

# Social and Community-Level Risk Factors among Adolescents Presenting in Mental Health Crisis to an Urban Pediatric Emergency Department

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## ABSTRACT

**Purpose:** Children and adolescents with low Socioeconomic Status (SES) have higher rates of mental health problems and unmet mental health needs. Often low-income areas where children of low SES may reside have shortages of mental health resources. This study describes community characteristics of high-risk mental health patients who sought emergency care for an acute psychiatric crisis.

**Methods:** This retrospective cohort study uses community-level census data to evaluate specific socioeconomic characteristics associated with the neighborhoods where mental health patients resided at the time of presentation to an urban pediatric emergency department.

**Results:** Most patients resided in Baltimore city and of these patients, the mean household income level and measures for educational status were considerably lower than state averages. Levels of violent crime were also higher for the communities where the study patients resided.

**Conclusion:** Children living in communities stricken by various social inequities may face a range of barriers that affect their mental health.

**Keywords:** Socioeconomic status; Social risk factors; Community-level risk factors; Mental health needs; Mental health crisis

**Abbreviations:** Socioeconomic Status (SES); Emergency Department (ED); Community Statistical Area (CSA); Baltimore Neighborhood Indicator Alliance (BNIA)

## INTRODUCTION

Social inequalities afflict countless communities across the nation and manifest in different areas of life such as income, educational level and employment status. These inequities affect patterns of health and disease within communities. Several pediatric studies reveal that children with low Socioeconomic Status (SES) suffer from mental health problems more frequently than their peers with high SES and have higher rates of unmet mental health needs [1].

Emergency medicine providers gain a unique perspective of a community's mental health needs as the Emergency Department (ED) often serves as a safety net for patients in mental health

crisis, which are rising in number. Understanding a patient's community context carries high importance for mental health patients as studies demonstrate that lower-income areas are more likely to have shortages of office-based practices providing outpatient mental healthcare along with overall shortages of mental health professionals. Furthermore, low-income populations face a range of barriers to care such as lacking reliable transportation and inability to pay. Considering the effects community-level factors may have on mental health, this study aims to describe the socioeconomic and community characteristics of high-risk pediatric mental health patients who present for emergency care [2].

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## MATERIALS AND METHODS

A retrospective cohort study was conducted including pediatric patients who presented to the pediatric ED at an urban quaternary care children's hospital in Baltimore, Maryland, from September 2015 to August 2018. The hospital has an annual ED volume of approximately 37,000 patients, of which 2,000 patients present with primary mental health related concerns. The study population included preadolescents and adolescents, aged 9 yrs to 18 yrs, who were evaluated for a mental health chief complaint and recommended inpatient psychiatric hospitalization with an ED length of stay greater than 24 hours. Patients presenting with active medical problems were excluded [3]. For the study patients who resided in Baltimore City, the home addresses were used to identify the Community Statistical Area (CSA) where each patient lived at the time of presentation. Using census data from the Baltimore Neighborhood Indicator Alliance (BNIA), various socioeconomic characteristics associated with each CSA were evaluated including income level, high school graduation rate, violent crime and unemployment rate using BNIA data from 2018. Descriptive statistics including frequencies, proportions, means and standard deviations and medians and interquartile ranges were calculated. This study was approved by The Johns Hopkins university school of medicine institutional review board [4].

## RESULTS AND DISCUSSION

The study population, 61% were Black/African American, 27% White/Caucasian, 6.5% Hispanic/Latino, approximately 61% had public insurance and 56% resided in Baltimore City. For patients residing in the city, community-level census data was accessed to evaluate various socioeconomic characteristics [5]. These patients had a mean household income level of \$48,988, considerably lower than the state average of \$80,766. The average proportion of children living below poverty was 32.1% compared to the state average of 11.7%. Educational status, evaluated by high school completion rate and chronic absenteeism for grade levels 9<sup>th</sup>-12<sup>th</sup>, showed rates of 78.0% (below the state average of 88.7%) and 35.0% (above the state average of 15.2%), respectively [6]. Violence measured by violent crime rate per 1,000 residents and number of gun-related homicides per 1,000 residents had mean values of 17.9% (above the state average of 4.7%) and 0.4% (above the state average of 0.11%), respectively. Lastly, the mean unemployment rate of the represented CSAs (5.3%) was higher than the state average (4.2%) (Table 1).

