

## REVIEW ARTICLE

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# Unpacking the Influence: Social Media's Impact on Maternal Attachment and Anxiety: A Scoping Review

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## Abstract

The scoping review explores the multifaceted influence of social media on maternal attachment and anxiety, crucial components of maternal mental health and child development. Maternal attachment, defined as the emotional bond between mother and child, and maternal anxiety, encompassing stress related to parenting responsibilities, are examined in light of contemporary digital media use. Ten studies included in this review encompassing various research methodologies—quantitative, qualitative, longitudinal, and experimental—were systematically reviewed. Findings highlight social media's dual role: while it provides valuable support and resources, it also poses risks by potentially exacerbating maternal anxiety and influencing attachment patterns. Notably, digital platforms facilitate social support networks and information exchange among mothers, yet studies reveal nuanced impacts on attachment dynamics and anxiety levels. Geographically diverse studies underscore global relevance, though language bias limits inclusivity. This synthesis underscores the need for nuanced, culturally sensitive research to guide interventions promoting healthy maternal well-being amidst digital media use.

**Keywords:** Maternal attachment; Social media; Anxiety

## 1 Background

Maternal attachment and maternal anxiety are crucial aspects of a mother's mental health and well-being. Maternal attachment refers to the emotional bond that develops between a mother and her child, while maternal anxiety encompasses the stress and worry experienced by mothers regarding their roles and responsibilities.<sup>1</sup> The prolifer-

ation of social media has introduced new dimensions to these experiences, offering both support and challenges.<sup>2</sup> This review seeks to elucidate how social media influences these maternal aspects, drawing on the existing body of research. Maternal attachment is foundational for a child's development, influencing their emotional, social, and cognitive growth. Secure attachment fosters a sense of safety and stability, which is crucial for healthy

development.<sup>3</sup> It is a way of communication between the mother and the newborn and is essential for the cognitive and neurological growth and development of the baby.<sup>4</sup> Several hormonal changes occur that help the mother and the newborn with social and emotional development.<sup>5</sup>

Conversely, maternal anxiety can hinder a mother's ability to provide consistent and responsive care, potentially leading to insecure attachment patterns.<sup>6</sup> The advent of social media presents a unique context within which these dynamics unfold, warranting a comprehensive exploration. Several complications are faced by the postnatal mother in nurturing the newborn because of maternal anxiety.<sup>7</sup> It has been discovered that the study helps the mother, and the babies achieve emotional balance and reduce stress. There is potential to increase the mother's level of attachment to her newborn.<sup>8</sup>

Social media can offer valuable support and resources for mothers, it also poses risks in terms of exacerbating anxiety and potentially impacting maternal attachment.<sup>9</sup> Understanding these dynamics is crucial for promoting healthy maternal well-being in the digital age. Access to online parenting resources and support groups can help mothers feel more informed and empowered, potentially reducing anxiety about childcare and parenting challenges.<sup>6</sup> There is an urgent need to understand the impact of media use during the postnatal period. Social media can facilitate social support networks for mothers, providing opportunities for connection with other parents, sharing experiences, and seeking advice.<sup>10</sup> This can contribute positively to maternal attachment by reducing feelings of isolation and enhancing emotional support.<sup>11</sup>

The main objective behind this scoping review is to identify and examine the impact of social media on maternal attachment and anxiety, focusing on how these dimensions of maternal mental health and child development are influenced by digital media use. This scoping review is crucial due to the widespread impact of social media on maternal mental health, specifically its effects on maternal attachment and anxiety. By synthesizing existing research, the review will clarify the dual nature of social media's influence, identify gaps in the literature, and guide the development of evidence-based recommendations and interventions to support maternal well-being in the digital age.

## 2 Method

The current systematic review followed a five-stage methodological framework which includes (1) identifying the research question, (2) identifying the relevant studies, (3) selecting the studies according to inclusion criteria, (4) charting and interpreting data, and (5) summarizing and reporting of results. In addition, backward citation tracking on the eligible studies and manual search were applied to identify additional sources of information. Since the purpose of this

review is to map the available evidence on the impact of social media on maternal attachment and maternal anxiety, our research question was broadly tailored as "What can be the impact of social media on maternal attachment and maternal anxiety"

### 2.1 Search Strategy

Using Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) guidelines, review authors searched and identified all relevant studies reporting on the topic by searching the databases (PubMed, Scopus and Google Scholar). The comprehensive search strategy by combining these terms using Boolean operators (AND, OR) was developed based on keywords such as for social media- "social media", "digital media", "online platforms", "social networks", maternal attachment- "maternal attachment", "mother-child bond", "parental attachment", "mother-infant attachment", maternal anxiety- "maternal anxiety", "parental anxiety", "postnatal anxiety", "postpartum anxiety", Combination Terms- "social media AND maternal attachment", "social media AND maternal anxiety", "digital media AND mother-child interaction", "social networks AND postnatal anxiety" and Additional Considerations- Interventions: "Social media intervention", Resources: "online parenting resources".

