

00:32:58 Joseph Morris: Was also a Part 1 participant and it was very good!

00:32:59 Muhammad Qadeer Haider: Muhammd Qadeer Haider (Ph.D.); Researcher (STEM+C) at Southern Methodist University, Dallas TX.

00:33:03 Dilanthi Weerasinghe: Hi everyone, Dilanthi Weerasinghe, School Psychologist and doctoral student at UCL, London. I attended the last session - it was excellent!

00:33:04 Kim Freeman: Kimberley Freeman, Professor, Howard University. I participated in part of part 1

00:33:05 ngobile thango:Ngobile Thango, University of Cape Town, Research interest Paediatric TBI -Surgeon,joining second time

00:33:11 luz Minaya: Hello Everyone! Luz Minaya, EdD Student from The University of Southern California. Was here for the first part! Happy to be back!👋

00:33:19 Terra McKee: Terra McKee. PhD Student. North Carolina Agricultural and Technical State University. Missed Part 1. STEM Education Research, and GIS/Remote Sensing

00:33:23 Elham Nikbakht:Elham Nikbakht, Texas A&M University

00:33:26 Diane Madden: Diane Madden Doctoral Student George Maso University

00:33:28 Freda Dorbu: Freda Dorbu. PhD student at NCAT.

00:33:37 Julie Johnson: Julie Johnson, NSF program officer

00:33:39 Karen Omohundro: Karen Omohundro, doctoral student at George Mason University; participated in session 1

00:33:46 Yanjiang Teng: Yanking Teng, Michigan State Univeristy

00:33:48 DANIEL Miller-Uueda: Hello! Dan Miller-Uueda, EdD student, University of Pennsylvania

00:33:49 Kate Miller: Kate Miller, University of Pennsylvania, Doctoral Candidate and Project Manager. Participated in Session 1.

00:33:50 Lauren Berny: Lauren Berny, University of Oregon. I participated in sessions 1.

00:33:52 Anthony Sparks:Anthony Sparks - Southern Methodist University (project member)

00:34:12 Kate Williams: Kate Williams, University of Maryland, participated in Part 1

00:34:15 Deniz Ozen Unal: Deniz Unal, Visiting Scholar @ North Carolina State University, College of Education, STEM (Math Edu)

00:34:24 Yanet Ruvalcaba: Yanet Ruvalcaba, PhD student in Psychology, Florida International University

00:34:38 Ignatius Esene:Ignatius Esene, MD, Ph.D, M.P.H

00:34:43 Luis Morales-Navarro: hi I'm Luis Morales-Navarro, graduate student, project team member, University of Pennsylvania

00:34:45 Melissa Gilbert: Melissa Gilbert, Stanford Center for Opportunity Policy in Education; participated in Part 1

00:35:03 Luis Morales-Navarro: also participated in part 1!

00:35:15 Jackie Relyea: Hi! Jackie Relyea, Assistant professor at NC State University

00:35:29 Gill Francis: Hi, Gill Francis - Research Associate at University of Cambridge; also participated in part 1

00:35:37 Christa Haverly: Christa Haverly, postdoc at Northwestern, participated in part 1

00:36:14 Sarah Rand: Watch part 1 here-
<http://cadrek12.org/announcements/air-webinar-series-systematic-literature-reviews-and-meta-analytic-techniques>

00:36:34 Mike Steele: Mike Steele, Program Officer in the Division of Research on Learning and DRK-12 Lead, Professor of Mathematics Education at the University of Wisconsin-Milwaukee

00:36:49 Melissa Demetrikopoulos: Hi from Melissa K. Demetrikopoulos, Ph.D. with the Institute for Biomedical Philosophy. We are a university support services company involved in program design and evaluation of DRK-12 projects. I attended the first session.

00:37:16 Maria Tsapali: Maria Tsapali, Affiliated lecturer, University of Cambridge

00:37:23 Reagan Mergen: Reagan Mergen, PhD Student in Education at George Mason University; I participated in part 1.

00:37:45 Ignatius Esene: Ignatius Esene, M.D, Ph.D M.P.H. Neurosurgeons from #Cameroon

00:38:01 Jennifer Gauble: Jennifer Gauble, Research & Evaluation at the Saint louis Zoo.

00:38:24 Ilana Umansky: Hi everyone. I'm Ilana Umansky, Assistant Professor at the University of Oregon.

00:38:46 Aynura Berdyeva: Thank you for joining us today. If you have any tech related questions, or if you run into tech issues please let me know!

