

From: Mike Puma (b)(6)
Sent: Monday, July 12, 2010 10:27 AM
To: info@whatworks.ed.gov
Subject: Head Start Impact Study

I just received an embargoed copy of the Quick Review of our study. We are totally confused by the warning regarding conflicting sample size information. It's important that this get resolved before this gets published on the WWC web site. Can you please let us know ASAP the source of the confusion?

Mike

Mike Puma
President
Chesapeake Research Associates
410-897-4968 (office) 443-454-1977 (cell)
mpuma@chesapeake-research.com

From: What Works
Sent: Monday, December 13, 2010 7:49 AM
To: ZZ NJ Mike Puma
Subject: What Works Clearinghouse Quick Review of Study
Attachments: QR153_HeadStart_DC.pdf

Dear Dr. Puma:

We are emailing to inform you that a revised What Works Clearinghouse (WWC) quick review of your report, "Head Start Impact Study: Final Report," will be posted on the WWC website Tuesday, December 14, 2010. As part of this process, we are sharing with you a courtesy copy of the quick review (attached). **This quick review is embargoed until Tuesday, December 14, 2010, at 10am Eastern Time and cannot be circulated until that time.**

Quick reviews examine evidence published in a study (supplemented, if necessary, by information from author queries) to assess whether that study's design meets WWC evidence standards. Quick reviews rely on the effect sizes and significance levels reported by study authors. The WWC rating applies only to the summarized results, and not necessarily to all results presented in the study.

To learn more about WWC quick reviews, you can visit the WWC quick review page at:
<http://ies.ed.gov/ncee/wwc/publications/quickreviews/>.

Because of the volume of correspondence the WWC receives, questions regarding WWC reports and quick reviews should be submitted to the Help Desk at info@whatworks.ed.gov. Your questions will be forwarded to the appropriate staff member on the WWC team and you will receive an e-mail response.

Sincerely,

The What Works Clearinghouse Team

From: Michael Ponza
Sent: Tuesday, July 20, 2010 11:13 AM
To: Camilla Heid
Cc: ZZ NJ Mike Puma; Ronna Cook; Bell Steve; Scott Cody; Jill Constantine; Debbie Reed; Sakari Morvey; Mark Dynarski
Subject: Re: Head Start QR -- Attrition Issue

Thank you we will take a look and resolve as appropriate This goes through our independent quality review team
Sent from my iPod

On Jul 20, 2010, at 10:56 AM, "Camilla Heid" <HEIDC1@WESTAT.com> wrote:

Hi Michael,

Attached are the Ns by year, age cohort, and treatment/control status. Puerto Rico is not included in these numbers. Also included are bullet points as to why we do not believe that the attrition rates are high. Let me know if you have questions.

Camilla

From: Michael Ponza [mailto:MPonza@mathematica-mpr.com]
Sent: Monday, July 12, 2010 7:18 PM
To: Camilla Heid; ZZ NJ Mike Puma
Cc: Ronna Cook; Bell Steve; Scott Cody; Jill Constantine; Debbie Reed; Sakari Morvey; Mark Dynarski
Subject: RE: Head Start QR -- Attrition Issue

Hi Camilla,

Yes, we always felt that methods w/ Exhibit 2.9 was an approximation.

Do you know and can you provide to us the number of Puerto Rican students randomly assigned and confirm that Puerto Rican students are NOT included in the main impact analyses represented in the online impact tables?

We think that would be sufficient and would enable us to correctly compute attrition for the sample on which the main analyses were conducted. Is that information in the reports or online somewhere, or is that something outside the published documents that you would need to provide us.

Just to recap. When we use Exhibits 2.2 (baseline) and 5.6 (analysis) numbers, those two samples show high attrition. I couldn't tell if you were agreeing with that or disputing that. That, that is an appropriate method of calculating attrition. Is that method correct?

Our working assumption was that if we could back out the Puerto Rico numbers, than we could do a better job calculating attrition in the sample used for the main impact analysis. That maybe the samples not including those students would have low attrition.

Please let us know.

Thanks.

From: Camilla Heid [mailto:HEIDC1@WESTAT.com]
Sent: Mon 7/12/2010 5:32 PM
To: Michael Ponza; ZZ NJ Mike Puma
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Subject: RE: Head Start QR -- Attrition Issue

Michael,

Thanks for the opportunity to comment on WWC's Quick Review of the Head Start Impact Study Final Report. Here are some items to consider.

- We did not include any sample sizes or response rates by site in the report including Puerto Rico. Would the Puerto Rico sample sizes be helpful to the review?

