

## 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 diagnostics of developmental disorders (Durkin, 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 (Coller 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).
- Health care-related experiences have shown to mitigate the negative health outcomes for parents of CSHCN (McAllister et al., 2018), underscoring the significance of healthcare-related experiences in maternal wellbeing when meeting the complex treatment needs of CSHCN.
- Care coordination, family-centered care, and shared decision making are healthcare experiences 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; Martinez et al., 2018).
- Health inequities disproportionately affect certain groups of CSHCN (e.g., racial/ethnic minorities, insurance), suggesting sociodemographic factors influence association between medical complexity and health care experiences (Yu et al., 2021; Perrin et al., 2020).

## The Present Study

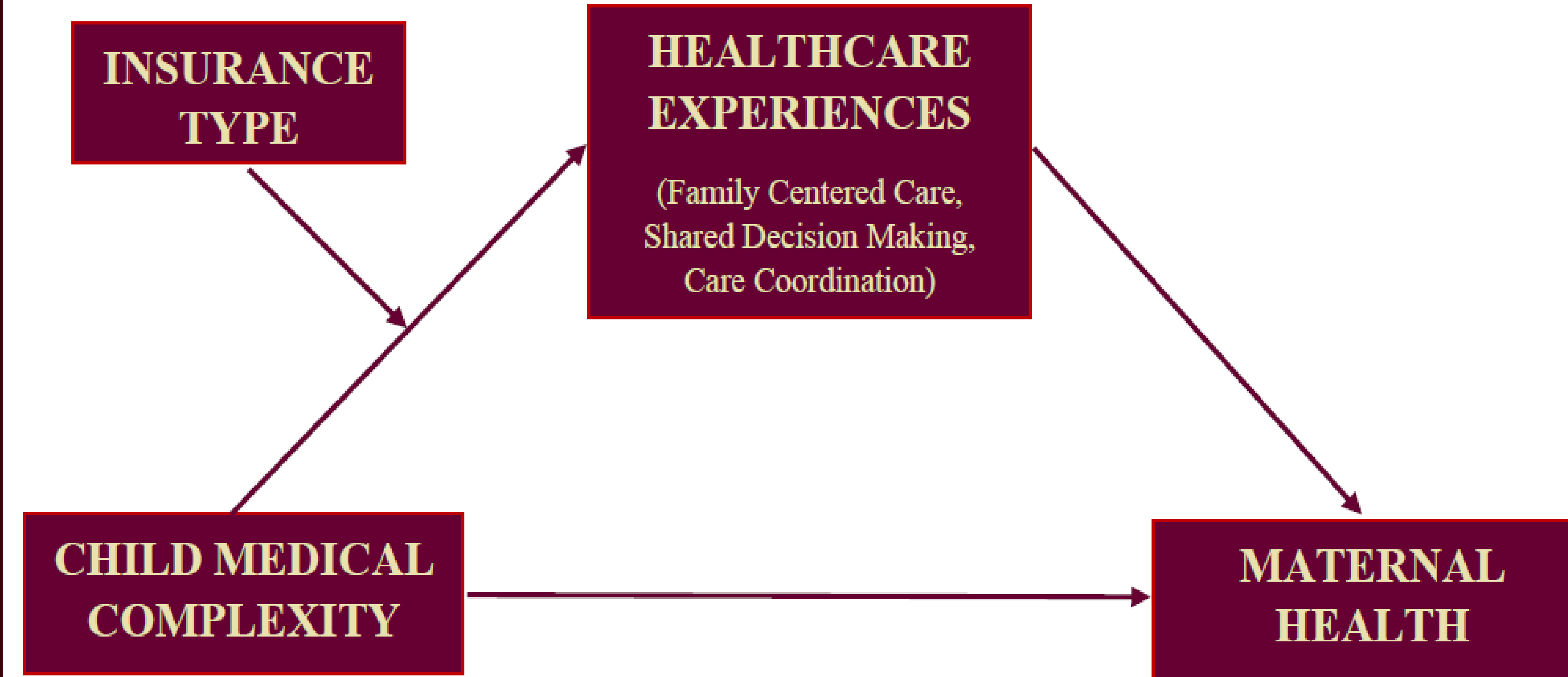
We specifically evaluated child race/ethnicity and insurance type as a moderator of the relationship between medical complexity and maternal health as mediated by care coordination, family-centered care, and shared decision-making. The study aims were achieved by answering the following research questions:

**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?

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



**Table 1: Descriptive Statistics and Correlations of Model Variables**

	M(SD)	1	2	3	4	5	6
1. Complexity	2.16(1.28)	--	-.13**	-.12**	-.11**	-.15**	-.14**
2. CC	5.15(3.59)		--	.33**	.38**	.04**	-.04
3. FCC	16.70(5.36)			--	.29**	.20**	.06**
4. SDM	5.54(5.54)				--	.20**	.08**
5. Maternal Health						--	.24**
6. Insurance (Priv = 1)							--

Note: \*  $p \leq .05$ ; \*\*  $p \leq .01$ ; CC = Care coordination; FCC = Family centered care; SDM = Shared decision making; Priv = Private

**Table 2: Healthcare Experience Mediator Models**

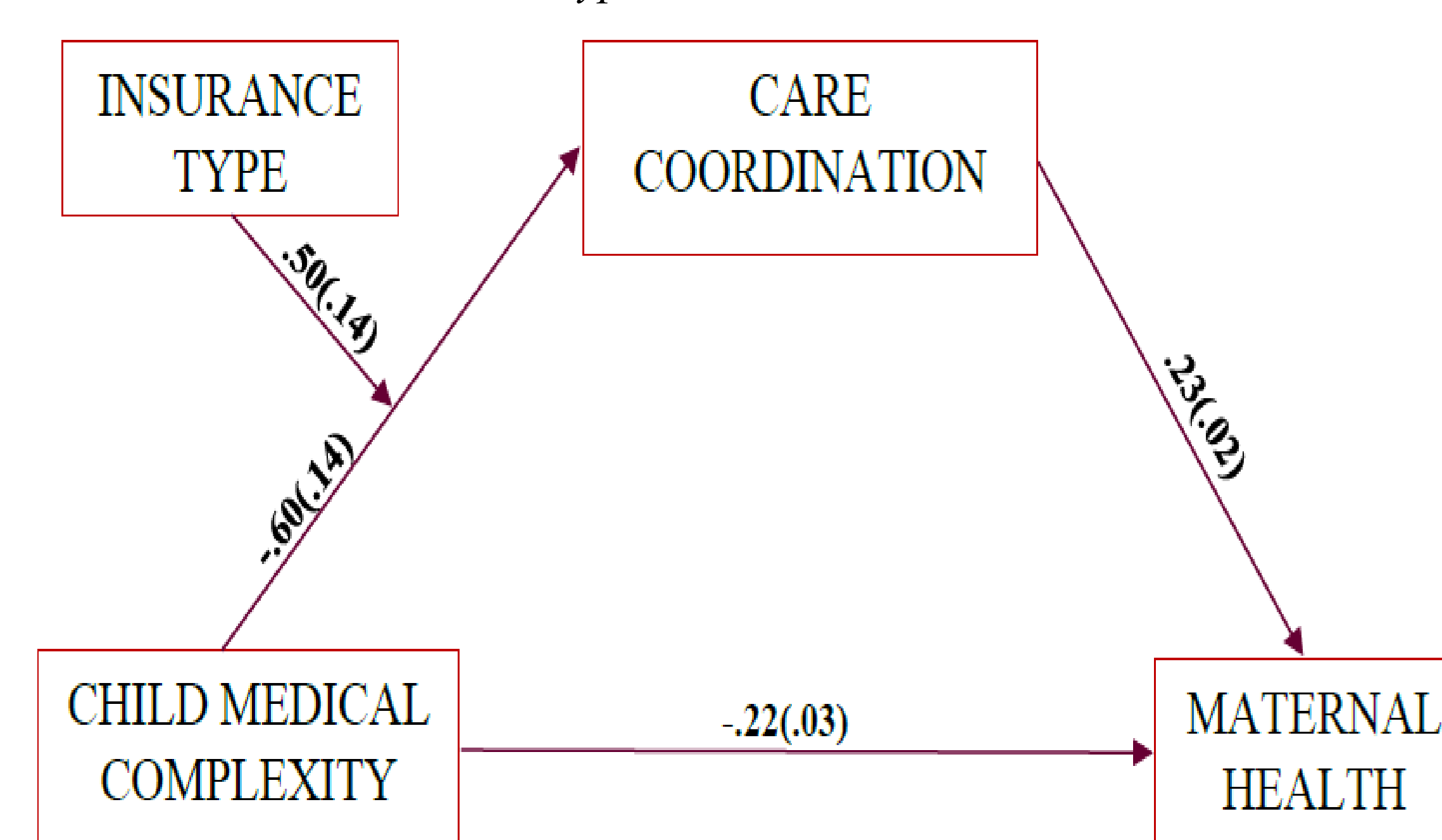
Variable	B	95%CI	SE B	IE	TE
<b>FCC Model</b>					
Comp—Health (path c)	-.16**	[-.18, -.14]	-.11.77	-.03**	-.19**
Comp—FCC (path a)	-.25**	[-.29, -.22]	-.11.65		
FCC—Health (path b)	.12**	[.11, .12]	17.73		
<b>SDM Model</b>					
Comp—Health (path c)	-.17**	[-.19, -.14]	-.12.09	-.03**	-.19**
Comp—SDM (path a)	-.16**	[-.18, -.13]	-.10.34		
SDM—Health (path b)	.16**	[.15, .18]	16.73		
<b>CC Model</b>					
Comp—Health (path c)	-.16**	[-.19, -.13]	-.8.60	-.03*	-.19**
Comp—CC (path a)	-.21**	[-.34, -.08]	-.2.66		
CC—Health (path b)	.13**	[.07, .19]	3.37		