00:38:53 Rob O. (NSF): Rob Ochsendorf (Program Director at NSF working on DRK-12 and ECR programs)

00:40:16 Judith Hannam: Jude Hannam back for second session - research admin at Uni of Cambridge on Digital Ed Initiative

00:40:39 ahmed trabelssi: Hi all, Ahmed trabelssi m&e specialist and phd candidate in management \Tunisia

00:47:55 Melissa Rasberry: Remember, if you have questions, you're welcome to share them here in the chat.

00:57:37 Natalie Armenteros: what do you recommend for creating these plots?

00:58:52 Jeff Valentine:@Natalie Armenteros: Most programs that do meta-analysis will create these plots. For example, the metafor program in R will do it.

00:59:05 Anju Mehta: Can we do forest plots in SPSS? Any other meta-analysis software?

00:59:30 Ignatius Esene: I use STATA

00:59:50 Saurabh Dhamankar: Hello . Do we going to receive recordings of today's session?

01:00:03 Natalie Armenteros: Thank you!

01:00:05 Sarah Rand: Yes, recordings will be posted

01:00:07 Ignatius Esene: But the meta-analysis commands in STATA have to be downloaded

01:00:38 Melissa Gilbert: What program did your team use?

01:00:50 Rob O. (NSF): If original studies don't report a Hedges' g, the idea is that the meta-analyst needs to convert the statistic to the g, yes?

01:01:12 Anju Mehta: Thank you!

01:01:26 Heather Hatton: In a pinch you can also build forest plots in Excel.

01:01:28 Norma Ming: Will you be talking further about how to determine which studies are appropriate to include in the same meta-analysis? For example, how similar do they need to be along the PICOS dimensions?

01:01:51 ahmed trabelssi: Just making sure; meta synthesis is the equivalent of meta analysis for qualitative studies ?

01:01:53 Ellen Yeziarski: If I heard correctly, you mentioned that the overall effect was statistically significant (in reference to the

position of the diamond at the bottom). What is the typical statistical test used on effect sizes?

01:03:13 Jeff Valentine:@Ellen Yeziarski: The large sample z-test is by far most common. You'll see that on the slide when you review them.

01:07:24 Ellen Yeziarski: @Jeff Valentine: Thank you. I will need to learn more about the conditions/assumptions.

01:11:45 Jeff Valentine:@ahmed trabelssi - good question - you can think of meta-analysis, which involves summarizing the results of individual quantitative studies, as similar to meta-synthesis, which involves summarizing the results of qualitative studies

01:13:39 ahmed trabelssi: @jeff valentine thank you Prof!

01:13:50 Joseph Morris: Rob - my understanding is that calculating the Hedges' g correction is best practice for minimizing effect size biases based on small sample sizes

01:16:36 Nicholas Moore: Do you ever face challenges in communicating the results of a meta-analysis to clients, e.g. interpreting pooled effect sizes? Have you come across any resources that explain how best to frame findings to non-technical audiences?

01:17:18 Rob O. (NSF): Thanks Joseph Morris!

01:17:43 Anju Mehta: Is determining the quality of studies important? A reviewer has asked us to use the quality of the study as a moderator. What would be the criteria that we can use?

01:20:06 Jeff Valentine:@Anju Mehta - yes, it is critical. Webinar 1 has slides on this. We ran out of time to do them :(It is a very difficult question.

01:20:58 Anju Mehta: Yes, I went over those slides and still could not decide how to categorize!

01:21:28 Jeff Valentine:@Anju Mehta - yes, that's largely because this is not a problem that is amenable to categorization

01:25:00 Melissa Raspberry: Monica, can you tell us more about this resource?

01:25:26 Monica Caicedo: not I am sorry was a mistake

01:25:33 Jeff Valentine: Sandra Wilson, Ariel Aloe, and I have a chapter in the Handbook of Research Synthesis and Meta-Analysis on interpreting effect sizes.

01:26:14 Nicholas Moore: thanks both

01:26:17 Joseph Morris: How can we encourage primary researchers to report their findings in a way that facilitates meta-analysis? Many primary studies do not always explicitly report the statistical information needed to calculate effect sizes in a straightforward way.

01:30:55 Emily Tanner-Smith: @Joseph Morris: Journal editors and evidence clearinghouses can both play an important role in encouraging primary researchers to report in ways that facilitate to meta-analysis. For instance, by having clear author guidance documents outlining expectations for clear reporting. Or the What Works Clearinghouse's evidence review standards, which also can incentivize authors to report information needed for effect size estimation.