- Your method of calculating the Puerto Rico sample sizes will not yield accurate estimates because Exhibit 2.2 (Final Report) and Exhibit 5.6 (Technical Report) provide unweighted data while Exhibits 2.9 A and 2.9B provide percentages for weighted data. Although differences between weighted and unweighted data are small, they are not perfect matches.
- Attrition rates increase as the child progresses through school. It is not clear why the review cites the Head Start year for the 4-year old cohort and first grade for the 3-year old cohort as examples of conflicting information.

Let me know if you have additional questions.

Camilla Heid

From: Michael Ponza [mailto:MPonza@mathematica-mpr.com]

Sent: Monday, July 12, 2010 12:44 PM

To: ZZ NJ Mike Puma

Cc: Camilla Heid; Ronna Cook; Bell Steve; Scott Cody; Jill Constantine; Debbie Reed; Sakari Morvey

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Michael and others.....

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our understanding that this is not attrition for the main impact analysis because it includes the sample of students in Puerto Rico; these students were excluded from the main impact analysis.

We could find no reference to the exact number of students randomly assigned by condition who were part of the Puerto Rican sample. If we knew this, we could subtract them from the baseline numbers in Exhibit 2.2 and then use the sample sizes reported in the online impact tables to determine attrition for each group and outcome. Since we could not find these numbers, we could not back out the exact non-Puerto Rican baseline sample, and thus could not compute the exact attrition for the impact analysis sample; this left us with our original calculation described above.

We noted that there was “conflicting information” because it is possible, making some assumptions, to get a rough estimate of the numbers of non-Puerto Rican sample members randomly assigned by using the information in Exhibits 2.9A and B on the percentage of students administered both baseline and follow-up tests in Spanish (which only occurred for the Puerto Rican sample members). One can then subtract the resulting number from the total number randomly assigned to get the number of non-Puerto Rican sample members by condition at baseline. This can then be compared to the analysis sample sizes reported in the online impact tables to assess attrition of the sample on which the main impact analyses were performed. Done in this way, it appears that all samples would have a “Low” attrition rating.

However, this requires making a number of assumptions and calculations, so in the end we decided to express concern about those numbers rather than explicitly state that those analyses suffered from high attrition. The IES peer reviewer was pushing us to downgrade those analyses as having high attrition, but our approach was to express caution instead.

One will probably ask us why we did not use the response rate tables in Exhibits 2.5 and 2.6. We considered that, but noted that the response rates did not seem to correspond to the rates that resulted when we did our own calculations using the sample sizes described above, and that they appeared to include Puerto Rico

as well. So we used the information on actual samples sizes at our disposal rather than relying on response rates.

Please clarify and let us know what the sample sizes are for calculating attrition are if we have this wrong. Please also point out where the information is in the two reports or online tables, or if this is supplemental information not provided in any of the materials we had access to for the quick review of the Head Start Study.

Thank you.

From: Mike Puma [REDACTED]
Sent: Monday, July 12, 2010 8:56 AM
To: Michael Ponza
Cc: Camilla Heid; Ronna Cook; Bell Steve
Subject: Re: Head Start QR

Thanks. Since I will be out of my office I have copied the other authors, especially the Westat team who can check any figures because only they have access to the data.

Mike

Sent from my iPhone

On Jul 12, 2010, at 11:36 AM, "Michael Ponza" <MPonza@mathematica-mpr.com> wrote:

So you know, it is unlikely that we will be able to hold up the release of the QR over this. We may be able to, but it depends on the source of the problem. I say that because we had something similar occur recently on the FAFSA quick review by Bettinger et al. In that case, we made the correct assessment of attrition (and downgraded an RCT to consistent w/ reservations) based on information in the author's paper we reviewed that lead to the media exposure that triggers a quick review. They contacted us

like you, the day before the release, objecting. It turned out they had legacy text in the paper we reviewed that misstated the sample sizes. So our assessment was correct based on the published information, but the information in the paper was incorrect. The QR was released as scheduled, we handled their complaint through the Help Desk, got the revised information, they made available a corrected version of the paper. So we are now in the process of updating that quick review and re-releasing, as we want to get things accurate. If there is information in the three sources I mentioned that we based the QR on that we did not interpret correctly, then we could hold up the QR on that basis and fix before release. If it is the case that the information is not there (you mentioned Westat having access to the data, so may need them to look at the data), or it is misleading, or you would need to provide other data not in these reports to clear this up, then that would put this in the “revise through the Help Desk process” if the QR is not accurate.

Let me pinpoint the issue, get back to you about what it is, and we can go from there.

