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Increasing awareness of the connection between breastfeeding and mental health through an educational session for healthcare providers

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Aim of the study

The relationship between breastfeeding and mental health is complex and complicated by various confounding factors. Although no direct causative link has been established, several trends have arisen in the literature. The aim of this study was to see if an educational session on these trends could increase awareness of how breastfeeding affects mental health in women. Specifically, we aimed to see if this session could increase awareness in a group of clinicians (nurses, physicians, and lactation consultants) who provide care in the peripartum.

Subject or material and methods

A 45-minute education session was offered to health care providers for members of this population. The goal of this session was to increase awareness of how breastfeeding impacts mental health and how, when it is going well, it can positively affect mood. The session also emphasized the importance of support in the perinatal period.

Results

The session was evaluated for changes in awareness and knowledge and perceived usefulness and relevance via a short pre-and post – 8 question survey. There were significant differences in the post answers for Questions 1-5 compared to the pre – answers.

Discussion

These particular questions dealt with awareness and perceived relevance of the topic, the understanding of the complexity of the topic, perceived knowledge of the topic, and training on the topic.

Conclusions

These findings suggest that an educational session may improve awareness, knowledge levels, and perceived importance of this topic.

postpartum depression; breastfeeding; education; support; mental health

BACKGROUND AND PURPOSE:

There have been numerous studies that have explored the complex relationship between breastfeeding and mental health. Although the direc-

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tionality of this relationship remains unclear, several themes emerge from the literature. One of these themes is that breastfeeding when going well, may offer protection against stress and, therefore, depressive symptoms in the postpartum period [1-3]. Some studies have also demonstrated a link between breastfeeding challenges and symptoms of depression [4,5]. Breastfeeding challenges are expected, with 60-80% of women experiencing problems [6]. Due to the high incidence of breastfeeding challenges, early access to support and appropriate interventions is of utmost importance. A Canadian study [6] showed that those who received breastfeeding supports (and did not report a negative experience with those supports) had lower depression rates.

Perinatal mental illness is associated with an increased risk of psychological and developmental disturbances in children, including physical illnesses [7], stunted growth, difficult temperament, and emotional and behavioural problems [8]. Several factors may contribute to a possible association between depression and breastfeeding challenges. For example, challenges may lead to early cessation, which would remove any possible protective effects breastfeeding may have on mental health. The nature of the challenge, for example, pain, could, in turn, contribute to depressive symptomatology. One theory suggests that depression may be associated with inflammation manifested by pro-inflammatory cytokines. Cytokines increase during the 3rd trimester and may further increase in response to postpartum factors such as pain and psychosocial stress [9]. Others have explored the role of oxytocin in breastfeeding and how this may affect stress responses. Oxytocin levels are lower in women with symptoms of postpartum depression [10] and the oxytocin surge that occurs during breastfeeding appears to buffer stress-induced cortisol secretion [11]. Therefore, it is hypothesized that the act of breastfeeding may indirectly lessen stress reactivity via the effects of oxytocin.

Another phenomenon that has been only recently described in the literature is the Dysphoric Milk Ejection Reflex (D-MER). This phenomenon has been described as "an abrupt dysphoria or undesirable feeling that occurs with the milk ejection reflex and continues for no more than a few minutes" [12]. Despite an overall limited awareness of this condition until recently, one study suggested the prevalence rate is as high as 9% [13]. It has been hypothesized that an abrupt drop in dopamine during milk ejection may play a role in the etiology of D-MER symptoms.

Given the complexity of the relationships between breastfeeding and mental health, women must receive support from health care workers who are aware of these complexities – as this will allow providers to provide the best support in all contexts. Our study sought to determine if an educational session could improve awareness and knowledge in a group of such providers in our local health care context.

