Playground Safety in Pomona’s Parks

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Geo 435
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Abstract

The intention of this report is to give the general public a basic understanding of playground safety and how well the public playgrounds that are found throughout the parks within the City of Pomona follow playground safety standards as stated by the United States Consumer Products Safety Commission. After reviewing this report, the reader should be able to identify some common hazards that can be found associated with the playground area and structures. This report should also leave the reader with some level of knowledge so that the reader is capable of assessing the playground’s safety on their own discretion. It is with the hope of the writer that the reader should also be able to understand that there are inherent dangers in all environments and that with proper supervisions these dangers could be significantly reduced.
Introduction

In our modern society we are more concerned with safety and health more than ever before. We wish for an environment that has little dangers and plenty of benefits. This desire for a “good” environment is often strongest in our urban residents. City folks will often seek for a place where they can take a break from the daily grind and have a brief pause to enjoy the simple passing of time. Many cities throughout the world have fulfilled the desires of their citizens by providing them with some existence of a public space. In many instances the public space takes the form of a public park. Filled with amenities and greenery, its sole purpose is to allow any urban dweller to escape from the urban environment with attractions and distractions, even if for a brief moment.

Of course children are often brought into parks to share in the benefits that many attribute to these green spaces. Children are a large contributor of park visitation and as such they are given their own designated areas to conduct play. These “playgrounds” are often set up in a way to contribute to the children’s enjoyment of the park. These playgrounds provide various health and mental benefits for any growing child in a safe and comfortable manner. But despite the safe environment that these playgrounds are suppose to foster, there have been numerous children who have become injured on the playground (Solomon).

It is generally agreed upon that there can be a multitude of reasons that can lead to the injury of children during their innocent acts of play (Widman), but this report wishes to look at the factors that are involved with the playgrounds themselves. Using the Public Playground Safety Handbook provided by the United States Consumer Product Safety Commission (CPSC), this report will assess the level of safety of the playgrounds found in the parks that are managed by the City of Pomona. This report will look at twenty-two playgrounds found throughout the City of Pomona and identify any dangers or hazards that are often associated with playgrounds and their use. By increasing the public’s
awareness, this report hopes to help reduce child injuries on these public playgrounds.

Methods

This report began by identifying common sources of injuries that are associated with playgrounds. This report relies significantly on the guidelines and standards mentioned by the CPSC in their handbook. The CPSC handbook was used due to its federally supported research. The CPSC handbook has also been numerously referred to by several other organizations that studies and reviews playground safety. Such institutions included the National Program for Playground Safety (NPPS), National Recreation and Park Association (NRPA), and for our specific instance, the Govt. of California Playground Safety Regulations. The CPSC handbook was also used for guidance when testing the playground equipment and its features. Certain tools, as suggested by the CPSC handbook, were created to help test particular features of the playground equipment.

Once the common sources of injuries have been listed and identified, a score sheet was developed to help assess the level of safety for each of the twenty-two playgrounds in the City of Pomona. Individual features of the playground were reviewed. The score sheet gave positive values when CPSC standards have been applied to the playground features and negative values were given if the playground features seemed to lack CPSC standards. How well the playground features complied with CPSC standards also helped determined its value on the score sheet. These values were then summed up and an overall score would be assigned for each playground. The result where then charted for ease of review.

To properly collect the data, each of the twenty-two playgrounds in the City of Pomona was visited. Upon each visit, the playground features were looked over and their assessment were recorded. Any notable circumstances related to the
park were noted and photos were taken to assist in identifying and reviewing any curiosities found on the playground.

Playground Users Clarification

It should be mentioned that the playgrounds that this report focused on were those with the intended use for children of grade school age. These children are identifiable in the ages of 5-12 years old. The reason for choosing this particular age group is due to the fact that it is during this age span that children begins to show signs of independence and increased in daring behavior (Canada). This particular age span is also an important part of child development in both the physical and mental stages. It is crucial that any risk that these children make will not result in serious injury and create a detrimental affect in their developmental process.

Toddlers, children under the age of 5 years, is ignored in this report is due to the fact that many of these children are still dependent on the parent (Canada) and are often highly supervised. Although toddlers may have the opportunity to use playgrounds intended for older children, any risk that they take will often be at the discretion of the parent.

