Laflamme Lucie[1], Reimers Anne[1,2]

[1] *Karolinska Institutet, Department of Public Health Sciences, Division of Social Medicine, SE-171 76 Stockholm, Sweden*
[2] *Stockholm County Council, Stockholm County Council, Department of Epidemiology, SE-171 76 Stockholm, Sweden*

Neighborhood social characteristics and fall injuries in children. An area-based study in Stockholm County

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Summary

Objectives: To study the potential influence of the composition of the population in Stockholm County on the occurrence of paediatric fall injuries.

Methods: Odds ratios are compiled considering socio-demographic composition (socioeconomic circumstances, socioeconomic status, and social integration), fall injury mechanisms, age groups and injury severity levels.

Results: Compositional characteristics impact on fall injuries in various ways depending on type of exposure, age of victim, fall circumstance, and severity level. For younger children, effects are observed above all in the case of socioeconomic circumstances and for older children, in that of social integration. Also, both protective and aggravating effects are observed. Further, all falls aggregated and for both young and old children, social integration is associated with excess odds of admissions for long-bone fractures.

Conclusion: The effect of neighbourhood social composition on fall-related injury in childhood is not straightforward. Better understanding of the underlying mechanisms may aid the determination of targets, and also enhance strategies for prevention and for the allocation of health-care resources.

Keywords: Social context – Ethnicity – Deprivation – Sports – Injury severity

Children in lower social positions are often at greater risk of sustaining injuries than others (Laflamme 1998; Cubbin 2002). Differences may be more or less pronounced depending upon cause of injury (Laflamme 1998; Cubbin & Smith 2002; Downsell & Towner 2002; Engström et al. 2002; Hasselberg et al. 2001; Hippisley-Cox et al. 2002; Laflamme & Diderichsen 2000), injury-severity level (Cubbin & Smith 2002; Downsell & Towner 2002; Hippisley-Cox et al. 2002; Reading et al. 1999), and age of child (Hasselberg et al. 2001; Hippisley-Cox et al. 2002; Laflamme & Engström 2002). Also, as is the case for other health outcomes, both individual and contextual mechanisms may impact on risk differences.

In the injury literature, contextual studies are less common, and come mainly from road-traffic safety research (Laflamme & Diderichsen 2000). The studies available show that areas with less favorable traffic environments (e.g. fast-moving traffic, high traffic volume, busy streets, absence of parks) and socioeconomic circumstances (e.g. higher concentrations of household on low income, below the poverty level, or female-headed) are associated with higher pedestrian and bicyclist injury risks than others. Other childhood-injury causes with a documented association with deprivation in living area are falls (Hippisley-Cox et al. 2002), poisoning and chemical injuries (Hippisley-Cox et al. 2002), scalds and burns (Hippisley-Cox et al. 2002; Van Nierkerk et al. 2006), injuries due to firearm assaults (Powell & Tanz 1999), and an aggregated group composed of "any medically attended injury" (Kendrick & Marsch 2001; Laing & Logan 1999).

In a recent Swedish regional study, it was observed that the effects of socioeconomic composition of the population in a living area on childhood injury are diagnosis-specific, and may be both aggravating and protective (Reimers & Laflamme 2005). For example, although having a high concentration of people living under precarious economic circumstances in a particular neighborhood impacted negatively on pedestrian injuries, it had a protective effect on other types of road-traffic injuries. Also, neighborhoods with a higher concentration of people with low socioeconomic status showed an excess risk of burns and poisonings, but not of traffic-related injuries.

In the case of fall injuries, which accounted for about 50 percent of all injuries in the population studied, no specific neighborhood effect was observed (Reimers & Laflamme 2005). But, as falls were considered in an aggregated manner and given that the circumstanc-

