AMERICAN PSYCHOLOGICAL ASSOCIATION

Exploring the Conceptualization, Measurement, and Reporting of SES in Social/Behavioral Research

2015 World Poverty Day

Brought to you by the APA Office on Socioeconomic Status

Webinar Transcript

John Ruiz, PhD:

Good afternoon everyone and welcome to today's webinar. My name is John Ruiz. It is my honor to welcome you to today's event which is focused on SES and health. It's titled "Exploring the Conceptualization, Measurement, and Reporting of SES in Social/Behavioral Research."

By whatever metric we think about SES, it is amongst the most robust determinants of mental and physical health and wellbeing. You can see a list there on your screen of the various ways of how it is measured and conceptualized - always with a very robust literature supporting it as determinants of outcomes.

Despite its broad effects, issues of poverty and class are often overlooked both by public and often times by researchers. We tend to marginalize them as nuisance variables to be controlled for. Recognition of this problem has led to a number of events. Publically this weekend we recognize world poverty day that will be Saturday, October 17th, with events around the world including in the United States.

Within APA, the Committee on Socioeconomic Status has been tasked with addressing and informing actions and policies related to SES and outcomes. Amongst the APA Committee on Socioeconomic Status' many activities is the Stop Skipping Class campaign which has two aims: first is the raise awareness of the importance of SES and social class, and second is to facilitate improvements in the science of SES.

Today's webinar largely stems from the 2006 APA Task Force Report on Socioeconomic Status. That particular Report serves as a road map for where we have been, what we know and where we should be going in regards to improving the science of SES. Amongst its many observations was one that the literate itself, upon which SES and improvements are based, is largely lacking sophistication as well as basic reporting. A recent analysis show roughly, by the most conservative estimates, only about 16% articles reported in APA journals are making any mention of SES within the manuscript.

A couple of the key recommendations of that Report were to: (1) include SES and its markers as standard demographic variables as much as we would report gender and age in analyses, (2) improve measurement and analysis strategies move from beyond simply controlling for SES to

include it to examine effects and report those effects in a more sophisticated and meaningful way.

The Committee on Socioeconomic Status with Report in hand has lobbied effectively before the APA Journals' Council of Editors to improve upon reporting and in fact recent action was taken that should facilitate greater reporting of these variables across APA journals. These are going to be the new expectations in manuscripts to report something of SES. The aims of today's webinar are to review contemporary approaches to the conceptualization and measurement of SES and illustrate those approaches with new data.

We are honored to have an all-star lineup of presenters.

Beginning with Dr. Nancy Adler from University of California, San Francisco. She is Professor of Medical Psychology, Vice-Chair of Department of Psychiatry, Director of Health Psychology Program, and Director of Center for Health and Community. She has received a host of awards and honors. She is Chair of MacArthur SES and Health Network and an Elected Member of Institute of Medicine. She has been named "World's Most Influential Scientific Minds" through Social Science and Reuters. She is a key contributor 2006 Task Force Report that is motivating today's event.

We are also joined by Dr. Robert Kaplan who splits his time these days between Stanford University and Chief Scientific Officer at Agency for Health Care Research and Quality. Dr. Kaplan is a former Distinguished Professor of Health Services and Medicine at UCLA. He is past president of numerous organizations. He is a former Editor-in-Chief of key health psychology journals. He has some 500 plus articles and papers. Again, like Dr. Adler, he is also an elected member of Institute of Medicine.

Our agenda for today is that Dr. Adler is going to address key issues in conceptualization and measurement of SES. She is going to talk about resources that are available to enable our participants and attendees to better use those approaches in their work. Dr. Kaplan is going to discuss boarder associations between SES and health, as well give examples on recent findings between education and health.

Our key learning objectives today include: (1) an appreciation for why assessing and reporting SES is important, (2) understanding of contemporary approaches to conceptualizing and measuring SES across a variety of context and populations, and (3) to leave with an informed sense of the ways by which SES impacts health.

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Nancy Adler, PhD:

Thank you very much. In this part of the webinar, I'm going to be talking about the conceptualization and measurement of SES in health research, both for physical and mental health outcomes. Like many things, the closer you get and the more you understand, the more complex it is. From a distance it may seem relatively easy to throw in a measure of SES. By the end of the talk you will both understand why it is important to have a theory about it and to choose the right measure. I hope to provide some ideas of how to think about it.

