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Advancing Women's Mental Health Research Across Disciplines

WOMHER International Graduate Conference 2024
Oral presentations

Oral presentation theme I: Women's Mental Health in the 21st Century

User-centered ecological momentary assessment in mental healthcare

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Background: Use of smartphone applications to enable clinical research and healthcare delivery is promising and rapidly developing. Digital phenotyping research apps, such as the Mom2B smartphone app, are a novel approach to data collection to predict health and treatment outcomes for women in the perinatal period. However, little is known about the challenges, concerns and experiences of users to improve the adoption, acceptability, and usability of these apps

Objective: The aim of this study was to explore the experiences and attitudes of Mom2B app users, particularly their acceptability of the app and concerns around providing data this way.
Methods: Semi-structured focus group interviews were conducted online in Swedish with 13 groups, and a total of 41 participants. Participants had been active users of the Mom2B app for at least six weeks, and included pregnant and

postpartum women, both with and without depression symptomatology apparent in their last screening test. Interviews were recorded, transcribed, translated to English, and evaluated using inductive thematic analysis.

Results: Four themes were elicited: acceptability of sharing data, motivators and incentives, barriers to task completion, and user experience. Participants also gave suggestions for the improvement of features and user experience. Overall, app-based digital phenotyping was evaluated as a feasible and acceptable method of conducting research that also allows participants to benefit from the data they share by being able to monitor their wellbeing.

Discussion: The findings highlight the perceived duality of this app as an efficient and practical tool that facilitates engagement in research, as well as allows users to monitor their wellbeing and get both general and personalized information related to the perinatal period. Digital phenotyping apps should be trustworthy and accessible, and technical issues should be promptly addressed. The findings raise important considerations for the development for future mHealth research apps in cooperation with users.

Keywords: user experience; research methodologies; ecological momentary assessment

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Spectral mother-daughter relationships of contemporary trauma fiction

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In recent decades, trauma has become a common subject of exploration within a variety of literary genres. A common feature in trauma fiction is the focus placed on traditional family, sometimes as a source of traumatic experience, sometimes as a site of crucial social support during a victim's healing process. This paper will focus on two novels from the United States and Sweden, Alice Sebold's *The Lovely Bones* and Sara Stridsberg's *The Antarctica of Love*, in order to demonstrate two different literary approaches to motherhood in the aftermath of traumatic sexual violence.

Sebold and Stridsberg both approach this subject through a shared fantastic premise: the narrators are girls or women who turn into ghosts after having been raped and murdered by strangers. Sebold's protagonist is a teenage girl who spends her spectral afterlife violently longing for her mother's return to the suburban nuclear family which she left after her daughter's death. Stridsberg's protagonist is repeatedly drawn back to Earth not only by a wish to be consoled by her distant mother, but also by her fear of having passed on a traumatic family inheritance to her own daughter. Both novels urge us to ask questions about the role of the mother-daughter relationship as a site of interpersonal support after traumatic experiences. Can intergenerational bonds persist after death? What may supportive relationships between mothers and daughters look like in a world plagued by gendered violence?

Keywords: trauma, sexual violence, intersocial relationships, ghosts, fiction

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(Un)intended pregnancy and partner support: how they relate to perinatal wellbeing and parental leave sharing in Sweden

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The perinatal period is a challenging time for mothers' mental health due to vast biological and social changes. Despite Sweden having a high-quality antenatal care and progressive parental leave policies, inequalities remain, resulting in those with less resources being in higher risk of poorer psychological and physical wellbeing. We investigate the association of pregnancy planning and partner support with women's wellbeing as well as parental leave sharing.

This study uses a structural equation model to study pregnancy planning and partner support in relation to antenatal psychological and physical wellbeing, and in relation to parental leave sharing. The measured variables were assessed with standardized self-report surveys (pregnancy planning and depression), or single items (partner

support, pregnancy symptoms, stress and parental leave sharing). Furthermore, the mediating role of partner support was evaluated, and interaction models were used to investigate potentially stronger associations among socio-economically disadvantaged groups.

This study included 3,696 Swedish participants. The results showed that those with a higher level of pregnancy planning also had more partner support, less stress, depression and pregnancy symptoms. Partner support fully mediated the effect between pregnancy planning and parental leave sharing. Being younger than 26, having a lower education or having an insecure income was associated with higher depression scores. However, these associations were not as strong among those with good partner support and higher level of pregnancy planning.

In conclusion, joint decisions about fertility positively relates to women's wellbeing and to satisfaction in partner support. Additionally, even though in Sweden parental leave policies encourage equal sharing of the parental leave, perceived partner support remains an important factor for equal parental leave sharing. This indicates that negotiating egalitarian household practices is easier when women feel supported.

Keywords: Peripartum depression, Parental leave sharing, Maternal mental health, Unplanned pregnancy, Structural equation model

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Continuous glucose monitoring across the menstrual cycle: Associations between glucose levels, mood and sex hormones

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Background: Within their reproductive years, women undergo approximately 450 menstrual cycles, which pose an energetically expensive biological process due to hormonal fluctuations. Insulin sensitivity, and therefore the regulation of glucose levels, has recently been shown to vary throughout the menstrual cycle. Whether these changes in metabolic processes also affect mood regulation is unclear, however, more than 40% of women worldwide experience negative mood especially during the premenstrual phase.

Objectives and Methods: In this ongoing study (data collection will be completed by the end of May 2024), we investigated associations between glucose levels, mood and sex hormones in a sample of 39 healthy women. We analysed cross-

sectional data during a fasted baseline session (T0) and longitudinal data from lab visits once a week (T1-T4) for four weeks, i.e. for one menstrual cycle. We collected fasted levels of blood glucose and insulin at T0, as well as blood hormone levels of estradiol, progesterone and testosterone at T0-T4. Additionally, we tracked women's menstrual cycle phases and continuously monitored interstitial glucose levels (T1-T4), while participants completed ecological momentary assessments where they rated their mood every day.

Results and Conclusions: Preliminary results show no independent association of glucose levels with mood ratings or phase of the menstrual cycle. Positive mood fluctuated throughout the menstrual cycle, while negative mood was decreased the most during the periovulatory phase. Implications for metabolic and mental health will be further discussed. This study may contribute to the development of personalised interventions for women experiencing mood disturbances linked to their menstrual cycle. Tailored approaches that consider individual differences in metabolic and hormonal profiles could lead to more effective treatment strategies for managing mood symptoms.

Keywords: Menstrual cycle, glucose, sex hormones, mood