

# INFLUENCE OF PERCEIVED PARENTAL CARE ON ADOLESCENTS LIVING WITH CHRONIC PAIN

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## Abstract

One quarter of adolescents are reportedly living with chronic pain; chronic headaches being the most common physical complaint amongst youth. As part of the foundational microsystem of most individuals, parental and child relationships are generally formative and play key roles in development and may play an especially important role in the lives of adolescents living with chronic pain.

The aim of the current study was to examine the association between perceived parental support, mental illness, and absenteeism in the adolescent chronic headache suffering population.

This study is a secondary analysis examining cross-sectional data collected from the National Longitudinal Study of Adolescent Health (Add Health) conducted in 1994. The current study included participants (N=462) who were adolescents that reported suffering from chronic levels of headaches with a wide variety of demographic backgrounds.

A series of Chi-square tests were conducted and found statistically significant relationships between both perceived maternal and paternal care and participants' mental health and attendance measures; some exhibited a significant relationship up to 16 years after the parental questions were asked.

## Introduction

### Significance of Study

- With an estimated 32 million children and adolescents in the United States being afflicted by at least one chronic health condition, and with studies depicting about 13% of childhood COVID-19 cases experiencing long-term symptoms, it is vital to identify ways to address the mental health concerns of this population
- Individuals who experience long-term pain conditions are more likely to access mental health professionals compared to their counterparts with no chronic pain issues
- With mental health care supports pushed to its limits and 75% of all U.S. counties experiencing shortages of mental health staff, it is vital to find a way to reduce the number of adolescents experiencing mental health concerns

### Research Questions

- What is the impact of a perceived positive maternal or paternal relationship on adolescents experiencing chronic headaches on their mental health?
- What is the impact of perceived paternal or maternal care on the social and school attendance of adolescents experiencing chronic headaches?

### Hypotheses

It is hypothesized that adolescents who perceive having more maternal or paternal support will experience less depression in adolescents and into adulthood, decreased rates of suicidal ideation and reduced suicide attempt rates. It is also hypothesized that perceived parental care will influence attendance rates.

## Literature Review

Negative parental attitudes and interactions with their children were found to be linked to elevated psychiatric symptoms in pediatric patients who suffered from. Additionally, without intervention or assistance in developing healthy coping strategies to manage pain and psychological symptoms, these children are especially likely to experience lifetime mental health disorders and suicidal ideation. A cross-sectional survey completed in Norway in 2015 examined the prevalence of mental health conditions among adolescents with chronic headaches and compared internal and external coping strategies in young people with chronic headaches with and without mental health problems. The study found that adolescents with chronic headaches showed more frequent mental health problems overall (23%) than those without chronic headaches (6%). Several studies have also shown that headaches were associated with elevated rates of suicidal ideation.

