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## Title

Pregnant women's intention to use a mobile application-based decision aid for prenatal screening for trisomies 21, 18 and 13

## **Priority 1 (Research Category)**

Screening, prevention, and health promotion

## **Presenters**

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## **Abstract**

Context: Decision-making regarding prenatal screening is complex that can be supported by from decision aids. Mobile health technologies have led to apps that assist pregnant women in making informed health decisions. Objective: assess pregnant women's intention to use a mobile application to make decisions about prenatal screening for trisomies 21, 18 and 13. Study Design and Analysis: Mixedmethods cross-sectional study complying with STROBE and COREQ guidelines, including descriptive, bivariate and multivariate analyses of quantitative data and thematic analysis of qualitative data. Setting: Study conducted in Quebec City and Montreal, among women at least 16 weeks pregnant or who had given birth in the previous year, and who had no high-risk pregnancies. Population Studied: Participants included 67 eligible pregnant women, mostly Canadian, French-speaking, aged 25 to 34 and highly educated. Instrument: For the quantitative phase, participants used a paper-based decision aid about prenatal screening and completed a questionnaire, the CDP-Reaction, to assess their intention as well as psychosocial determinants related to the intention to use a mobile app with similar content. For the qualitative phase, participants viewed a video on shared decision-making using the paper-based medium described above and discussed their use of smartphones as well as mobile health apps. Outcome Measures: The primary outcome measured was pregnant women's intention to use the mobile application, quantified on a scale of 1 to 7, and then the identification of these potential predictors. Results: The mean intention score was 4.92 out of 7, indicating a strong intention to use the mobile app. The significant factors positively associated with this intention were beliefs in consequences (β: 1.21; 5% CI: 1.02 - 1.39; p < 0.0001) and social influence ( $\beta$ : 0.17; 5% CI: 0.01- 0.32; p=0.03). Most of the women who had already used pregnancy apps rated the mobile app positively, but also many were open to

adopting other formats of such a decision aid (web version, paper etc.). Conclusions: The results suggest a strong intention among pregnant women to use the mobile app to make the decision in relation to screening for trisomies 21, 18 and 13, influenced by perceived advantages and disadvantages of its use and peer opinion. Interventions to promote informed choice in prenatal screening should target these influencing factors.

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