ORIGINAL RESEARCH ARTICLE

The impact of social media addiction on pregnancy stress and prenatal attachment

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Abstract

The purpose of this study is to determine the impact of social media addiction on pregnancy stress and prenatal attachment. The study was conducted between November 2023 and April 2024 with a sample of 277 pregnant women. This descriptive, cross-sectional, and correlational study utilized several instruments, including the Demographic Information Form, the Social Media Addiction Scale-Adult Form (SMAS-AF), the Fear of Missing Out Scale (FoMO), the Pregnancy Stress Rating Scale (PSRS), and The Prenatal Attachment Inventory (PAI). The findings revealed that the majority of the participants used social media to gain information related to their pregnancy (60.3%) and childbirth (46.6%). It was observed that the participants had a moderate level of social media addiction (40.56±9.82). The study found that as levels of social media addiction and FoMO increased, pregnancy stress also increased. Additionally, no significant relationship was found between social media addiction and prenatal attachment, although a higher level of FoMO was associated with a decrease in prenatal attachment. It is recommended that the number of healthcare professionals who provide accessible education and follow-up services to pregnant women be increased. Moreover, preventive and supportive environments should be established within healthcare services to guide the use of social media during pregnancy. *(Afr J Reprod Health 2025; 29 [1]: 118-126).*

Keywords: Pregnancy; internet addiction disorder; pregnancy stress; prenatal attachment

Résumé

L'objectif de cette étude est de déterminer l'effet de la dépendance aux médias sociaux sur le stress de la grossesse et l'attachement prénatal. L'étude a été menée auprès de 277 femmes enceintes entre novembre 2023 et avril 2024. Dans cette étude, conçue comme descriptive, transversale et relationnelle, le formulaire d'information introductive, l'échelle de dépendance aux médias sociaux pour adultes, l'échelle de peur de manquer quelque chose (FoMO), l'échelle d'évaluation du stress de la grossesse et l'inventaire de l'attachement prénatal ont été utilisés. L'étude a déterminé que la majorité des femmes enceintes utilisaient les médias sociaux pour obtenir des informations sur leur grossesse (60,3 %) et leur accouchement (46,6 %). Il a été observé que la dépendance aux médias sociaux des femmes enceintes était à un niveau modéré (40,56 ± 9,82). Il a été constaté que le stress lié à la grossesse augmentait avec l'augmentation de la dépendance aux réseaux sociaux et des niveaux de FoMO. Il a également été déterminé qu'il n'y avait aucune relation entre la dépendance aux médias sociaux et l'attachement prénatal, et à mesure que le niveau de FoMO augmentait, l'attachement prénatal diminuait. Le nombre de professionnels de santé facilement accessibles qui fournissent des services d'éducation et de suivi aux femmes enceintes devrait être augmenté. Un environnement préventif et favorable à l'utilisation des médias sociaux pendant la grossesse devrait être créé dans les services de santé. *(Afr J Reprod Health 2025; 29 [1]: 118-126).*

Mots-clés: : Grossesse, dépendance aux réseaux sociaux, stress de la grossesse, attachement prénatal

Introduction

The use of social media as a source of health information is widespread. Social media platforms are often utilized by users to communicate about health issues and to foster a sense of well-being, primarily due to the opportunities they provide for collaboration and social interaction.[1] In a study conducted by Baker and Yang (2018) involving new mothers, it was found that the vast majority of women used social media to ask questions and seek advice about pregnancy and parenting, considering their social media connections as a support system.[2] Systematic reviews show that the use of mobile

health apps and social media is feasible and acceptable to support pregnancy care, including promoting a healthy lifestyle and providing health information.[3-5]