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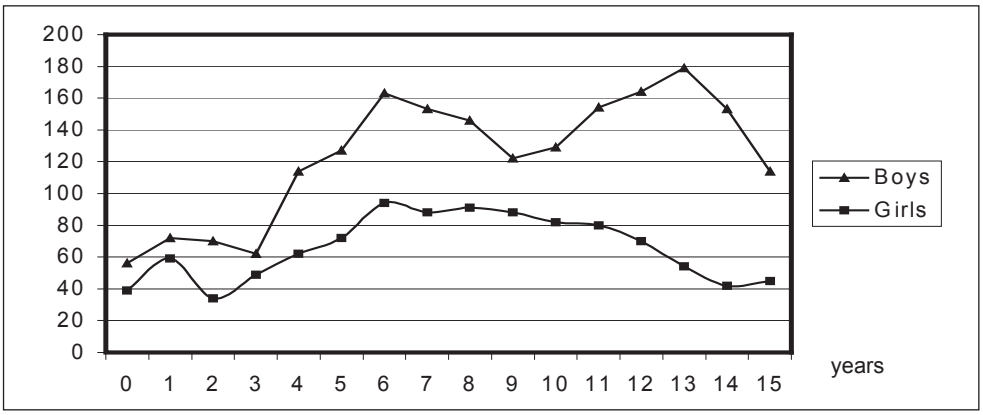

Figure 1 Incidence of fall injuries leading to hospitalization (per 10000 children) by sex of child in Stockholm County (1999–2001)

es underlying their occurrence are many and may vary according to age of child, it felt necessary to revisit the data and investigate further the issue of any possible neighborhood compositional effect. This is dealt with in the current study, considering seven types of fall-related injuries and also various injury severity levels.

Methods

The study was designed as an in-depth complement to the register study conducted in the Stockholm County referred to above (Reimers & Laflamme 2005), where a total of 11 variables describing different area-based socioeconomic characteristics were analyzed using factor analysis (see below). The three resulting factors, which were used to create three additive indexes, provided a basis for establishing the compositional effects of neighborhood on childhood injury occurrence.

Area-based dimensions considered

In 2000 Stockholm County had 138 parishes and just over 1.8 million residents, of whom 360000 were children aged 0–15. Simultaneous factorial analysis of 11 social and socioeconomic contextual characteristics revealed three injury-related area dimensions (factors): socioeconomic circumstances (e.g. car ownership, lone parenthood and low income), socioeconomic status (measured according to income and education level), and social integration (e.g. individual economic and social exclusion, indicated by receipt of social welfare or immigrant status) (Reimers & Laflamme 2005).

To analyze the effects of these dimensions of living context, a three-level additive index was constructed for each factor. The levels were low, moderate (or average), and high (more extensively described in Reimers & Laflamme (2005)).

Fall-injury definition and treatment

Injury cases were identified from Stockholm County's inpatient register, which is maintained by commission from the Health Care Board of Stockholm County Council. The register has comprehensive coverage of the hospital admissions in the whole county and it includes all patients with a stay of at least one night in any of the hospitals in the County. The injuries considered here are those involving children aged 0–15 years, residing in Stockholm County at time of injury, and hospitalized for at least one night following injury during the three-year period, January 1999–December 2001. Of the 5540 injuries recorded in total, 3027 (54.6%) were due to falling. Patients resident outside the County, foreign patients, and patients who lacked an address were excluded from the analyses.

Incidence rates by age and sex of child are presented in Figure 1, from which it emerges that fall-injury incidence generally increases with age among both boys and girls; it is consistently higher for boys, and to a greater extent after the age of three. Whereas two peaks are observed for boys (one at the age of six, the other at the age of 13), there is only one that arises for girls (at the age of six), after which injury incidence declines.

For the analyses, the fall injuries were broken down into seven different types (according to E-code), using the International Classification of Diseases, 10th Revision. The distributions by category are presented in Table 1 for the two age groups considered, separated based on the age of school introduction (the year they turn 6). Falls of a more general nature – the first four categories – are separated from those related to sport and play. The most common diagnosis among both age groups is "fall on same level" (W00-W01,W18), which comprises 34.9% of falls among younger children and 42.3% among older ones. Falls from height, from item of furniture (such as a bed or chair) and from playground equipment are more frequent among younger children, and falls from trees and sport-related falls are more common among older ones.

