Introduction

Trampolines started to appear in the gardens of private houses within the UK around the turn of this century. Since that time, they have become incredibly commonplace, and the reasons why are understandable. The compact nature of the trampolines makes them an attractive proposition for all but the smallest of gardens. The continued success of British gymnastics at consecutive Olympic Games may have captured the imagination of young people. And they can offer a valuable outlet for children to exercise and burn energy either alone or with friends in a relatively secure location, reducing the risk of stranger danger, and possibly prolonging the life of sofas throughout the land.

Commercial trampoline parks are indoor facilities that have wall-to-wall trampolines ideally positioned to prevent users falling off on to hard surfaces. Padded or spring walls are also usually provided in order to reduce the risk of impact injuries.
An initial trend for trampoline parks in the USA in the late 1950’s fell away, however, the parks have seen rapid growth around the world over recent years, with variations on the traditional trampoline park model starting to appear, offering greater enticements such as ‘ninja warrior’ style assault courses which can include foam pits, diving boards, swings, monkey bars, climbing walls, ropes and many other components.

However, the rise in popularity of trampoline parks has coincided with reported increases in visits to Accident and Emergency facilities as a result of injuries sustained by users of the parks, some of which have been quite serious (the American Academy of Paediatrics, 2016).

Overview

Who is at risk?

According to research conducted in Australia (Mulligan et al, 2016), indoor trampoline parks are increasing as a source of injuries among children. A prospective cohort study was conducted, with semi-structured interview and medical record review, of children aged under 17 years presenting to a paediatric emergency department following an injury at an indoor trampoline park. In a 6-month period in 2014, 40 such children (55% female) presented to the department.

Common injury mechanisms included individual jumpers falling while attempting a somersault or trick, landing awkwardly on an obstacle such as a ball or protective padding, and multiple users colliding while on a single trampoline. Most sustained soft tissue injuries and fractured bones. One child sustained an unstable cervical fracture/dislocation.

Unlike domestic trampolines, where the majority of injuries occur from falling off, most trampoline-park injuries occur on the trampoline surface. These differences require injury prevention strategies that engage children, carers and businesses to meet best practice design and management standards.

A similar rise in trampoline park related injuries is also confirmed in the USA by a study (the American Academy of Paediatrics, 2016) that estimated that US emergency department visits for trampoline park injuries (TPI) increased significantly, from 581 in 2010 to 6932 in 2014, whereas home trampoline injuries (HTI) did not increase. Sprains and fractures were the most common injuries at trampoline parks and homes. Compared with HTIs, TPIs were less likely to involve head injury, more likely to involve lower extremity injury, more likely to be a dislocation, and more likely to warrant hospital admission. TPIs necessitating hospital admission included open fractures and spinal cord injuries. TPI mechanisms included falls, contact with other jumpers, and attempted somersaults.

It is worth noting that neither report suggested that trampoline parks where becoming more dangerous, but that the increase in usage was resulting in a higher number of injuries being experienced through their use.

Developments and Standards

The International Association of Trampoline Parks (IATP) was founded in 2012 and located in Hershey, Pennsylvania. Its vision is ‘to be regarded as an essential resource and an international authority for our industry’ and its mission ‘to serve our membership by promoting optimally safe operations, facilitating commercial success and stimulating growth of the trampoline park industry’.

There is currently no British Standard or accepted industry code of practice relating to the design or operation of trampoline parks within the UK.

Within the UK, in order to provide a collective approach to concerns regarding injuries and consistent standards, an industry working group, including park operators, representatives from local authorities and British Gymnastics, was formed. This then moved into a committee of the International Association of Trampoline Parks (IATP). The UK Sub Committee of the IATP focus is to share best practice and accident data and to look into how best to ensure the safety of trampoline park customers across the UK. This group shares knowledge and practice internationally through its links with the IATP.

