

Interview

Jill Montaquila, Westat, USA

Interviewed by: Megan McNally and Teresa Dodson, The George Washington University



Dr. Jill Montaquila

Dr. Montaquila, currently the Associate Director of Westat's Statistical Staff and senior statistician, spoke with us, Megan McNally and Teresa Dodson, earlier in 2013, as part of a GWU sponsored series of interviews on statistical leadership. With over 21 years of experience in the survey statistics, Dr. Jill Montaquila has held many of the most prestigious positions in the survey research field. These positions include Chair of the Survey Research Method Section at the American Statistical Association (2013) and President of the Washington Statistical Society (2006–2007).

With a slight nudge from a college mentor, this self-proclaimed math geek earned a Master's Degree in Statistics from Miami University (Oxford, OH); and, then, received her Ph.D. in Statistics a few years later from American University (Washington DC). Her extensive knowledge in sample design and weighting has led her to publish many articles on new approaches in address-based sampling and random digit dialing telephone survey methodologies. She is also a Research Associate Professor in University of Maryland's Joint Program in Survey Methodology.

Students: This is Megan McNally and Teresa Dodson; we're sitting down with Associate Director, Dr. Jill Montaquila on March 14, 2013 in the Westat office located in Rockville, Maryland. We'll be discussing

Dr. Montaquila's work in the survey research field. Thank you for joining us.

You're welcome

Students: To begin...

We wanted to know what attracted you to the Survey Research field.

Well, to be honest, job opportunity. I was completing my Master's degree in Statistics and thinking what am I going to do for a career. The program I was in was at Miami University in Southwestern Ohio. Miami had a terminal Master's degree program so you couldn't stay at Miami and do a Ph.D. They didn't have a Ph.D. program, so I knew I wouldn't be doing that at least and I didn't think I wanted to go on for my Ph.D. at that point. Most of Miami's graduates either went into industry like quality control work with some of the companies in the Cincinnati area, or became actuaries which I've heard is pretty lucrative but not the most interesting work. I don't know how accurate that is; I've just heard that from a few people. Or went into government jobs. I didn't want to stay in the Cincinnati area, and so the idea of working for a company in that area wasn't very appealing. I didn't think I wanted to do actuarial work so that pretty much funneled me into the government sector. And, there were opportunities. I thought I could go live in DC for a couple of years, get a little experience and then I'll move back to Northeast Ohio, which is where I was from originally. Obviously, that never happened. The potential for a job opportunity is really what drew me to the field. It wasn't a love of survey sampling or anything like that; although, it certainly has evolved into that.

Students: When did you realize that you wanted to be a statistician?

That's another good question. Probably when I became a statistician. I was always sort of a math geek

and really enjoyed math. What I really would have loved to have done, my dream job, although, it's not really a job, as I was an undergrad and early graduate student, I always thought it would be so cool to have a job where you could just sit and proof theorems. I know that's really geeky but I love the logic and sitting and working through theorems. Of course, there aren't jobs, other than pure academic jobs, where you are just doing academic research. You don't get paid to sit and prove theorems so when I started my Master's program I thought I would do this "design your own program." They had an option to design your own program. I was going to do a Master's in math but take a few econ courses because I thought if I am going to get a job then I will probably need something applied. I had a really good advisor in my Master's program who said, "I don't think you want to do that. Why don't you take this stat course?" And, I did *not* want to take statistics. It was a two semesters probability and statistics theory course. And I was like "I don't really want to do that, I'm a math person, I'm not a stat person." So I kind of got pulled, kicking and screaming, not really but, into this stat theory course. Eventually, it sort of clicked and I thought, "statistics isn't so bad." I guess maybe through those two years of my Master's program I sort of grew to like statistics and think it was a field that I could make a career out of.

Students: So is there any research that suggests there is a stereotype that exists with females struggling with math and science and that it is a male industry. So we were just wondering if you have any experienced or been affected by these stereotypes? How did you overcome this if you had one?