There was an editorial by Marcia Angell, who was an Editor at that time of the New England Journal of Medicine, and in 1993 the New England Journal was not particularly interested in psychosocial issues. But, what she noted in this editorial, which was for an issue where they published in a number of papers showing SES and health outcomes, was that, "In study after study SES emerges as one of the most important influences on morbidity and mortality."

She then went on to say it was also one of the most mysterious influences. It wasn't at all clear how it actually worked to do this. This actually was part of the impetus for establishing the MacArthur Foundation Network on SES and Health. The Network consisted of a dozen health researchers from fields ranging from neuroscience to sociology, included several eminent psychologists. We all gathered and worked for almost 15 years on the question, "how does SES get under the skin to affect health?" Like all good social scientists, we came up with a complex model. What this did was to lay out for us both a roadmap for our research, but also our hypothesized pathways by which SES may operate to influence health. The SES measures are moderated by race and by gender and interact with them, and in turn these shape both environmental resources and constraints that people operate in and also psychological influences that affect how they are operating in these circumstances.

Let me turn to the measurement issues. In terms of 3 items first listed (1) education (2) occupation, and (3) income, are the most traditional components of socioeconomic status. Socioeconomic Status is not a single thing. It is a combination of these three. One of the things I will be talking about will be to think about these individually as well as together.

Let's turn to education. This is probably the most commonly used measure of SES in the United States. In Great Britain where they have a longer history of measuring social class, they tend to use occupation and split it into manual and non-manual labor. In the US we much more frequently rely on education. The advantage of education among the 3 primary measure it is

much easier to use and measure. It is easier for people to report. There is relatively little social desirability although there is some, there is less taboo than around income. Importantly, the causal direction using education as an SES indictor in relation to health is much clearer because temporal association is clearer. For both income and occupation - If you fall ill, that may affect your ability to keep job and also then would also affect your income. In that case it is health driving SES, rather than SES driving health. With education you have clearly defined temporal ordering - If you fall ill you don't lose your college degree, they don't come take your PhD away from you. Education which is generally set earlier in life -- in one's 20s is then predicting health events at age 40, 50, 60 and beyond - you can be pretty sure about temporal ordering of it.

Why does education have such a strong relationship with health? All indicators of SES, show the same relationship. The higher you are in education, income, or occupation – the better your health. What is it about education that provides better health? First thing is knowledge - you learn skills, you learn capabilities of things that allow you to make healthier choices and lead a healthier life. If it were just knowledge you could assume that every year of education adds a comparable degree to a person's knowledge bank and if that were the case you would expect the same relationship, the same increase each year. What we find, however, is that it is discontinuous at the time of graduation. There is more of a bump up in health between 11th grade and completing 12th grade, where you get a degree, than between 10th grade and 11th grade. One of the reasons that may be is a credentialing effect. Once you graduate, you now have a degree that opens gate to certain kinds of employment and opportunities. This is sometimes referred to as sheepskin effect and its effects are beyond just the knowledge gained by having completed those years education.

Another resource provided by education is the environment in which it gives you entry, so if you graduated from high school you have a better chance of going on to college where you are exposed to different kind of social networks and norms including those regarding health behaviors, like use of alcohol or smoking. There is something else I didn't put in that is not necessarily a resource provided by education but psychologists may be interested in – some of the association may reflect a spurious relationship with conscientiousness. We know that conscientiousness is a strong predictor of longevity and is also a strong predictor of completion of education. It may be that people who are more conscientious about their education are more conscientious about their health. As I was alluding to, these are complex relationships and if you are interested in the role of education it's important to try to tease these factors apart.

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To summarize a couple of things about measurement issues, you have to think carefully about years of schooling versus the highest degree. The advantage of schooling is you have a conscious measure. The advantage of highest degree is it captures the sheepskin effect. Another measurement issue, we have not made much of advance on is taking into account the quality of education. Right now even to say somebody has a college degree or a high school degree is a fairly crude indicator. That may entail very different things it takes to get there and also opens different doors, so if you have a degree from an elite university versus a degree from Podunk University, your life opportunities may be quite different. But we don't yet have a good way of classifying quality of education.