Statistical analyses

For each contextual index, odds ratios with 95% confidence intervals were compiled, using "best" level as comparison (i.e. high so-

Table 1 Distribution of fall injuries recorded in Sweden's Hospital Discharge Register according to fall diagnosis (1999–2001)

		0–5 yrs			6–15 yrs		
Cause of injury	*ICD-10*	N	%	% boys	N	%	% boys
Fall on same level	*W00,W01, W18*	285	34.9	60.0	935	42.3	61.9
Fall from height	*W10-W13, W15, W17*	150	18.4	61.3	262	11.8	66.8
Fall from item of furniture	*W06,W07,W08*	140	17.2	57.1	55	2.5	50.9
Other fall	*W03-W05, W16, W19*	70	8.6	70.0	190	8.6	66.3
Fall from playground equipment	*W09*	136	16.7	63.2	274	12.4	63.5
Fall from tree	*W14*	24	2.9	70.8	332	7.4	76.1
Fall related to sport	*W02*	11	1.3	54.5	163	15.0	81.6
Total	*W00-W19*	816	100.0	61.3	2211	100	66.8

Table 2 Odds ratios (95 % confidence intervals) by age group, contextual index and type of fall injury. Univariate analyses

Contextual exposure	**Fall on same level** OR (95 % CI)	**Fall from height** OR (95 % CI)	**Fall from furniture** OR (95 % CI)	**Other fall** OR (95 % CI)
0–5 years				
Socioeconomic circumstances				
High	1.00	1.00	1.00	1.00
Moderate	0.71 (0.59-0.87)	0.99 (0.77-1.27)	1.02 (0.75-1.41)	0.37 (0.22-0.62)
Poor	0.63 (0.54-0.73)	0.67 (0.54-0.84)	1.34 (1.09-1.64)	0.69 (0.52-0.92)
Socioeconomic status				
High	1.00	1.00	1.00	1.00
Average	1.12 (0.92–1.35)	1.08 (0.83–1.39)	1.27 (0.97–1.67)	1.04 (0.70–1.54)
Low	0.89 (0.68–1.17)	0.55 (0.35–0.87)	1.39 (1.00–1.95)	0.82 (0.47–1.44)
Social integration				
High	1.00	1.00	1.00	1.00
Moderate	1.19 (0.97–1.47)	1.20 (0.90–1.59)	0.88 (0.62–1.25)	0.70 (0.43–1.15)
Low	1.11 (0.95–1.30)	1.10 (0.89–1.37)	1.36 (1.11–1.66)	0.98 (0.73–1.32)
6–15 years				
Socioeconomic circumstances				
High	1.00	1.00	1.00	1.00
Moderate	1.19 (1.07–1.32)	0.98 (0.80–1.21)	0.69 (0.42–1.14)	1.12 (0.88–1.41)
Poor	1.03 (0.94–1.13)	1.06 (0.90–1.24)	1.03 (0.74–1.44)	1.14 (0.94–1.37)
Socioeconomic status				
High	1.00	1.00	1.00	1.00
Average	0.91 (0.81–1.02)	0.83 (0.67–1.04)	1.14 (0.73–1.78)	0.78 (0.60–1.02)
Low	0.90 (0.78–1.04)	1.17 (0.91–1.50)	1.44 (0.85–2.44)	1.02 (0.76–1.39)
Social integration				
High	1.00	1.00	1.00	1.00
Moderate	1.32 (1.17–1.48)	0.60 (0.47–0.75)	0.51 (0.30–0.88)	0.75 (0.57–0.99)
Low	1.30 (1.20–1.41)	0.62 (0.53–0.73)	0.63 (0.44–0.89)	0.80 (0.67–0.97)

cioeconomic circumstances, high socioeconomic status, and high social integration). The analyses were performed for two age groups (corresponding approximately to pre-school and school-age children), considering each of the seven fall-diagnosis groups shown in Table 1 for children aged 6–15 years and five diagnoses for children aged 0–5 years (because of small numbers for two diagnoses).