Teenagers, children ages 13-18, are also not considered in this report because they are often no longer interested in the challenges and activities that are provided by the playground. This age group is at a stage where they have gained an increased in mobility and is able to seek entertainment outside the playground environment. It should also be mentioned that this age group is prone to misuse playground equipment and that any injuries they sustain is not the fault of the playground equipment but by that of the attempted user (Worthman).
Common Playground Hazards

Crushing:
Any moving playground equipment where a limb or body part may be crushed due to normal playground equipment use (e.g. space under a seesaw)

Entanglement:
Any non-rigid playground equipment where a child may inadvertently ensnare themselves through play (e.g. rope structures and rope nets)

Impalement:
Protrusions on playground equipment that may stab/jab/impale children when they make contact with the object (e.g. exposed threaded ends of bolts or screws)

Entrapments:
Certain accessible openings that let through portions of the body and not allow the rest of the body to follow or prevent body part from escape without proper orientation (e.g. vertical bars on railings and horizontal gaps between platforms and railings)

Sharp Points, Corners, and Edges:
Parts of the playground equipment that may puncture or cut skin (e.g. splinters, metal edges)

Tripping:
Sudden raised or indented features on playground surface (e.g. cracks, dips)
Falling:
The unintended decent of some height from the playground equipment (e.g. fall from climbing structure)

Poor Surfacing:
Material is inadequate for reducing the injuries sustained from falling and tripping (e.g. asphalt, displacement of surfacing material)

Poor/Lacking Components:
Poorly maintained playground equipment may pose a hazard for users and bystanders. Playground equipment may lack component that is crucial for the safety of its users.

Location of Playgrounds Assessed

All twenty-two parks are located within the Pomona city limits

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>Address</th>
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<tr>
<td>1.</td>
<td>Cesar Chavez Park</td>
<td>2720 Barjud Ave.</td>
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<td>2.</td>
<td>Ganesha Park</td>
<td>1775 N. White Ave.</td>
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<td>4.</td>
<td>Hamilton Park</td>
<td>317 Hamilton Blvd.</td>
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<td>6.</td>
<td>John F. Kennedy Park</td>
<td>1150 Fairplex Dr.</td>
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<td>7.</td>
<td>Kellog Park</td>
<td>610 Medina St.</td>
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<td>9.</td>
<td>Lincoln Park</td>
<td>400 E. Lincoln Ave.</td>
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<td>10.</td>
<td>Memorial Park</td>
<td>655 W. 3\textsuperscript{rd} St.</td>
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<td>11.</td>
<td>MLK Jr. Park</td>
<td>800 W. Lexington Ave.</td>
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12. Montvue Park  
1555 N. Cordova St.

13. Palomares Park  
499 E. Arrow Hwy.

14. Philadelphia Park  
800 E. Philadelphia St.

15. Philips Ranch Park  
10 Village Loop Rd.

16. Powers Park  
600 W. Olive St.

17. Ralph Welch Park  
1251 W. 11th St.

18. Ted Greene Park  
2105 N. Orange Grove Ave.

19. Tony Cerda Park  
450 E. Grand Ave.

20. Washington Park  
865 E. Grand Ave.

21. Westmont Park  
1808 W. 9th St.

22. Willie White Park  
3065 Battram St.

Results

After reviewing the initial data collected, it would seem that the playgrounds found in parks that are managed by the City of Pomona lack any serious hazard. Each of the playgrounds that were inspected had followed the standards that had been stated by CPSC. It should be mentioned that according to the scoring system devised by this report, not a single park received full marks. This is due to the fact that some parks had approached the CPSC standard differently from what this report had expected and that some parks, although still safe, had some minor concerns.

Looking at the table provided (Table 1), it can be said that each of the playgrounds scored quite well. With the highest possible score possible being a 48, the average score of the twenty-two parks was a 39. This meant that the average score fell in the 80% range of the highest possible score. Out of the twenty-two parks, 60% of them received scores that were above the average score.
Table 1

<table>
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<tr>
<th>Park Number</th>
<th>Total Score</th>
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*Park Number; refer to Park List on page 7

Highest Possible Score = 48

Average Score = 39

Average Score represents 80% of Highest Possible Score

60% of the playgrounds are above the Average Score
Upon further review of the data collected, it seems to suggest that there are few prominent hazards that are shared with all the parks. These prominent hazards were found by taking the average of the total score for a single type of hazard from all of the playgrounds and looking at the types of hazards that displayed the lowest average score. These prominent hazards pertain to the category of surfacing, entanglement and falling.