The second component of SES beyond education is income or financial resources. The first issues here is whether you are interested in income versus wealth. Wealth is more predictive of health in part because it is a more stable measure. People who have greater wealth have more opportunities, they have them over time. It turns out that income is quite volatile. A fair fraction of the population experiences drops and less often increases that are unanticipated in their income. So if you are looking at income at given time it may not be a stable indicator of financial resources. Another issues that comes up is whether you are interested in absolute versus relative income. This has to do with different theories about what SES gets you in relation to health. Absolute income matters a lot for what you can buy and it probably matters a great deal at bottom of income ladder. You need money to be able to buy necessities. Above that amount, it may be that relative income is more powerful because the same absolute income will have very different meaning whether you are in an affluent setting versus one that amount of money puts you close to top. Sitting here in San Francisco where house prices have become astronomical, knowing somebody's absolute income does not necessarily translate into their relative buying power. It is their relative income that becomes much more salient. In relation to that, the degree of income inequality becomes a contextual issue, it is not an aspect of the individual but of the social surround. We have had a tremendous growth in income inequality in the United States where the upper 1% has been accruing a far greater share of income and wealth and this has ramification for our community and conditions people are living under.

Several measurement issues follow from this. As I mentioned, wealth is more stable than income, however there are challenges in measuring wealth. It is more complex to measure. People tend to know how much they are paid, what their annual income is. For wealth they need to know value of assets they have and then you need to subtract out debt or mortgages to

know what their actual wealth is. Another complication is whether you are interested in personal or household income. If you are measuring household income, you need to adjust for the size of household since the same income if it is for 1 or 2 people has different implications than if it's supporting 7 people.

Another issue that comes up in terms of measurement of income and wealth, is social desirability. People are very hesitant to say how much money they have or how much they are earning. Some of this is societal taboo about discussing money. Some of it may be what you're asking them to report may be somewhat different than what they are reporting to the IRS. There are many reasons why people may be uncomfortable in telling you what their income is. As a result researchers have tended to use ranges, what range does your income fall, the problem with this is you don't have a continuous measure, you don't know where they falling in that range, harder to be precise. Also, you need to know something about what the distribution is before you set the ranges. There are a number of studies the Network looked at in trying to see if there is a gradient between income and health, where researchers had truncated too much at the top. They truncated $50,000 or $60,000 a year and many more people were above that you couldn't make differentiations in the range that you wanted. So you need to know what distribution you are anticipating before you set the categories. It is not only a practical issue but also conceptual issue. It has to do with whether you think absolute or relative income is more likely to be effecting the outcome you are looking at. Also, the importance of considering income inequality as a contextual issue.

The third component of SES is occupation. The first aspect of occupation is whether you are employed versus unemployed. We know, in general, that people who are employed have better health in part because there are benefits of working. There are financial benefits, not only your salary, but benefits like health insurance and social benefits of working. Many people report their social networks are based in work. If they are having problems at work, work can sometimes be a haven. The flip side of that is that there could be work-life conflicts. If you are in a situation where work is demanding it may be stressful in relation to also balancing issues at home. Finally, you have to take into account the "healthy worker effect." The reason that people who are employed may be healthier is not simply the benefits of working, but it is healthier people get hired. You need to factor that in.

What aspects of occupation matter? For those that are working, the actual work conditions are hugely important. Once aspect of this is physical risk -- whether people's jobs put them at risk

of injury. Second is for non-manual labor jobs is social risk. We know that positions that have high demands that give workers very little control over how to do their work are quite toxic and stressful, so the work conditions themselves play a role in health effects. Another aspect of occupation that is often assessed in some of our measures is occupational prestige. This reflects income and education because the most respected occupations are those that need more education and they usually pay better. Finally, you need to need to be aware that occupation may be confounded with qualifications. Who gets to be in the high prestige occupation and that may affect the casual chain.

These three components -- income, education and occupation -- make up socioeconomic status. I would caution against using term SES when you are using only one of them because they are correlated with one another but are not redundant; they are not the same. In fact, they are less highly correlated for women and people of color, particularly education and income. Education buys you less entrée to high prestige occupations and less income if you are female or from a disadvantaged group. Some researchers, if they are interested in SES at large, create a composite which will combine income, education and occupation, often standardizing them and looking at the mean. It is not clear how the weighting should happen for those. In the Network, one of the things I was interested in was subjective SES. We developed what's become known as the "ladder" because we didn't want to use value-laden terms. If you ask people are you middle class, lower class, upper class, it is heavily value laden and may affect how people report. The ladder was intended to be a more neutral way of asking the question. People are shown a ladder and asked the following: imagine everyone in the United States is somewhere on this ladder, those at the top are the best off, they have the highest income, the most education, and the best jobs; those at the bottom are the worst off, they have least education, the least income, and the worst job or no job at all – where would you place yourself on this ladder? It turns out that just like self-rated health predicts mortality even when you control for every known objective indicator and lab test, so too does the subjective SES in relation to objective measures. It tends to predict a whole range of health outcomes even when you control for objective SES.