Table 3 Odds ratios (95 % confidence intervals) by age group, contextual index and type of fall-related injuries. Univariate analyses

Contextual exposure	Fall from playground equipment OR (95 % CI)	Fall related to sport OR (95 % CI)	Fall from tree OR (95 % CI)
0–5 years			
Socioeconomic circumstances			
High	1.00		
Moderate	1.08 (0.82–1.42)		
Poor	0.87 (0.69–1.09)		
Socioeconomic status			
High	1.00		
Average	1.03 (0.77–1.36)		
Low	0.93 (0.63–1.37)		
Social integration			
High	1.00		
Moderate	1.24 (0.91–1.68)		
Low	1.24 (0.99–1.54)		
6–15 years			
Socioeconomic circumstances			
High	1.00	1.00	1.00
Moderate	0.71 (0.58–0.87)	1.01 (0.85–1.21)	0.70 (0.54–0.91)
Poor	0.74 (0.63–0.87)	1.02 (0.88–1.17)	0.74 (0.60–0.91)
Socioeconomic status			
High	1.00	1.00	1.00
Average	1.04 (0.85–1.28)	0.96 (0.80–1.15)	1.17 (0.92–1.50)
Low	1.12 (0.86–1.44)	0.65 (0.49–0.86)	0.78 (0.52–1.15)
Social integration			
High	1.00	1.00	1.00
Moderate	1.09 (0.88–1.36)	0.90 (0.73–1.09)	1.45 (1.11–1.91)
Low	1.11 (0.95–1.29)	0.90 (0.79–1.04)	1.36 (1.11–1.66)

An additional aspect that was looked at was injury severity level, all types of falls aggregated. As in an earlier study from the UK (Hippisley-Cox 2002), odds ratios were compiled all falls aggregated (total number of hospital admissions), for hospital admissions for long-bone fracture, and for admissions for long-bone fracture requiring an operation. Fractures were identified using diagnosis codes from ICD-10 (S422, S520-529, S720-729; 53.2 % of all fall injuries in total), and operations from the Operative Procedure Coding Schema (OPCS; 51.7 % of all falls).
Data processing was performed using SAS (Version 8.1).

Results

Table 2 shows odds ratios (ORs) for the first four types of fall injuries, calculated according to age category and each of the three compositional characteristics. For children aged 0–5 years, the most important differences are found for the first exposure, where socioeconomic circumstances impact on the occurrence of all types of fall injuries. More particularly, younger children living in areas characterized by a relatively high concentration of people under poor or moderate socioeconomic circumstances show lower odds of falls on same level (the largest diagnosis group), falls from height and "other falls". This protective effect of about 31–37 percent is in contrast with the aggravating one found for fall from item of furniture (OR = 1.34; 95 % CI = 1.09;1.64).
A comparable excess odds of fall from item of furniture is also observed among young children living in areas characterized by a higher concentration of people with a low level of social integration (OR = 1.36; 95 % CI = 1.11;1.66).
Among children aged 6–15 years, significant differences are found for the third exposure and for the two levels compared. A protective effect is observed for all types of fall injuries except "fall on same level", where the surplus risk is about 30 % (Ors = 1.30 and 1.32 for low and moderate, respectively).
Table 3 focuses on falls associated with sports and play. There is no significant contextual effect observed for falls from playground

Table 4 Odds Ratios (95 % confidence intervals) by contextual index and injury-severity level, all fall injuries aggregated. Univariate analyses

Contextual exposures	All admissions	Admission for long-bone fracture	Admission for long-bone fracture requiring operation
	OR (95 % CI)	OR (95 % CI)	OR (95 % CI)
0–5 years old	*N = 816*	*N = 320*	*N = 314*
Socioeconomic circumstances			
High	1.00	1.00	1.00
Moderate	0.83 (0.74–0.94)	1.19 (1.00–1.42)	1.16 (0.97–1.39)
Poor	0.82 (0.75–0.89)	0.91 (0.79–1.06)	0.90 (0.77–1.04)
Socioeconomic status			
High	1.00	1.00	1.00
Average	1.24 (1.11–1.39)	1.07 (0.90–1.28)	1.09 (0.91–1.31)
Low	0.99 (0.85–1.16)	0.76 (0.58–1.00)	0.77 (0.58–1.01)
Social integration			
High	1.00	1.00	1.00
Moderate	1.14 (1.00–1.29)	1.40 (1.15–1.69)	1.41 (1.16–1.71)
Low	1.17 (1.06–1.28)	1.25 (1.08–1.45)	1.27 (1.09–1.47)
6–15 years old	N = 2211	*N = 1291*	*N = 1251*
Socioeconomic circumstances			
High	1.00	1.00	1.00
Moderate	0.96 (0.89–1.02)	0.95 (0.87–1.05)	0.95 (0.87–1.05)
Poor	0.97 (0.92–1.03)	1.02 (0.95–1.10)	1.02 (0.95–1.10)
Socioeconomic status			
High	1.00	1.00	1.00
Average	0.96 (0.89–1.03)	0.94 (0.85–1.03)	0.94 (0.85–1.03)
Low	0.93 (0.85–1.03)	0.95 (0.84–1.08)	0.96 (0.85–1.09)
Social integration			
High	1.00	1.00	1.00
Moderate	1.04 (0.96–1.12)	1.06 (0.96–1.18)	1.06 (0.96–1.17)
Low	1.05 (1.00–1.11)	1.11 (1.03–1.19)	1.11 (1.03–1.19)