## Methods

### Research Design

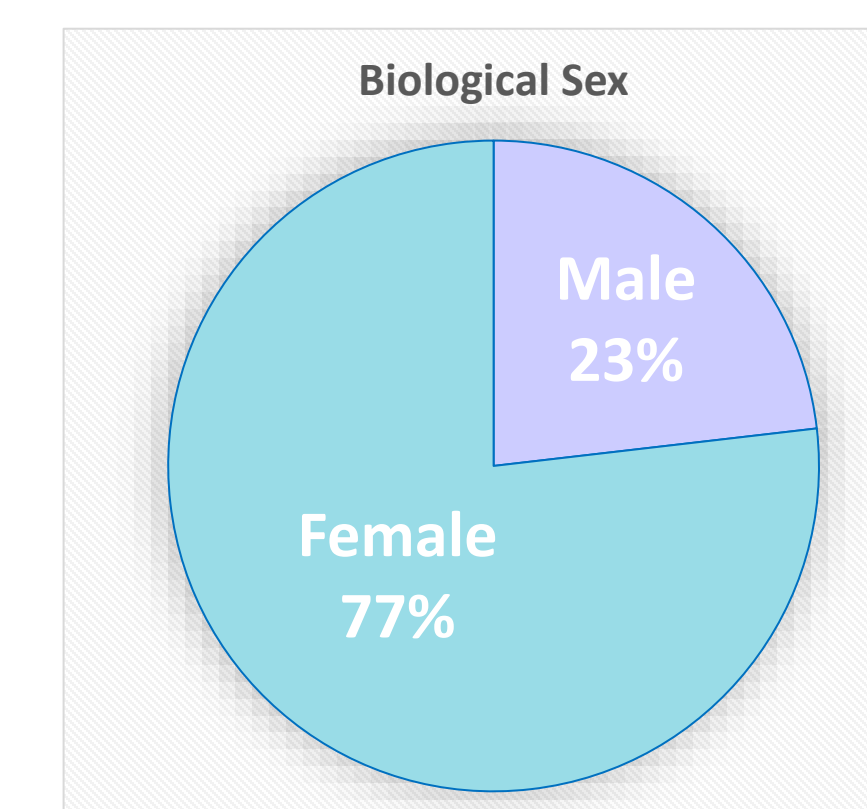
- The current study is a secondary data analysis of general release version of data collected by the National Longitudinal Study of Adolescent to Adult Health (Add Health).
- Wave I included the from self-report data from interviews with 20,745 7th to 12th-grade students (12-19 years old) from across the United States to determine health measures and perceived parental care.
- A data point of the participant's depression rate was also collected from Wave IV about 14 years after the first data was collected.
- Wave IV data was collected from 2008-2009 using in-home interviews where participants completed a survey questionnaire.

### Sample

- The initial sampling frame was gathered using the Quality Education Database.
- The Add Health study used a stratified sampling design to select a sample of 80 high schools.
- The sample was selected by stratifying schools in the sampling frame by gender and grade, then randomly choosing 17 students from each school.
- The core sample created a total sample size of 20,745 for Wave I.
- The current study identified a total of 462 participants who experienced chronic headaches in adolescence.
- Wave 4 data, collected primarily in 2008, was gathered on 381 of the 462 individuals that made up the frequent headache cohort in Wave I.

**Table 1** Sample Characteristics (N=462)

Characteristic	<i>f</i>	<i>%</i>
Age in years	<i>M</i> = 14.93	<i>SD</i> = 1.688
Racial origin		
White	322	70.2
African American	100	21.8
American Indian	18	3.9
Asian	11	2.4
Other	34	7.4
Hispanic	57	12.4