I personally don't and I do know that girls typically do tend to shy away from math and the science fields more than boys for whatever reason. For me, that wasn't an issue. As a kid, math was always my favorite subject. In my adult life, having a career in statistics, I've never encountered that so to speak "glass ceiling" where women are held back. I know there has been a lot of research done and the statistics do show that women are a little bit at a disadvantage compared to men in the field for whatever reason but I personally haven't experienced that. I do think some of it is personal traits. Some people just have a fear of statistics or of the sciences for whatever reason. Maybe they had a bad experience in a math or statistics class at some point and they think I'm not a math person so to speak. But, I think that a lot of people who think that way just need a different approach or need to give it a second

chance. But, anyhow, for me that hasn't been an issue. But, one thing I will say that has been is related to me being a woman in the field, I do feel like, and this may just be my perception, maybe I need to work a little harder to be taken seriously. Certainly my colleagues here at Westat haven't done anything to make me feel that way but, like for example, I know that I have sort of a young, childish sounding voice and that something that I sort of struggled with. I hate to pick up the phone and call somebody, especially somebody I don't know, professionally, because I feel like they aren't going to take me seriously when they hear my voice. Whereas if I was a man and had a deep voice I think I probably wouldn't feel that way. But again, there is nothing that anyone has done to make me feel that way. Nobody has said, "I'm not talking to you, you don't sound serious," or anything like that. It's more my perception and my concerns. That's the only thing I can say about being a woman in the field where I feel that gender maybe makes a little bit of a difference, just to me personally.

Students: And just to touch on that, do you think that in the field of statistics it might be more prevalent in this specific field, or do you think that it may be in the overall job field, the working world?

In terms of a differential between men and women?

Students: About working harder to be taken seriously? Do you think that it would be more prominent in a math industry or just as prevalent in the overall working world for women?

I think probably more in the technical fields, scientific. Maybe professional is a better word to say, but primarily scientific fields. I can think of other industries, for example, when I worked in retail and in restaurant businesses when I was in college and everything. I certainly never worried about the types of things that I just described to you. I never worried about that when working in those industries. I think maybe the technical fields and in certain professional fields there may be more of a barrier or a differential between men and women.

Students: From your published articles, it's clear that you have an expertise in looking for new approaches to improve common problems in surveys, particularly sampling. How did you and/or your team of coauthors decide to go against the traditional survey method in search of a new method or approach?

You said the word team and I think that's the key. I think so much of what I've done here has been part

of a team effort. I think working as a team and kicking around ideas, brainstorming and working together to say, "What's the best approach to solve this problem?" has definitely worked well for me and I think for a lot of people at Westat. When we have faced challenges along the way, sitting down as a group and saying, "Ok, what are our options?" and talking through them, weighing the pros and cons of different approaches has really been helpful.

Students: Were any of these methods or approaches controversial?

One area where I've been doing a lot of research recently with others is address-based sampling. An application that we are using has been a survey where, historically, we did data collection by phone. It was a random digital dial survey and we did telephone data collection and telephone response rates have plummeted. Many households now don't have landline phones, so in order to sample households you really need nowadays to practically bring in cell phone sample which have a whole slew of issues. So after this particular survey that I am sort of eluding to here, we did the survey in 2007 by telephone and after that, the client said that we need to do something different, besides just this landline, random-digit dial telephone survey. Whatever it is, the two big issues are the under coverage because of all the households that have cell phones and the response rate. So whatever it is, we want those things addressed. And, we really had a fork in the road. We had two primary options that we could consider. One was to bring in a cell phone sample and do what is called dual-frame RDD, the other approach was address-based sampling. They are two totally different approaches. We met internally as a team and talked about them and we were sort of leaning toward the address-based sampling approach for a variety of reasons. Then we met with a panel of experts and kicked around these same ideas. We had a daylong meeting, and it was a great meeting, talk about a team effort. These experts really gave us a lot of their insight and ideas and so forth. After that meeting, again, we met as a team and said that we really think the address-based sampling is the way to go. Other organizations had been testing it but they've been doing it differently than what we were considering to do. They had tested it and found issues with it. We thought we had a good approach and we discussed it some more and firmed up some aspects of the approach that we were considering and we said that we didn't know if it will work or not but it's worth testing because if it does work it's

