

# Associations Between Internet Addiction, Psychiatric Comorbidity, and Maternal Depression and Anxiety: Potential Underlying Mechanisms [Letter]

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## Dear editor

We are writing to comment on the recent study by Sakamoto et al<sup>1</sup> which we found to be a significant contribution to the field of internet addiction (IA) research. The study sheds light on a compelling association between IA and maternal depression and anxiety, an area that warrants further investigation. As such, we would like to elaborate on some of the possible factors that could be involved in this association. By exploring these mechanisms, we hope to deepen our understanding of the complex relationship between maternal mental health and IA.

First, research has demonstrated that mothers experiencing depression or anxiety tend to withdraw from their parental duties, resulting in negative impacts on their child's development.<sup>2,3</sup> Accordingly, this lack of parental involvement can also increase the risk of internet addiction<sup>4,5</sup> indicating the importance of promoting active parental involvement to prevent negative outcomes.

Second, maternal depression is linked to reduced time spent closely supervising children.<sup>2</sup> Some studies have shown that active parental involvement, specifically parental mediation, can have a significant impact on reducing the risk of internet addiction<sup>6-9</sup> and negative online experiences in children and adolescents<sup>10</sup> emphasizing the importance of active parental involvement in reducing this risk of IA.

Third, children of mothers with depression often struggle with social competence and have challenges in social situations and relationships,<sup>2</sup> which may influence a child's preference for online interactions and their risk for internet addiction.<sup>11,12</sup> Furthermore, excessive use of the internet may serve as a means for avoiding challenging domestic situations and the allure of virtual relationships can also contribute to the development of internet addiction.<sup>5</sup> This reveals the role of the internet as a coping mechanism and a means of temporary escape from stress or negative emotions.

Fourth, children of mothers with depression are at a higher risk of developing mood disorders themselves, as well as exhibiting externalizing behaviors.<sup>2</sup> Individuals with IA often experience comorbidity with depression, anxiety, and impulse-control disorders.<sup>13</sup> Consequently, this highlights the need for a comprehensive assessment and treatment plan that addresses all of the individual's mental health issues.

Nonetheless, we would like to draw your attention to a noteworthy observation we made during our examination of the scale used. The 6-Item Kessler Scale (K6) used in this study is a strong predictor of serious mental illness, including clinically significant depression or anxiety.<sup>14</sup> However, the value of the K6 is primarily as a broad screener rather than a specific screener for any one mental disorder.<sup>14</sup> In order to investigate the patterns and associations of specific disorders, we suggest that more specific screening scales should be preferred to the K6 such as the PHQ-9 scale for major depression and GAD-7 scale for anxiety.<sup>15</sup>

Furthermore, IA is a complex phenomenon that encompasses various subtypes, such as gaming addiction or social media addiction. These subtypes may possess distinct characteristics, risk factors, and comorbidities, which may have implications for the assessment and treatment of IA. Therefore, future studies should examine specific subtypes of IA to improve the effectiveness of preventive and therapeutic interventions<sup>16</sup> and focus on developing targeted interventions for specific IA subtypes.

In conclusion, the study by Sakamoto et al is enlightening and provides valuable insights into the association between internet addiction (IA) and maternal depression and anxiety. Maternal depression and anxiety screening and treatment, along with family-based interventions focused on improving parent-child relationships, communication, and understanding, could be a promising direction for treating internet addiction in children and adolescents.<sup>17</sup> This approach could also provide a more detailed guide and evidence on the effectiveness of interventions to reduce internet addiction.

## Disclosure

The authors report no conflicts of interest in this communication.

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