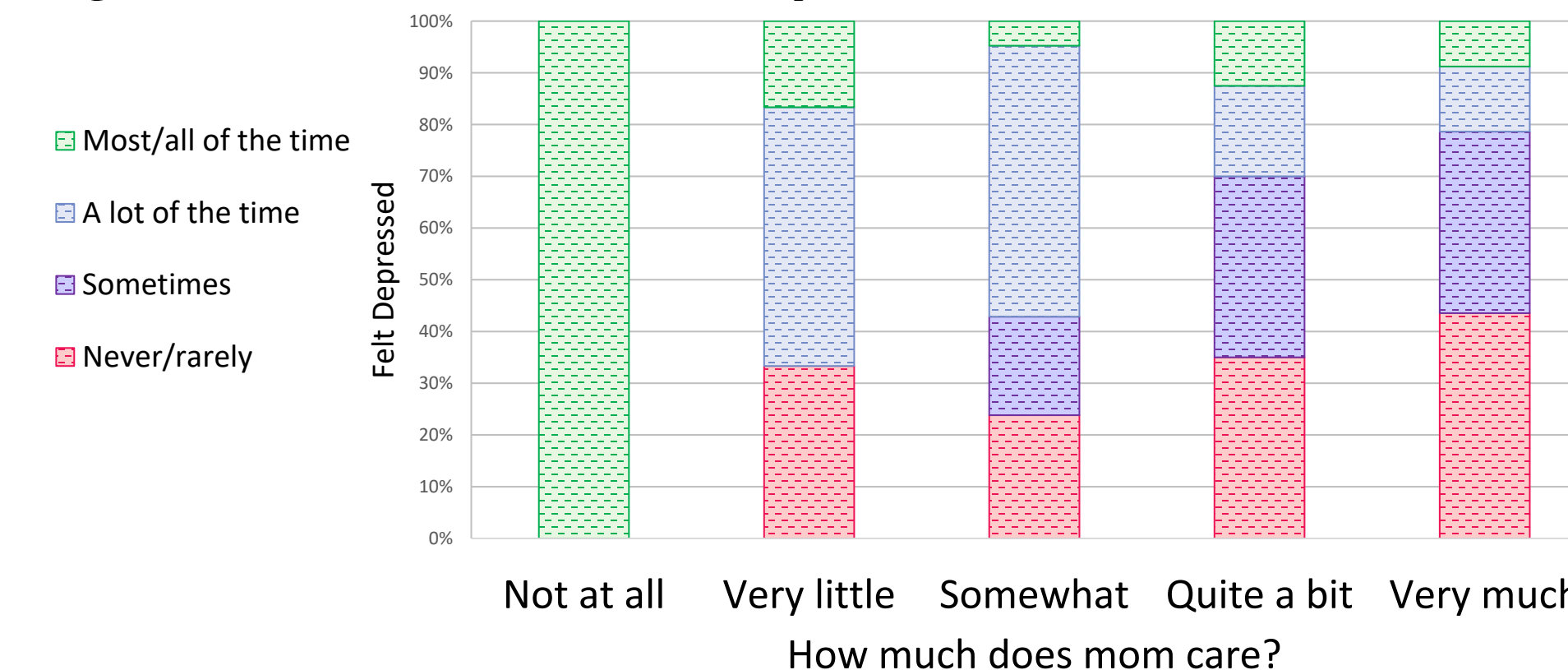


**Figure 1** Sample Biological Sex (N=462)

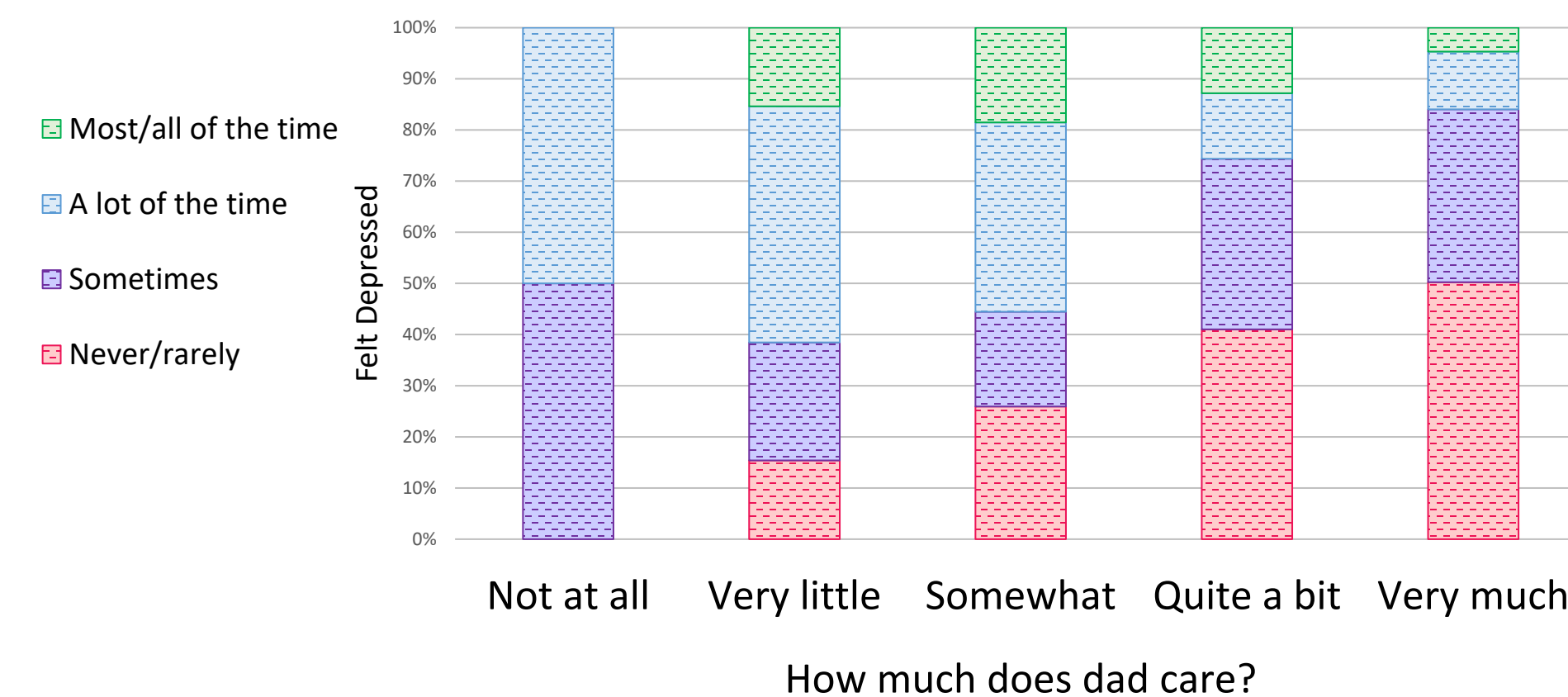
## Results

Results indicate that adolescents perceive receiving high levels of maternal or paternal care experience depression less often and are less likely to perceive others as disliking them. Additionally, the more paternal care the child perceived, the less likely the participant would experience suicidal ideation and the fewer suicide attempts they would make.