**Table 1:** Study patient demographics.

Characteristics	Total patients (N=536) N (%)
<b>Age</b>	
9-12	186 (34.7)
13-18	350 (65.3)
<b>Gender</b>	
Female	237 (44.2)
Male	299 (55.8)
<b>Race</b>	
White	147 (27.4)
Black	327 (61.0)
Hispanic	35 (6.5)
Asian	12 (2.2)
Other	15 (2.8)
<b>Communities</b>	
Baltimore city	302 (56.3)

Suburban Maryland counties	217 (40.5)
Out-of-state	17 (3.2)
<b>Insurance payor</b>	
Public	327 (61.0)
Private	191 (35.6)
Self-pay/Other	17 (3.2)

A strong correlation exists between social risk factors (e.g. poverty, low-quality home environment, low educational status and exposure to community violence) and risk for poor mental health. Finding that most high-risk mental health patients who resided in Baltimore City lived in neighborhoods with high poverty rates and low high school graduation rates supports previous studies showing the negative impact of low income and low parental education on children’s mental health [7-10]. Potential explanations for this relationship suggest that children with low SES face a range of barriers that impede their access to

mental health services and ability to maintain treatment [11-13]. For instance, fewer office-based practices were found in lower-income areas and many mental health agencies have limited hours which may not accommodate people working in low-wage shift positions with less time flexibility (Table 2) [14,15].

**Table 2:** Community-level characteristics associated with adolescent patients who reside in Baltimore city and presented in mental health crisis to the ED.

Variable	Mean	Std deviation	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile	Minimum	Maximum	State of Maryland
Median household income	49.88	24,786	39,314	32,117	58,882	15468	109,518	80,776
Children living below poverty	0.32	0.19	0	0.2	0.45	0.001	0.65	11.7%
High school completion rate	0.78	0.07	1	0.7	0.84	0.633	0.92	88.7%
9 <sup>th</sup> -12 <sup>th</sup> Grade student with chronic absenteeism	0.35	0.1	0	0.3	0.42	0.04	0.51	15.2%
Unemployment rate	0.05	0.05	0	0	0.05	0.01	0.26	4.2%
Violent crime rate per 1,000 residents	17.9	10.4	16	9.7	24.7	1.8	40.7	4.7
Number of gun-related homicides per 1,000 residents	0.4	0.4	0	0	0.7	0	1.7	0.11

Although exposure to violence affects all SES groups, children and adolescents from lower SES backgrounds tend to have increased exposure. Numerous studies reveal the association between experiencing violence, either directly or indirectly and

worse mental health outcomes. Adolescents who know victims of crime or have seen violent crime are more likely to have both internalizing and externalizing behavior problems. Here, we found that study patients lived in neighborhoods with more

than three times the rate of violent crime compared to state averages. These findings underscore the crucial task providers have in assessing patients' exposure to violence as part of gaining a comprehensive view of the factors impacting their mental health outcomes. A key aspect of this assessment includes understanding the community context in which patients live as both social and environmental factors may affect patients' mental health needs.

With the rising number of child and adolescent patients with mental health illness, future work should focus on optimizing the care and resources available. Research efforts exploring personal-level data on barriers to attaining and maintaining mental healthcare may help direct efforts in enhancing resources for patients with mental illness living in low-resource areas. Furthermore, work focused on causal studies and investigating into the effects of various types of violent crime exposures on the mental health of children and adolescents may help direct further preventive strategies.

While this study is limited in that it reports community-level data at one point in time, the information presented elicits further discussion about how negative community-level factors and scarcity of resources may affect children's mental health. Pediatric providers should recognize that their role as advocates for child health extends beyond their place of practice. Advocating for child health means understanding the sundry factors directly impacting patients' wellbeing and creating change in communities where disparities exist.

## CONCLUSION

The present study reveals the diverse psychosocial factors related to the adolescence mental health issues, as individual issues, family related, school related and community related to the others as predictors of health deterioration in this population. These factors should be examined in promotion programs proposals, prevention and mental health treatments in adolescents.