An excessive attachment to social media, characterized by a persistent desire to be online, driven by uncontrollable motivations, and negatively affecting other significant areas of life, is regarded as social addiction.[6] Women's desire to research may increase, as there may be many different and intriguing topics, especially for those who are pregnant for the first time. During pregnancy, expectant mothers often turn to these platforms to research concerns regarding their health and that of their babies, considering the experiences and advice of others. While social media usage can help meet the "information needs" of pregnant women, the need for reassurance about their pregnancy may lead to online behaviors and searches that result in stress. Influenced by social media, pregnant women may develop unrealistic expectations about how they should feel or what they should do, leading to feelings of guilt and self-criticism, which in turn can cause stress. This stress may also negatively impact prenatal attachment.[7]

Social media and mobile applications have become highly prevalent sources of health information among pregnant women. Social media also offers the advantage of enabling interaction and discussion with healthcare professionals. Studies have shown that the most common type of posts made by pregnant women on social media is announcing their pregnancy. They also share content related to pregnancy symptoms, the pregnancy process, and preparation for childbirth.[8,9] The most influential reasons for sharing among pregnant women are to share their excitement and to seek advice. However, some pregnant women feel compelled to share content, such as pregnancy announcements, due to the expectations of others, even when they do not wish to do so, which can lead to stress and anxiety.[9] One study observed that women were negatively impacted by social media in the postpartum period. The individuals featured in birth videos and photos shared on social media (such as friends or celebrities) often appear well-groomed, healthy, and happy, which can create pressure among pregnant women to look good. Discrepancies between their own birth experiences and the posts they see on social media can lead to disappointment, causing them to remember their births negatively. The study concluded that social media posts about childbirth do not reflect reality and can lead to unrealistic expectations.[10] Prenatal attachment is also influenced by social media use during pregnancy.[9]

Despite the significant role that social media plays in the lives of pregnant women today, there is insufficient information in the literature on how social media is perceived, valued, and used by pregnant women, as well as on their social media addiction, fear of missing out (FoMO), and the impact of these factors on pregnancy stress and prenatal attachment. In light of this information, the aim of this study is to investigate the impact of social media addiction on pregnancy stress and prenatal attachment.

Research Questions

-What are the levels of social media addiction and fear of missing out (FoMO) among pregnant women?
-Is there any relationship between the levels of social media addiction and pregnancy stress and prenatal attachment among pregnant women?
-Is there any relationship between the levels of FoMO and pregnancy stress and prenatal attachment among pregnant women?.

Methods

Design and participants

We conducted a cross-sectional and correlational study on a convenience sample of pregnant women. The study was carried out between November 2023 and April 2024 at the Pregnancy School unit within a hospital. The study population consisted of all pregnant women who attended the Pregnancy School during the specified dates, while the sample included 277 pregnant women who met the inclusion criteria and agreed to participate in the study. The hospital where the study was conducted is a single education and research hospital located in a city

center. The population served here is culturally diverse. The hospital's Pregnancy School actively serves all pregnant women and is located in an easily accessible area on the ground floor of the hospital. All pregnant women who wish to do so are provided group and individual training by a midwife working in this unit. Before the study was conducted, cooperation was established with the midwife working here. Particularly on the days when group training was held, the eligibility criteria for the study were evaluated, and women who were eligible were informed about the study and invited to participate in the study. After obtaining written consent from women who agreed to participate in the study, the researcher filled out the questionnaire using the face-to-face interview technique. The adequacy of the sample size and the power of the study were determined using the G*Power 3 software program. In our study, with a total sample size of 277, a power analysis based on the highest correlation value of r=-0.35 determined that the study had a power of 99% with a 5% margin of error (α=0.05).

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The study included pregnant women who were 18 years or older, primiparous or multiparous, had at least one social media account and actively used social media, owned a smartphone, were capable of reading and understanding Turkish, and were willing to participate in the study. Pregnant women diagnosed with any high-risk pregnancy or those with psychiatric disorders requiring medication were excluded from the study.

Data collection tools

Face-to-face interviews were conducted with pregnant women who met the inclusion criteria. The purpose of the study was explained to the participants, and data collection commenced after obtaining their consent.