Pete Gianaros did an imaging study and found differences in grey matter volume in parts of the brain that modulate stress. It looks like the SES ladder may be capturing a couple of things: (1) it may predict better because it allows people to tell you the nuances of what income, education, and occupations means in their life. If they did graduate from a more or less prestigious high school or college, they can take that into account when they are doing that ladder; (2) the other

hypothesis is that being low on hierarchy is stressful in it of itself. There is both animal model literature that suggests that as well as human data. The subjective ladder has been used in over 200 studies. I don't think it substitutes for knowing the objective information but because it is just one item, it is getting widely used and can be very useful particularly if you do it in conjunction with objective SES.

In closing, the key consideration is what your theory is about the role of SES. You don't want to just pick a random, easily accessible measure of SES, you want to have a theory as to why that aspect should be measured as you are measuring it, and should be related to your outcome. In brief, you don't want to skip class. You want be careful what class you take. If you want more background and information, we have a website for the MacArthur Network (www.macses.ucsf.edu). It sadly ended a couple of years ago, but we have kept the website up, although we have not updated it. We prepared a lot of materials on the measures, under research link, and you can look at the specific measures of SES.

Now going to turn it back to Bob much more depth in the kinds of studies done about SES and health.

Robert Kaplan, PhD:

First, thank you Dr. Adler and Dr. Ruiz for the introduction. I am going to quickly go through discussion of the impact of education on mortality falls on what Dr. Adler introduced. I'm going to go in a little bit more detail before I do that I want to discuss briefly NIH mission statement. As many of you know, I spent 3.5 years as Associate Directors of NIH with responsibility of behavior and social programs. The NIH mission statement is "science in pursuit of fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life and reduce illness and disability." The point I want to emphasize is what NIH and other organizations are trying to do is to find knowledge that is going to help people live longer and more productive lives.

We have to entertain this question: how well are we doing at increasing the life expectancy and do we really understand the determinants of what makes people live for longer periods of time. Part of this interest for me was the relationship between how we're doing in health outcomes in our country in relation to other countries in the world. Where we are as USA, in terms of expenditures on health care, we are way out in the extreme in relation to other countries. But if you look at life expectancy, we are really about the middle of the pack or a little bit lower.

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When I was at NIH, this led us to sponsor a study that looked at health outcomes in the United States in relation to other peer economics, these were all rich economies. They tended primarily to be in North America, Western Europe also included Australia and Japan. The question was: How are we doing in our health outcomes in relation to these countries and how is this changing over the course of time. Life expectancy at birth for men and women starting in 1980 and going through 2010. Men, back in 1980, were center of distribution but found our way to last place among these wealthy countries. This is also true for women, women started a little bit higher but also have declined in relation to other rich countries.

One of the outcomes of the study that was a shock to all of us, was an outcome measure which was death prior to age 50. What you see on this slide is a comparison of the 17 countries, the question here is: Do you make it to your 50th birthday party? You might think about being at your 50th birthday party and waiting for the cake to be delivered, the question is are you alive to blow out candles? You can see that United States is not doing well, we are at the bottom for men and women by a substantial margin. So for example, US females can expect to lose about 1.4 years of life before the age of 50. This is double for Sweden.

Perhaps more shocking is the finding that if you look at where we are in relation to other countries and how this is changed since 1980 for men and women. You can see that we were relatively low for men among these comparison countries in 1980 but we have now found our way to the bottom, but surprisingly for women we have just gone off the chart. We have been curious about what are the variables associated with this change are these variables where intervention may be possible. One of the variables identified by this Institute of Medicine Committee was educational attainment. This turns out to be one of the variable that has been slipping over the course of the time in the United States in relation to these comparison countries.

