diligently select study participants in order to ensure the sample is unbiased and reflects the population they want to learn about. There are several sample selection strategies employed to accomplish this: simple random sampling (SRS), systematic sampling, stratified sampling, clustered sampling, probability proportion sampling, and others, but their discussion is beyond the scope of this piece. Suffice it to know that SRS is the most popular strategy for sample selection in market research. This is because it best ensures little if any bias will exist in the sample since each person has an equal chance of being selected to participate in the study. It also means that the resulting sample will consist of people who reflect the attributes and characteristics of the study population, thus resulting in a representative sample.

Sometimes sample bias is called for in the research and the researcher must be intentional in inserting this. Some community studies require that the sample composition reflect the respective distribution of racial/ethnic or income groups in the community for example, as well as their geographic locations relative to certain resources. In these cases, stratified random sampling or clustered sampling may be used to ensure these peculiarities are factored into the sample. Some studies also require oversampling of certain groups when their response rates to surveys tend to be low compared to others, or when their numbers are so small in the population that their responses would essentially get muted in the survey findings. Thus, researchers have a range of options available to them in sample selection to ensure they are able to generalize their findings to the study population.

Summary

Clearly, we can go on for pages discussing ways to assess surveys for generalizability. But what has been covered here should help you to critically evaluate the strength of the findings found in published survey research reports. The gist of this is to continue to have fun engaging in the many interesting topics covered by this method. But also, be cognizant of how narrowly or liberally you interpret the results. Place them within the context of the aforementioned important measures for reliable generalizations.

Aretha



I have always been resistant to technology – just ask my husband who is the complete opposite. I never even wanted a home computer, it was blasphemous! And later, when that man I live with replaced my Word40 program with Microsoft Word, I was livid. I had 8 hours to complete my prelims and I was being forced to learn this new tool at the same time. Aaaarrggghhh! But technology has its virtues and I will tell you why.

Again, last Saturday, I was sitting in Starbucks waiting for my Grande' Latte with almond milk (no foam, no whip) and I heard Aretha Franklin grace my ears. *Rock Steady* – really? Oh, no they didn't. Before I left 10 minutes later (yes, it did take that long), I had heard *Respect* and *Think*. It was hard for me to leave.



Photo by Dmitry Bayer on Unsplash

I don't know if you have noticed but Starbucks, at least the one in my Hood, has been rockin' Aretha Franklin ALL MONTH LONG: *Chain of Fools, I Can't See Myself, Rock Steady, Shame You Don't Share Your Love with Me*. You all don't know anything about that! That's old school right there.

Aretha's music (yes, I have called the Queen of Soul by her first name for quite some time now)



accompanied me on my 3-mile jogs, mat exercises and even the sauna back in the day. She and I jammed uninterrupted for much of my two-hour workout, 3 times a week. Check out the top 10 on my iPod playlist. You can't touch this!

- 1. Ain't No Way
- 2. Chain of Fools
- 3. Respect
- 4. You Make Me Feel Like a Natural Woman
- 5. I Say a Little Prayer
- 6. Dr. Feelgood
- 7. The House that Jack Built
- 8. Baby I Love You
- 9. I Never Loved a Man the Way that I Love You
- 10. Until You Come Back to Me

Like many of you, I like hearing the music of my favorite past artists because it takes me to another place in another time. It is the opportunity to make my past present and hold it close, just for a little while. It is a reprieve from today's challenges

and a chance to embrace and to be embraced by those I have loved and lost, but still need and miss terribly. Whether or not I knew Aretha personally is irrelevant. When she passed away, I lost someone that meant something to me. Someone who affected my life in a meaningful way.

The loss of famous artists, athletes, poets, and statesmen saddens us. Why? We didn't always know them personally, but we knew of them through their work. It touched us in a place that moved us. Maybe it was something they said. Maybe it was how they said it or that they said it at a pivotal moment in our lives. Perhaps it was something they did. Or maybe how they moved when they did it. And thanks to advancements in technologies, we get to easily carry them with us everywhere we go, keeping them close even long after they are gone. Now, that is some technological virtue for you.



Who's on Your LSL?

Photo by Stefan Vladimiro on Unsplash

Recently, an episode of *Castle* aired on Late-night. The now defunct ABC television series ran for eight seasons from 2009 to 2016. The show was about successful crime writer, Richard Castle, who partners with Homicide Detective Kate Beckett and her team of the New York Police Department to solve crimes. The result was a fun, often hilarious, and at times very serious drama with interesting, smart, and quirky characters who developed an indelible bond with one another. The writing for the show was solid.

