

BACKGROUND AND PURPOSE

Although studies have shown a clear association between social factors and medical care, the impact of social factors on traumatic dental injuries (TDI) is unclear. It is unknown if varying neighborhood levels are associated with higher rates or specific patterns of TDI, or how these patients seek care for these injuries. The purpose of this study was

- To examine the association between patterns of TDI and social determinants of health (SDoH) in the context of neighborhood opportunity.
- To investigate how the resources of a Level I Pediatric Trauma Center are utilized for patients with TDI.

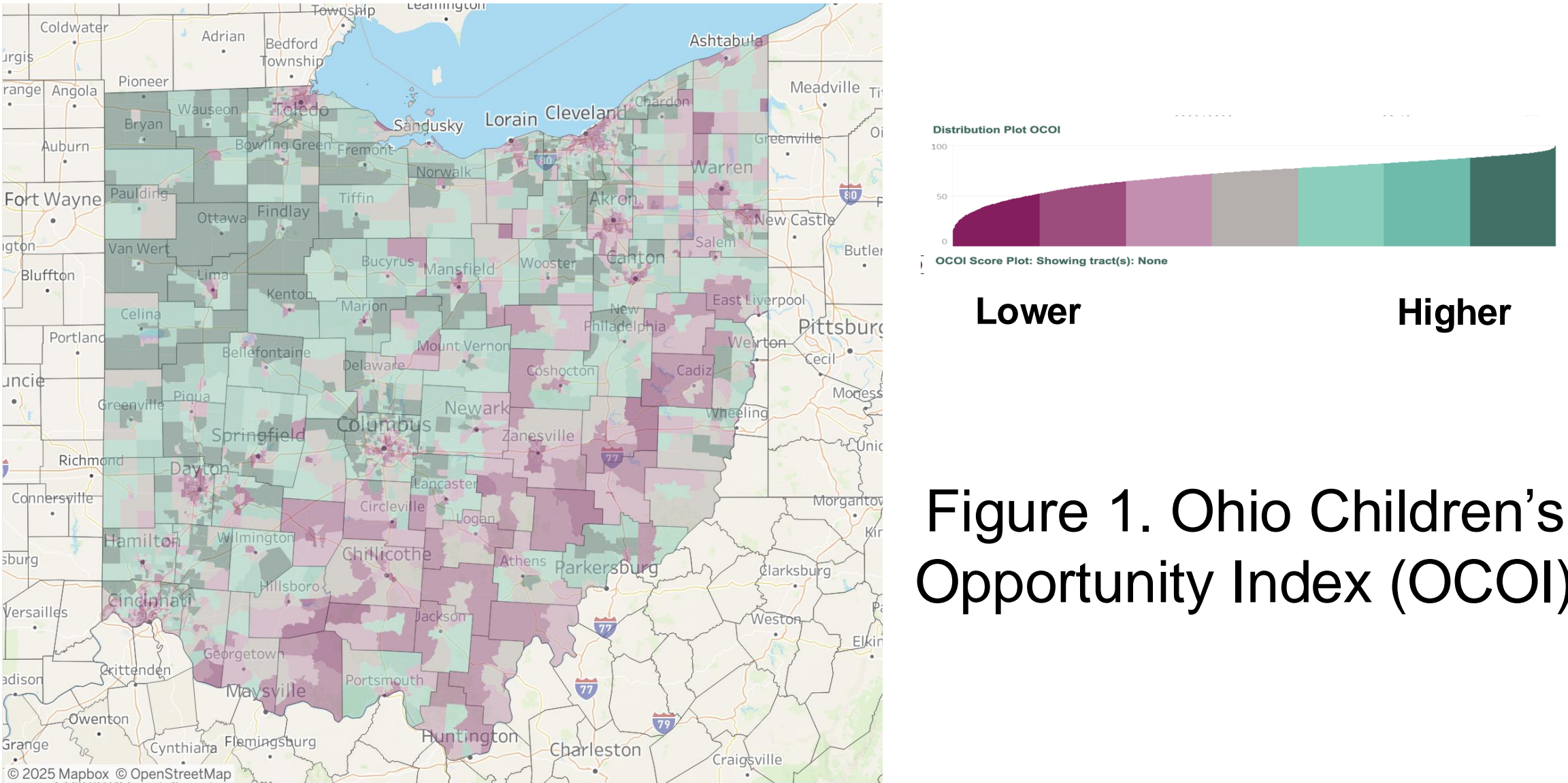
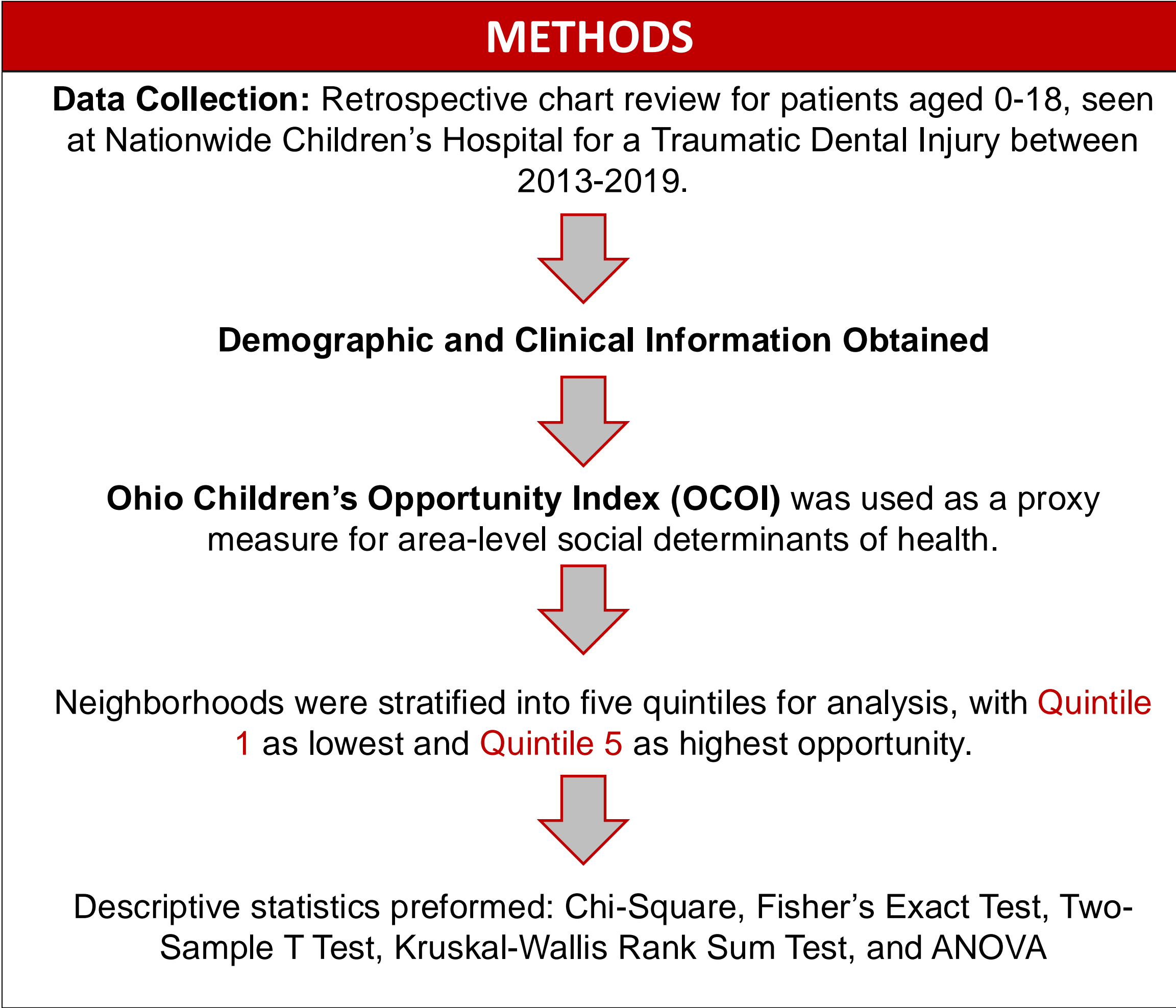