This story is told perhaps most dramatically by in study by David Kindig and his colleague from University of Wisconsin. They looked at a summary of health in American communities between 1992 -2006. What I'm going to show you first is counties in which there were substantial improvement in health status during that interval, these are shown here in green. Next, I will show you, in yellow, counties in which there is minimal improvement in life expectancy. Surprisingly, now shown in red, female life expectancy in the United States actually declined between 1992 and 1996 in 42% of the counties in the United States. In fact,

educational attainment was the strongest correlate of this decline in the data set that they had available to them.

We also know that disparities are correlated. For example, if we look at white-black life expectancy disparities y-axis, and disparities in math performance at the 4th grade on the x-axis at the state level, these are highly correlated, suggesting there is a relationship. I will get back to potential causal relationships as we go through. We also know from a variety of studies, the failure to graduate from high school or from college differs by SES group. If for instance, you look at number of people with less than a high school education they are fewest among white (women) and a little bit higher among African Americans and highest in Hispanic groups. At the other end, if we look at the probability for obtaining a college degree – highest for white women, intermediate for African American women and lowest for Hispanic women. When we look at how this relates to life expectancy data, at least the life expectancy and educational attainment issue, it looks something like this, here on the left side, if we look at changes in life expectancy by year – it turns out it getting larger as a function of time.

The relationship between the hazard of premature death and education seems to go almost through the highest levels of education. These are the hazards of death between 1997-2002 in studies that link the National Health Interview Survey to the National Death Index. Those with less than a high school education have the highest risk of death and this continues almost linearly through highest degrees MD/PHDs of DDS degrees. Dr. Adler mentioned before there may be a credentialist component to this so it's not just number of hours of curriculum that people are just exposed to but getting credential or particular degree may contribute to this. For example, if we look at log-odds of survival in this case non-Hispanic men and women, you see there is a discontinuity around graduates from high school and perhaps another one later and this turns out to be also so but more pronounced for non-Hispanic blacks. This data comes from Mark Hayward at the University of Texas.

We recently had an opportunity to use data from REGARDS study. It is a big national study prediction of stroke in African American and white individuals in the United States. Study has 33,000 adults. What we looked at was relationship between educational attainment and probability of dying of any cause within an interval of 10 years. What you can see on the left side is the crude rate and you can see that it is very grated so the lowest probability of dying accrues to people with college degrees and then it is little bit higher for some college, little bit higher for some high school and higher yet for those with less than high school. Then we

adjusted for all sorts of things statistically, if you adjust for all the demographic variables in this data set, it attenuates this relationship but it is still linear. If you for adjust income, it attenuates it a little bit more but it is still quite linear. If you adjust for every biological variable in this data set and there are many of them all kinds of measures like cholesterol, heart function, and so forth - it still doesn't make the relationship go away. And, if we add to that in the model behavioral factors - cigarette smoking, and a variety of exercise variables and dietary variables, it still won't go away although it is attenuated. This relationship remains with all sorts of statistical adjustments.

What drives this relationship between educational attainment and life expectancy? We really don't know, but there are some interesting hypotheses. For example, these data that come from David Cutler and his group at Harvard look at the relationship between years of education and a variety of health habits. In the upper left, cigarette smoking plummets quite dramatically as people have more education than high school. Body mass index similarly declines, people tend toward thinner bodies as they have more years of education. Engagement in physical activity continues to increase through the highest levels of education. Number of days people had 5 or more drinks in the last year declines as people have more education suggesting that there may be a relationship between education and health habits.

One of the points I find most interesting is that people continuously say that it must be because educated people are wealthier thereby getting better health care. We are in the final stages of doing an analysis of a data set called the "Medical Expenditure Panel Survey," where we have a longitudinal cohort of about 33,000 people in the United States and we are looking at the relationship between all kinds of variables and health status, this isn't death, it's an index of health. Turns out educational attainment is related to all sorts of things – it's related to being uninsured, family income, physical limitations, and the number of office visits. We have done a ton of controls. It turns out when you remove medical care and quality of medical care people get doesn't make this relationship go away. So it doesn't appear better health care that is driving this difference.

