Reviewer's report

Title: Birth and Developmental Correlates of Birth Weight

Version: 2 Date: 19 September 2012

Reviewer: Rosemarie Bigsby

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Minor Essential Revisions:

The authors have taken care to address all the concerns raised by the reviewers, which is appreciated. However, I feel the title is too broad, and may be misleading, because the study sample are all children identified as potentially having sensory processing disorder. This should be in the title, to prevent potential readers from thinking the article is taken from the general population.

Similarly, the authors should change their purpose statement on p. 10 to include a statement such as "in a retrospective, convenience sample from a clinic population identified as or suspected of having sensory processing disorder".

They authors have changed their focus from obesity, and added the specific birthweight groups as usually defined in newborn care. Unless I missed it, they have not noted whether the milestones of the children born at LBW and ELBW are corrected for prematurity. That is, when they asked parents a question such as the age at which the child sat up or walked, they should have asked the family to correct for prematurity. A baby born 3 months prematurely would not be expected to walk at 12-18 months from their birth, but actually from the mother’s due date. This is absolutely essential, as it will affect the results considerably.

Also, in Response to #7, they state that all 39 infants of LBW were SGA. That would be highly unusual and is highly suspect. Many infants are born prematurely, and are LBW, but are at the appropriate weight for that premature gestational age (AGA). A small percentage out of the preterm population also are small for that premature gestational age (SGA). These aspects of the paper trouble me because they suggest the authors do not have a good understanding of the preterm population, and basic procedures that should be included in a paper on this population.

The authors addressed the fact that they are using a "convenience sample" but yet on p. 4 second paragraph they state the studied "how birthweights are affected by birth history and developmental milestone achievement" - Didn't they actually report on the opposite, that is, whether BW is associated with related birth complications? Also, they made no mention at this point of the fact that all of the children in the sample may have sensory processing problems. This causes a selection bias that goes beyond that of a typical convenience sample from a more general clinic, such as a pediatric well-care clinic. Their clinic specializes in children with sensory processing issues.
On p. 6, the sample sizes are listed as ELBW n=3, VLBW n=8, LBW n=39 and HBW n=100. As I suspected when I asked them to delineate the specific weight groups individually, The individual LBW samples are too small to be able to draw conclusions about the relationship between their birthweight status and their developmental milestone achievement, and yet it is important to single the ELBW infants and VLBW out from the total group because those infants are likely to have had very significant medical involvement.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declar that I have no competing interests.