A key task for the group is the drafting of a publicly accessible British Standard.
Led by a cross section of operators, members of UK - IATP and RoSPA, it is intended that the British Standard will be available sometime in 2017. RoSPA have stated that they hope all existing commercial trampoline centres declare their compliance with the standard within 18 months of its publication. In the interim period, the UK - IATP recommends that an independent inspection of trampoline park facilities is a sensible approach to formulating a safety case for the design and construction of each park.

The Law

The duties under UK law for the majority of leisure facilities such as sports centres and swimming pools are the same for trampoline parks. One key difference between these facilities and a trampoline park is the inherent nature and level of voluntary risk that visitors accept when using them.

The main law governing health and safety at work in the UK is the Health and Safety at Work etc Act 1974 (HSWA). This Act places general duties on employers, the self-employed, and people in control of premises to ensure, so far as is reasonably practicable, the health and safety of their employees and anyone else that may be harmed by work activities or the workplace, e.g. members of the public.

Section 53 of the Health and Safety at Work Act 1974 defines "fairground equipment" as:

"fairground equipment" means any fairground ride, any similar plant which is designed to be in motion for entertainment purposes with members of the public on or inside it or any plant which is designed to be used by members of the public for entertainment purposes either as a slide or for bouncing upon, and in this definition the reference to plant which is designed to be in motion with members of the public on or inside it includes a reference to swings, dodgems and other plant which is designed to be in motion wholly or partly under the control of, or to be put in motion by, a member of the public.

It is therefore suggested in some parts that trampoline parks in the UK fall within the scope of the Health and Safety Executive's regime for health and safety compliance of fairground equipment.

The Management of Health and Safety at Work Regulations 1999 complement and expand on the general HSWA duties mentioned above, requiring employers, among other things, to carry out risk assessments and have effective arrangements in place for managing health and safety and emergency arrangements.

Equally, The Occupiers' Liability Act 1957 should also be considered as it places a common law duty of care on persons in control of premises to 'take such care as in all the circumstances of the case is reasonable to see that the visitor will be reasonably safe in using the premises for the purposes for which he is invited or permitted by the occupier to be there.' It is important to note that this Act also states that 'an occupier must be prepared for children to be less careful than adults'. As an example, it may be that adults would take notice and act upon visible warning signs, but it shouldn't be assumed that children would do the same and so occupiers would need to take this into account when designing safety standards. The Occupiers' Liability Act 1984 extends the duties placed on occupiers to include some responsibility to protect uninvited visitors. Uninvited visitors could include people such as the emergency services or trespassers.

The Corporate Manslaughter and Corporate Homicide Act 2007 increases the possibility for a corporation to be found guilty of homicide and manslaughter without the need to identify an individual within the organisation to prosecute. The offence of corporate homicide or manslaughter is related to the way in which senior managers organise the activities of the organisation.

Whilst prosecutors will need to establish that the criterion for a gross breach of duty of care has taken place, clearly there is scope for any organisation to be subject to the Act including trampoline park operators.

Other acts and regulations which may be considered as relevant to trampoline parks include, but not exhaustively, the Manual Handling Operations Regulations 1992, the Health and Safety (First Aid) Regulations 1981, and the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013. In England and Wales, the Regulatory Reform (Fire Safety) Order 2005 governs fire safety in non-domestic premises whilst in Scotland this is addressed by The Fire Safety (Scotland) Regulations 2006 and other associated documents.

Safety Management of Trampoline Parks

Legal duties are placed upon on a wide range of people according to their role in the design, installation and operation of trampoline parks. These include:

- **Designers, suppliers, manufacturers, installers and importers** have duties to ensure that the trampolines are safe when first supplied and installed, to carry out any necessary research and provide information about safe use, which is updated in the light of experience.
— Organisers have overall control of the trampoline park, and have duties concerning safe layout and emergency procedures such as first-aid, dealing with medical emergencies and fire safety evacuations.

— Controllers own or otherwise have control of the trampoline park, and have a duty to maintain it in a safe condition, including such things as regular inspections and maintenance of the facilities in direct accordance with manufacturers’ guidance and legal requirements.