Figure 1. Ohio Children’s Opportunity Index (OCOI)



RESULTS

3639 Participants

Trauma:  
→ Permanent: 2459  
→ Primary: 1180

Age (mean): 7.631

Male: 61.9%

English as primary language: 87.1%

Race:  
→ White: 50.5%  
→ Black: 36.4%  
→ Other: 13.1%

Special Health Care Needs:  
→ ADHD: 16.8%  
→ Autism Spectrum Disorder: 3.5%  
→ Cerebral Palsy: 1.1%  
→ Developmental Delay: 2.5%  
→ Epilepsy: 3.2%  
→ Intellectual Disability: 2.2%

Table 1. Distribution of Mechanism of Injury (MOI) based on Demographics

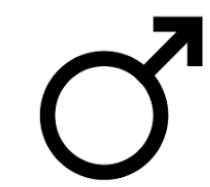
	Assault	Automobile Accident	Fall	Hit by object	Sports injury	Other	P-Value
Male	87	53	1250	276	270	317	<.001
Female	16	38	878	187	55	212	
English	94	80	1828	412	295	462	0.08
Non-English	9	11	300	51	30	67	
White	38	53	1056	219	174	297	<.001
Black	56	30	786	173	120	160	
Other	9	8	286	71	31	72	
Total N(%)	103 (2.8)	91 (2.5)	2128 (58.5)	463 (12.7)	325 (14.6)	529 (8.9)	3639 (100)

Table 2. Distribution of MOI based on Neighborhood Opportunity Index


		Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total	P-Value
Primary	Assault	1	1	1	0	0	3	0.84
	Automobile accident	1	3	1	4	0	9	
	Fall	174	193	158	218	200	943	
	Hit by object	23	22	14	20	18	97	
	Sports injury	2	2	3	2	1	10	
	Other	24	19	25	27	23	118	
Permanent	Assault	34	26	18	12	10	100	0.02*
	Automobile accident	20	20	13	15	14	82	
	Fall	246	241	251	208	239	1186	
	Hit by object	69	80	83	67	67	366	
	Sports injury	49	58	63	77	68	315	
	Other	85	90	73	79	84	411	
Combined	Assault	35	27	19	12	10	103	0.03*
	Automobile accident	21	23	14	19	14	91	
	Fall	420	434	409	426	439	2128	
	Hit by object	92	102	97	87	85	463	
	Sports injury*	51	60	66	79	69	325	
	Other	109	109	98	106	107	529	

DISCUSSION


Key Takeaways:




Males were more likely to experience trauma than females (P<.001).




Fall was most common MOI for TDI (58.5%)



MOI was significantly associated with race (p <.001) and neighborhood opportunity level (p=.003).



Higher indices of sports injuries as MOI in White individuals and in higher opportunity neighborhoods.



Higher indices of assault as MOI in Black individuals and in lower opportunity neighborhoods

CONCLUSIONS

Neighborhood index and demographics influence mechanism of TDI. Assault was a more common MOI in lower opportunity neighborhoods and in Black individuals. In contrast, sports injuries were more common MOI in higher opportunity areas and in White individuals.

REFERENCES

- Goswami M, Aggarwal T. Prevalence of Traumatic Dental Injuries among 1- to 14-year-old Children: A Retrospective Study. Int J Clin Pediatr Dent. 2021 Jul-Aug;14(4):467-470. doi: 10.5005/jp-journals-10005-1961. PMID: 34824497; PMCID: PMC8585904.
- Lee JY, Divaris K. Hidden consequences of dental trauma: The social and psychological effects. Pediatric dentistry. 2009;31(2):96-101.
- Ohio Colleges of Medicine Government Resource Center. (n.d.-b). Ohio Opportunity Index. Ohio Opportunity Index | Ohio Colleges of Medicine Government Resource Center. <https://grc.osu.edu/Projects/OhioOpportunityIndex>