

FUNCTION, SAFETY AND SELECTION OF TOYS FOR CHILDREN

Aini Mat Said¹, Noor Syaizwanna Sharif¹, Nur 'Afni Hashim¹, Afida Mastura Muhammad Arif¹ & Rumaya Juhari²

¹Center of Excellence for Sustainable Consumption Research,

²Department of Human Development and Family Studies

Faculty of Human Ecology

Universiti Putra Malaysia

Introduction

Toys are prehistoric and they were initially domestically produced until the early sixteenth century whereby specialised toy-making centres in Europe emerged as cottage industry and later spread to America and Japan (Cross and Smits, 2005). In the 1960s, one of the leading toy manufacturer and marketing companies in the world, Mattel Inc. of the United States of America began manufacturing toys offshore to reduce manufacturing costs in response to competitive pressures (Teagarden, 2009). Thereafter, the market is inundated with mass produced toys that are manufactured through contracted offshore manufacturing. Total sales of toy in the global market have been steadily increasing annually. Statistics from the World Outlook Report (Parker, 2006) shows that the toy market was valued at USD17,293 million in 2001 and is predicted to be worth USD26,802 million in 2011. In 2006, China ranked first in toy export (children's toys and indoor games) as she supplies about 74 percent of the world's demand while Malaysia ranked 18th place (Parker, 2006). Although Malaysia exports toys, toys sold in the Malaysian market are mainly imported from China and Hong Kong. Data in 2006 indicated that the total value of toy imports into Malaysia was valued at about USD 45 million and 67.45 percent and 17.52 percent were imported from China and Hong Kong respectively (Parker, 2006).

There has been a radical change in the production, marketing, retailing, attitudes towards toys, values as well as consumption of toys. It has evolved in tandem with progress in civilisation, advancement in technology and changing consumer culture. The toys of today have to meet not only the expectations of parents but have to satisfy the sophisticated preferences and the tech-savvy present young generation. This is manifested in the growing increase in the kinds of toys, especially electronic ones in the market. It was estimated that there were approximately about 50,000 kinds of toys in the

marketplace in 2002 (The Japan Toy Association, 2002). The consumers are thus faced with a challenging task in making purchase decisions as they are confronted with extensive options in terms of categories, types, price and quality of toys.

The consumers worldwide were taken by surprise over the massive toy recalls in 2007 where millions of toy products were withdrawn from the market. It was even nicknamed as “year of recalls” (Beamish and Bapuji, 2008). Unfortunately, due to ignorance and apathetic attitude of consumers, a large percentage of products that were subjected to recall remained on the road or in the home (Consumer Reports, 2004). Consumer product recalls, particularly the recall of toys, have gained considerable attention across the world and raised concern about consumer product safety (Bapuji, Crossan and Hora, 2008). There are various reasons for toy products to be recalled: defective; pose choking hazards, strangulation and chemical hazards; noisy; and sharp edges. A survey conducted by Czech Consumer Association (2004) showed that 30 percent of the toy products sold in their market was not safe. Likewise, The Federation of Malaysian Consumers Associations (FOMCA) conducted a random testing of 24 toys from supermarkets and hypermarkets. The results indicated that 23 of them contain lead on their surfaces that can pose a serious health risk to children (News Strait Times, 2007). Results from the laboratory tests conducted in Universiti Putra Malaysia on toys (for aged below three years) sold in the night markets found that none of them were strong enough to prevent any detachment or cracks in the drop test. They also posed choking hazards as indicated after use and abuse tests. The toys tested basically failed to meet the safety standards including labeling requirements (Konami et al., 2010). These test data were taken prior to the enforcement of the Consumer Protection (Certificate of Approval and Conformity Mark of Safety Standards) Regulations 2009 which came into operation on 30 January 2010. Consumers should not be complacent since unsafe toys were also sold in countries that even have in place toy safety regulations. For example, it was reported by Wahl (2009) that nothing has changed to prevent dangerous toys from landing in Canadian retailers’ aisles.

In the circumstances where there are regulatory weaknesses and ineffectiveness or unethical marketers, consumers’ aptitude in making purchase decision act as the ultimate barrier against unsafe products. Toys are supposed to bring enjoyment and happiness to children but unsafe toys can cause serious injuries and even fatalities. This paper aims to provide some guidelines to consumers in choosing and purchasing toys for children. The topics of discussion would encompass functions of toys, hazards of toys, toy labeling, and criteria of selection and toy safety tips.

Definition and categorisation of toys

There are several definitions of toys provided by various standards bodies and organizations as illustrated in Table 1 below.

Table 1: Definition of Toy

Sources	Definition
Malaysian Standard (2001)	Product designed or clearly intended for use in play by children under 14 years old.
Council Directive 88/378/EEC (2009)	Any product or material designed or clearly intended for use in play by children of less than 14 years of age.
Toys Safety Standard of The Japan Toy Association (2002)	As an object or a number of objects intended as a play thing for a child or children up to the age of 14 years.

