A Critique of the Systematic Review On Induced Abortion and Mental Health Released by the Royal College of Psychiatrists

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The Royal College of Psychiatrist's recently conducted review of scientific literature published from 1990 to the present on abortion and mental health is hauntingly similar to the American Psychological Association Task Force Report released in 2008. The report by the RCP is, however, far more complex and on the surface it may appear to be more rigorous than the APA report. An enormous amount of time, energy, and expense has been funneled into a work product that was not undertaken in a scientifically responsible manner. In this critique, I provide evidence that should incite scientists and clinicians to reject the conclusions of the report and work together to provide an accurate and truly exhaustive review of the peer-reviewed research.

Unjustified Dismissal of Studies

The RCP review incorporates four types of studies: 1) reviews of the literature; 2) empirical studies addressing the prevalence of post-abortion mental health problems; 3) empirical studies identifying risk factors for post-abortion mental health problems; and 4) empirical studies comparing mental health outcomes between women who choose abortion and delivery. In each category, there are studies that are ignored and large numbers of studies that are entirely dismissed for vague and/or inappropriate reasons. With regard to the first type of study, only 3 reports are considered (APA Task Force Report, 2008; Charles et al., 2008; Coleman, 2011). The authors of the RCP report "missed" 19 reviews of the literature (listed at the end of this document), published between 1990 and 2011. Moreover, no criteria were identified for selection of particular reviews to discuss and to provide context for the current report. In relation to the third type of study, only 27 studies are included in the RCP report. At the end of this document, citations to 20 relevant and unmentioned articles published in highly respected peer-reviewed journals are provided. They are not listed in Appendix 7 of the RCP report, which contains all included and excluded studies.

Among the scores of studies identified and excluded across study types 2 through 4 above, the most common reasons are the nebulously defined "no usable data" and "less than 90 days follow-up." The latter resulted in elimination of 35 peer-reviewed studies in each of the prevalence, risk factor, and comparison study types. The RCP authors state that "*Because the review aimed to assess mental health problems and substance use and not transient reactions to a stressful event, negative reactions and assessments of mental state confined to less than 90 days following the abortion were*

excluded from the review." This is highly problematic for various reasons. First, elimination of studies that only measured women's mental health up to 90 days, does not effectively remove cases of transient reactions. Just because the authors of these dozens of studies did not follow the women long-term, it does not mean that the women were not still suffering quite significantly beyond the early assessment. Moreover, when investigating the mental health implications of an event, it is logical to measure outcomes soon after the event has occurred as opposed to waiting months or years to gather data. As more time elapses between the stressor and the outcome(s), healing may naturally occur, there may be events that moderate the effects, and more confounding variables may be introduced. Finally, focusing only on mental health events that occur later in time effectively misses the serious and more acute episodes that are effectively treated soon after exposure.

Ironically, many of the studies removed from the analyses due to the abbreviated length of follow-up, had incorporated controls for prior psychological history and other study strengths. As a result, the samples of studies included in each section of the RCP review were not representative of the best available evidence and many of the eliminated effects coincidentally revealed adverse post-abortion consequences. In the category wherein the authors sought to derive prevalence estimates, only 34 studies were retained, including 27 without controls for previous mental health. In contrast, in the Coleman review, 14 out of the 22 studies had controls for psychological history.

Factual Errors

Perhaps even more disturbing than the elimination of large segments of the literature, are the factual inaccuracies that are present in the RCP report. As the author of the Coleman (2011) review cited in the report, I was alarmed to see the content in "Section 1.4.4: Summary of Key Findings from the APA, Charles, and Coleman Reviews." The first 6 points are not reflective of the conclusions derived from the meta-analysis and the 7th and final point in this section wrongly states, with reference to the meta-analysis that *"previous mental health problems were not controlled for within the review."* In fact, as noted above, the meta-analysis incorporated more studies into the final analyses with controls for prior psychological problems than the current review. Moreover, the conclusions derived from the meta-analysis were based on more studies with controls for prior psychological history than the Charles and the APA reviews as well.

I do not have the time or interest in identifying all errors present, but a few others jumped out at me. First, several studies are eliminated from the RCP report, because the outcome(s) assessed are lifetime estimates of mental health problems, deemed inappropriate by the RCP team. Nevertheless, the Coleman et al. (2009) and the Mota et al. (2010) articles, which relied upon lifetime estimates, are included in the prevalence section of the report. Inclusion reflects an inaccurate read of the two studies. I also noticed my affiliation is stated as the Department of Psychiatry at Bowling Green State University. I wish we had a medical school, it would make retrieval of articles much less expensive, but unfortunately we do not.

Problematic "Quality Assessments"

This review is being pitched as methodologically superior to all previously conducted reviews, largely because of the criteria employed to critique individual studies and to rate the overall quality of evidence. However, the quality scales employed to rate each individual study are not well-validated and require a significant level of subjective interpretation, opening the results to considerable bias. The main problems with the quality scale employed to rate the individual studies are as follows: 1) the categories used are missing key methodological features including initial consent to participate rates and retention of participants across the study period; 2) the relative importance assigned to the included criteria is arbitrary, as opposed to being based on consensus in the scientific community; 3) the specific requirements for assigning a "+" or "-" within the various categories are not provided; 4) the authors fail to explain (as their predecessors, Charles et al. 2008 did) how combinations of pluses and minuses in the distinct categories add up to an overall rating ranging from "Very Poor" to "Very Good." Incredulously, the Gilchrist et al. (1995) study received a rating of "Good", when very few controls for confounding 3rd variables were employed, meaning the comparison groups may very well have differed systematically with regard to income, relationship quality including exposure to domestic violence, social support, and other potentially critical factors. Further Gilchrist et al. reported retaining only 34.4% of the termination group and only 43.4% of the group that did not request a termination at the end of the study. No standardized measures for mental health diagnoses were employed and evaluation of the psychological state of patients was reported by general practitioners, not psychiatrists. The GPs were volunteers and no attempt was made to control for selection bias. Despite these facts, the study received a mark of "+ thorough" for confounder control, a "+" for representativeness, and a "+" for validated tools. I can provide a similar rebuttal to many more of the individual study ratings provided by the RCP; and the reader should not trust these "quality" assessments.

