**Letter to the Editor**

Title: Measuring pregnancy intention: the complexity of comparison

Dr Geraldine Barrett

Dr Jenny Hall

Prof Judith Stephenson

Research Department of Reproductive Health, UCL Institute for Women's Health, London, UK

Contact information: g.barrett@ucl.ac.uk, Telephone: +44(0)7729 179648

We read with interest the article by Aiken et al, "Comparison of a Timing-based Measure of Unintended Pregnancy with the London Measure of Unplanned Pregnancy',[1] which compares the survey question, "Did you plan on becoming pregnant now?' with the London Measure of Unplanned Pregnancy (LMUP).[2]

In 2005, Prof Westhoff and Dr Castano kindly included the (then relatively new) LMUP in their ongoing study. Since then, the LMUP has been validated in a further seven languages,[3-7] including U.S. Spanish, and used around the world. We agree that it is useful to understand how the various ways of measuring pregnancy intention compare to one another. There are, however, several methodological issues that relate to the analysis presented by Aiken et al that need to be considered.

Firstly, due to the inclusion of the LMUP in an ongoing study, the LMUP items were asked directly after the single item, "Did you plan on becoming pregnant now?" The single item, asking about pregnancy planning, will have framed, and likely shaped, women's responses to the subsequent LMUP items. As Kaufman et al showed in their study, which randomised the order in which women answered the pregnancy intention questions from the National Survey of Family Growth Survey and the Demographic and Health Surveys, women tended to report higher levels of pregnancy intention (i.e. fewer unwanted, more mistimed pregnancies) on the second set of questions regardless of the actual set of questions.[8] In Kaufmann's study too the questions were separated by a body of intervening items on sexual health and contraception.

Secondly, although all survey questions are measures in the epidemiological sense, a single survey item is not a "measure" according to internationally accepted standards of psychometric validation.[9-12] A single survey item is inherently prone to greater measurement error than a multi-item validated measure. By contrast, the LMUP is a measure that fits these international standards.

The categorisation of LMUP scores into three sub-categories (0-3 unplanned, 4-9 ambivalent,10-12 planned) is to aid interpretation and assist with the production of prevalence estimates, but is provisional. The advice for using the LMUP has consistently been to use the full range of scores where possible in analyses. We strongly encourage researchers to visit the LMUP website (www.lmup.com), essentially the "LMUP handbook", where further advice on analysis and the use of the LMUP is available.

Finally, we share Aiken et al's enthusiasm for a measure that will accurately predict pregnancies that will have negative consequences for women and families. We call for rigorous measurement in our field and for the development and evaluation of valid and reliable multi-item instruments for the complex and hard-to-measure constructs we all encounter.

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