something that for years into the future could change this survey and other surveys as well. I think the team giving it careful consideration and everyone bringing their expertise to the table and then being willing both here at Westat and also the client being willing to take a chance and say, "Let's go for it." If it would have failed, we would have been back to the drawing board, it didn't, we consider it to be a success but that's an example of where the teamwork and everyone being able to play a part and help shape what was done, really made a difference.

Students: Just going along with that, you said that you had talked to a team of experts. So, you're considering that there were more experts out there in the field than just your team that you pulled in? So, who were these other experts? Just curious. . .

Yes, we handpicked them because they had specific areas of expertise. We picked someone who has a lot of experience and expertise with dual frame telephone surveys to have his voice heard. We picked someone who has a lot of expertise in web surveys. We didn't know with this address-based sampling approach whether web would be a feasible approach. We picked someone who really is an expert in mail surveys and also questionnaire design. We had specific areas that we wanted to make sure this panel of experts represented and could give us some input on. It turned out to be a really good group to have pulled together. I wish everyone could have this experience of working with an expert panel like that. For one day, it was really literally one day where we had a very full agenda and a very set list of topics and ideas that we wanted to discuss with them, but it was really a great discussion. A unique opportunity for me definitely.

Students: We have been learning about telephone surveys having a high non-response due to people screening their calls and thus not answering the survey. Do you believe there is a large difference between people not answering the phone versus the people who do not own a phone?

Yes, I do. We have pretty good information nationally about people who don't own a phone. There is a researcher at The National Center for Health Statistics, Steven Blumberg, I don't know if you've seen any of his articles, but every six months he puts out a publication on the NCHS website that tracks the phone ownership patterns. Every six months he reports on the latest estimate of what proportion of households have just a landline phone, have landline and cell, have cell

only, and have no phone. Then he does that for households with children and then he does it for people, what proportion of adults fall into those categories and then characteristics of those adults. So, we have a lot of information about the cell phone only, um, adults in cell phone only households and what their characteristics are. They are much more likely to be renters, to be male, to be young and so forth. So, we know a lot about them. We don't know so much about the persistent non-responders that you described, the people who just refuse to answer their phone. To some extent, that group, whereas the cell phone only group is a fixed group at any given point in time, you are either cell phone only or you are not, the non-respondents could differ from survey to survey. While you might be someone who tends to not answer the phone if you do not recognize that number or the organization showing up on caller ID, we know there are things that we can do to affect that. Sending advanced letters, including an incentive in the letter, leaving an answering machine messages so that the next time that we call on that number you will recognize it and say, "OK, maybe I'll do their survey." There are things we can do to affect that so that's not a fixed group. And as a result, we don't know so much about their characteristics because that group differs from survey to survey. But, there are a lot of methods that we can use to try to examine that exact question, "How different are the people who didn't respond to the survey from the people that did?" And look at non-response bias or the potential for non-response bias as a result of that group.

Students: Do you know what the most well known method would be to use for that?

There's actually a whole collection of methods and it really depends on your situation and what other data you have available. There is a short course that Bob Groves and Mike Brick developed and Kristen Olsen and I have been teaching for the past several years that goes specifically into that. It's a short course on non-response bias and the methods you can use to examine non-response bias. It really boils down to what is your sample design first of all because depending on the design, you may have very useful information on your sampling frame or you may have virtually no information on your sampling frame. That's sort of the starting point, basically what sources do you have to get information about the non-respondents is what is boils down to.

Students: What do you see changing in the survey research field to adapt to this change? Do you see a big movement or not?