METHODS AND PROCEDURES

An educational session was designed and developed to educate participants on the abovementioned themes outlined in the introduction section. The session consisted of 26 slides. Important themes included how breastfeeding seems to be protective against depression when it is going well, the importance of good supports, and the importance of recognizing and dealing with guilt in the face of breastfeeding challenges and decisions regarding breastfeeding cessation. Nine identical sessions were provided to various groups of health care providers involved in the care of peripartum and breastfeeding women. There was a total of 163 participants in the nine sessions. The numbers used for statistical analysis varied due to missing data (not every participant answered every question). Three of these sessions were completed virtually (via Webex or Microsoft Teams), secondary to pandemic restrictions. Data were collected from consenting participants in pre/post-session surveys. Implied consent was obtained for this study. The survey included a description of the scope of the research and outlined risks and plans for dissemination. The survey was confidential, and no identifying information was asked outside of the profession. Completing the survey was completely voluntary. The surveys were anonymously matched using a unique identifier that the participants made themselves. It consisted of the first three letters of the street they lived on and the first three letters of their birth month.

The survey consisted of 8 statements assessing perceived knowledge, attitudes, and awareness around breastfeeding and mental illness and the perceived usefulness and effectiveness of such a session (Table 3). Comments were rated using Likert scales ranging from 1 (disagreement) to 10 (agreement). The local Health Research Ethics Board was consulted and determined that ethics approval was not required for this study.

RESULTS:

Descriptive statistics were used for the demographics of the study population. One hundred sixty-three session attendees completed pre/post-session surveys and included nurses (133), medical residents (14), medical students (8), physicians (1), lactation consultants (1) and others (1). (Table 1).

Table 1. Demographics of the sample by the occupation of participant

Occupation		Frequency	Valid Percent	Cumulative Percent
Valid	Resident	14	8.9	8.9
	Physician	1	.6	9.5
	Nurse	133	84.2	93.7
	Lactation Consultant	1	.6	94.3
	Medical Student	8	5.1	99.4
	Other	1	.6	100.0
	Total	158	100.0	
Missing	System	5		
Total		163		

Paired t-tests were used to find differences between pre-and post-answers of the same participants assessed on a Likert scale. The number of participants varied from question to question due to missing data. There were significant differences in post answers for Q1 to Q5 inclusive compared to pre-answers. There were no identified differences in mean values for Q6-Q8. Question 1: "Awareness of connection between breastfeeding and Mental Health": Mean (±SD) value of Post assessment was higher than the value of pre-assessment: 9.25 (±1.054) vs 7.81 (±2.250) with P (95%CI): P<0.0001 (-1.809 – (-1.073)). Question 2: "Perceived importance of the topic as being relevant to practice": Mean (±SD) value of Post assessment was higher than the value of pre-assessment: 9.48 (±0.967) vs 9.24 (±1.312) with P (95%CI): P<0.0001 (-0.419 – (0.072). Question 3: "The relationship between breastfeeding and mental health is complex": Mean (±SD) value of Post assessment was higher than the value of pre-assessment: 9.47 (±0.999) vs 8.67 (±1.630) with P (95%CI): P<0.0001 (-1.049 – (0.537)). Question 4: "Adequate level of knowledge of this topic": Mean (±SD) value of Post assessment was higher than value of pre-assessment: 8.20 (±1.470) vs 6.23 (±2.048) with P (95%CI): P<0.0001 (-2.285 – (-1.663)). Question 5: "Received appropriate level of training on topic": Mean (±SD) value of post assessment was higher than value of pre-assessment: 7.37 (±1.881) vs 4.83 (±2.300) with P (95%CI): P<0.0001 (-2.901 – (-2.186)). See Tables 2 and 3.