— Operators are in immediate charge of the trampoline park and have a duty to operate it safely. This includes ensuring that strict user safety guidelines are developed, clearly communicated to employees and visitors and enforced at all times, and that equipment is used safely and in direct accordance with its design philosophy.

— Attendants help to operate the trampoline park, and have a duty to take reasonable care for their own and others’ safety, and to follow instructions. They should ensure park users strictly adhere to user safety guidelines at all times, and are trained and competent in the application of emergency protocols such as first-aid, medical emergency response, and fire safety evacuations.

— Inspection bodies provide inspection and testing services. Where they are engaged by other duty holders to perform specific tasks, it should be established that the particular type of inspection and testing service required is one that body is registered and competent to perform.

For further guidance regarding the specific requirements placed on each interested party listed above, please refer to HSG 175: ‘Fairgrounds and amusement parks: Guidance on safe practice’ (HSE, 2007).

One duty common to all interested parties is the need to manage health and safety effectively. This includes planning and risk assessment. A range of risk assessments will be required. For example:

— Designers need to: identify how the public or employees might be injured, including risks arising from the need to inspect and maintain the trampolines and associated equipment, as well as from its use as an attraction and emergency situations; determine possible effects of ‘foreseeable misuse’ by the public, controllers or operators.

— Manufacturers need to: identify the risks to their employees and others during the manufacturing process.

— Installers need to: identify the risks to their employees and others during the installation process, such as risks from working at height, manual handling, electricity etc.

— Organisers needs to: assess site risks, for example, access, transport, limitations of space, – produce a site layout which will minimise the risks; identify any planning, equipment, information and training needed to deal with emergencies.

— Controllers need to: assess the risks from assembling, maintaining and using the attraction.

In some cases the duties will overlap, for example, if one party designs, manufactures, and installs components of the trampoline park, or another party is regarded as the organiser, controller and operator. If this is the case, duty holders need to:

— identify any control measures, precautions, information, instructions and training needed to make sure that all jobs and activities are undertaken safely;

— review their assessment, where relevant, in the case of changes in design, manufacturing process, modifications, operating conditions, operational experience etc.

Conclusion

The use of trampolines is regarded to be an extreme sport and should be considered as such. The reported rise in the number of injuries associated with the use of trampoline parks certainly increases the need for the development and publication of a publically available British Standard. It should also increase the need for caution to be demonstrated when selecting a trampoline park to utilise, particularly so in the context of the development of more extreme variations such as those that offer ‘ninja warrior’ and other assault course style facilities. The level of safety management standards required should be directly proportionate to the level of risk presented (i.e. the higher the risk presented, the higher the level of safety management that is required).

The current absence of a relevant publically available British Standard does not imply that trampoline parks are generally devoid of existing safety management systems and so selection procedures for use of such facilities should take into account the level of safety management involved in their design, manufacture, installation, organisation, and control. By doing so, the risks associated with using trampoline parks will not be eliminated, but they may be reduced.
References

Legislation
1 The Health and Safety at Work etc Act 1974
2 The Management of Health and Safety at Work Regulations 1999
3 The Occupiers' Liability Acts of 1957 and 1984
4 The Corporate Manslaughter and Corporate Homicide Act 2007
5 The Manual Handling Operations Regulations 1992
6 The Health and Safety (First Aid) Regulations 1981
7 The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013
8 The Regulatory Reform (Fire Safety) Order 2005
9 The Fire Safety (Scotland) Regulations 2006

Other references

Other useful links
14 ‘The International Association of Trampoline Parks: http://www.indoortramplineparks.org /

Further RMP Resources and Articles

For access to further RMP Resources you may find helpful in reducing your organisation’s cost of risk, please access the RMP Resources or RMP Articles pages on our website. To join the debate follow us on our LinkedIn page. Additionally we have specific discussion groups for the Education, Emergency and Government sectors.

Get in touch

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