Author's response to reviews

Title: The joint influence of marital status, interpregnancy interval, and neighborhood on small for gestational age birth: a retrospective cohort study

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Author's response to reviews: see over
February 25, 2007

Dear Dr. da-Silva,

Re: MS# 2100646160143565

We are pleased to submit our final manuscript, entitled “The joint influence of marital status, interpregnancy interval, and neighborhood characteristics on small for gestational age birth: a retrospective cohort study” to BMC Pregnancy and Childbirth.

We have made the requested corrections with one exception. There is a request to remove reference 40 because it was not cited in the manuscript. Reference 40 is cited in the last paragraph of the discussion (page 14, line 20), therefore we did not remove the reference. We have verified that all other references are cited in the manuscript. In addition, we have made minor editorial changes in the manuscript which are listed below.

Should any questions remain, please do not hesitate to contact the corresponding author at nathalie.auger@inpq.qc.ca.

With warm regards,

Nathalie Auger

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Editorial changes

Abstract

Page 4, line 9:

Previous: We used multilevel logistic regression to assess relationships between variables.
Revised: We used multilevel logistic regression to obtain adjusted effect estimates.

Page 4, line 17:

Previous: Marital status appears to bear consideration in recommending particular IPIs as an intervention to improve birth outcomes.
Revised: Marital status should be considered in recommending particular IPIs as an intervention to improve birth outcomes.

Background

Page 5, line 4:
A recent meta-analysis concluded that the IPI, defined as time between the last delivery and conception of the next pregnancy.

Revised: A recent meta-analysis concluded that the IPI, defined as time between the last delivery and conception of the current pregnancy.

Page 5, line 16:

Previous: For example, the influence of the IPI on small for gestational age
Revised: The influence of IPI on small for gestational age

Page 5, line 19:

Previous: The influence of marital status on SGA birth, a birth outcome known to be associated with psychosocial factors such as social support [18,19], is little addressed in the literature.
Revised: The influence of marital status on SGA birth, a birth outcome known to be associated with psychosocial factors such as social support [18,19], has yet to be fully understood.

Page 5, line 21:

Previous: The exception is one study in which being unmarried was found to increase the likelihood of SGA for subsequent-born relative to firstborn infants
Revised: Being unmarried has been reported to increase the likelihood of SGA for subsequent-born relative to firstborn infants

Page 6, line 2:

Previous: accounting for residential neighborhood
Revised: accounting for residential neighborhood cluster variations

Page 6, line 2:

Previous: The setting was Montréal, a large Canadian city in which SGA birth has been shown to vary according neighborhood
Revised: The setting was Montréal, a large Canadian city in which SGA birth has been shown to vary according to neighborhood

Methods

Page 8, line 2:

Previous: We used multivariate multi-level logistic regression
Revised: We used multi-level multivariate logistic regression

Page 8, line 9:

Previous: These odds for the influence of neighborhoods are comparable to those published in other studies
Revised: These odds for the influence of neighborhoods are comparable to those in other studies

Page 8, line 12:

Previous: Last, we tested individual-level interaction between IPI category and marital status, and interaction between these variables and other relevant variables.
Revised: Last, we tested individual-level interactions between IPI category and marital status, and between these variables and other relevant variables.

Page 8, line 13:
Previous: The significance of the parameter estimates was assessed with the Wald test.
Revised: The significance of parameter estimates was assessed using the Wald test.

Results

Page 9, line 3:
Previous: The proportion SGA to total births was
Revised: The proportion of SGA to total births was

Page 9, line 5:
Previous: Among married mothers 56.8% of births
Revised: Among married mothers, 56.8% of births

Page 9, line 14:
Previous: There was an inverse relation between births to unmarried mothers and neighborhood perceived security
Revised: There was an inverse relationship between unmarried status and neighborhood perceived security

Page 9, line 17:
Previous: High neighborhood perceived security corresponded to a greater frequency of an intermediate IPI (49.5%), and lesser frequency of short (16.7%) or long (33.8%) IPIs relative to neighborhoods with low perceived security (41.0%, 19.7%, and 39.3%, respectively).
Revised: High neighborhood perceived security corresponded to more frequent intermediate IPI (49.5%) and less frequent short (16.7%) or long (33.8%) IPIs, relative to neighborhoods with low perceived security (41.0%, 19.7%, and 39.3%, respectively).

