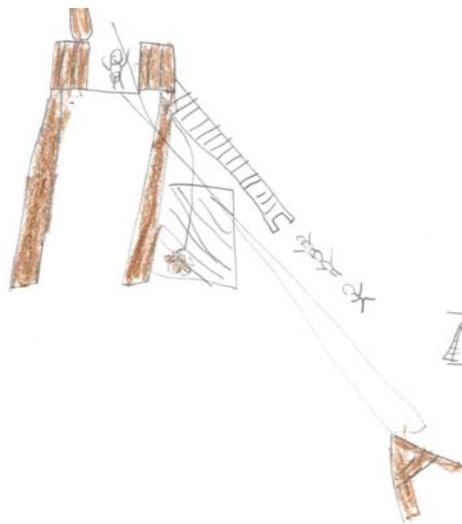


Research Review

Promoting Safe Play and "Hanging Out."

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Picture by Alexander Aged 9, Belfast

Promoting Safe Play and "Hanging Out"

Why is the issue important to children?

Unintentional injury is the leading cause of death amongst children in the UK and a common cause of childhood morbidity. In 1999, four hundred and twenty three children died from unintentional injury in Britain. Furthermore, 2.28 million children (aged 14 and under) were admitted to Accident and Emergency (A+E) Departments. Road traffic accidents were and are the biggest cause of accidental death for all children under fifteen. However, approximately 16% of

children admitted to A+E Departments in 1999 (aged 14 and under), were either injured in playgrounds or whilst playing sport. Forty-eight thousand children of the same age were injured in parks and public gardens.

While a significant number of children and young people are injured during play, taking risks and learning through playing is an important aspect of social and cognitive development. Research conducted in Switzerland for example, showed that children with less access to outdoor play displayed considerably less social and motor development compared with children who had a greater degree of outdoor freedom. Indeed, research shows that a number of different groups of children and young people are missing out on play and outdoor activities.

There are therefore two issues for the promotion of safe play and hanging out identified in the literature, that has important implications for interventions. Namely, how do we reduce serious childhood injuries that occur through play activities while promoting an inclusive play environment that allows children and young people to take risks and learn through exposure to an acceptable level of hazard?

Which children comprise the key population?

Research indicates that children from lower socio-economic backgrounds are more likely to be unintentionally injured, compared with children from more affluent families. Girls are less likely to engage in outdoor play than boys. Boys however, are more likely to be injured in outdoor play. Disabled children are more likely than their non-disabled peers, to be excluded from outdoor play environments and opportunities. These factors can have a compound affect on children's access to safe play. For example, research has shown that disability is more prevalent in children from lower socio-economic backgrounds.

What are the main risk and protective factors?

Risk Factor: Poverty

Children from lower socio-economic backgrounds are significantly more like to suffer unintentional injuries than children from more affluent background. The British Medical Association (BMA) reported that children from Social Class V were four times more likely to be fatally injured than their counterparts in Social Class 1.

Protective Factor: Safety Equipment

It is logical to assume that the increased use of safety equipment by children and young people will result in a reduction in the number of children subsequently

becoming injured. For example, research has shown that the increased use of cycle helmets will reduce the number of children incurring head injuries. However, research on Australian children's (aged between 10 to 14) skateboarding injuries showed that approximately 40 % of those receiving medical attention were wearing protective clothing at the time of injury.

Risk Factor: Gender

Boys are significantly more likely to be injured in the leisure environment compared with girls. While taken together, unintentional injuries are the biggest cause of mortality for children, cancer is the single biggest cause of death amongst girls aged 5 to 15 in England and Wales. While this difference may reflect a greater willingness on behalf of boys to partake in risky activities, research shows that girls are less likely to be involved in play activities outside of the home environment. While this reduces the probability that girls will be injured in the leisure environment, it does suggest that many girls are missing out on an important aspect of childhood development.

Protective Factor: Adult Supervision

Research indicates that the majority of unintentional play and leisure injuries are sustained when there is either none or insufficient adult supervision present. However, while younger children are often keen to ensure that they play in areas where they can "see and be seen"; older children and young people often seek areas to "hang out" that are free from adult supervision.

Risk Factor: Exposure to hazardous environments

While this is closely linked to social class, children exposed to hazardous environments (such as busy roads and derelict houses) appear to be substantially more likely to be unintentionally injured compared with children less exposed to such environments⁸

Protective factor: The design of play spaces

According to the Child Accident Prevention Trust (CAPT), the design of play areas and their locations has a significant impact on child safety. Play spaces that encourage child safety have: clearly laid-out boundaries where activities in one area do not inter-fear with activities in another; separate play spaces for older and younger children; clearly marked paths that are separated from play equipment; clear lines of vision throughout the area to facilitate adult supervision; suitable fencing protecting children from roads, rivers and ponds and safe access for children with special educational needs.