Definitely there is a big movement away from landline RDD. In a lot of situations people have moved away from landline RDD to dual frame RDD but that still has the issues that you all are bringing up. Yes, you can cover the cell phone only group if you use dual frame but if people still don't answer the phone then you still have that non-response problem. It's even worse, actually, when you bring in cell phones. So, I don't think that's the answer. I think society has changed and people don't want to be bothered and it's so easy to screen our calls. So, I don't know that we are going to see where response rates for telephone surveys have been trending downward; I would be surprised if they took an uptick at any point. We certainly with address-based sampling, the group here that has been involved with the research that I described earlier certainly feels that mail is a good way to go. For whatever reason, those people who won't answer the phone and do an interview, will complete a survey under certain conditions if it is mailed to them. So, we've had a good deal of success with using mail in this situation where previously we used telephone. Now how long is that going to continue? Just because today or next year people are willing to fill out a questionnaire that is mailed to them, can we expect that will continue into the future? I don't know. I think Web certainly has a place. We haven't delved much into this but I think the idea of using an address-based sample, mailing to them to get their attention, but then having a way to send them to the web. By, putting a URL in the letter and saying, "Please go to this website and complete your survey." Will we get to a point where we can actually get people to do that when we send them a letter and to get onto their computer or smartphone, or whatever, and do the survey? I don't know. I don't think we are quite there yet. But it's a field or an area that we definitely need to explore.

Students: So you just talked about you're not sure how long this will last in the future or when these changes are going to happen, so are there like sign posts or something that we should look for when there's going to be a big change in the world of statistics?

Some of measures we've traditionally used. Response rates for years have been something that we've looked at. I can remember in the late 90s when we started to see response rates dropping. Telephone survey response rates have been so high through the 80s and 90s and it was such a good approach for a lot of reasons. And then in the late 90s we started to see them

sort of dropping off. And we were like, “What’s happening here?” And then other organizations started to report the dropping off. And it wasn’t until the early part of the 2000s that people really started publishing papers and saying that telephone survey response rates are dropping and industry-wide this became recognized. So I think the same types of things. There are a lot of issues with using response rates as measures but it’s still a useful indicator of people’s willingness to participate. So, just keeping an eye on that and how difficult it is to get response and how much effort is needed to get response over time can help us monitor where things are and whether the old approaches that we’ve been relying on should be revisited. That’s probably the best indicator that we have as a signal that things aren’t working so well anymore if they aren’t.

Students: Along with risk taking and when companies have success and new approaches sometimes there comes bumps in the road with that or mistakes. What have you found to be the best way to handle the mistakes or bumps in the road during the research process?

I think I’ll answer that separately because I think it’s different for the two. Mistakes, I would say just be upfront, acknowledge them. I can remember relatively early here in my career at Westat, I made a big mistake. It was a stupid thing; it was a weighting factor that adjusts a household’s probability of selection for having multiple phone numbers. So, if you have two phone numbers in your household and another household just like you only has one phone number and we are sampling phone numbers to get to the household, that household with two phone numbers has twice the probability of being selected as the household with one phone number. So there is this factor of two that comes in. It has twice the probability so the weight of that household should be cut in half. Well, when I spec’d this out, it was just a stupid oversight, I had things flipped. I don’t remember if I was spec’ing the probability or the weight but whatever should have been two, I had as one half or vice versa. We computed the weights and actually delivered this file to the client and then I realized that I got the wrong factor here in these weights that we computed and delivered to the client. I went and talked to the person who at the time was the senior statistician on the project fully expecting that I was in big trouble here because of where we were in the process. And, he handled it so well. I mean, there was nothing to make me feel worse than I already felt. He said, “We’ll just notify the client, we’ll go back and

have to redo the work on Westat’s nickel but we’ll do that. We’ll go back, we’ll redo the work, and deliver a new file.” It’ll be okay, basically. We’ve got to do it quickly, we’ve got to be right upfront immediately with the client about it. And, I learned a really important lesson there. To own up to your mistakes, do it quickly, have a plan to resolve it and that’s really the best approach I think.