Note: \*\* < .001; \* < .05; IE=Indirect Effect; TE=Total Effect; FCC=Family Centered Care; SDM=Shared Decision Making; CC=Care Coordination

**Sample.** Data were drawn from the 2016-2019 National Survey of Children's Health (NSCH), a cross-sectional survey by the Maternal and Child Health Bureau. The total sample included 9711 children aged 3-17. 52% were male; 83% were White, non-Hispanic, 10% Hispanic, 6% Black, non-Hispanic. 20% had public insurance (e.g., Medicaid) and 80% had private insurance.

**Analyses.** Analyses were conducted to determine whether the indirect effect of health care experiences on CSHCN severity and maternal health vary systematically (i.e., moderated-mediation) as a function of child race/ethnicity or insurance type. We analyzed a first- and second-stage moderation model (Preacher, 2008) using Mplus to determine the degree to which the relationship between CSHCN severity and health care experiences (i.e., first-stage) and the relationship between health care experiences and maternal health (i.e., second-stage) varied by child insurance type. The interaction effects were tested with bootstrapped moderation analyses using 10000 re-samples and estimated bias corrected 95% CIs.

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



Indirect Effect Public Insurance (B=.14, SEB=4.63,  $p < .001$ )  
Indirect Effect Private Insurance (B=.03, SEB=1.01,  $p = .31$ )

## Results

**Research question 1.** Child's medical complexity was a significant predictor of maternal health. ( $b = -.15$ ,  $t(-14.31)$ ,  $p < .001$ ,  $R^2 = .02$ ). Results indicate maternal health decreases with greater child medical complexity.

**Research question 2.** Family centered care, shared decision making, and care coordination had a significant indirect effect on child medical complexity and maternal health (Table 2). Findings suggest each of the healthcare experiences explains a significant amount of the variance in the relationship between child medical complexity and maternal health.

**Research question 3.** There was a significant conditional indirect effect of care coordination on child medical complexity and maternal health according to insurance type (Figure 2). Results identify a distinction between those with private versus public insurance in the degree to which care coordination affects the relationship between child medical complexity and maternal health. When taking insurance type into account, the indirect effect of care coordination was significant for those with public insurance. However, the indirect effect was non-significant for those with private insurance.

## 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 (Vohra 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 for 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 continues 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).

Scan for additional study information and references