Table 2. Paired Samples Statistics part I

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	I am aware of the connection between breastfeeding and mental health.	7.81	118	2.250	.207
	Post-Q1	9.25	118	1.054	.097
Pair 2	This is an important topic relevant to my practice.	9.24	118	1.312	.121
	Post-Q2	9.48	118	.967	.089

Pair 3	The relationship between breastfeeding and mental health is complex.	8.67	116	1.630	.151
	Post-Q3	9.47	116	.999	.093
Pair 4	I have an adequate level of knowledge of this topic.	6.23	115	2.048	.191
	Post-Q4	8.20	115	1.470	.137
Pair 5	I have received an appropriate level of training in this topic.	4.83	116	2.300	.214
	Post-Q5	7.37	116	1.881	.175
Pair 6	This session will be useful in my practice.	9.05	116	1.376	.128
	Post-Q6	9.00	116	1.486	.138
Pair 7	This session will enhance my awareness & knowledge.	9.03	115	1.389	.130
	Post-Q7	9.08	115	1.292	.120
Pair 8	This session will enhance my comfort level in this topic.	8.74	115	1.511	.141
	Post-Q8	8.57	115	1.445	.135

Table 3. Paired Samples Statistics part II

		Std. Deviation	95% CI		Sig (2-tailed)
			Lower	Upper	
Pair 1	Aware of connection b-/w breastfeeding & MH – Post-Q1	2.019	-1.809	-1.073	.000
Pair 2	Important topic relevant to practice – Post-Q2	.951	-.419	-.072	.006
Pair 3	Relationship b-/w breastfeeding & MH is complex – Post-Q3	1.393	-1.049	-.537	.000
Pair 4	Adequate level of knowledge of this topic – Post-Q4	1.683	-2.285	-1.663	.000
Pair 5	Recieved appropriate level of training in this topic – Post-Q5	1.944	-2.901	-2.186	.000
Pair 6	Session will be useful in my practice – Post-Q6	1.363	-.199	.302	.684
Pair 7	Session will enhance my awareness & knowledge – Post-Q7	1.340	-.291	.204	.729
Pair 8	Session will enhance my comfort level in this topic – Post-Q8	1.389	-.091	.422	.205

DISCUSSION

In this study, significant improvements were noted in awareness of the complexity of the topic and perceived importance. It is possible that even a relatively short presentation of 45 minutes could be of significant benefit to health care professionals working in this area. A substantial increase in perceived adequate level of knowledge and training also indicates the usefulness of such a session. This session could be easily incorporated into annual education days and webinar sessions and does not require a significant time commitment.

Formal supports appear to be protective despite a possible link between breastfeeding challenges and depressive symptoms [6]. Session attendees reported improvements in their aware-

ness of the connection between breastfeeding and mental health, their perceived importance of this topic as relevant to their practice, their understanding of the complexity of the relationship, their perceived knowledge of the topic and their perceived adequacy of training on this topic.

CONCLUSION

These results suggest that a short educational session such as this one appears promising in improving health care providers' awareness and knowledge of this topic. This, in turn, could have a positive effect on care provided to women in the perinatal period. Future research considerations could include comparing in-person sessions to virtual sessions and expanding to different groups of individuals such as members of informal support groups (ex. peer support) and counsellors.

There continue to be many myths regarding the relationship between breastfeeding and maternal mood and depression. Therefore, it is of utmost importance for healthcare professionals caring for this population to be informed of up-to-date research and the complex and controversial nature of such a connection.

Health care professionals may wonder how they can best support breastfeeding women and address concerns around potential connections to depressive symptomatology. In some cases, health care professionals may advise women who are depressed to stop breastfeeding. Although this may be an appropriate decision for some women, others may experience this advice as a personal failure or loss, further impacting maternal mood. Therefore, it is imperative to perform a risk-benefit analysis around an individual's current breastfeeding status and mental health concerns while acknowledging their internal feelings around their desire to breastfeed. If the individual wishes to continue breastfeeding, everything should be done to support the breastfeeding journey, even in the context of mental health concerns.

Health care professionals should be cognizant of their own biases and experiences with breastfeeding, not to let this interfere with the support they provide. It has been well established that breastfeeding, on a population level, has been linked to a multitude of health benefits for both the baby and the mother. Although it is essential that breastfeeding continue to be supported and women continue to be educated on the benefits, health care professionals should provide non-judgmental support regardless of the chosen method of feeding and avoid language that may infer inferiority of alternate methods (ex: "risks of bottle feeding) as this may unintentionally contribute to feelings of guilt.

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