The articles were included if they met the criteria and were observational, quantitative, qualitative, and mixed-method studies, and they must describe at least one of these components including social media, maternal attachment, and maternal anxiety.

The articles written in the English language were included due to the language barrier. The papers and articles published from 2015 to 2024 are included in the review. To reduce reviewer bias, titles and abstracts are all identified and recorded.

### 2.2 Study Screening and Selection

The entire texts of possibly pertinent studies were then studied and independently screened according to the eligibility requirements. All pertinent studies that met the requirements for eligibility were arranged.

After screening the titles and abstracts, a full-text review was done for 18 reviews. Based on further analyses of the full text reviewed article 8 articles were excluded from the final analysis due to lack of inclusion criteria. Finally, 10 articles met the inclusion criteria and were selected for data extraction.

### 2.3 Charting And Data Extraction

The following data was taken out of every study included: Author, Title, Year of Publication, University of Study Area, Study Design, Sample Size, Study year and summary of key

Author, year of publication	Study location	Study design	Study sample	Study title	Summary finding
Sarah M. Coyne, Jane Shawcroft et.al., 8 <sup>th</sup> October 2021 <sup>12</sup>	worldwide	Longitudinal study	249 families in project MEDIA (249 mothers, 5 fathers)	Digital distraction or accessible aid? Parental media use during feeding and parent-infant attachment, dysfunction, and relationship quality	The study findings showed that the media could be found useful to help parents cope with the difficulties of parenting infants.
J. Slomian PhD student, O, Bruyere PhD, 18 March 2017 <sup>13</sup>	Belgium	Web-based survey	Belgium women had child under 2 years who agreed to participate.	The Internet as a source of information used by women after childbirth to meet their need for information: A web-based survey	349 questionnaires valid for analysis 90.5% of women admitted using the internet to seek information about themselves or their baby. Most frequent reason to find information on their own. Women believed useful information (82.7 %) but gave 5.3 out of 10 to the information.
Jennifer L. Barkin, Joan R. Bloch et.al., 16 December 2015 <sup>14</sup>	Urban medical center in Rittsburgh	Descriptive qualitative study	31 women who were enrolled in giving birth in the year prior to study	Barriers to Optimal social support in the postpartum period.	More availability of trustworthy childcare. Healthcare providers had relatively frequent access to new mothers prenatally and postnatally.
Linda Linder, Brandon T. McDaniel, 13 August 2022. <sup>15</sup>	Southern California.	Observational study	93 adults and child dining at a casual restraint in Southern California	Moment to moment observation parental media use and parent-child interaction: quality and media multitasking.	68.8% of adults and 51.6% of children were female. M= 11.33, S.D= 3.81, Range = 6-8. 61.3% of parents used little bit doing 20% or more of the 5 minutes intervals. (less overall positivity). 12.9% showed no device used. 2.2% showed some use.
Rhonda C. Boyd, Jordan Price et.al., 17 <sup>th</sup> December 2018 <sup>16</sup>	Africa	Randomized control trial	24 mothers (mean age 26 years, predominantly African American)	Pilot RCT of social media parenting intervention for postpartum mothers with depression symptoms.	Linear regression showed that the social media group had significantly improved parenting competence (83%) and decreased depression severity when compared with in-person group.
Miriam T. Ashford, Susan Ayers et.al., 2 May 2017 <sup>17</sup>	England	A cross-sectional study	114 Women above the age of 18 years within 12 months of postpartum.	Internet in web-based treatments for postpartum anxiety: An exploratory survey.	70% moderate or severe anxiety. 61% of women (interested in web-based postpartum anxiety treatments.
Melissa Smith, Annalise Mitchell et.al., 16 <sup>th</sup> December 2020 <sup>10</sup>	Australia, New Zealand, UK, Poland, the USA and Vietnam	Cross-sectional study.	48 Pregnant women of all gestational age. (M=29,SD=5.26)	The relationship between digital media use during pregnancy, maternal psychological well-being, and maternal-fetal attachment.	There was no evidence of a relationship between digital media use and maternal-fetal attachment (p = .330). Information seeking, emotional support and social support were highly endorsed reasons for digital media use (85.42%, 66.67%, 62.5% respectively).
Hussain AAL, Ghadeer Nihad AAI Kishi et.al., 1 December 2021 <sup>18</sup>	Al- Ahsa, Saudi Arabia	Cross-sectional study	382 pregnant women. Mean age (26.1 ± 10.9 years)	Pregnancy-related anxiety and impact of social media among pregnant women attending Primary health care.	The mean score of pregnancy-related anxiety domain was 10.6 out of 15 for fear of giving birth. social media engagement showed a correlation with anxiety.
Danielle Zayia, Leander Parris et.al., 15 July 2021 <sup>19</sup>		Correlational research design	80 mothers	Social learning in the digital age: Association between technofearance mother-child attachment and child social skills.	The association between mother's ratings of technofearance and attachment to their child and children's rating of attachment was not significant. F (1.79) = 3.24, β= 0.20, p=0.08)

findings and the main result.

