Children’s Medical Complexity and Maternal Health: The Role of Healthcare Experiences

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Background
• Reports suggest an increasing prevalence of children with special health care needs (CSHCN) in the past 20 years due to advancements in medical technology and improved diagnoses of developmental disorders (Burkhart, 2019).
• Medical complexity among CSHCN is classified by two dimensions; degree of functional limitations associated with condition(s) and need for specialized health care services (Geller et al., 2016).
• The excessive burden on family resources (i.e., financial, time) associated with caregiving and coordinating the necessary healthcare services is associated with adverse effects to mothers’ wellbeing (Hickey, 2019).
• Care coordination, family-centered care, and shared decision making are health care experiences associated with adverse effects to mothers’ wellbeing (Hickey, 2019).

Research question 1: Does child medical complexity predict maternal health?
Research question 2: Do healthcare experiences (i.e., care coordination, family centered care, shared decision making) mediate the relationship between child medical complexity and maternal health?
Research question 3: Does insurance type affect the degree to which health care experiences explain the relationship between medical complexity and maternal health?

Methods
We specifically evaluated child race/ethnicity and insurance type as a moderator of the relationship between medical complexity and maternal health as mediated by care coordination, family-centered care, and shared decision-making. The study aims were achieved by answering the following research questions:

Results
• Our results indicate that the health of mothers with children who have complex health conditions is adversely affected by greater medical needs.
• Children’s access to the necessary services and quality of their care has significant influence on child and family outcomes, particularly among CSHCN with greater complexity (Volta et al., 2014).
• Healthcare experiences, including family centered care, shared decision making, and care coordination may reduce the negative impact on maternal health.
• Care coordination is particularly relevant to the health of mothers whose children have public insurance, such as Medicaid.
• Although government-funded insurance policies (e.g., Medicaid) have become a prominent source of healthcare coverage for low-income children with chronic health problems, there continue to be inequities inherent within the program (Perrin et al., 2020).

Discussion
• Our results indicate that the health of mothers with children who have complex health conditions is adversely affected by greater medical needs.
• Children’s access to the necessary services and quality of their care has significant influence on child and family outcomes, particularly among CSHCN with greater complexity (Volta et al., 2014).
• Healthcare experiences, including family centered care, shared decision making, and care coordination may reduce the negative impact on maternal health.
• Care coordination is particularly relevant to the health of mothers whose children have public insurance, such as Medicaid.
• Although government-funded insurance policies (e.g., Medicaid) have become a prominent source of healthcare coverage for low-income children with chronic health problems, there continue to be inequities inherent within the program (Perrin et al., 2020).
• Care coordination is associated with several benefits, including lower unmet health care needs for CSHCN, thereby reducing the associated burden of care for parents (Lindly et al., 2020).

Table 1: Descriptive Statistics and Correlations of Model Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complexity</td>
<td>2.16(1.28)</td>
<td>--</td>
<td>-.13**</td>
<td>-.12**</td>
<td>-.11**</td>
<td>-.15**</td>
<td>-.14**</td>
</tr>
<tr>
<td>CC</td>
<td>5.15(3.59)</td>
<td>--</td>
<td>-.33**</td>
<td>-.38*</td>
<td>.04</td>
<td>-.04</td>
<td>-</td>
</tr>
<tr>
<td>FCC</td>
<td>16.70(5.36)</td>
<td>--</td>
<td>.29**</td>
<td>.20*</td>
<td>.06**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SDM</td>
<td>5.54(5.54)</td>
<td>--</td>
<td>-.20*</td>
<td>-.06**</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Maternal Health</td>
<td>6.16(4.52)</td>
<td>--</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
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</table>

Table 2: Healthcare Experience Mediator Models

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>95% CI</th>
<th>SE</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care coordination</td>
<td>.10**</td>
<td>[.06, .15]</td>
<td>.03</td>
<td>3.13</td>
<td>.001</td>
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<tr>
<td>Shared decision making</td>
<td>.08**</td>
<td>[.05, .11]</td>
<td>.02</td>
<td>4.04</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Figure 1: Conceptual Model of Child Medical Complexity & Maternal Health

Figure 2: Moderated Mediation Model of Care Coordination and Insurance Type

Scan for additional study information and references