01:31:17 Ellen Yeziarski: @Joseph: GREAT question. We need to improve the expectations of our research community. One way is to teach our doctoral students how to review quantitative studies. I taught a graduate seminar where we reviewed papers using this pub as a framework: <https://psycnet.apa.org/fulltext/2018-00750-002.html>. It was illuminating!

01:31:53 Emily Tanner-Smith: Here is a link to the Cochrane Consumer Network, discussed previously: <https://consumers.cochrane.org/>

01:37:27 Joseph Morris: Awesome! Thank you so much!

01:39:50 Joseph Morris: Ellen - can you send me the title or doi for the publication you listed? My online library is having a hard time locating it from the link.

01:43:19 Emily Tanner-Smith: @ Joseph: I believe Ellen was referring to the APA journal article reporting standards piece by Appelbaum et al 2018 (<http://dx.doi.org/10.1037/amp0000191>)

01:45:41 Ellen Yeziarski: @Emily: Thank you very much -- that's the one!

01:45:53 taylor: if we include unpublished papers to adjust for the publication bias, how can we control the quality of the synthesis?

01:45:57 Emily Tanner-Smith: As Jeff mentioned, reporting in individual trials has improved in the medical literature with other reporting standards, such as the CONSORT Statement: <http://www.consort-statement.org/>

01:48:02 Heather Hatton: The APA journal article reporting standards (JARS) are available on the APA website, as well.

01:48:13 Emily Tanner-Smith: @taylor: In general you do not want to assume that published = high quality (or vice versa). So in general you would want to make sure to code data related to study quality (and/or risk of bias) and then incorporate that information in the analysis. This could be conducting descriptive statistics summarizing the quality of the included studies, including measures of study quality in a meta-regression model (as a key independent variable, or covariate to control for). You can also conduct sensitivity analyses assessing whether your results change with the in/exclusion of a 'low' quality study.

01:51:03 Joseph Morris: Thanks for clearing that tup!

01:51:10 Heather Hatton: <https://apastyle.apa.org/jars>

01:52:06 Anju Mehta: Emily, I posed this Q to Jeff too, what criteria do we use to categorize "low" or high" quality study?

01:54:21 Emily Tanner-Smith: @ Anju Mehta: There are many different scales and indexes that can be used to measure study quality or risk of bias, although the items you use will vary depending on what type of research design you are evaluating. As noted in the webinar 1 slides (that were not covered, but are archived), it is essential that you do not just use 'average' or 'summative' scores of quality, but rather assess quality or risk of bias in unique domains.

01:55:04 Emily Tanner-Smith: For randomized trials, a popular tool for assessing risk of bias is the Cochrane RoB 2: <https://methods.cochrane.org/bias/resources/rob-2-revised-cochrane-risk-bias-tool-randomized-trials>

01:55:25 Emily Tanner-Smith: For non-randomized studies of intervention effectiveness, Cochrane ROBINS-I is another popular tool: <https://methods.cochrane.org/bias/risk-bias-non-randomized-studies-interventions>

01:56:37 Emily Tanner-Smith: The Joanna Briggs Institute also provides several critical appraisal tools for different types of study designs: <https://joannabriggs.org/critical-appraisal-tools>

01:57:14 Melissa Gilbert: Have to transition to another meeting. Thank you! Really appreciate the time for Q&A today.

01:58:50 taylor: Thank you @Emily!

02:00:34 Anju Mehta: Thank you! That helps.

02:00:53 April Pattavina: Thank you! Very helpful

02:01:11 Shuguang/Sophia Wang: Thank you!!

02:01:21 Aynura Berdyeva: Please complete the survey here: <http://www.surveymshare.com/t/Meta-Analytic-Techniques>

02:01:48 Deniz Ozen Unal: Thank you, appreciated

02:01:48 Yanet Ruvalcaba: Thank you!

02:01:50 ngobile thango: Thank you great session today

02:01:56 Rob O. (NSF): Thank you team AIR! Much appreciated.
02:02:02 Dilanthi Weerasinghe: Can you please include the chat as good
questions and answers.
02:02:02 Gill Francis: Thank you!!
02:02:03 Rob O. (NSF): Thank you instructors!
02:02:05 Liwei Wei: Thanks!
02:02:06 ahmed trabelssi: thank you !
02:02:06 Anju Mehta: Thank you!
02:02:09 Reagan Mergen: Thank you!
02:02:11 Dilanthi Weerasinghe: Thank you!
02:02:29 Peggy King-Sears: Very helpful -- thanks so much!
02:02:29 Ilana Umansky: Thank you!
02:02:39 Karina Giménez: Thanks
02:03:06 Shuguang/Sophia Wang: Thank you so much!