Risk Factor: Disability

There is a wealth of research to show that disabled children are less likely to be involved in outdoor play compared with their non-disabled peers. While this

reduces the likelihood of these children becoming injured, play spaces are often not built to accommodate disabled children's needs. Advocates of play spaces for disabled children argue that their inclusion in play opportunities is a basic human right as the exclusion of disabled children from play spaces prolongs their dependence on parents and other primary care-givers for leisure and recreational activities. It also denies disabled children the opportunity to socialise with their non-disabled peers.

Which interventions work?

Strong evidence as to the effectiveness of interventions aimed at reducing children's leisure injuries and promoting safe and inclusive play is scarce. However, a number of interventions have been developed and some of these have been rigorously evaluated.

Intervention 1: Modifying playground equipment

Research indicates that the majority of unintentional playground injuries are fractures, sustained through falls and mainly incurred by boys under 10. There is relatively strong evidence to suggest that the removal of more hazardous play equipment (such as monkey bars) and increasing the depth of bark on playground floors can lead to a significant reduction in children's injuries from falls without reducing the numbers of children who use the facilities. Sibert et al (1999) for example, found that doubling the depth of bark surfaces in five playground parks in Wales led to significant reductions ($p < 0.05$) in injury rates per observed child in those parks. In one of the parks, monkey bars (which had a fracture rate twice that of other climbing frames) was replaced with a rope-climbing frame. No injuries were recorded for the rope-climbing frame over the study period.

Intervention 2: Traffic calming

Britain has one of the highest child pedestrian casualty rates in Europe with 140 children being killed on UK roads each year. Speeding has been identified as the common cause of this alarmingly high statistic. There is strong evidence to suggest that the introduction of traffic calming schemes significantly reduces child pedestrian and cycling injuries and creates safer places for children and young people to play. According to Pilkington (2000), government research shows that the introduction of 20 mph zones reduced the number of child pedestrian and cycling injuries by 67%¹³. CAPT claims that with every one mile reduction in speed there is a corresponding 5% reduction in the number of road crashes.

Intervention 3: Community-based education programs

Community-based education programs have been a popular strategy in injury prevention work and seek to improve the individual's own safety practices, by educating them of the dangers of certain risky behaviours (such as not having

smoke alarms in the home or failing to wear seatbelts in cars). This approach has been applied to reducing injuries in children's play and, while the evidence is limited, it does suggest that education programs aimed at reducing certain types of injuries amongst children can be successful. Klassen et al's for example, argues that there is relatively strong evidence to suggest that bicycle helmet use is positively effected by community based education programs, especially if this is accompanied by the provision of subsidised safety equipment. Eight of the eleven studies they reviewed reported significant increases in bicycle helmet use following the interventions. However, the evidence that community based education programs increase other types of safety practices amongst children and young people is less strong.

Which interventions look promising?

The following interventions have been labelled as "promising" as no evidence was found that they have been subjected to robust evaluation.

Intervention 1: Consultation with Children and Young People about Play Spaces
Recent years has seen a dramatic increase in the number of play schemes and initiatives that have sought to consult with children about their needs and requirements for play. The former Department for Transport, the Environment and the Regions for example, produced an interactive CD-ROM to consult with children about their views on green play spaces. Better Play have funded the Devon Play Association to consult with local children about the development of new play facilities in the area. However, there is no robust evidence at present that supports the proposition that play spaces designed through consultations with children are either safer, more popular or meet the needs of children and young people more effectively, than play spaces created solely by adults. Equally, no evidence was found that this is not the case.

(For further information e-mail: team@devonplay.co.uk)

Intervention 2: Inclusive adventure playgrounds for disabled children

Kidsactive, a London based children's charity, was established in 1968 and currently runs six inclusive adventure playgrounds in the London area. These are aimed at both disabled and non-disabled children aged between 5 and 15. According to the charity, in developing an inclusive playground practitioners need to: employ skilled professional staff who have experience of working with disabled children; make sure the proposed site for the playground is fenced and secure; maintain suitable ratios of children to play-workers; introduce activities and equipment specifically designed to meet needs of disabled children and include a transportation service to collect and return disabled children to and from the playground¹⁰. Kidsactive have produced a set of guidelines called Side by Side, aimed at helping managers and practitioners in creating inclusive play opportunities.

