

# Psychological Services

## **When Meta-Analysis Continues to Mislead: A Reply to Østergård and Hougaard (2020)**

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## REPLY

When Meta-Analysis Continues to Mislead:  
A Reply to Østergård and Hougaard (2020)Barry L. Duncan<sup>1</sup> and Jacqueline A. Sparks<sup>2</sup><sup>1</sup> Better Outcomes Now, West Palm Beach, Florida, United States<sup>2</sup> Department of Human Development and Family Studies, College of Health Sciences, University of Rhode Island

Østergård and Hougaard (2020) reiterate the flawed conclusions of their meta-analysis of the Partners for Change Outcome Management System (PCOMS) and obfuscate the main point of our critique (Duncan & Sparks, 2020). Despite the lauded statistics and selection criteria, the inclusion of six significantly confounded investigations resulted in a misleading overattribution of meaning to studies of questionable methodology that warranted exclusion. Further, their hypothesis that social desirability leads to inflated effect sizes on the Outcome Rating Scale (ORS) is insufficient. It is not supported by studies finding comparable results to the ORS on independent outcome measures or investigations reporting that change on measures of life functioning, like the ORS, precedes that depicted on symptom scales. While more research is needed, the totality of credible research supports the efficacy of PCOMS.

**Impact Statement**

With the fatal flaws regarding dose of intervention and fidelity of the studies included in the Østergård et al.'s (2018) meta-analysis of the Partners for Change Outcome Management System (PCOMS) exposed, and the authors' conjecture regarding social desirability and the Outcome Rating Scale contradicted by past and recent evidence, clinicians can confidently implement the evidence-based practice, PCOMS, to improve outcomes and reduce dropouts.

**Keywords:** meta-analysis, routine outcome monitoring, ROM, Partners for Change Outcome Management System, PCOMS

The Østergård and Hougaard (2020) reply to our critique (Duncan & Sparks, 2020) of their meta-analysis of the Partners for Change Outcome Management System (PCOMS; Østergård et al., 2018) reiterates the flawed conclusions of the original meta-analysis and continues to gloss over multiple exceptions to their interpretations. But here we will focus on two primary points to further clarify the problems with their investigation. First, when so few investigations have been conducted, qualitative review of the methodology of included studies is a necessity beyond rote selection criteria. And second, evidence supporting their conjecture of social desirability leading to inflated effect sizes on the Outcome Rating Scale (ORS) is insufficient, and not supported by past and recent data that include independent outcome measurement.

Meta-analysis is meant to provide a statistically accurate assessment of an intervention's efficacy not possible with a single study, aiming to synthesize disparate data to facilitate informed, practical

decisions about its use. But it can also misrepresent the evidence by inclusion of flawed studies, especially when so few studies have been conducted. Østergård et al. (2018) included 14 randomized clinical trial (RCT) of PCOMS; two that confirm our critique (see below) have since been published (Bovendeerd et al., 2021; Duncan et al., 2021). Of the now 16 RCTs of PCOMS, 10 have found a significant feedback effect while six have not.

Of those six studies: Four did not meet a minimal threshold for adequate treatment for a feedback effect, that is, at least four sessions (Murphy et al., 2012; Rise et al., 2012); two, Kellybrew-Miller (2015) and Lester (2012), averaged but 2.2 and 1.7 sessions, respectively. Similarly, four of the six RCTs not finding an effect contained significant adherence problems and/or did not follow the PCOMS protocol (available since 2002), ranging from ORS feedback not being discussed with clients or treatment altered (Davidsen et al., 2017) or not using the Session Rating Scale (Murphy et al., 2012) to

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Barry L. Duncan is a coholder of the copyright of the Partners for Change Outcome Management System (PCOMS) instruments. The measures are free for individual use but Duncan receives royalties from licenses issued to groups and organizations. In addition, the web-based application of PCOMS,

BetterOutcomesNow.com, is a commercial product and he receives profits based on sales.

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PCOMS being used at most two thirds of the time (Kellybrew-Miller, 2015; van Oenen et al., 2016). Including these studies in their analysis, Østergård et al. generate a chain of necessarily flawed interpretations that overreach the data, and which are unfortunately amplified to almost “fact” status through repetition. While these studies purportedly passed their criteria of inclusion, they clearly do not pass basic methodological integrity regarding dose of intervention and/or adherence to documented protocols.

Regarding the hypothesis that social desirability explains why PCOMS benefits are sometimes less impressive when an alternate outcome measure is used, we agree this must be considered carefully and future research is clearly needed. Using the outcome measure that is part of the feedback intervention could introduce social desirability/demand characteristics and inflate scores. In addition to consideration of the flawed studies upon which this conjecture is based, another explanation is that measures used as part of psychotherapy help shape treatment and subsequent outcomes. Perhaps such a measure is a *more* accurate reflection of the client’s experience of treatment outcome as well as *more* sensitive to change than symptom-based measures (Reese et al., in press). Some evidence supports this possibility.

For example, DeSantis et al. (2016) found the ORS to be more sensitive to patient distress and therefore identified more patients in primary care for behavioral health intervention compared to the Patient Health Questionnaire-9 (PHQ-9). In addition, de Jong et al. (2019) reported that PCOMS showed benefit on a quality-of-life measure but not symptom severity. Malins et al. (2020) found that last-session ORS scores predicted multiple outcomes 12 months later including symptom severity of anxiety. More studies like this are needed. Both our clinical and research experiences (Reese et al., in press) suggest that global improvements in functioning as measured by the ORS (including quality of life) are often more relevant to client treatment goals and precede symptom improvement.

Finally, three recent RCTs have found significant effects on independent measures of outcome. Brattland et al. (2018) found a significant PCOMS advantage compared to treatment as usual (TAU) on the Behavior and Symptom Identification Scale-32 (BASIS-32; similar effect size as the ORS). Duncan et al. (2021) found that significantly more PCOMS clients achieved clinically significant change compared to TAU as measured by both the PHQ-9 and ORS. Using the Outcome Questionnaire 45 and Mental Health Continuum Short Form, Bovendeerd et al. (2021) reported significant advantages of PCOMS over TAU on both measures. These studies cast considerable doubt on the social desirability hypothesis.

Though more research about the benefits of PCOMS is necessary and the reasons for the sometimes higher effect sizes with the ORS compared with alternate measures further explored, the totality of the research supports the efficacy of PCOMS. While Østergård and Hougaard (2020) excuse their analysis with claims of meeting selection criteria, reporting the risk for bias, conducting sensitivity analyses, and inability to test adherence across studies, a simple reading of the included studies would have exposed their obvious problems and warranted exclusion from any bona fide meta-analysis. Despite the sophisticated statistics, this inclusion resulted in a misleading over-attribution of significance to studies of questionable methodology as well as unsupported claims of inflated effect sizes on the ORS.

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