As far as bumps in the road, other than mistakes, challenges, or glitches or things like that, I think the best approach is to have a team-focused way of resolving it. Meet with the team or the people on the team who are critical to getting through the issue and come up with a game plan. Have a game plan for not only what the resolution should be but who is going to do what to get through this.

Students: It can be difficult for employees to break out of support positions and break into leadership roles. Did you experience this in your own career path?

I think for a while when I was not the senior person on the team, the senior statistician, but a member of the team, doing what I felt was, I don’t know if I would say decision-making but where I felt where I was sort of moving into a senior role, it was at times a little uncomfortable for me. Like, I don’t want to step on that senior person’s toes and if I didn’t know how far they wanted me to go with something it was maybe a little uncomfortable. But, I think I was really fortunate with the senior people that I was working with gave me that free reign and they were pretty clear about it. I can remember going to meetings and the senior person on the team would say, “Jill, what do you think?” Instead of me having to think of whether I should say something, or should I not. They sort of encouraged me, “Jill, what do you think about this or do you have any ideas?” That was helpful to me. In that situation, I didn’t have to worry about stepping on toes. On other projects, a senior person might be working on the project but basically I was tasked with doing it. I can remember I would just proceed and do the work and as questions arose I would touch base with that person. I don’t think for the most part I ever had much question about what my role was or whether I could take that next step. I do think a lot of that is the people I was working with and their particular styles, and personalities, and so forth.

Students: Was there ever a time in your own career path where you had to place your own integrity and/or your principles above a perceived successful reward and sacrifice the “success” because of your principles and your own integrity?

Yes, one example comes to mind. It's probably not the best example. I probably could come up with better examples if I gave it more thought, but let me tell you this example. We had a proposal that we were working on last summer. And basically, the potential client wanted a survey done and basically wanted a certain number of completed interviews for a certain price. There was no way that we could get them a meaningful sample. We could get them a number of completed interviews for that price but it would be garbage. To get them a sample that was really meaningful and statistically valid, we could not do for anywhere near that price. We knew that nobody else could either. We internally discussed this and kicked around some options and said, "Well, what if we do this and what if we do that?" And, we exhausted the options. So it came down to the point that we know they aren't going to pay more than X amount for this project, what do we do? Ultimately, we decided just to not bid on it because if we did bid and we had something that was way over that amount, they wouldn't even consider our bid. That would be a lot of effort for nothing, just to be shot down. If we bid something at that amount, either Westat was going to lose a whole lot of money on it because, like I said, it would cost a lot more to do this in a valid way or we'd have to put forth an approach that wouldn't give them anything meaningful and we just decided that we didn't want to do that. The proposal manager, I have a lot of respect for her, she definitely considered my opinions and concerns in making that decision, ultimately.

Students: You served as the President of the Washington Statistical Society as well as other leadership positions. To hold these types of positions require strong leadership skills and traits. Can you tell us how you used those skills to obtain those high ranking positions?

To obtain the positions, um. In my case, like when I became the president of WSS, I had served in a lot of other positions in the organization. I had been treasurer, I had been rep at large, I had been social chair and I had been involved in quantitative literacy, so it was a matter of years being involved in the organization and knowing how things worked and knowing the people. In terms of getting that position, it was more a matter of I think that history of having worked with that group of people that is really involved in WSS and having worked with them in many years in a lot of different roles. And, just knowing how things worked. That was my particular path there.

Students: Are there any leadership traits that you practice in your own leadership roles to be the more effective to your team or that you found to be good approaches?

I think delegating is definitely important. Teamwork is so important and being able to delegate to the team and communicate clearly what responsibilities people have is important. I think one thing that I am realizing more and more that is critical that I didn't understand at first is knowing each team members' capabilities, being really familiar with their capabilities, and being able to delegate in a way that the task matches up to their capabilities as much as possible. I think that's really important. Those are the main things that come to mind.

Students: Are there any negative traits that you feel women may need to adapt or change in some way to become successful leaders?