Similarly, when it came to evaluating the quality of evidence associated with specific outcomes, such as anxiety, depression, suicide ideation, drug or alcohol abuse, psychiatric treatment, etc. with regard to the comparative studies, "Grade Working Group grades of evidence" were employed by the RCP. The anchors on this scale are vague and oftentimes only one reason is identified as the basis for a "Very Low" rating. For example, in the category of "Any Psychiatric Treatment," which actually only included the Munk-Olsen et al. study (p.104), the basis for the "Very Low" (very uncertain about the estimate) rating was not controlling for pregnancy intention. As if this isn't problematic enough, when the study is again evaluated (see pages 198 and 199), it is rated as "Good" in the comparison category. There are loose, poorly conceived rationales and inconsistencies like this throughout the report and the problem lies in the application of an inadequate quality assessment protocol for individual studies and for the body of evidence.

Faulty Conclusions

Each section in the RCP report includes conclusions that are based on a very small number of studies that are not properly rated for quality. The results should, therefore, not be trusted as a basis for professional training protocols or health care policy initiatives. To illustrate how incomplete and misleading the conclusions provided by the RCP are, I will use one example. I recently identified 119 studies published between 1972 and 2011 using the MEDLINE, PubMed, and PsycINFO data bases specifically related to risk-factors associated with post-abortion psychological health. Below is a list of the most common risk factors derived from the 119 peer-reviewed journal articles identified.

a. *Timing during adolescence or younger age* (18 studies confirm: 2 studies do not)
b. *Religious, frequent church attendance, personal values conflict with abortion* (18 studies confirm; 1 study does not)
c. *Decision ambivalence or difficulty, doubt once decision was made, or high degree of decisional distress* (29 studies confirm; 3 studies do not)
d. *Desire for the pregnancy, psychological investment in the pregnancy, belief in the humanity of the fetus and/or attachment to fetus* (21 studies confirm; 1 does not)
e. *Negative feelings and attitudes related to the abortion* (16 confirm; 1 does not)
f. *Pressure or coercion to abort* (10 studies confirm; 1 does not)
g. *Conflicted, unsupportive relationship with father of child* (24 confirm; 6 do not)
h. *Conflicted, unsupportive relationships with others* (28 confirm; 7 do not)
i. *Character traits indicative of emotional immaturity, emotional instability, or difficulties coping* including low self-esteem, low self-efficacy, problems describing feelings, being withdrawn, avoidant coping, blaming oneself for difficulties etc. (42 studies confirm; 1 study does not)
j. *Pre-abortion mental health/psychiatric problems* (35 studies confirm; 3 studies do not)
k. *Indicators of poor quality abortion care* (feeling misinformed/inadequate counseling, negative perceptions of staff, etc.) (10 studies confirm)

The RCP conclusions relative to studies addressing risk factors for post-abortion mental health problems make no mention of most of the variables described above. They simply state (based on 27 studies) that *"The most reliable predictor of post-abortion mental health problems is having a history of mental health problems prior to abortion" and "A range of other factors produced more mixed results, although there is some suggestion that life events, pressure from a partner to have an abortion, and negative attitudes towards abortion in general and towards a woman's personal experience of the abortion, may have a negative impact on mental health."* I am one academic, without a lab full of graduate students and with a heavy teaching load (not a Department of Psychiatry), yet I was able to find all these

studies. Why wasn't this high powered research team able to do a better job? Simply glancing at titles and abstracts to determine which studies merit further attention will not yield the information needed and resulted in a short-sighted view of the available evidence.

Before I leave this section on poorly developed conclusions, I should note how curious it was to read one of the conclusions under the risk factor section: "*Women who show a negative emotional reaction immediately following an abortion are likely to have a poorer mental health outcome.*" How can this "conclusion" be derived if studies that only examined women in the first 3 months following abortion were eliminated? Moreover, if this is true, why would these studies have been eliminated in the first place? Shouldn't the researchers be most concerned with those most likely to be adversely impacted?

Appropriateness of Meta-Analysis

Counter to the claims of the authors of this report, a quantitative review or meta-analysis can be performed when there is heterogeneity present in the effects one wishes to summarize. The random effects model is specifically designed to address heterogeneity. In addition, separate meta-analyses, based on distinct comparison groups and outcomes can be performed. There is no excuse not to perform extensive meta-analyses from the vast literature that has accumulated. Such an approach is much more reliable and the results derived yield more valid conclusions than a narrative review; data that can be translated more readily into practice.

A Call for Change

The bottom-line conclusion of the RCP review, based on only 4 studies, is that abortion is no riskier to women's mental health than unintended pregnancy delivered. When this report was released a few days ago, several of my colleagues emailed "Here we go again…" Many of us are left wondering, how many of these purposefully driven "systematic reviews" have to be published with results splashed all over the world, before women's psychological health will finally take precedence over political, economic, and ideological agendas? This report constitutes no less than a crafty abuse of science and if the merits of this report are not seriously challenged, we will shamefully grow more distant from our ability to meet the needs of countless women. Until there is acknowledgement than scores of women suffer from their decision to undergo an abortion, we will remain in the dark ages relative to the development of treatment protocols, training of professionals, and our ability to compassionately assist women to achieve the understanding and closure they need to resume healthy lives.

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