equipment in the case of children aged 0–5 years but a protective one is observed for the first exposure in the case of children aged 6–15 years living in areas with higher concentration of people with moderate or poor socioeconomic circumstances (Ors = 0.71 and 0.74 respectively). The latter applies even to falls from tree with very similar odds ratios (Ors = 0.70 and 0.74 respectively). By contrast, excess risks of fall from tree are observed for the third exposure, where children from areas with higher concentrations of people with moderate and low social integration register odds ratios of 1.45 and 1.36 respectively.

In the older age group, a protective effect of socioeconomic circumstances appears in two diagnoses, i.e. fall from playground equipment and fall from tree. The effect is significant for children living in areas with higher concentrations of people with both moderate and low socioeconomic circumstances. By contrast, degree of social integration is associated with excess odds of fall from tree, which is significantly more frequent among children living in areas characterized by a higher concentration of people with both a moderate and low level of social integration (OR = 1.45 and 1.36 respectively).

In the case of sport-related falls, a significantly lower odds is found among children living in areas with a higher concentration of people of low socioeconomic status.

Turning to severity levels, table 4 highlights some excess odds for the two severity levels considered, i.e. admission with long bone fracture and admission with long bone fracture necessitating an operation, in particular regarding social integration. Among younger children, those living in areas with higher concentrations of people with moderate or low social integration have significantly higher odds of both admission with long bone fracture (OR = 1.40 and 1.25 respectively) and admission with long bone fracture necessitating an operation (OR = 1.41 and 1.27 respectively) compared with young children living in areas with higher concentration of people with high social integration. Those excess odds are also observed among older children, but they are lower and appear only for those living in areas with high-

er concentration of people with low (but not moderate) social integration (OR = 1.11 for each severity level).

Discussion

Main findings

Falling is a leading cause of injury in childhood, and circumstances of fall occurrence are many. Better understanding of such circumstances and of the importance of neighborhood socioeconomic composition with regard to risk magnitude may aid the determination of targets, and also enhance strategies for prevention and for the allocation of health-care resources.

This exploratory study shows that the effect of neighborhood social composition on fall-related injury in childhood is not straightforward. For younger children, effects are observed above all in the case of socioeconomic circumstances and for older children, in that of social integration. Also, both protective and aggravating effects are observed. Further, all falls aggregated and for both young and old children, social integration is associated with excess risks of admissions for long-bone fractures and long-bone fractures requiring operation.

In other words, our results indicate that socioeconomic circumstances of the living area do not by definition impact on pediatric fall injuries. When they do, they then may either aggravate or protect against the risk of fall among young children. Most often, they will have a "protective effect", except in the case of fall from items of furniture. Among older children, they will come into play and impact protectively on fall from playground equipment and fall from tree but not in other instances. A plausible explanation for this protective phenomenon is a lack of exposure – or access – to the related items.

It is also worth mentioning that, in the case of younger children, the considerable excess odds of fall from an item of furniture observed among those living in areas with a higher concentration of people with low socioeconomic circumstances, is replicated among children living in areas with higher concentration of people with low socioeconomic status and low social integration. The fact that this diagnosis is over-represented in the less well-off groups (economically, educationally and socially) is a matter of concern – since the prevention of such injuries is much dependent on parental level of consciousness and capacity to afford items of safety equipment.