## 2.4 Analysis

Thematic analysis was utilized to examine this review. The primary areas identified were maternal attachment, maternal anxiety, social media, child-parent interaction, pregnancy-related anxiety, and parental media use. The prevalence of these themes was extracted, recorded in a spreadsheet, carefully analyzed, and discussed in the results and discussion section.

## 3 Results

Of the 10 studies identified, 3 used a quantitative cross-sectional study design, 1 was a longitudinal study, 1 was a web-based survey, 1 was a descriptive study, 1 was an observational study, 1 randomized control trial was conducted and 1 was a correlational research design. The sample size ranged from 24 to 342 participants. All studies included both male and female participants. The studies included pregnant and postnatal mothers. All studies included in this review were conducted in different areas.

Regarding the main theme of the reviewed studies, a study conducted by Zayia Danielle, Parris Leander *et al.*, 15 July 2021, showed that the association between mother's ratings of technoference and attachment to their child and children's rating of attachment was not significant.  $F(1,79) = 3.24$ ,  $\beta = 0.20$ ,  $p = 0.08$ .

Another study conducted by AAI Hussain, Nihad Ghadeer AAI Kishi *et al.*, 1 December 2021, showed that the mean score of the pregnancy-related anxiety domain was 10.6 out of 15 for fear of giving birth. Social media engagement showed a correlation with anxiety. A study conducted by C. Boyd Rhonda, Price Jordan *et al.*, 17<sup>th</sup> December 2018 Linear regression showed that the social media group had significantly improved parenting competence (83%) and decreased depression severity when compared with the in-person group. In a study conducted by Smith Melissa, S. Mitchell Annaleise S. Mitchell *et al.*, 16<sup>th</sup> December 2020, Information seeking, emotional support, and social support were highly endorsed reasons for digital media use (85.42%, 66.67%, and 62.5% respectively) reducing maternal anxiety. Another study showed that the women admitted using the internet to seek information about themselves or their babies. The most frequent reason to find information on their own. Women believed in useful information 61% of women (were interested in web-based postpartum anxiety treatments). Another study showed no evidence of a relationship between digital media use and maternal-fetal attachment ( $p = .330$ ).

## 4 Discussion

The review of 10 studies on the themes of maternal attachment, anxiety, social media, and child-parent interactions revealed a diverse array of research methodologies and findings. Among the studies reviewed, quantitative cross-sectional designs were the most common, used in three studies. These designs are valuable for capturing a snapshot of relationships and associations between variables at a specific point in time. One study employed a longitudinal design, allowing for the examination of changes over time in parent-child relationships and media use patterns. This longitudinal approach provides insights into developmental trajectories and the long-term effects of digital media on family dynamics.

Additionally, a web-based survey and a descriptive study contributed insights into participants' behaviors and perceptions related to digital media use and maternal well-being. An observational study provided observational data on parent-child interactions in the context of media use, offering nuanced insights into real-life behaviors. A randomized control trial highlighted the effectiveness of social media-based interventions in improving parenting competence and reducing depression severity among postpartum mothers, compared to traditional in-person methods.

Regarding sample sizes, studies ranged from smaller samples of 24 participants to larger cohorts of 342 participants, reflecting variability in study scope and generalizability. The inclusion of both male and female participants across all studies ensured comprehensive insights into parental roles and dynamics.

Geographically, the studies were conducted in various locations, underscoring the global relevance of digital media use and its impacts on maternal and child outcomes. These diverse settings provide a broader understanding of cultural influences on digital media behaviors and their effects on family functioning.

Specific findings from individual studies highlighted significant correlations between social media engagement and maternal anxiety, as well as the role of digital media in providing informational and emotional support to mothers. Conversely, some studies found no significant relationship between digital media use and maternal-fetal attachment, suggesting nuanced effects that warrant further investigation.

## 5 Limitations

While an extensive search was conducted for this scoping review, the exclusion of non-English articles introduces language bias as a limitation. Nevertheless, this review provides a thorough summary of existing evidence regarding the effects of social media use on maternal attachment and anxiety. This synthesis aims to elucidate both the beneficial and detrimental impacts of social media on parental interaction and attachment dynamics.

## 6 Conclusion

While digital media offers avenues for support and information-seeking among mothers, its impacts on maternal attachment and anxiety are multifaceted and context-dependent. Future research should continue to explore these complexities across different populations and settings to inform targeted interventions and guidelines for responsible media use in parenting practices.

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