I want to take a few minutes to try and put in perspective why I'm personally so interested in this issue - the reason is that I think many people aren't aware of how profound the relationship between educational attainment and life expectancy is. In order to illustrate this I wanted to show you how educational attainment stacks up things that we commonly do in healthcare without questioning. The number of quality-adjusted life years you get by getting a

pap smear every year as opposed to every third year if you're a woman. It turns out it may be a day or day and half in life expectancy. Or across the most recent analyses, if you get regular mammograms it may be a month of life expectancy may not even be that. Older British studies where people weren't treated for cholesterol. If you look at normal LDL cholesterol versus having cholesterol above 160, could be about 6 months of life. Blood pressure may be 8 months of life. Actually smoking is about 6 years. But the difference in life expectancy between those with an advanced degree versus those with less than a high school education is 12 years. It is remarkably profound in relations to other risk factors. Again these are not randomized clinical trials, we can debate about the methodology, but whatever methodology you use the effect of having less education is very strongly associated with how long people live.

Another way of putting the relationship between life expectancy and low education. If you look at number of deaths from homicide, a small number of motor vehicle crashes: maybe 30,000; suicides: 40, 000; diabetes: 60,000; Alzheimer's disease: 80,000; strokes: 120,000. Sandra Galea at Columbia University estimates that the impact of having less than a high school education may account for the loss of about 240, 000 deaths per year in the United States, approaching the effects of smoking.

I just want to wind this down by saying we are very intrigued, my thoughts about this were very much stimulated by the work that Dr. Adler and her colleague started in the MacArthur Network. We think about what we are getting in return we are getting in return for the almost $3 trillion we spend in health care each year. We may look at it like this – if you look at what makes people healthy? It's been estimated that health care accounts for only about 10% of that, behaviors might account for half of that, and the other 40% is other factors outside these two - genetics and other factors. But if we look at where we are spending our money, we are spending 97% of that $3 trillion on health care and we are only spending 3% on factors outside the health care system. If you think about it this way, we are spending about 97% of that $3 trillion chasing perhaps 10% of the variance in what might affect the outcomes and we are spending about 3% on what might contribute to the other 90% of potential outcomes.

So we don't have causal studies. It is very early in the process. But if you look at something on an international level, if you look at changes in the number of people who have college degrees over the interval of 1970-2010 on the x-axis versus changes in life expectancy on the y-axis, there are roughly a linear coloration. Countries like South Korea had terrible life expectancy for

women in 1970 and now actually life expectancy in women in South Korea is close to 90 years. Very similar story in Singapore.

I think many of you know I'm a Californian. At the end of these talk, I always have to quote the great Jerry Garcia from the Grateful Dead who said "Someone has to do something, and it's just incredibly pathetic that it has to be us." Thank you for allowing me to participate, and I hope we have left some time for questions.

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Questions and Responses

1.

John Ruiz, PhD:

Thank you very much to both our speakers. Let's go ahead and start to look at some questions now. We have received a bunch of questions and more are coming in. Please define relative income. Is it only connected with buying power?

Nancy Adler, PhD:

Relative income is where you are in relation to whatever population is relevant to you. If you are making $50,000 per year that may put you in the 20th percentile or in the 80th percentile of income in your community. The absolute income is how much money you have in your hand. The relative income partly will affect your buying power because you are competing against people who have more money but it also tells you where you stand in relation to others.

2.

John Ruiz, PhD:

Our next question is how can work affect physical health? In other words, the question is pointing out going to work reduces time for other pro-health activities.

Nancy Adler, PhD:

I think it partly depends on what your work is. If you are a minimum wage worker and you are working 3 jobs – it can affect your physical health adversely because of things like not having time to work out, lack of control and stress. Sometimes, actually, the work itself can be very positive. If you work for the post office and are now starting to walk and lose weight – your work may actually facilitate your exercise. So depends on the nature of the work and what it yields you.

Robert Kaplan, PhD:

We recently released a book that was done both by NIH and AHRQ, if you go to the OBSSR website at NIH you can click to a link to it. There is excellent chapter by Lisa Berkman that

gets into work and work stress in relation to health outcomes. The book is free and free download or buy it at the government printing office for the price of paper. And actually Dr. Adler is one of the contributors to the book.

3.

John Ruiz, PhD:

We will make an attempt to gather up these various links and resources and post them on the APA SES website so that everyone can have access to those. Do you believe that SES or education is a causal factor or proxy for other factors that aggregate at different levels of SES?

Robert Kaplan, PhD:

This is one of the research frontiers and Dr. Adler might want to comment this as well because she has done so much work on socioeconomic status. This is one of the big challenges because these factors are associated, you will never be able to randomize clinical trials just to separate the factors out. I personally believe that it is causal. And the reason I do think its causal, at least on the education side, is that there are some international data that are starting to emerge that suggest that countries that have had bigger investments in improving SES through the education channel have experienced the biggest increases in life expectancy. But again if you are a purist and you require randomized clinical trial data to persuade you, it is very difficult.