In summary, a toy is defined as any object designed for use in play by children under the age of 14 years. It should be cautioned, however, that there are exceptions to this whereby in Malaysia goods specified in the Second Schedule of the Consumer Protection (Certificate of Approval and Conformity Mark of Safety Standards) Regulations 2009 are not regarded as toys such as aquatic equipment, darts with metallic points, toys installed in public places, fashion jewelry for children etc.

There is no uniformity in the categorisation of toys. The categorisation used depends on the primary objective such as education values, marketing purposes, standardisation and regulatory accomplishment. A toy lending library in the US, Toys' n Things, used five basic categories based on basic educational values namely creative thinking, cognitive and symbolic process, social and emotional growth process, sensory and perceptual process and physical development. Within each of the groups there are more specific divisions and subdivisions (Kight, 1976). Table 2 shows the classification made by CPSC (1993) where the toys are grouped into six major categories with subcategories under each main category.

The classification system of toys is important particularly if it is designed to be an educational and training tool for parents and educators. The system designed by Toys' n Things is an exemplary model to be emulated especially for child care providers, nurseries and kindergartens as it facilitates teaching

and learning for both parents and teachers, in maximising the role toys for children’s development.

Table 2: Categorisation of Toy

Main Category	Subcategory
All Toys	A general category orienting the consumer to special features of toys that are relevant to the particular age group.
Active Play	Push and pull toys, ride on toys, outdoor and gym equipment as well as sports equipment.
Manipulative Play	Construction toys, puzzles, pattern-making toys, manipulative toys, dressing, lacing and stringing toys, sand and water play toys.
Make-believe Play	Dolls, stuffed toys, puppets, role play materials, play scenes, transportation toys and projectile toys.
Creative Play	Musical instruments, art and craft materials and audio-visual equipment.
Learning Play	Games, specific skills development toys and books.

Function of toys

The value of play among children has been recognised by scholars and the right to play of a child is enshrined in the Declaration of the Rights of the Child (1959) by the UN Commission on Human Rights. Principle 7 of the declaration states that ... “The child shall have full opportunity for play and recreation, which should be directed to the same purposes as education, society and the public authorities shall endeavour to promote enjoyment of this right” (U.N. Doc. A/4354: 3). Through playing, the children can achieve many living skills such as solving problems, sharing of ideas, expressing their feelings, and learning about themselves and others. Play will enhance their physical, linguistic, social, emotional and cognitive development. It is therefore vital that play media and materials (toys) are chosen appropriately so that maximum potential impact of a child’s development is materialised. Listed below are some of the main functions of toys;

- (i). Stimulate the children’s mental, emotional and psychological development (Myoungsoon, 2002; Benjamin, 2007);
- (ii). Help children to mimic adult roles, because toys give an opportunity to expose and explore the environment (Benjamin, 2007);

- (iii). Stimulate children's growth and development in many areas (Schiller, 1999);
- (iv). Encourage the physical development such as: push and pull toys; wagons; sleds; balls; boxes; ladders; and others including household tools (Myoungsoon, 2002); and
- (v). Stimulate visual activity through the attractive or eye-catching colours, decorations and constructions. Children's creativity and expression can be encouraged using handy material such as paper, clay, carpentry materials, crayons, scissors and glue (Benjamin, 2007).

Hazards of toys

According to the Emergency Medical Services News (2002), around 150,800 children aged 14 and below in the world were treated in hospital emergency rooms for toy-related injuries. It was estimated that there were 220,500 toy-related injuries treated in U.S. hospital emergency departments in 2006. Seventy five percent of the injuries involved children under 15 years of age and 36 percent were to children under five. Most injuries affected the head and face area, which include eyeball, mouth and ear. Other parts of the body injured include arms, from shoulder to finger and the leg and foot area. The most frequent diagnosed injuries were lacerations, contusion and abrasions, fractures, sprains and strains.

Data from the Epidemiology of Injury in Malaysia (the only data available as for now), as reported by Injury Prevention and Control Unit (Junainah and Sivananadam, 1996), 72 percent of injuries associated with toys occurred among children below the age of 10, with toddlers between 1-4 years of age having the highest occurrence (38.1%). Boys were more affected than girls, where 66.7 percent of cases involved boys and 26.7 percent involved girls while information on gender was missing in 6.6 percent of cases.

Studies by National Safe Kids Campaign (2004) have shown that there are various underlying causes that lead to toy injury amongst children. Those factors include appropriate selection, proper use of toys, combined with parental supervision and interaction with children can greatly reduce the incidence and severity of such injuries. Proper parental selection of toys and guidance will mitigate toy-related injuries among children.