Page 10, line 9:
Previous: Being unmarried was a stronger risk factor for subsequent births (pooled odds ratio [OR] 1.47, 95% confidence interval [CI] 1.28-1.68, not shown in figure) than for firstborns
Revised: Being unmarried was a stronger risk factor among subsequent births (pooled odds ratio [OR] 1.47, 95% confidence interval [CI] 1.28-1.68, not shown in figure) than among firstborns

Page 10, line 11:
Previous: Furthermore, odds associated with being unmarried were greater for subsequent births with both short (OR = 1.60, 95% CI 1.31-1.95) and intermediate IPIs (OR = 1.48, 95% CI 1.26-1.74) than for firstborns
Revised: Furthermore, odds associated with being unmarried were greater among subsequent births with both short (OR = 1.60, 95% CI 1.31-1.95) and intermediate IPIs (OR = 1.48, 95% CI 1.26-1.74) than among firstborns

Page 10, line 23:
Discussion

Page 12, line 2:

*Previous:* we demonstrated that the association between IPI and SGA birth depends on the marital status of the mother. We also showed that the association between marital status and SGA birth varies according to the IPI and maternal Canadian-born versus foreign-born status. Specifically, we found that the likelihood of a SGA birth due to being unmarried was greatest for subsequent births compared to firstborns, especially for short IPIs. This association was strongest for Canadian-born mothers. Foreign-born mothers may be less susceptible

*Revised:* we demonstrated that the association between IPI and SGA birth depends on maternal marital status. We also showed that the association between marital status and SGA birth varied according to IPI and maternal place of origin (Canadian-born versus foreign-born). Specifically, we found that the likelihood of SGA birth associated with being unmarried was highest for subsequent births compared to firstborns, especially for short IPIs. This association was strongest for Canadian-born mothers. Foreign-born mothers might be less susceptible

Page 12, line 16:

*Previous:* it might be that that child rearing stresses are reduced and resemble those of unmarried mothers without any children

*Revised:* it might be that that child rearing stresses are diminished and resemble those of unmarried mothers without children

Page 12, line 19:

*Previous:* (e.g., fewer stressors, greater coping, or greater adaptation)

*Revised:* (e.g., fewer stressors, better coping or adaptation)

Page 12, line 23:

*Previous:* nutritional depletion may be present in mothers with short IPIs [34], subsequently making such mothers more susceptible

*Revised:* nutritional depletion may be present in mothers with short IPIs [34]; such mothers may be more susceptible

Page 13, line 2:

*Previous:* Other biological mechanisms include a direct link between the psychosocial stress of being unmarried, and the likelihood of SGA birth [18,19]. Such a mechanism might operate through neuroendocrine or immune pathways which have been shown to be influenced by psychological stress

*Revised:* Other biological mechanisms may also link the psychosocial stress of being unmarried with the likelihood of SGA birth [18,19], and may operate through neuroendocrine or immune pathways known to be influenced by psychological stress
Previous: we suspect marriage is serving as a proxy for other determinants related to SGA birth
Revised: we suspect that marriage may serve as a proxy for other determinants of SGA birth

Previous: our study confirms the association between IPI and SGA birth found by others
Revised: our study confirms the association between IPI and SGA birth

Previous: Beyond the influence of the IPI in relation to SGA birth
Revised: Beyond the influence of IPI on SGA birth

Previous: this estimated attributable risk cannot be directly contrasted with ours
Revised: this estimated attributable risk cannot be directly compared with ours

Previous: Our study was subject to several limitations
Revised: Our study may be subject to several limitations

Previous: estimates of effect might differ
Revised: effect estimates might differ

Conclusions

Previous: Although no other study has as yet addressed
Revised: Although no other study has yet addressed

Previous: prevention strategies may also need to take neighborhood factors into account
Revised: prevention strategies may need to take neighborhood factors into account

Previous: Although no other study has as yet addressed
Revised: Although no other study has yet addressed

Figure title

Previous: according to interpregnancy interval and place of birth
Revised: according to interpregnancy interval and maternal place of birth

Page 20, line 7:
Previous: Figure footnote: Results are for multi-level logistic regression testing an interaction term between marital status and interpregnancy interval, adjusted for
Revised:  Figure footnote: Results are from multi-level logistic regression testing an interaction term between marital status and interpregnancy interval, adjusting for

Page 21, line 6:
Previous: Figure footnote: Results are for a multi-level logistic regression model testing an interaction term between marital status and interpregnancy interval, adjusted for
Revised:  Figure footnote: Results are from multi-level logistic regression testing an interaction term between marital status and interpregnancy interval, adjusting for