In synthesis, the analyzed scientific production provided indication that in some situations that are typical from adolescence as depression, suicidal ideation and dissatisfaction with life. Rather than that, precursor factors that lead to adolescence mental health issues were identified as psychosis, anxiety, conduct or eating disorders and toxic substances abuse. In relation to the risk factors with higher probability to adolescence mental health issues, physical, psychological and violence that affects within the family environment constitutes the most severe factor and can lead to psychopathologies, especially in the initial phase of adolescence.

So, the health professional, especially the nurse, as of solid knowledge, should commit to the community services effectiveness subsidized by guidelines, legislations and public politics in mental health. In scheduled visits to high risk families, the professional should stimulate the good intra familiar relationship aiming to identify by cultural and social changes that splits the physical violence nature. This action contributes to the precaution of all types of violence suffered by adolescents.

It is important to mention that the adolescence mental health protection starts with the parents and the family, the school and the community. It important that health and education professionals to be sensitized and prepared to adopt avoidance and health promoter strategies that take in consideration the adolescents' biopsychosocial and cultural aspects.

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## DATA AVAILABILITY STATEMENT

Data are available upon reasonable request and will be provided by the corresponding author or senior author of this study.

## REFERENCES

- Allen J, Balfour R, Bell R, Marmot M. Social determinants of mental health. *Int Rev Psychiatr.* 2014;26(4):392-407.
- Reiss F, Meyrose AK, Otto C, Lampert T, Klasen F, Ravens-Sieberer U. Socioeconomic status, stressful life situations and mental health problems in children and adolescents: Results of the German BELLA cohort-study. *PLoS One.* 2019;14(3):0213700.
- Hodgkinson S, Godoy L, Beers LS, Lewin A. Improving mental health access for low-income children and families in the primary care setting. *Pediatrics.* 2017;139(1):20151175.
- Sheridan DC, Spiro DM, Fu R, Johnson KP, Sheridan JS, Oue AA, et al. Mental health utilization in a pediatric emergency department. *Pediatr Emerg Care.* 2015;31(8):555.
- Kalb LG, Stapp EK, Ballard ED, Hologue C, Keefer A, Riley A. Trends in psychiatric emergency department visits among youth and young adults in the US. *Pediatrics.* 2019;143(4):20182192.
- Leff RA, Setzer E, Cicero MX, Auerbach M. Changes in pediatric emergency department visits for mental health during the COVID-19 pandemic: A cross-sectional study. *Clin Child Psychol Psychiatr.* 2021;26(1):33-38.
- Leeb RT, Bitsko RH, Radhakrishnan L, Martinez P, Njai R, Holland KM. Mental health related emergency department visits among children aged <18 years during the COVID-19 pandemic-United States, January 1-October 17, 2020. *Morbidity Mortality Weekly Report.* 2020;69(45):1675.
- Cummings JR, Allen L, Clennon J, Ji X, Druss BG. Geographic access to specialty mental health care across high-and low-income US communities. *JAMA Psychiatr.* 2017;74(5):476-484.
- Steele L, Dewa C, Lee K. Socioeconomic status and self-reported barriers to mental health service use. *Canadian J Psychiatr.* 2007;52(3):201-206.
- Reiss F. Socioeconomic inequalities and mental health problems in children and adolescents: A systematic review. *Social Sci Med.* 2013;90:24-31.
- Devenish B, Hooley M, Mellor D. The pathways between socioeconomic status and adolescent outcomes: A systematic review. *Am J Commun Psychol.* 2017;59(1-2):219-238.
- Hardaway CR, McLoyd VC, Wood D. Exposure to violence and socioemotional adjustment in low-income youth: An examination of protective factors. *Am J Commun Psychol.* 2012;49(1-2):112-126.

13. Zinzow HM, Ruggiero KJ, Resnick H, Hanson R, Smith D, Saunders B, et al. Prevalence and mental health correlates of witnessed parental and community violence in a national sample of adolescents. *J Child Psychol Psychiatr Allied Disciplines*. 2009;50(4):441-450.
14. Singer MI, Anglin TM, Song LY, Lunghofer L. Adolescents' exposure to violence and associated symptoms of psychological trauma. 1995;273(6):477-482.
15. Grinshteyn EG, Xu H, Manteuffel B, Ettner SL. The associations of area-level violent crime rates and self-reported violent crime exposure with adolescent behavioral health. *Commun Mental Health J*. 2018;54(3):252-258.