Among the main hazards posed by toys to the children are:

- (a) Accidental ingestion and choking

Younger aged child has great deal of curiosity and learn from touching and putting anything around him/her into his/her mouth. This behaviour and the physically immature development of the airway and esophagus were the factors that contribute to incidental ingestion for younger aged child. Small things can get clogged in the narrow passageway as:

- (i). The ability of swallow is low. So, younger aged child is not easy to swallow obstruction in his/her airway and esophagus by his/her own will and thus prevent accidental ingestion.
- (ii). Because of high rate of breathing and higher airway open frequency, it is easy for accidental ingestion to occur.
- (iii). The teeth of younger aged child have not developed well. Thus, he/she cannot chew well and hence there is an easy tendency to swallow object as a whole.
- (iv). Younger aged child head is heavier compared to the body and thus, easy to lose his/her balance and fall down and incidental swallowing can happen.

According to the Toy-Related Deaths and Injuries Report 2007 produced by the US Consumer Product Safety Commission (2008), there were 18 fatal incidents among children under the age of 15 and an estimated of 232 900 toy related injuries among all ages. Most of the injuries are lacerations, contusions, and abrasions. The head and the face area were the most frequently affected area. Moller *et al.* (1997) found that ingestion or inhalation were the most frequent hazards besides insertion, shearing and cutting, stability and loss of control of wheeled toys. The most common types of toys involved in the injury cases were classified in the non-specific category of “toys not elsewhere classified”, which consist of a diverse group of small toys including toy cars, stuffed toys such as teddy bears, xylume sticks, toy spades and amusement novelties.

(b) Cut and laceration

Moller *et al.* (1997) also stated that the most common injuries were laceration, foreign bodies in soft tissues or in and through openings, bruising, fractures and superficial abrasions.

(c) Chemical hazards

Materials that are used for the manufacture of toys should not contain toxic substances that may harm human health under normal use condition. Toxic substances such as lead (Pb) was found in paint that is used to coat wooden

toys and Di-Ethyl Hexyl Phthalic acid (DEHP) was also detected in Poly Vinyl Chloride (PVC) made toys.

The biggest recall was made by Mattel Inc. in 2007 where 19.8 million China-made toy products were withdrawn from the market globally. Some of these toys were also sold in the Malaysian market. The products that were recalled included Barbie, Polly Pocket and "Cars" movie items. The reason for the recall was due to high lead contents in paints and in presence of small powerful magnets in some of the toys.

(d) Inappropriate use of toys

According to Dawn (2005), inappropriate use of toys or materials was ranked as one of the major contributors to accidents and injuries among children in both preschool and school age children. Some toys are chewed, bitten, pushed and pulled; others are gently handled, kept well beyond childhood years. Selecting the right toy ensures that children get the best out of their toys and that they can last for years.

Toy selection criteria

Prior to purchasing of toys, parents and adults should first understand the preferences of the children of varying ages on toys (Taylor *et al.*, 1997):

- (i) Infants enjoy toys, which they can hold, mouth and cuddle;
- (ii) Toddlers enjoy toys that allow them to employ their motor skills;
- (iii) Preschool children enjoy toys that provide opportunities to practice their mastered skills;
- (iv) Primary school children enjoy toys, which allow them to be active and cooperative with others.

Two main aspects for consideration in purchasing toys are safety and durability. Toys should be constructed to withstand the usage and abuses of children in the age range for which the toy is appropriate. Many parents do not realise that some toys products that are safe for older children and adults may significantly increase the injury risk for preschoolers (Dawn, 2005). Table 3 shows the characteristics of toys that are suitable for the different age levels of the children (CPSC, 1993).

Table 3: Toy Appropriateness for Children of Different Age Level

Age	Toys
For all ages	• No shock/thermal hazards in electrical toys. • Amount of lead in toy paint severely limited. • No toxic materials used by children under 12. • Latex balloons, toys, and games with latex balloons must be labeled warning of the choking and suffocation hazards.
Under age 3	• Unbreakable. • No small parts or pieces which could become lodged in the throat. • Infant rattles large enough not to become lodged in child's throat and constructed so as not to separate into small pieces. • No balls with diameters 1.75 inches or less.
For ages 3 through 6	• All toys and games with small parts must be labeled to warn of the choking hazard to young children.
For 3 years and older	The following toys must be labeled to warn of the choking hazard to young children: • All balls and toys and games with balls with a diameter 1.75 inches or less. • All marbles and toys and games with marbles.
Under age 8	• No electrically operated toys with heating elements; • No sharp points on toys. • No sharp edges on toys.

During purchasing, it is important that consumers understand the meaning of the symbols that are written on the labels affixed to the toy products. Table 3 below shows some of the safety symbols and warnings that are used universally in labeling of toy products.