(For further information visit: www.kidsactive.org.uk)

Intervention3: The Home Zones initiative

The Home Zones initiative is championed by Children’s Play Council (CPC) and is the UK interpretation of the “woonerf” (literally meaning living yard) developed in Holland in the 1980’s. On woonerf streets, pedestrians have priority over traffic and the layout of the street is substantially altered, partly to facilitate children’s outdoor play. While in the UK, local authorities do not have the power to alter the priority of streets, the government has given it's support to nine pilot Home Zone schemes across England and Wales and the Scottish Parliament will also be initiating three pilots^{2 16}. Morice Town in Plymouth is one such pilot initiative and Great George Street in Bristol is currently working towards Home Zone pilot status. One Home Zone scheme, Campfield Road in Hertford has been completed. As well as changes in the priority of streets from traffic to pedestrians, the Home Zones initiative also advocates a reduction of speed limits to a maximum of 10 mph in these areas and radical redesigning of the street space, in consultation with local residents.

(For further information visit: www.ncb.org.uk/cpc and www.homezones.org.uk)

Summary

Research into the effectiveness of interventions aimed at promoting safe and inclusive play is limited. A recent systematic review for the Health Development Agency (H.D.A) for example, surveyed international literature on children’s injuries and found only seven studies that evaluated the success of intervention targeted at children’s play and leisure time. Furthermore, the limited evidence that does exist is primarily concerned with younger children. In the literature search for this review, only two publications were found that specifically address leisure injuries amongst older children and only one of these was produced in the UK. Similarly, while there is a wealth of research highlighting the exclusion of disabled children from outdoor play activities, little research exists that have evaluated the successfulness of interventions that have sought to address this.

The limited evidence that does exist indicates that interventions need to tread a careful line between allowing children and young people to explore and take risks through play, while simultaneously reducing the number of children seriously injured while playing. Play areas that are well designed, appropriately supervised and have sufficient safety equipment appear to reduce children’s injuries and facilitate safe and inclusive play. Following this, there is strong evidence that interventions which promote these protective factors are successful. For example, the evidence suggests that subtle modifications to playground equipment (such as doubling the depth of bark on playground floors) can reduce the number of children’s injuries without forcing the child to alter their play behaviour.

Interventions which seek to reduce the quantity and speed of traffic in areas close to where children play also appear to yield positive results.

Finally, children and young people often have very age specific needs in relation to play and consultation with them over play spaces for them, may well be an effective way of making sure such spaces adequately reflect and address their needs. However, the literature search for this review found no details of any research that sought to test this assertion.

¹ Child Accident Prevention Trust 2002 *Child Injury Facts and Figures- 1999*, www.capt.org.uk (Visited 19-08-02)

¹ Gill "Street Life" in *YoungMinds Magazine* Issue 33

¹ NCH 2001 *Factfile*

¹ Health Evidence Bulletins Wales 2002 *Road Traffic Accidents* www.uwcm.ac.uk/injury/chapter3.html (Visited 21-08-02)

¹ Victorian Injury Surveillance System (VISS) 1997 *Hazard* No. 31, Monash University, Australia

¹ Office National Statistics 2002 *Social Focus in Brief-Children* www.statistics.gov.uk/themes/social_finances/sfib/children (Visited 20-08-02)

¹ R. Whewey and A. Millward 1997 *Child's Play: Facilitating play on housing estates*, Chartered Institute of Housing and the Joseph Rowntree Foundation, UK

¹ Child Accident Prevention Trust 2000 *Taking Chances: The Lifestyles and Leisure Risks of Young People, Project Summary* www.capt.org.uk

¹ Child Accident Prevention Trust 2002 *Safety Equipment* www.capt.org.uk (Visited 19-08-02)

¹ Kidsactive 2000 *Side by Side: Guidelines for inclusive play*, London, UK

¹ Towner et al 2000 *What works in preventing unintentional injuries in children and young adolescents?* Health Development Agency, Britain

¹ Sibert et al 1999 "Preventing injuries in public playgrounds through partnership between health services and local authority: community intervention study" *British Medical Journal*.

¹ P. Pilkington 2000 "Reducing the speed limit to 20mph in urban areas" *British Medical Journal*

¹ Child Accident Prevention Trust 2002 *Children and Road Safety* www.capt.org.uk (Visited 20-08-02)

¹ Klassen et al 2000 "Community-Based Injury Prevention Interventions" *The Future of Children: Unintentional Injuries in Childhood* Vol.10 No.1

¹ www.homezones.org.uk