Demographic Information Form: This form consists of questions regarding socio-demographic and obstetric characteristics. It includes questions about the participant's age, educational status, employment status, family type, income level, pregnancy desirability, and social media usage.

Social Media Addiction Scale-Adult Form (SMAS-AF): The scale, developed by Şahin and Yağcı (2017) and validated for reliability, is a 20-item, 5-point Likert-type scale designed to assess social media addiction. It comprises two subscales: Virtual Tolerance (items 1-11) and Virtual Communication (items 12-20). Items 5 and 11 are reverse-coded. The scale's total possible score ranges from 20 to 100, with higher scores indicating a higher likelihood of social media addiction.[12] In this study, Cronbach's alpha coefficients for the total scale and its subscales, Virtual Tolerance and Virtual Communication, were 0.83, 0.70, and 0.79, respectively.

Fear of Missing Out Scale (FoMO): Developed by Zhang *et al*. (2020)[13] and validated for Turkish reliability by Çelik and Özkara (2022), this scale consists of two factors: personal FoMO (five items) and social FoMO (four items), with a total of nine items. It is a 7-point Likert-type scale, with total scores ranging from 9 to 63. The Cronbach's alpha value for the personal FoMO factor is 0.86, while for social FoMO, it is 0.92.[14] In our study, the Cronbach's alpha coefficients for the total scale and its subscales, personal FoMO and social FoMO, were 0.91, 0.88, and 0.87, respectively.

Pregnancy Stress Rating Scale (PSRS): This scale, developed to measure perceived stress during pregnancy, was validated for Turkish reliability by Aksoy *et al*. (2019). The scale has a high reliability with a Cronbach's alpha coefficient of 0.94. It consists of positively worded items rated on a 5-point Likert scale. The total score ranges from 0 to 144, with higher scores indicating a higher

perception of prenatal stress.[15] In this study, the scale's Cronbach's alpha coefficient was calculated as 0.96.

The Prenatal Attachment Inventory (PAI): This 21-item scale was developed to assess the thoughts, feelings, and conditions experienced by women during pregnancy and to measure their level of attachment to their baby during the prenatal period.[16] The Turkish validity and reliability study was conducted by Dereli Yılmaz and Kızılkaya Beji (2013). It is a 4-point Likert-type scale, with scores ranging from 21 to 84. Higher scores indicate a stronger attachment to the baby. In the study by Dereli Yılmaz and Kızılkaya Beji (2013), Cronbach's alpha reliability coefficient was found to be 0.84.[17] In the current study, the Cronbach's alpha coefficient was calculated as 0.89.

Data analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 25.0. Descriptive statistics were presented as percentages for categorical variables and as means and standard deviations for numerical variables. To determine the appropriate statistical methods for the study, the Shapiro–Wilk normality test, along with skewness and kurtosis values, was employed to assess whether the scale scores followed a normal distribution. The results indicated that the data did not follow a normal distribution. Spearman correlation analysis was used to evaluate the relationships between the total mean scores of the SMAS-AF and FoMO with the PSRS and PAI. The significance level for the findings was assessed within a 95% confidence interval, with a significance threshold of $p<0.05$.

Ethical considerations

Ethical approval for the study was obtained from the relevant institution's ethics committee (Date: 20.06.2023, Number: 06-2023/18), and permission to conduct the study was granted by the associated hospital. Additionally, permission to use the scales was obtained via email from the developers. All participants were informed about the study's purpose and signed an informed consent form before participation.

Results

The mean age of the pregnant women who participated in the study was 28.84±5.21 years. It was found that 37.9% (n=105) of the women had graduated from high school, 36.5% (n=101) were employed, and 37.5% (n=104) of their spouses had also graduated from high school. Additionally, 40.8% of the women were in their third trimester of pregnancy, and 12.3% of the pregnancies were unplanned (Table 1).

