

PARENTAL PERCEPTIONS, RISKS, AND INCIDENCE OF PEDIATRIC UNINTENTIONAL INJURIES

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Contribution to Emergency Nursing Practice

- Examines parental injury perceptions so that these factors can be considered when communicating with parents about prevention
- Analyzes current ED and statewide trends and client perceptions of injury threat, the nurse may tailor information to an individual, thus making health more relevant.

Objectives of the Research

To examine the distribution of self-reported high-priority injury risks at SSM Health Cardinal Glennon Children's Medical Center

(a pediatric level 1 trauma center)

and investigate the relationship between parental perceptions and injury-prevention behaviors.

Background

More than 9,000 children die from various causes of unintentional injury. Of all the pediatric unintentional injuries occurring in the United States, 8.7 million are treated in emergency departments, and 225,000 require hospitalization annually. Health education programs are available to address these injuries.

Methods

- Missouri Information for Community Assessment (MICA) was categorized to mirror variables corresponding with risks of injury presented in the Safe 'n' Sound (SNS) program.
- Level 1 trauma center data were examined to determine how the variables were distributed compared with MICA data and with the parent-reported levels

Methods

- This study was a retrospective analysis using secondary data from SNS, the emergency department at SSM Cardinal Glennon Children's Medical Center, and data from the Missouri Department of Health and Senior Services and MICA.
- This study was approved by the Institutional Review Board of SSM Cardinal Glennon Children's Medical Center.
- Participation was voluntary, and parents were not identified.
- Logistic regression analysis was used to assess the association between parental perceptions and 6 injury behaviors.

Safe n' Sound

(<http://www.safensoundallaround.com/#>)



- Safe 'n' Sound is a computer-based program that collects parent-reported injury risk information and generates tailored feedback for parents with children below the age of 5.
- Program delivers tailored information related to risk factors present in the home and car for 6 different categories of injury: burns, falls, poison, airway obstruction, drowning, and motor vehicle injuries

MICA (Missouri Information for Community Assessment) – www.health.mo.gov

- The Missouri Information for Community Assessment (MICA) is an interactive system that was developed to make health data accessible at the local level through an easy-to-use format.
- It allows users to summarize data, calculate rates, and prepare information in a graphic format.
- Data MICA users can access statistics on various health conditions and associated topics.
- Users can choose from among the many conditions, generate data tables by year of occurrence, age, gender, race, and county or zip code of residence, and obtain age-adjusted rates.
- Data MICAs also allow users to create charts and maps. All forms of output are available for download.

Results

- A total of 429 SNS surveys were compared with ED data and MICA data.
- For SNS users, car crashes were identified as the highest risk, specifically due to the use of incorrect car seats.
- The injuries seen most often in the emergency department were falls, and falls were also the most prevalent injury captured by MICA.
- Controlling for demographics, parental perceptions predicted several risks for injury.

	Percentage agreement	Fall: window access	Burn: smoke detector battery change	Suffocation: eats small food	Drowning: outdoor pool	Motor vehicle: type of car seat
Whether or not [child] gets injured is mostly a matter of luck.	37.9% (n=393)	p = .894 B = 1.232 (.057, 26.635)	p = .564 B = 1.361 (.478, 3.870)	p = .246 B = -.095 (-.262, .073)	p = .011 B = 3.103 (1.292, 7.453)	p = .206 B = .593 (.264, 1.333)
Bumps and bruises are just part of growing up, but I am not worried about [child] getting seriously hurt.	53.1% (n=320)	p = .003 B = .011 (.001, .209)	p = .009 B = .303 (.124, .742)	p = .494 B = -.070 (-.283, .143)	p = .861 B = .931 (.421, 2.062)	p = .830 B = .919 (.423, 1.994)
Children should be allowed to get some little bumps and bruises when they explore things so that they learn from it.	66.5% (n=352)	p = .027 B = 36.61 (1.521, 881.26)	p = .496 B = 1.384 (.543, 3.528)	p = .028 B = .137 (.017, .258)	p = .649 B = 1.228 (.507, 2.975)	p = .954 B = .978 (.449, 2.130)
If I watch [child] closely enough I don't need to use safety supplies to keep him/her from being injured.	51.5% (n=293)	p = .685 B = .576 (.04, 8.31)	p = .886 B = 1.078 (.385, 3.02)	p = .697 B = .029 (-.126, .184)	p = .581 B = 1.296 (.516, 3.255)	p = .057 B = 2.374 (.973, 5.579)

		SNS (n=429)		ED	MICA	
	Number of parents who responded	Number of parents who indicated a risky response	Percentage of “risky” parents who responded	Number	Number	Rate (per 1000)
Motor Vehicle	429	375	87.2	45	35591	761
Inappropriate car seat	429	311	72.5			
Infrequent use of car seat	268	116	43.3			
Child out of car seat often	291	75	25.8			
Suffocation/choking	67	56	83.6	n/a	781	16.7
Eats Small Food	47	34	72.3			
Plays w/ toys that can fit in mouth	30	13	43.3			
Sleeping position not on back	22	9	40.9			
Other items present in bed for sleep	9	7	77.8			
Unsafe window cords	1	1	100			
Burns	241	190	78.8	11	8715	186.3
Battery changed more than 6 mos	206	136	66			
Smoke detector not present in house	246	40	16.3			
>120 F water temperature setting	49	24	49			
Drowning	307	127	41.2	n/a	259	5.5
Outdoor pool has no fence/wall	278	66	23.7			
Leave child alone in pool	45	25	55.6			
Water left out (in tub, bucket etc.)	62	26	41.9			
Can get to standing water	87	32	36.8			
Falls	113	36	31	150	167,607	3583.9
2nd story window access	90	27	30			
Gate present on stairs	16	3	18.8			
Gate on stairs closed	10	2	20			
Uses walker with wheels	5	2	40			

Discussion

- Because parental perceptions are significantly related to risks of injury, prevention programs aiming to decrease injuries could focus on the perceptions.
- Not only can perceptions be used to tailor health communication materials, these perceptions can be the targets of change.
- Further work might investigate the extent to which changes in perceptions result in increased adoption of safety practices.

Limitations

- There are high admission rates for non-trauma related needs in the Emergency Department. Because of this, parents could be more likely to forgo using the SNS kiosk or not understand the usefulness of the program for preventing injuries, compromising external validity.
- Second, emergency room procedure has moved to a “door to doctor in twenty minutes” philosophy, which may be a significant barrier for parents to use the SNS kiosk.
- If the kiosk is not being used by parents who have children presenting trauma in the emergency room or by the majority of parents visiting the ER, kiosk use would be limited.
- Because SNS is tablet based and installed in a safety corner display, there were times with the program was not functioning. These issues may affect the external validity of the findings.

Conclusions

- Parental perceptions are significantly related to injuries risks reported in the home and help inform the development of the tailored information presented to parents.
- Just more than half of respondents agreed that is they watched their child closely enough, they did not need to use safety supplies, however this belief was not associated with any of the injury prevention behaviors investigated.
- Understanding the parental perceptions specific to injury risks allows for more detailed tailoring of information based upon what parents believe about preventative injury behaviors.

Conclusions

- The prioritization system within SNS program was developed to tailor injury prevention messages to crucial behaviors for parents of young children.
- Though many pediatric facilities encourage condensed waiting room times, exam room wait times are often extended.
- Waiting room signage and encouragement from the waiting room staff may be beneficial to increased SNS kiosk use, which may result in more representative data and a better match between reported risk and injury incidence.
- Parental perceptions were related to injury risks and warrant further consideration in future communication campaigns.

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