The surfacing materials found on the playgrounds were either sand or wood mulch. Considering the advantages and disadvantages of both materials, this report found favor with sand as a better surfacing material than wood mulch. Sand will not degrade as fast as wood mulch and is capable of better withstanding the elements. Sand also provides a better cushioning for fall and trips due to its ability to shift and effectively absorb impacts. The sand is also viewed by many as a medium of play for children and is often perceived as an essential part of the playground environment. The wood mulch alternative is understood to be used for its more aesthetic appeal. The wood mulch is not as intrusive as sand and deters animals from soiling the playground surface. Wood mulch is accepted by the CPSC as a capable surfacing material, but lacks some of the additional benefits associated with sand. Playgrounds with sand as a surfacing material received a better score for the category.

Some of the playground equipment poses a slight issue of entanglement. The issue stems from semi-rigid climbers that have square shaped openings. These openings allow hands and feet to slip through and may result in a low hazard ensnarement. Playgrounds where these semi-rigid climbers were present did not receive the highest possible score for the category. (See picture 01).
The issue of falling hazard is related to individual playground equipment that is tall and is purposely in place to challenge the children’s skills. Most of the fall hazards originate from tall vertical climbers that may require varying methods to successfully scale them. Children are known to fall from the full height of these climbers for various reasons during their play and it is often the surfacing material that determines the extent of the fall injury. Playgrounds that had high/tall climbers or features were more likely to have falling incidents and did not receive the highest possible score for the category. (See pictures 02-04)

Despite some minor concerns, the playgrounds found in the City of Pomona is safe to use. What little hazards that may be found on them it should not deter their use. The major components of the playgrounds are in good conditions and suggest that maintenance have been regularly conducted.

Conclusion

After conducting this research I can say with confidence that the playgrounds of Pomona are safe and that they are free of hazards that may seriously injure children. Although there were minor concerns that have been brought up, they are well within range of acceptable risk that are involved with most other forms of play. Overall, the playgrounds have successfully followed the guidelines and standards that have been mentioned in the CPSC handbook. The City of Pomona has demonstrated that the safety of children is being well considered in their park environments.

Discussion

A notable feature of the playgrounds that should be mentioned, but was not considered in the beginning of this research, is that they are predominantly
supplied by a single manufacture of playground and park equipment. The *Miracle Recreation Equipment Company* (MREC) seems to have provided playground equipment for a majority of Pomona’s parks and supplies playground equipment on a national level (See picture 05). On their catalogue, MREC claims to follow national standards of safety as dictated by several safety research organizations including the CPSC. The playground equipment that MREC have provided are known as “play structures” which are modular in design as allows the attachment of various playground equipment to its main structure (See pictures 06). Since the design is very modular, many of the play structures found on the playgrounds had shared many components and features. This has led to the fairly similar scores that each of the playgrounds reviewed had received. Since the playground equipment used for the parks of Pomona was created and designed by a single manufacturer with safety in mind, taking CPSC standards into consideration, it is obvious that there is little or no presence of hazards. The City of Pomona has done well in choosing suppliers that follows the standards of the CPSC and have designed their playgrounds accordingly. (See Picture 07)

A topic that should be mentioned regarding children’s safety on the playground is supervision. It is critical that any and all children should not be completely unsupervised when using any equipment on the playground. Supervision is important for several key reasons. Firstly, children are less likely to conduct inappropriate behavior knowing that an adult is present for fear of being reprimanded. Secondly, supervisors will be able to detect any hazardous element during the children’s play before they get injured. And thirdly, if any incidents have occurred the supervisor will be able to assist the injured children (SKW). It is with proper supervision that any and all injuries the children may sustain when using playground equipment can be avoided.

It should be understood that this research was conducted under several limitations. Firstly, this research had a time constraint of approximately 7 weeks. This limited the time available to fully review and conduct further analysis of the
research subject. Secondly, this research was part of a class assignment where certain criteria’s were required to be in place to be acceptable. Thirdly, the conductor of the research is not native to the City of Pomona and is not completely aware of the citizen’s opinions regarding the safety of the playgrounds, which may or may not contradict the findings stated in this report.
Picture 01
Semi-rigid Climber,
“Honeycomb Climber”

Picture 02
Vine Climber
8ft high
Photo courtesy of MREC catalogue
Picture 03
Tensile Tower
8ft high
Photo courtesy of MREC catalogue
Various climbers on a play structure 8ft high

Signs indicating equipment was supplied by MREC
Picture 06
Common play structure configuration found in Pomona’s parks
Picture 07
Play structure at Garfield Park, Pomona
Displayed in MREC catalogue
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