Table 1: Socio-demographic and obstetric characteristics of the pregnant women (n=277)

Characteristics	**x̄**	**SD**
Age	28.84	5.21
	n	**%**
Education Level		
Primary School	17	6.1
Secondary School	70	25.3
High School	105	37.9
University and Above	85	30.7
Spouse's Education Level		
Primary School	6	2.2
Secondary School	72	26.0
High School	104	37.5
University and Above	95	34.3
Employment Status		
Yes	101	36.5
No	176	63.5
Income Status		
Income less than expenses	62	22.4
Income equal to expenses	171	61.7
Income more than expenses	44	15.9
Family Type		
Nuclear Family	263	94.9
Extended Family	14	5.1
Gestational Week		
1st Trimester	76	27.4
2nd Trimester	88	31.8
3rd Trimester	113	40.8
Pregnancy Planning		
Yes	243	87.7
No	34	12.3
Stillbirth		
Yes	22	7.9
No	255	92.1
Miscarriage/Curettage		
Yes	82	29.6
No	195	70.4

Note: x̄: Mean, SD: Standard deviation.

Table 2: Usage patterns and characteristics of social media sites among pregnant women

Characteristics	x̄	SD
Frequency of social media site usage (hours/day)	2.17	1.32
	n	**%**
Sharing problems on social media sites		
Yes	22	7.9
No	255	92.1
Commenting on content on social media sites		
Yes	50	18.1
No	227	81.9
Most frequently communicated individuals on social media		
Relatives	78	28.2
Friends	193	69.7
Unknown individuals	6	2.2
Meeting individuals from social media in person		
Yes	40	14.4
No	237	85.6
Frequency of using social media platforms*		
Facebook	122	44.0
Instagram	219	79.1
Twitter (X)	51	18.4
Linkedin	24	8.7
Whatsapp	251	90.6
TikTok	85	30.7
Youtube	137	49.5
Use of pregnancy-related social media sites		
Yes	206	74.4
No	71	25.6
Purpose of using social media during pregnancy*		
Obtaining information about pregnancy	167	60.3
Chatting about pregnancy	29	10.5
Sharing experiences with other pregnant women	72	26.0
Pregnancy shopping	123	44.4
Obtaining information about childbirth	129	46.6
Checking social media accounts before sleep		
Yes	159	57.4
No	118	42.6

Note: x̄: Mean, SD: Standard Deviation, *The n value is not evaluated based on 100%.

When evaluating the frequency of social media site usage among pregnant women, it was determined that they spend an average of 2.17±1.32 hours per day on these platforms. It was found that social media sites are used for sharing problems in 7.9% of cases, commenting on content in 18.1% of cases, and communicating with friends in 69.7% of cases.

The majority of pregnant women primarily used 'WhatsApp' (n=251; 90.6%) and 'Instagram' (n=216; 79.1%). When the purpose of using social media during pregnancy was questioned, obtaining information about pregnancy (n=167, 60.3%), shopping for pregnancy-related items (n=123, 44.4%), and gaining information about childbirth (n=129, 46.6%) were among the top priorities. It was also determined that 57.4% (n=159) of the pregnant women checked their social media accounts before going to sleep (Table 2).The mean total score of the SMAS-AF among the pregnant women who participated in the study was found to be 40.56±9.82, with a mean score of 24.19±5.87 for the 'Virtual Tolerance' subscale and 16.36±5.12 for the 'Virtual Communication' subscale. The mean total and subscale scores for FoMO were as follows: 14.68±7.82 (total), 8.62±5.30 (Personal FoMO), and 6.05±3.16 (Social FoMO) (Table 3).