In this episode, the team is at the scene of a murder in a restaurant when they encounter a popular, very handsome and well-respected billionaire, who had also won a genius award for his work. Castle, in his lovable quirkiness, says excitedly "Oooo ooooo, oooo, he is on my LSL!" Of course, the team stares at him wondering what he is talking about – as usual. He goes on to quickly explain that LSL is "Last Supper List." The gist of the LSL: if he knew he was going to die soon, this billionaire would be one of the 12 people he would want to share his last supper with. He goes on to ramble off several other names, and of course, the team loses interest and turns its attention back to the dead body in front of them.

LSL is a strange but interesting concept. Think about it. Who, if anyone, would we want around us when the moment is near (assuming we knew this in advance)? If we had the opportunity to plan what we believed to be our last dinner, who would we invite to join us? Why? And what would we talk about, especially knowing what we know? Let us say we select the 12 for our LSL – how do we tell them? Do we tell them? And once we are gone, how would our uninvited friends and family members think about how much or how little we cared for them?

Right now, I am thinking about what I would serve. It would depend on the time of year. If it's warm, I would likely throw ribs and chicken on the grill and fix up some sides and a salad. If it's cold outside, I would probably serve up some prime rib, baked chicken, greens with smoked turkey, and maybe some mashed potatoes. I make pretty good mashed potatoes. With this menu, I would try damn hard to hang around long enough to at least enjoy my own last supper!

Just a Word on Survey Implementation

The online method for administering surveys is easy and inexpensive but not necessarily the best for data collection. Response rates for web surveys have been declining over the last 20 years due to <u>spamming and survey fatigue</u>. Ten years ago, researchers found the numbers to be at about <u>33 percent on average</u>. Today, anecdotal evidence suggests they have fallen to less than <u>30</u>.

Traditional mail surveys produce higher response rates (<u>about 50 percent</u>) than the web method. But while this is the case, the mail mode does not necessarily render high completion rates. Respondents do not always answer all the questions, leaving many researchers stuck with surveys they may not be able to use in their analyses. After factoring in the cost of printing, mailing supplies, postage, and the time it takes to prepare and stuff the envelopes, mail surveys can also be expensive, time-consuming and quite demanding of people resources.

<u>Pew Research</u> found a steady decline in its telephone survey response rates beginning in 1997. Like the online dilemma, many people are now hesitant to answer calls from unknown numbers due to scams, telemarketers and organizations attempting to solicit donations for various causes. These conditions leave online survey as the most viable option for collecting data that can inform important research questions. Still though, this does not make it the best choice.

Consider the groups potentially left out of online surveys - those without a home computer, internet access or a mobile device with a data plan; those who are not web savvy; and individuals young and old who simply prefer to do things the old fashioned way. This means only minimal input of poor, working class, minority, and elderly persons is being factored into potentially important decisions concerning their schools, communities and local economy.

People are hesitant about sharing any information about themselves today, and understandably so. This mistrust along with a respondent's unwillingness or inability to use the web and uncertainty about the household's connectivity can make for problematic online survey findings. Sometimes what is not seen in the data can speak volumes about the weaknesses of the insights gleaned from it. To ensure the sample is representative of the population being studied, a combination of data collection methods should be considered. Surveys can be administered via both online and mail, or online and telephone for example. Mixed approaches have the best chances of yielding acceptable response rates and reliable, representative data from which inferences can be drawn with truly high levels of confidence.

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Simply Research Services PO Box 194 Flossmoor, IL, 60422

Phone: 708 205 9900 E-mail: info@simplyresearchsvcs.com

An effective solution when questions simply need to be answered



Reba Chaisson, Principal

Simply Research offers market research services and temporary staff support for all phases of research and analytics projects. A consultant and former professor, our principal has a broad background that makes her uniquely qualified to gain insight into customer and student behavior. She taught and researched at Purdue University and the University of Illinois Chicago. She spent more than 10 years in the private sector helping clients at Acxiom Corporation, Ernst & Young (EY), Sears Holdings, and RenRe Insurance achieve their revenue, acquisition and retention goals by gaining insight into their customers through analytics. Dr. Chaisson has doctorate and master's degrees in sociology along with a bachelor's in computer science and marketing research certifications in qual and quant.

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