Author's response to reviews

Title: Knowledge and future preference of Chinese women in a major public hospital in Hong Kong after undergoing non-invasive prenatal testing for positive aneuploidy screening: a questionnaire survey

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Author's response to reviews: see over
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Mr Jason Pepito and Dr Lucy Frith
BioMed Central Editorial

Dear Mr Jason Pepito and Dr Lucy Frith Editor

MS: 1294366479159195
Chinese women’s knowledge and future preference after undergoing non-invasive prenatal testing for positive aneuploidy screening: a questionnaire survey Kam On Kou, Chung Fan Poon, Wai Ching Tse, Sui Lam Mak and Kwok Yin Leung

Thank you very much for processing our manuscript and the valuable comments from the two reviewers. These comments definitely help improve the quality of our manuscript. We have revised our manuscript according to the comments, and hope that our manuscript is now acceptable for publication in your journal.

Regards,
KY
Dr. KY Leung
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In response to the comments by Dr Annette Bernloehr, our reply is as follow:

Minor essential revisions:

Abstract
1. In the title (lines 1-3), we have revised the text as “Knowledge and future preference of Chinese women in a major public hospital in Hong Kong after undergoing non-invasive prenatal testing for positive aneuploidy screening: a questionnaire survey.” On lines 23-25, we have revised the text as: The objectives of
The objectives of this study are to assess (a) knowledge and preferences of Chinese women in a major public hospital in Hong Kong who underwent NIPT…’

2. On line 27, we have added the text: ‘Setting: prenatal diagnosis and counseling clinic’.

3. We have introduced all abbreviations in full before using them. On line 33, we have revised the text as: ‘…the International Society for Prenatal Diagnosis in 2011…’

Background

1. One lines 77-79, we have revised the text as: ‘The objectives of this study are to assess (a) knowledge and preferences of Chinese women in a major public hospital in Hong Kong who underwent NIPT,…’

Methods:

1. On lines 83-85, we have revised the text as: ‘Between February 2012 and September 2013, we invited all Chinese pregnant women who underwent NIPT for a positive conventional aneuploidy screening to complete a questionnaire in the setting of our prenatal diagnosis and counseling clinic.’

2. On lines 94-98, we have revised the text as: ‘The options included first trimester combined (based on nuchal translucency, pregnancy-associated plasma protein A (PAPP-A) and free beta human chorionic gonadotrophin (beta hCG)), or second trimester maternal serum screening (based on alpha fetoprotein and total beta hCG)
depending on the week of gestation at the time of booking.’

3. We have added Table 1 (Lines 487-489) to describe the ten knowledge questions, and adjust the remaining tables.

4. On lines 139, we have revised the text as: ‘high risk results for trisomy 21 or trisomy 18’.

5. One lines 141-142 we have revised the text as: ‘All babies screened to be low risk were confirmed normal after birth on physical examination.’

6. In response to the question on cohabitation, we have not particularly asked for as carrying a pregnancy after cohabitation is not common in Hong Kong.

7. In Table 3 (lines 496-499), we have added the text: ‘The correct answers were marked as #.’

Discussion

1. We have revised the Header in Discussion (line 189).

2. On line 251, we changed the word from “did” to “were”

3. On line 263, we changed the word “Knowledge” to a lower case (knowledge).

4. In Table 2 (previous Table 1), we have added ‘(>=35)’ after advanced maternal age.

5. In Table 3 (previous Table 2) question 1, we have revised the text as: ‘chorionic villus sampling’ and adjusted the format so that % were placed consistently under n.

Major compulsory Revisions:
1. In the Methods chapter (lines 123-125), we have revised the text as ‘assistance by an experienced midwife if required, to explain in a non-directive manner on medical terms or general terms if Cantonese is not their mother tongue.’. In the Discussion chapter (lines 265-268), we have added: ‘Significant bias might be introduced by offering assistance by an experienced midwife to the women during filling the questionnaire. However, the assistance was provided in a non-directional manner and confined to explanation on medical terms or general terms if Cantonese was not their mother tongue if required.’

2. In the Discussion (lines 273-277), we have added the following text: ‘In this preliminary study, the question 4 in Table 2 was not well constructed because it consisted of two sentences although we intended to ask the last part, that is, for some women the extended period awaiting confirmatory invasive testing results is likely to be highly stressful. We will further develop the questionnaire in our subsequent studies.’ We have added ‘preliminarily’ in the Abstract (line 31) and Methods chapter (line 114).
In response to the comments by Dr. Gwendolin Manegold-Brauer, our reply is as follow:

Major compulsory Revisions:

1. In the Method chapter (lines 85-88), we have revised the text as: revise the text as

‘All included women had Down syndrome screening at our clinic. Screen positive women who underwent NIPT were followed up for counseling and a mid-trimester anomaly scan during which the questionnaire was completed.’