From: Mike Puma [REDACTED]
Sent: Monday, July 12, 2010 8:15 AM
To: Michael Ponza; mpuma@chesapeake-research.com
Cc: Camilla Heid; Ronna Cook; Steve Bell
Subject: RE: Head Start QR

Thanks. I am cc'ing the other authors – especially the Westat team -- since they have direct access to the data and may be better than me at trying to resolve what may have created the concern.

Mike

From: Michael Ponza [mailto:MPonza@mathematica-mpr.com]
Sent: Monday, July 12, 2010 11:06 AM
To: mpuma@chesapeake-research.com
Subject: Head Start QR

Hi Michael,

I received word of your inquiry about the Head Start quick review through our Help Desk. I head up the quick review team (since October 2009) so I am intimately familiar with the quick review of this study. As you may know, the "protocol" in quick reviews is to base the report solely on what appears in the report, we do not do author queries as we do in say intervention or other reports (there were reasons for not doing AQs on these products, but it is something I'm trying to change). The quick review of your study was based on the final report (200 pages), the methodology report (400 pages), and some other on-line documentation (detailed tables for the impact estimates, including sample sizes, standard errors, and confidence intervals, found on the Administration for Children and Families, Office of Planning, Research and Evaluation Website at: http://www.acf.hhs.gov/programs/opre/hs/impact_study/index.html.)

If I'm recalling correctly, we tried to assess attrition using info on baseline samples and analysis samples from these three sources, and couldn't get things to square up because inclusion or exclusion of Puerto Rico from some and not others, even making some assumptions. That lead to the caution. I'm getting together with the deputy PI on quick reviews and will look at our documentation and SRG for this one.

We will get back to you shortly.

Michael

Michael Ponza, Ph.D

Senior Fellow

Mathematica Policy Research, Inc.

505 14th Street, Suite 800

Oakland, CA 94612-1475

Phone: (510) 830-3707

Fax: (510) 830-3701

mponza@mathematica-mpr.com

<Response to WWC attrition rates July 20.docx>

From: Camilla Heid <HEIDC1@WESTAT.com>
Sent: Thursday, July 29, 2010 3:24 PM
To: Mark Dynarski; ZZ NJ Mike Puma
Cc: Sanchez, Susan; What Works
Subject: RE: WWC response on the Head Start quick review

Thanks Mark. It will probably take a week or so to get this information to you. Both programmers for this project are on vacation.

Camilla

-----Original Message-----

From: Mark Dynarski [mailto:MDynarski@mathematica-mpr.com]
Sent: Thursday, July 29, 2010 10:49 AM
To: (b) (6)
Cc: Camilla Heid; Sanchez, Susan; What Works
Subject: WWC response on the Head Start quick review

<<Response 2010014.docx>> I am attaching the WWC's response related to your questions about its quick review of the Head Start study. Note that the response asks for additional information related to equivalence of the treatment and control groups at baseline. Under WWC standards, calculated attrition rates indicate the need to examine equivalence.

Feel free to contact me if you have additional questions; copying the What Works help desk (see above) will ensure your questions are logged and addressed.

Regards,
Mark Dynarski
Director, What Works Clearinghouse

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To: Michael Ponza; ZZ NJ Mike Puma
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Michael Ponza, Ph.D
Senior Fellow
Mathematica Policy Research, Inc.
505 14th Street, Suite 800
Oakland, CA 94612-1475
Phone: (510) 830-3707
Fax: (510) 830-3701
mponza@mathematica-mpr.com

From: Debbie Reed
Sent: Thursday, July 29, 2010 12:33 PM
To: Sakari Morvey
Subject: FW: WWC response on the Head Start quick review
Attachments: Response 2010014.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Response sent on 20100014. Please save to Sharepoint.
Response requests additional info from authors and then there will be a revision of the Quick Review (Michael will have the lead on this)
d

-----Original Message-----

From: Mark Dynarski
Sent: Thursday, July 29, 2010 9:18 AM
To: Debbie Reed
Subject: FW: WWC response on the Head Start quick review

-----Original Message-----

From: Mark Dynarski
Sent: Thursday, July 29, 2010 10:49 AM
To: (b)(6)
Cc: 'Heidc1@Westat.com'; 'Sanchez, Susan'; What Works
Subject: WWC response on the Head Start quick review

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Regards,
Mark Dynarski
Director, What Works Clearinghouse

July 28, 2010

Mr. Michael Puma
Chesapeake Research Associates
mpuma@chesapeake-research.com

Ms. Camilla Heid
Westat
Heidc1@Westat.com

Reference: QR2010014

Dear Mr. Puma and Ms. Heid:

Thank you for your inquiries concerning the WWC quick review of your study, “Head Start Impact Study: Final Report.” In response to your inquiries, I asked the WWC quality review team to examine the issues you raised. When a quality review is conducted, researchers who were not involved in the review independently assess the study in question and examine whether the WWC adhered to its procedures and protocols. Three findings emerged from the quality review team’s assessment:

1. The WWC followed the protocol under which quick reviews are conducted. In particular, the quick review relied “only on the evidence published in the report or article being reviewed” and “study authors are not contacted to provide additional information about the study.” The quick review protocol is available [here](#). Consistent with the quick review protocol and precedent, the information that you provided prior to the release of the quick review did not lead to a revision or delay in the publication of the quick review but did initiate a quality review of the publication.
2. The WWC followed procedures correctly in attempting to calculate attrition rates. The WWC calculates the attrition rate from the size of the analysis sample (numerator) and the size of the randomized sample (denominator). The WWC currently has no standard for weighting and the attrition calculation is based on the unweighted size of the samples. In addition, the WWC considers both the overall attrition and the differential attrition between the treatment and control groups. A detailed explanation of the attrition calculation can be found [here](#). The quality review team determined that the original WWC reviewers were unable to calculate attrition because the size of the randomized sample (without Puerto Rico) was not provided in the study or related publications. Attempts to calculate the size of the sample from statistics in the study led to inconsistent results (which was likely due to weighting and to the inclusion of the Puerto Rico sample in some reported statistics).

LETTER TO: Mr. Michael Puma and Ms. Camilla Heid
FROM: Mark Dynarski
DATE: July 28, 2010
PAGE: 2

3. Camille Heid's e-mail provided the sample sizes at randomization, excluding Puerto Rico. Based on this information, the quality review team calculated attrition rates for several key outcomes. Primarily due to the high degree of differential attrition between the treatment and control groups, the WWC ranks the attrition as high for these outcomes in the first follow-up period (see attachment table). In other periods, lower levels of differential attrition lead to a WWC ranking of low attrition. For example, in 2004 for the 3-year old cohort, attrition was low on the WJIII Spelling assessment (overall 17%, differential 8%, not shown in table).

For randomized control trials with high attrition, the WWC requires that the study demonstrate baseline equivalence of the analytic sample used for the impact analysis to achieve the rating of "consistent with WWC evidence standards with reservations." The quality review team noted that the study reports various tests of baseline equivalence. However, the information was not sufficient to apply the WWC calculations of baseline equivalence. Under WWC standards, the treatment and control groups are considered equivalent if the reported differences in pre-intervention characteristics of the groups are less than or equal to one-quarter of the pooled standard deviation in the sample, regardless of statistical significance (a difference of less than 0.05 standard deviations would be required if the study had not used estimation techniques to control for pre-intervention differences). The pre-intervention characteristics should include pre-tests (or proxies thereof) and demographic characteristics associated with the outcomes.

Based on these findings, we are requesting that you provide *information on baseline equivalence for the analytic samples for each cohort*. WWC reviewers will examine the information and determine the rating for the study. We will then discuss our recommendations for revising the quick review with the Institute of Education Sciences.

I hope this letter has addressed your concerns. If you have other concerns, please do not hesitate to contact the WWC through info@whatworks.ed.gov.

Sincerely,

(b)(6)

Mark Dynarski
Director, What Works Clearinghouse

cc: (b)(6)

ATTACHMENT

Examples of Attrition Calculations for Head Start Impact Study: Final Report

	2002 (Random Assignment)		2003		Overall Attrition	Differential Attrition	WWC Attrition Level
	T	C	T	C			
3-year Old Cohort							
PPVT (Adapted)	1466	988	1290	759	17%	11%	High
WJIII Letter-Word	1466	988	1294	760	16%	11%	High
WJIII Spelling	1466	988	1294	765	16%	11%	High
WJIII Oral Comp	1466	988	1282	735	18%	13%	High
CTOPPP Elision	1466	988	1288	743	17%	13%	High
4-year Old Cohort							
PPVT (Adapted)	1192	815	1022	609	19%	11%	High
WJIII Letter-Word	1192	815	1023	610	19%	11%	High
WJIII Spelling	1192	815	1023	613	18%	11%	High
WJIII Oral Comp	1192	815	1008	598	20%	11%	High
CTOPPP Elision	1192	815	1019	604	19%	11%	High

Sources: The sample sizes for 2002 were provided by Camilla Heid (July 20, 2010). The sample sizes for 2003 are from the on-line table available at http://www.acf.hhs.gov/programs/opre/hs/impact_study/reports/impact_study/2003_main_impact_tables.pdf