Table 3: Mean and median distributions of the social media addiction scale-adult form (SMAS-AF) and the fear of missing out scale (FOMO) subscale and total scores among pregnant women (n=277)

	Mean±SD*	Median (Minimum-Maximum)
SMAS-AF		
Virtual Tolerance Subscale	24.19±5.87	24.00(13.00-44.00)
Virtual Communication Subscale	16.36±5.12	16.00(9.00-34.00)
Total	40.56±9.82	39.00(22.00-70.00)
FoMO		
Personal FoMO Subscale	8.62±5.30	7.00(3.00-32.00)
Social FoMO Subscale	6.05±3.16	4.00(3.00-25.00)
Total	14.68±7.82	12.00(6.00-57.00)

* SD: Standard Deviation

Table 4: Correlation between the social media addiction scale-adult form (SMAS-AF) and the meantotal scores of the pregnancy stress rating scale (PSRS) and the prenatal attachment ınventory (PAI) among pregnant women (n=277)

	SMAS-AF	**SMAS-AF** Virtual Tolerance Subscale	**SMAS-AF** Virtual Communication Subscale
Pregnancy Stress Rating Scale (PSRS)	r*=0.32, p=0.000**	r=0.29, p=0.000**	r=0.27, p=0.000**
Prenatal Attachment Inventory (PAI)	r=-0.03, p=0.529	r=-0.00, p=0.880	r=-0.07, p=0.209

*r= Spearman correlation test, **p<0.05

Table 5: Correlation between the fear of missing out scale (FOMO) and the mean total scores of the pregnancy stress rating scale (PSRS) and the prenatal attachment ınventory (PAI) among pregnant women (n=277)

	FoMO	**Personal FoMO Subscale**	**Social FoMO Subscale**
Pregnancy Stress Rating Scale (PSRS)	r*=0.16, p=0.007**	r=0.22, p=0.000**	r=0.05, p=0.416
Prenatal Attachment Inventory (PAI)	r=-0.25, p=0.000**	r=-0.19, p=0.001**	r=-0.35, p=0.000***

*r= Spearman correlation test, **p<0.05

A statistically significant positive correlation was found between the SMAS-AF total score (r=0.32, p=0.000) and its subscale scores (Virtual Tolerance subscale: r=0.29, p=0.000; Virtual Communication subscale: r=0.27, p=0.000)
with the PSRS. Additionally, no significant correlation was found between the SMAS-AF and the PAI (Table 4).
A statistically significant positive correlation was found between the FoMO total score (r=0.16, p=0.007) and the Social FoMO subscale score (r=0.22, p=0.000) with the PSRS. Additionally, a statistically significant negative correlation was identified between the FoMO total score (r=-0.25, p=0.000) and its subscale scores (Personal FoMO subscale: r=-0.19, p=0.001 and Social FoMO subscale: r=-0.35, p=0.000) with the PAI (Table 5).

Discussion

This cross-sectional study was conducted with 277 pregnant women to examine the impact of social media addiction on pregnancy stress and prenatal attachment. The study provided essential and up-to-date insights into social media usage, addiction levels among pregnant women, and the relationship of these factors with pregnancy stress and prenatal attachment.

A study conducted in China found that pregnant women use social media more for obtaining information than for sharing content[8], while a study in the United States indicated that the majority use it for questions and advice related to pregnancy and parenting.[2] Another study in Turkey revealed that pregnant women use social media mainly to obtain information about childbirth.[18] In our study, similar to the literature, it was found that the majority of pregnant women used social media to gain information about their pregnancies, and nearly half used it to obtain information about childbirth. Based on misleading or contradictory information on the internet, pregnant women may face the risk of making incorrect decisions regarding their pregnancy and childbirth. [18-20] It is crucial for healthcare professionals to be aware of how information obtained from the internet affects women and to take a more active role on social media.
The study revealed that the mean total score of the SMAS-AF was 40.56±9.82. The mean scores of the SMAS-AF in different studies were found to be 40.35±11.33, 51.02±12.6, 41.04±11.93, and 46.28±12.58, respectively.[21-24] The results of this study align with the existing literature, indicating that interest in social media is consistent across different groups. Al Ghadeer *et al*. (2021), using a