2. In the Method chapter (lines 98-110), we have revised the text as: ‘All counseling on screen positive women were given or supervised by a maternal fetal medicine subspecialist, and different options including an invasive test or no further testing were discussed. From August 2011, NIPT was available in private sector in Hong Kong, and this option was also discussed as an alternative to an invasive test with screen positive women in our clinic upon questioning. Most commercial NIPT during the study period were based on massively parallel sequencing with ‘shortgun’ counting of all cell free DNA sequences while the remaining used ‘targeted’ counting of specific DNA sequences. An information sheet on NIPT including the process, benefits and limitations was provided. After undergoing NIPT with a separate counseling by private obstetrician, women were followed up, rescanned for fetal structures, counseled on the NIPT result, and offered a free option of invasive testing
after a positive NIPT result or for other reasons. As a quality of control of the counseling which we provided, a questionnaire was designed.

3. In the Methods chapter (lines 103-105), we have the following text: ‘Most commercial NIPT during the study period were based on massively parallel sequencing with ‘shortgun’ counting of all cell free DNA sequences while the remaining used ‘targeted’ counting of specific DNA sequences.’

Results

1. In the Results (line 145), we have added the following text: ‘All these 135 women filled out the questionnaire after knowing the results of their NIPT.’

2. In the Results (lines 152-154), we have revised the text as: ‘More than 90% of women knew false positive and false negative results of NIPT for Down syndrome (Questions 2 and 3, Table 3). 95.6% of women understood it would be very stressful if NIPT showed a positive result (Question 4, Table 3). More than 70% …’ On lines 159-160, we have also revised the text as: ‘…about half of the women answered ‘do not know’ and less than 10% answered correctly…’

3 and 4. In the Results (lines 169-172), we have revised the text as: ‘Pregnant women who underwent NIPT before 15 week gestation had significantly higher proportions of correct answers in three knowledge questions on NIPT with odds ratio of 6.2, 3.4 and 5.6 in Questions 2, 3 and 4 respectively than those after 15 weeks (Table 4).’

5 and 6. In the Results (lines 172-175), we have revised the text as: ‘Besides, pregnant
women with an advanced level of education had significantly higher proportions of correct answers in two knowledge questions on NIPT with odds ratio of 5.6 and 13.6 in Questions 2 and 4 respectively than those without (Table 4).’

7. We have deleted the sentence.

8. In the Results (lines 177-181), we have revised the text as: ‘There were no significant differences in the proportions of correct answers to questions 1 to 5 between women with or without other characteristics (including advanced maternal age, parity, history of miscarriage or termination of pregnancy, method of conception, status of employment) or source of information (including private doctors, web, relatives/friends, colleagues, books or magazines, and other means).’

9. In the Results (lines 184-187), we have revised the text as: ‘Significantly more women preferred NT as a contingent test than as a primary screening in their future pregnancies (57.8% vs 30.4%, p<0.001). On subgroup analysis, there were no significant differences in preferences among women with different characteristics or source of information (as above).’

Tables

1. Table 2 (previous Table 1): We have added ‘(>=35)’ after advanced maternal age.

2. Table 4 (previous Table 3), on line 501-503, we have revised the text as: ‘Table 4: Proportions and adjusted Odds ratios (OR) of correct answers to the first five knowledge questions: comparing non-invasive prenatal testing (NIPT) before 15
weeks versus after 15 weeks and with advanced education versus without’.

Discussion

1. In the Discussion (195-198), we have revised the text as: ‘However, our findings are in accordance with previous studies that pregnant women are in general knowing more about practical aspects of Down syndrome than screening limitations and accuracy’. One lines 208-210, we have revised the text as: ‘Although nulliparity and employed women are associated with the use of NIPT, our present study did not show that these subgroups of women knew more about NIPT than multiparity and unemployed.’ On lines 281-282, we have revised the text as: ‘The Chinese pregnant women who underwent NIPT knew more about the false positive and false negative results than the test accuracy…’ On lines 291-293, we have revised the text as: ‘It seems that women prefer NIPT as a contingent measure to a primary screening test probably because of its high cost, but this preference may change as the cost likely goes down in the future.’ In abstract (line 54), we have revised the text as ‘…its high cost…’