I struggle with that because I don't know how much is gender-specific and how much is person-specific. I think you have to be confident. To the extent that women have historically been given the message that you should be the quiet one or whatever, that may be sort of a barrier to overcome. I do think that you have to be confident and willing to voice your opinion. I think a lot of people, women and men, but probably more so women, are sometimes afraid to speak up because they are afraid they will be wrong. I would say to voice your opinion. Whether it's a technical opinion or nontechnical opinion, don't be afraid to voice it. And you're going to be wrong, and when you are wrong, just admit that you're wrong and people respect that. You want to be right more than you're wrong so I wouldn't voice my opinion in every situation; you have to pick and choose but don't be afraid to voice your opinion.

Students: With rise of status, leadership roles and responsibilities comes potential stress. How do you manage stress?

I think for me, it's important to separate work from other aspects of life. And that is true, definitely. I look back and my stress definitely has increased over the years but to be able to say at the end of the day, "Ok, I'm done with this work aspect, I'm going to set that stress aside and do something that I enjoy." And, have that separation. I know a lot of people live with their smartphones for personal and also work-related reasons. It's important to be responsible and to be accountable and there are definitely more evenings than not where I do check in on email and will respond to

a few messages, but I don't constantly have that smart-phone on me. I'm not constantly feeling like I need to respond. At the end of the workday I set that work aside and go do something I enjoy and then I'll come back to it. But when I am off work, I am off work. So, being able to compartmentalize to some extent and put that stress aside for a few hours and really, honestly, totally forget about it, is important.

Students: Was there ever a time where you felt like giving up on a certain project or it was too difficult?

Today [sarcastically]. Often, there are really a lot of times when you get that voice in the back of your head saying, "Is this really worth it?" But then you think, it is. For myself and for Westat. There are always going to be those challenges and I think the most important thing is persistence and sticking with things and riding out the rough times.

Students: When serving as the President of the Washington Statistical Society, what were some of your key roles in the position?

The president just sort of pilots the ship. The good thing about an organization like that is there are people who have been involved for a long time and they know their roles. There are a lot of positions on the board and committees and so forth, and those people know what they are doing, by and large. When new people come in, the people who have been there are really helpful in bringing them on board and helping them learn the ropes. As president, it's really just a matter of keeping things going in the right direction. The organization pretty much runs itself. You just need to have somebody there to chair the meetings, as new things come in delegate, and sort of stay on top of things and make sure new things are running smoothly. But it's easy when you have a group like that that keeps things going.

Students: Were there some rewarding projects that you worked on while you were at the Washington Statistical Society?

WSS does a lot of interesting things. These weren't things that I had a role in starting but being able to keep involved in them. Some of the big lectures, social events and things that bring statisticians together I think were meaningful. There's an annual dinner that WSS has every June and for me that was sort of the highlight of my presidency. It's the end of the term and it's a social event. It's the largest social event that

statisticians in the area have and so everybody comes together and you get both the statisticians and sometimes their spouses or partners and then you get graduate students from the area who are getting awards, and younger students, K-12 students, getting awards. Having that mix of people there, all coming together because of statistics I think is exciting

Students: We've read that you are in officer in the Caucus for Women in Statistics. Can you tell us a little about your role in the organization?

My role now for the past several years has been as a newsletter features editor. Basically, I put together a column for each of the newsletters that highlight some of the news articles and things like that about women in statistics. And also a mailbag article that's basically any announcements that members have. If people have changed jobs or gotten tenure, just any exciting personal news that people might want to share. That's been my role for the past several years, putting together that article for that newsletter each time it's published.

Students: You founded the Bureau of Labor School Outreach Committee. Was this to enhance communication among the Bureau's statistical methods division?