Social integration for its part impacts on fall-related injury occurrence among older children in several respects. It gives rise to an increased odds of fall on same level (42.3 %, the most frequent fall category) and of falls from tree. It also has a protective effect on fall from height (11.8 %) and fall from item of furniture (2.5 %). The mechanisms lying behind this relationship remain to be clarified.

Turning to fall-injury severity, we observed that severity levels did not vary considerably according to the exposures considered, except for social integration and more so for younger children. We do not know if, in countries like Sweden, injuries tend to be more serious in more deprived areas than in better-off ones (Laflamme 1998; Laflamme & Diderichsen 2002; Engström 1999), a phenomenon of differential exposure coming into play. Yet, if this applies, why this would be the case for social integration but not for socioeconomic circumstances of the area is hard to understand. The phenomenon cannot either easily be explained by the data at hand.

Of course, some important differences may have been disguised because of the heterogeneity of fall injuries as a group. It was not possible to break down the data to investigate this question further (except perhaps for fall on same level because of the low number of admissions for long-bone fracture (necessitating an operation or not) when divided up by age group and sub-diagnosis.

Strengths and limitations of the study

This study is one of the few so far to address area socioeconomic composition and pediatric injuries. It focuses on a very frequent injury diagnosis in childhood, and there have been mixed results with regard to its social determinants in earlier studies (Hippisley-Cox et al 2002; Reimers & Laflamme 2005). It appears that the lack of relationship observed in our earlier study is in part an artifact of the heterogeneous character of the diagnosis itself and of fall-injury circumstances of occurrence with varying age.

As such, the results can serve as a basis for the setting of area-based priorities, but they remain silent with regard to the circumstances of occurrence of fall injuries even when the overall diagnosis is broken down into seven sub-diagnoses. Increased knowledge about such circumstances (which were not investigated in the current study), in particular concerning the large group of same-level falls, is clearly essential for primary-preventive purposes.

Better understanding of the contextual mechanisms underlying social variations in injury risk would permit the adoption of effective injury-reduction strategies. When environmental changes are too costly, empirical evidence may be needed to determine which of several possible interventions is most likely to impact on injury risks in a particular deprived living area or hazardous work environment. This study represents one step in that direction.

Since many relationships have been tested, it is of course possible that some significant associations may have appeared by chance, but this would not apply to all the associations examined.

From another perspective, missing data in Sweden's Hospital Discharge Register are very low, estimated to range between 1 and 2 percent. Also, validity studies show that diagnoses may be wrong in about 10 percent of cases.

Although the possibility of differences between parishes with regard to the likelihood of keeping an injured child in hospital following an injury may be of importance (Benson et al. 1991), there is no evidence of such bias in a Swedish setting (Whitehead et al. 1997). Inaccuracies in the classification of the children as injured or not, to the detriment of children from less well-off areas may occur because of underreporting by the subjects themselves – or their families (differential access to medical care or in care seeking) (Laflamme 1998) or because of differences in hospital staff's propensity to keep an injured patient at the hospital at least one night (Engström 1999). The occurrence of any of those biases, which the data at hand cannot reveal, may have lead to an underestimation of the odds measured. Conversely, there would be an overestimation if hospital staff tend to keep injured patients from those groups to a greater extent. But, again, there is no evidence of such bias in the Swedish context.

Another set of limitations has to do with area-based analysis per se. First, as a representation of living area, a parish may comprise a larger and more heterogeneous population than a neighborhood. This would result in non-differential misclassification, biasing relative risk towards unity. Also, our analyses were conducted under the assumption that length of residence – or residential mobility – does not vary between parishes. This might also lead to a misclassification bias that would dilute any main effect.

Second, the absence of control for confounding effects of the physical characteristics of living environments (e.g. home, traffic, or playground) may reduce the relative risks observed, since safer environments – and products – can be expected to be found more frequently in better-off parishes. Other types of information of documented relevance are the health-care environment, community standard of living, and economic vitality (Matteson et al. 1998).

Third, the analysis was carried out under the assumption that children are injured in the parish where they live. It might be so that, as their mobility increases, children tend to be injured outside their neighborhood – in particular, but not exclusively, in the case of commuting injuries. This is an additional phenomenon that might dilute the relative risks compiled.