**Figure 2** Perceived Maternal Care and Depression

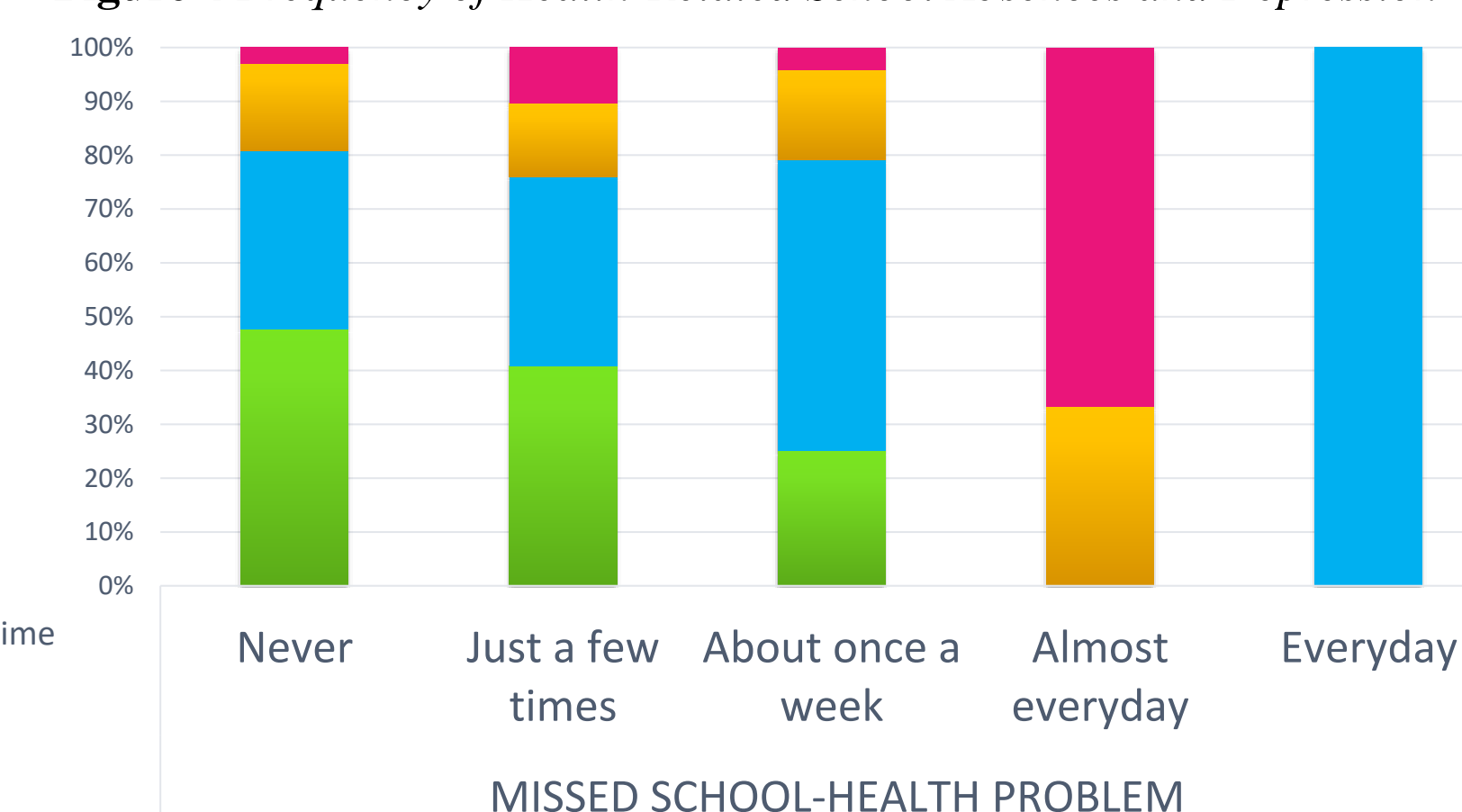


**Figure 3** Perceived Paternal Care and Depression



Lastly, increased perceived maternal care was linked to higher rates of school absences and increased perceived paternal care was correlated to lower rates of social absences.

**Figure 4** Frequency of Health-Related School Absences and Depression



## Conclusion

### Summary of Findings

- The frequency of experiencing depression was more prevalent with less perceived maternal or paternal care. This finding was also found to be consistent in the Wave 4 follow-up, 16 years after the initial assessment, lending to the idea that these perceived parental relationships created impacts that can lead long-term depression.
- Chronic headache sufferers experienced nearly twice as much suicidal ideation as the general surveyed population.
- The more perceived paternal care an adolescent felt, the less likely they were to have serious thoughts about suicide and the fewer attempts they would make.
- Perceived maternal connection appeared to have a positive correlation with frequent absences and perceived paternal care has a negative correlation with the frequency of social absences, unlike leading research which had suggested no correlations.

### Limitations

- One limitation of this study is the focus on a singular pain-related question focused on a seven-day period to determine the sample group who experienced chronic headaches.
- Another important limitation of this study is the effect of potential bias related to the self-reported answer of participants.
- The study utilized self-reports and depended on memory recall leaving room for inaccuracy
- This study also failed to address the limitations of knowing causation versus correlation as it evaluated depressive symptoms and chronic headaches during the same survey.

### Strengths

- The study maintained a large sample size thought Wave 4
- The sample was made up of a largely diverse group of participants with varying demographic backgrounds

## Implications for Future Research and Practice

This study demonstrates how imperative it is to identify and enhance protective factors for this population before lifelong mental health concerns develop. The results of the current study provide implications for future research and development of preventative and interventions in family systems and in community mental health settings to account for the impact of maternal and paternal roles in the prevention of depression and suicide. It highlights the value in future research and development of screening strategies and programs to increase family-oriented mental health treatment within the chronic headache suffering youth population.

Additionally, understanding the perception of the relationship between perceived paternal and maternal support and absenteeism can help guide prevention efforts and interventions, as well highlight the need to shift the current focus of the number of absences from school as a sign of solely truancy.

## Acknowledgement

Thank you to my loving, and supportive family, who tolerantly waded through my three years' worth of "papers" and stress. A special thanks also goes out to my study partner, Tater Tot, who is my primary form of self care. Thanks also to my peers, friends, and future colleagues who created the safe and loving cohort I will never forget. Lastly, I would not have been able to manage this program without the never-ending patience and backing of my amazing husband, who helped drive me to all my classes and motivated me every time I needed encouragement.