Toys are purchased for varying reasons and purposes: buying a particular toy due to the child's desires; educational rationale; parental emotional gratification; to please their offspring; purchase similar toys for their children as those owned by their friends; and customary of giving gifts to children seasonally (e.g. during Christmas) and for rites of passage (birthdays, vacation). Regardless of the basis of toy acquisition, the purchasers need to be wary of the age appropriateness and safety aspects of the toy. Listed below are some of the general considerations that need to be taken during and after purchasing of the toys (Frost, 1992; The Royal Society for the Prevention of Accidents (RoSPA):-

Table 4: Toy Safety Symbols

Toy safety symbol	Description	Symbol
CE safety mark	This is an assurance to consumers that the toy complies with the EC Toy Safety Directive.	
Age warning	This warning is an instruction or advice on safe use of the toy, for example; “Not suitable for children under three years old”.	
Lion mark	Voluntary British Toy and Hobby Association's Mark that indicate the toy meets the statutory safety requirements.	
Kite mark	The symbol that gives consumers the assurance that the product conforms to the appropriate British Standard and should therefore be safe and reliable.	
Choking hazard warning	This warning is an instruction or advice on safe use of the toy, for example; “Small parts. Keep away from children 3 years and under”.	
Malaysian Mark of Conformity	Toys that have been tested and certified safe by the International Laboratory Accreditation Cooperation or Asia Pacific Laboratory Corporation.	 Figure 1 – Conformity Mark

1). Safety assurance

Look for the mandatory or voluntary safety labels. For example, the European Community (CE) symbol which gives the assurance that the manufacturer meets the requirements of the EC Toy Safety Directive. Products without the CE mark may not be intended to be used as toys but are novelties which may not be safe for children to play with. Another example is the Malaysian Mark of Conformity label to ensure that the toy meets the Malaysian Toy Safety Standard.

2). Where to purchase

The consumers are advised to purchase from suppliers with a good reputation for safe and reliable toys. They should be members of trade associations whose rules call on them to meet high standards. Extra care needs to be taken if buying toys from a jumble sale or night market.

3). Toy selection

- (a) Select multi-purpose toys and allow children to make their own toys.
- (b) Select combined toys with natural materials (sand, water, etc) and in natural settings and toys that expand discovery – seeds, soil, magnifying glass and others.
- (c) Select safe toys. Look out for sharp edges, parts that can break off, parts that can cause choking, parts that can puncture or cut or strings that can wrap around a child's neck.
- (d) Select toys that are durable – expect heavy use and abuse.
- (e) Toys for infants and toddlers should be able to be washed and cleaned.
- (f) Consider age of children – select toys that can be used in different ways at different levels of development.
- (g) Balance your selection – promote physical, intellectual-emotional, language and creative development and match toys to developing interest (music, pets, board games).
- (h) Avoid bombarding children with too many toys, toys that encourage violent fantasy or games that encourage physical risk and discuss toy selections with children.
- (i) Limit the number and variety of 'bought' toys, especially theme-specific toys.
- (j) Ensure that toys reflect ethnic or culture balance.
- (k) Make sure the toys are suitable. Some children, particularly those under three years old are more vulnerable, particularly to choking, and less able to cope with particular toys than the older children.

4). Maintenance and aftercare

- (a) Parents or teachers should read the packaging and learn about them before letting the children play with them.
- (b) Adults should ensure that the children are using the toys correctly and safely.
- (c) Check toys periodically to see that they have not become dangerously worn, revealing sharp points and edges or filling materials. Dispose of them if they are no longer safe.
- (d) Children under three years of age should never be allowed to play with toys, which are marked, as being unsuitable for them.
- (e) Encourage children to play with one toy at a time, to be tidy and put toys away after play.
- (f) Consider involving children in donating toys to charitable organisations as they are outgrown and more appropriate ones are purchased.
- (g) Parents, pre-school educators and consumers in general should always be on alert for public notice of toys recall or reports on injuries from toys.

5). Avoid the following:

- (a) Toys with loose pile fabric or hair, which sheds easily presenting a choking hazard.
- (b) Toys with small components or parts, which can detach or which a child could choke on.
- (c) Toys with sharp points and edges or finger traps.
- (d) Loose ribbons on toys and long neckties on children's costumes.
- (e) Small toys sold with items of food.

Conclusion

A child learns and discovers the world around him through activity and play. Parents can enhance physical, psychological and social development of a child through appropriate selection of toys that suit their age, stage of growth and are safe to use. In order to realise these objectives, the consumers particularly the parents and teachers of pre-schoolers need to be equipped with adequate knowledge on principle functions of toys, toy selection criteria and toys maintenance and care. Szymansky (2002) aptly summarised that in a world where marketing hype and biased opinion lead consumers into purchasing, toys are one of the products for which consumers need educated information before purchase.

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