It was actually tied in with WSS's quantitative literacy program. Quantitative literacy works with the areas' schools, mostly. Basically, it's trying to promote statistics to children through the schools or through other organizations. We've worked with The Girl Scouts in the past and organizations like that. Through that program, statisticians will go out to schools and talk to the students and do activities. We've done festivals, there's a Science and Engineering festival in the mall that WSS has participated in. Statisticians are there and people can walk by there. There are all kinds of different things and exhibits. People can walk by and do activities, statistical activities. I had been involved in WSS's quantitative literacy program and wanted to help coordinate amongst statisticians at BLS to get involved in those types of activities. That's what the outreach committee basically did was pulling together BLS statisticians for these types of activities.

Students: Did BLS want to help out and join groups? Was that something that everyone wanted to add to their plate, more activities and stuff to do?

I think so. At least at that time, there were a lot of statisticians who were interested in doing this type of thing and the management there was pretty supportive

of people occasionally going out during the work day to do these types of things if necessary. Since the work day coincides with the school day, they (management) were pretty supportive of that.

Students: You've been elected the Survey Research Methods Section Chair at the American Statistical Association. As part of that organization, we've seen that you've co-authored articles with a focus on continued education in the field. Can you speak on your thoughts of the importance of that education?

I think the field of survey research is always changing. We talked about the decline of telephone surveys and new things that are emerging there. I think just staying on top of what's happening in the field. Part of that is through work experience, part of that is through reading journals, part of that is through casual conversations with people, networking and getting to know others in the field and being able to talk to them about technical issues. Part of that is through attending conferences, attending short courses and just all of these different ways that we can stay on top of what's happening in the field and bounce ideas off of other people. I think that's important, whether it's formal education or these sort of informal learning opportunities. I think it's critical to us individually but also to the field.

Students: Is it really important to have that Master's [degree] in Statistics in this field or are there other opportunities or programs that are also very valid to get?

I think formal education has its merits. You get exposed to, especially, theory that may be useful. I don't know if you know this, but Fritz [Scheuren], Mike Brick and I back in the mid-nineties collaborated on an article that dealt with a very specific aspect of estimation in telephone surveys. The method that we applied the survival methods analysis to estimate response rates essentially. And this had nothing to do with personal survival, lifetimes or anything like that. It was a tool to get us to deal with a problem. Had we not had exposure to survival analysis through formal coursework, we might not have recognized that this is an approach that we could use. So there's definitely something to be said for formal coursework in the types of things that you are exposed to in a Master's program or Ph.D. program but at the same time, I would say that doesn't define a person's capabilities definitely. There is so much more. I've seen people with Bachelor's degrees who have gone very far and

certainly one aspect of that is their willingness to learn outside of a formal program. It's not like they got their Bachelor's degree and stop, they continued learning, continued going to short courses, conferences, reading journals, all of those things. So, I don't think it's essential to have an advanced degree in order to do well in this field.

Students: As a former professor at University of Maryland in the joint program of survey methodology, I'm sure you given advice to students that you've brought from your on the job experience. Are there any specific skills or advice you could give professional women like us?

A lot of it is things that we've talked about. Being confident, don't be afraid to speak up, be willing to admit when you're wrong, be honest about mistakes. Look for opportunities, that's one thing that we haven't talked about that I think is really important. As opportunities come your way, recognize them and be willing to grab them because you don't know when that next opportunity will come along. Seek out mentors, that's another important thing. I've definitely benefited a lot from people who have mentored me. Look for role models and people you can bounce ideas off of or get advice from and don't be afraid to ask for advice.

Students: Thank you, Dr. Montaquila. Those are all the questions we had for you today.

About the interviewers



Megan McNally is a Research Assistant at Public Opinion Strategies. She holds a B.S. in Political Science with a minor in Mathematics from Allegheny College. Megan is currently in the George Washington University Survey Design and Data Analysis program.



Teresa Dobson is a Research Analyst at Marketing & Research Resources, Inc. She has a B.S. in Psychology and Mass Communication from Towson University. She also has a masters in Human Sciences-Psychology from Hood College. Teresa is currently in the George Washington University Survey Design and Data Analysis program.