different measurement tool, similarly found that pregnant women had a moderate level of social media addiction.[7] In contrast, Bağrıcı Bozan and Cangöl (2023) revealed that pregnant women had a high social media addiction score (65.58).[25] A meta-analysis by Zhang *et al*. (2023) involving 85 studies observed a strong positive correlation between fear of missing out and mobile phone addiction.[26] It was thought that FoMO, which views the absence of social media as a significant deficiency[14], may have influenced the moderate level of social media addiction among pregnant women.

A notable finding of the study was that both social media addiction and the level of fear of missing out increased pregnancy stress. Studies have pointed out that an increase in social media usage can lead to a higher level of fear of missing ou.t[27-29] It has been reported that pregnant women constantly seek information on topics such as protecting their health, having a healthy childbirth, and adapting to parenthood, leading them to turn to the internet, which they perceive as more accessible and convenient than consulting healthcare professionals.[30,31] A study examining websites on nutrition, exercise, and sleep during pregnancy found that the vast majority of sites contained information that did not comply with current evidence-based guidelines.[32] In the study by Serçekuş *et al*. (2021), it was determined that some pregnant women experienced increased fear of childbirth due to the information they accessed on the internet.[18] These results indicate that social media plays an important role in the lives of pregnant women today, particularly as a source of information, and that the pregnancy and childbirth process can be influenced by it. Thus, it is essential for healthcare professionals to educate pregnant women about the advantages and disadvantages of internet and social media sources, which quickly and easily meet their information needs. Additionally, they should recommend appropriate websites to ensure the effective use of social media as an information source during pregnancy.

Prenatal attachment is influenced by social media use during pregnancy. The study by Şanlı and Aypar Akbağ (2022) demonstrated that prenatal attachment decreased as stress levels during pregnancy increased.[33] In our study, it was observed that as the fear of missing out increased, prenatal attachment decreased. Pregnant women experiencing fear of missing out on social media-related developments may have found it difficult to focus on their babies due to the stress they experienced. It has been shown that pregnant women who share their pregnancy-related experiences frequently and in multiple groups have higher levels of prenatal attachment. Women use social media platforms during pregnancy for supportive and informative purposes, such as sharing their excitement, including the unborn child in the family unit, and validating their maternal roles.[9,34] This engagement leads them to think about their unborn child for longer periods and develop stronger feelings towards them. Based on the results of these studies, pregnant women with a fear of missing out may not have been able to use social media platforms as they desired during their pregnancies, which could naturally lead to lower levels of prenatal attachment.

Limitations

The study is limited to pregnant women wh visited a single center during a specific period. Additionally, the data obtained is limited to the responses given by pregnant women to the survey questions

Conclusion

The study concluded that the majority of pregnant women use social media to obtain information about their pregnancy and childbirth, and their social media addiction was found to be at a moderate level. It was observed that as social media addiction and fear of missing out increased, pregnancy stress also increased, while no relationship was found between social media addiction and prenatal attachment. However, it was observed that as the fear of missing out increased during pregnancy, prenatal attachment decreased. With the increase in internet usage, social media has become a frequently used tool by pregnant women, especially for obtaining information. The presence of non-scientific, incomplete, or incorrect information in this area can negatively impact the pregnancy process and childbirth, leading to stress

for women and adversely affecting the health of both the mother and the baby. Therefore, it is essential to identify the negative effects experienced by pregnant women addicted to social media early and take preventive measures. Expanding prenatal health services, increasing the number of healthcare professionals who provide easily accessible education and follow-up services to pregnant women, and creating a preventive and supportive environment within healthcare services for social media use during pregnancy are necessary. Additionally, more studies are needed to understand how pregnant women are affected by social media and internet usage.

Competing interests

The authors report no actual or potential conflicts of interest.

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Author contributions

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