Nancy Adler, PhD:

There are a few. For example, the Perry Pre-school Project was a randomized trial where children were randomized to early education high quality pre-school. It doesn't tell you about education writ large, but it does suggest that early education does put children on better educational achievement tracks and is useful. We do not have the large randomized trials, although we have some suggestive ones. Because of the temporal stability of education, I think we do have stronger evidence that education is on the causal pathway rather than being just an epiphenomenon.

4.

John Ruiz, PhD:

Do you find the same association between education and mortality amongst Hispanics and Latino individuals or does the Hispanic paradox apply?

Robert Kaplan, PhD:

That is an excellent question. In the study that I mentioned, the study using the REGARDS database, we looked at that. We didn't look at Hispanics separately because in that particular data set the sample size was not large enough, so it was designed to compare African Americans and non-Hispanic whites. The relationships is exactly the same between African Americans and non-Hispanic whites.

John Ruiz, PhD:

Do you think then, Dr. Kaplan, looking at the relationship between non-Hispanic blacks and whites – do you think that generalizes two Hispanics or do you think there might something different there?

Robert Kaplan, PhD:

I don't have the data to make the argument firmly, but from what we have seen in a variety of different analyses we think it applies across the board. Again, the reason that I became so interested in education is that education is a variable you can do something about. It is a variable that we can invest in, we can group the quality of education, and so forth. There are variables that epidemiologists call non-mutable, so there are things that you can't intervene on.

Nancy Adler, PhD:

There is an interesting study that was done in Mexico, started being called "Progresa" and then became "Oportunidades," which was an income transfer program. Analyses were done on the baseline data for the program for the sample, which is the poorest 10% of the entire population of Mexico. In some of the particularly rural villages the women who were relatively wealthy -- you couldn't call them wealthy because it's the lower 10% but those who had relatively more income than their neighbors -- had higher blood pressure and had poorer health. But education actually buffered the effect of that. The more education they had the healthier they were. It suggests that, especially in very poor countries globally, these may operate differently.

Robert Kaplan, PhD:

Mexico is one of the countries, if you look on an international basis, Mexico has increased their life expectancy quite significantly. Life expectancies everywhere are increasing but they are increasingly relatively rapidly in Mexico. And, Mexico is a country that has increased their post-secondary graduation rates.

5.

John Ruiz, PhD:

Is there any evidence to suggest that responses to the subjective SES ladder are influenced by the experience of relative deprivation?

Nancy Adler, PhD:

That's a really interesting question. We've been trying to figure out what it is affecting people's placement of themselves on the ladder because it is still mysterious as to why it should have such a powerful effect. We have been controlling for negative affect which could be confounding where you place yourself on the ladder and where you place yourself on self-rated health, and also finding that it relates to biological effects. It would be very interesting to look at the question of context. I'll have to go and look at any current studies that have done that, but I think it is an excellent question.

Robert Kaplan, PhD:

This is an analysis that we just did, it is not published and it's in the early phases but Dr. Adler mentioned how strong self-rated health status is as a predictor of life expectancy or longevity. We just took this analysis using the big databases, we looked at - if you could ask one question that would be used to inform you about how long someone has left in their life expectancy it would be do you have high cholesterol, do you get regular mammograms, do have high blood pressure and so forth, or what's your self-rated health, do you rate your health as excellent/very good/good/fair/poor, and did you graduate from high school. It turns out that self-rating your health as excellent or very good, or conversely rating your health status as poor and did you graduate from high school actually give you significantly more information about how long someone will live than their blood pressure, cholesterol, and so forth. We just thought that was a very intriguing finding.

Exploring the Conceptualization, Measurement, and Reporting of SES in Social/Behavioral Research

2015 World Poverty Day

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John Ruiz, PhD:

While a lot of advances have been made, there are still a lot of unanswered questions and things are breeding new questions as populations emerge in prominence. I want to thank both of our panelists today – Dr. Adler and Dr. Kaplan. I also want to thank the audience for coming and participating and asking such great questions. Here is a brief list of resources you may find helpful. Thank you everybody for your time and good luck out there measuring SES and making an impact. And, remember Saturday is World Poverty Day. Thank you for the APA staff for supporting us today.