Last but not least, the study is essentially ecological, and therefore does not permit conclusions to be drawn at individual or family level.

Conclusion

The previously reported absence of an effect of neighborhood socioeconomic composition on fall-injury risk may in part be an artifact of lacking precision, in particular in diagnosis and age group. This exploratory study shows that the effect of neighborhood social composition on fall-related injury in childhood is not straightforward. In addition, according to type of fall, both increased and decreased risks appear in less privileged neighborhoods. Social indicators, age group of victims, fall circumstances, and severity levels of injury are all of importance.

Zusammenfassung

Soziale Charakteristika der Quartiere und Sturzverletzungen bei Kindern. Gebiets-basierte Studie im Landkreis Stockholm.

Ziele: Der potentielle Einfluss der Zusammensetzung der Bevölkerung auf die Häufigkeit von Verletzungen durch Stürze im Landkreis Stockholm soll untersucht werden.

Methoden: Odds-ratios wurden berechnet unter Berücksichtigung der soziodemografischen Zusammensetzung (sozioökonomische Verhältnisse, sozioökonomischer Status, soziale Integration), der Mechanismen der Sturzverletzung, Altersgruppen und Schweregrad der Verletzung.

Resultate: Die kompositen Eigenschaften beeinflussen Sturzverletzungen in verschiedener Weise, je nach Typ der Verletzung, Alter der Betroffenen, Umstände des Sturzes und Schweregrad. Bei kleinen Kindern wurde vor allem ein Zusammenhang mit den sozioökonomischen Verhältnissen beobachtet und für ältere Kinder ein solcher mit der sozialen Integration. Des Weiteren wurde für alle Stürze, sowohl aggregiert wie für kleinere und grössere Kinder festgestellt, dass die soziale Integration in Zusammenhang steht mit einer erhöhten Wahrscheinlichkeit des Spitaleintritts aufgrund einer Röhrenknochenfraktur.

Schlussfolgerungen: Die Auswirkungen der sozialen Determinanten eines Quartiers auf sturzbedingte Verletzungen in der Kindheit sind nicht eindeutig zuzuordnen. Ein besseres Verständnis der zugrundeliegenden Mechanismen könnte dazu beitragen, präzisere Zielvorgaben zu definieren und die Strategien für die Prävention und die Ressourcenzuteilung zu verbessern.

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Résumé

Caractéristiques sociales des quartiers et traumatismes par chute chez les enfants: une étude géographique dans le comté de Stockholm

Objéctifs: Etudier l'influence potentielle de la composition de la population du comté de Stockholm sur l'incidence de traumatismes par chute chez les enfants.

Méthodes: Les Odds ratios sont calculés selon trois indicateurs sociodémographiques (contextesocio-économique, statut socio-économique, intégration sociale), selon le mécanisme de la chute, selon la gravité de la blessure et selon l'âge des enfants.

Résultats: Selon l'exposition, l'âge de la victime, le mécanisme de la chute et la gravité de la blessure, les caractéristiques de la population ont un impact différent sur les traumatismes. Chez les plus jeunes, c'est avant tout le contexte socioéconomique qui joue un rôle alors que chez les enfants plus âgés, c'est l'intégration sociale. On observe donc aussi bien des effets protecteurs qu'aggravateurs de ces caractéristiques. D'autre part, pour les chutes dans leur ensemble et pour les enfants de tous les groupes d'âge, l'intégration sociale est associée avec un excès d'Odds pour les admissions pour fractures des os longs.

Conclusions: L'effet de la composition sociale du voisinage sur les traumatismes par chute chez les enfants est complexe. Une meilleure compréhension des mécanismes sous-jacents pourrait contribuer à identifier des objectifs précis et à améliorer les stratégies de prévention et d'allocation des ressources.

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Address for communication:

Lucie Laflamme
Karolinska Institutet
Department of Public Health Sciences
Division of Social Medicine
Norrbacka, 2nd Floor
SE-171 76 Stockholm
Sweden
Tel.: +46 8 737 3776
Fax: +46 8 737 3878
e-mail: lucie.laflamme@ki.se