Are Baby Walker Warnings Coming Too Late?: Recommendations and Rationale for Anticipatory Guidance at Earlier Well-Child Visits

Rachel Schecter, BA1, Prithwijit Das, MSEd1, and Ruth Milanaik, DO1

Received March 26, 2019. Received revised August 19, 2019. Accepted for publication August 21, 2019.

Introduction

Baby walkers, traditionally marketed to parents as products that can help babies learn how to walk, are devices composed of a suspended seat surrounded by a rigid frame that is connected to wheels. This design positions infants to sit in a balanced standing position with their toes touching the floor, thereby allowing them to move independently without parental support. For many parents, baby walkers are viewed as an ideal way to encourage their children to begin walking, while keeping them entertained, quiet, and safe.1,2

Research has suggested that, despite their name, baby walkers can potentially hinder a child’s ability to walk. Studies have reported lower locomotive development test scores for babies who used baby walkers than those who did not.1,3,4 In addition, baby walkers may detrimentally affect the development of normal gait patterns and posture in early childhood and may even lead to idiopathic toe walking gait pattern development.5,6

In addition to gait concerns, baby walkers are associated with a high risk of injury. Alarmingly, statistics reveal that approximately 12% to 50% of children who use baby walkers become injured.7 Between 2004 and 2008, there were approximately 3000 children aged 15 months and younger who required treatment in US emergency rooms due to injuries from baby walker usage.8 However, this report did not include cases treated in urgent care centers or pediatric clinics/offices, and therefore, incidence may be higher. Baby walker injuries may be caused by falling down stairs, burns from electrical outlets, or drowning from walking into a pool or accessing the toilet.1 Since babies can independently move in baby walkers, they may be able to reach items on higher surfaces and are therefore at higher risks for reaching hazards, such as pulling hot liquids from counters.8

While the American Academy of Pediatrics (AAP) clearly states that baby walkers do not promote independent walking and stress that baby walkers can delay normal development and motor control, this warning does not appear until the published 8- to 12-month anticipatory guidance period.1,9 With baby walker usage remaining high in the United States, the question arises as to whether this guidance is coming too late. This study examines the age, gait patterns, and risks for injury of babies using baby walkers in video clips posted publicly on YouTube in order to evaluate whether additional anticipatory guidance is needed at earlier well-child visits.

Methods

Due to the fact that this study involved collecting publicly available data and required passive observation of behaviors without collection of identifiers, it qualified as exempt research. A single researcher analyzed public videos posted on YouTube, searching broad keywords such as “baby walker” and “baby walking using a walker.” During the evaluation of the public videos, the single researcher used generic words to minimize bias of searching for dangerous or highly proportionate instances of abnormal gait patterns. The demographics of the infants, including age (if specified in the video), gender, and observed race of each subject, were documented. For nonspecified age of an infant, the infant was evaluated and organized into 1 of 3 categories: 0 to 4 months, 4 to 8 months, and 8 to 12 months. Two developmental pediatricians reviewed and confirmed these categories as they align with key developmental time points. The characteristics of the baby walker such as

1Division of Developmental and Behavioral Pediatrics, Steven and Alexandra Cohen Children’s Medical Center of New York, Lake Success, NY, USA.

Corresponding Author:
Ruth Milanaik, Division of Developmental and Behavioral Pediatrics, Steven and Alexandra Cohen Children’s Medical Center of New York, 1983 Marcus Avenue, Suite 130, Lake Success, NY 11042, USA.
Email: rmlanai@northwell.edu

Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (http://creativecommons.org/licenses/by-nc/4.0/) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (https://us.sagepub.com/en-us/nam/open-access-at-sage).
stationary walker versus a roll-on bottom walker were also noted. In a stationary walker, the baby is still sitting in a suspension toy. However, there are no wheels, so the baby is only able to bounce and unable to move around. “Exersaucers,” which are devices that only allow the infant to sit in a suspended seat with toys attached to the frame, were excluded since infant users were unable to jump or walk in them. The researcher recorded the number of likes and dislikes as well as the number of views for each video. Any obstacles or dangers faced by the infant observed in the video were recorded. Infant ability to reach for objects that were accessible through the use of baby walkers was also documented. Additionally, the researcher observed and documented baby gait movements such as heel/toe walking, on toe walking, pronated foot walking, standing on toes, standing flat feet, jumping on toes, and jumping flat feet. The infant angle of the body in relation to the walker (45°, 75°, 90°, 100°) and infant neck control (poor, moderate, good) was also observed and recorded for each video.

Ethical Approval and Informed Consent

This study is considered exempt research due to the fact that data were exclusively collected on observations of behaviors that were publicly accessible online.

Results

Video clips (N = 107) featuring babies in baby walkers were examined and assessed over a 6-month timespan. These clips generated a combined total of 4,573,538 public views at the time of analysis. Male infants accounted for 52% (56/107) of the babies observed, and the average “identified” age stated by parents was approximately 6.7 months. When the age was not identified, as exhibited in 51% (54/107) of the videos, the average approximated age was 4 to 8 months. Infant subjects were observed to be 57% white, 17% white-Hispanic, 12% Asian, 11% other, and 3% black. Only 12% of videos included an infant using a stationary walker opposed to the roll-on bottom baby walker. In 75/107 (70%) of the videos, there was at least one obstacle or danger present. Obstacles included babies walking into narrow hallways (15%), doors (10%), or walls (33%), and babies becoming immobile while attempting to walk on carpets (33%). While videotaping, 14% of caregivers did not remove infants in baby walkers from direct life-threatening situations. Such observed dangers included infants falling out of a baby walker, infants being at risk for burns by open ovens or electrical outlets, as well as infants at risk for drowning while running around pool areas in baby walkers. Infants younger than 6.7 months presented with irregular/abnormal gait patterns in 97/107 (91%) video clips. These include flatfeet walking (11%), on-toes walking (73%), and rolled feet walking (4%; Figure 1). Additionally, 95% (102/107) of subjects exhibited actions such as jumping on toes (11%) and standing on toes (61%). Many infants, 90/107 (85%), were observed to be leaning forward in the walker with approximately a 45° body angle (Figure 2). Furthermore, 103/107 (96%) of babies had either poor or moderate head control while in the baby walker, with only 3% of babies exhibiting good head control while in walker.

Discussion

Our results clearly support current concerns with baby walker usage. An alarming 91% of the 107 video clips examined in this study depicted infants with abnormal gait patterns during baby walker usage. While this statistic does not imply causality, further research is needed to explore this issue. Furthermore, the majority of these infants were put at risk for physical injury due to dangerous situations arising from being placed in a walker.
Some filming caregivers even allowed infants to move around in their baby walkers while in direct life-threatening situations.

While AAP warnings remain clear on their stance against baby walker usage, sales and subsequent baby walker injuries in the United States persist. Further changes are necessary in the United States to prevent baby walker injuries. Canada banned the production, sale, and advertisement of baby walkers in 2004, citing unnecessary injuries and no supported benefits. The AAP needs to encourage lawmakers to consider such legislation in the United States. Furthermore, regardless of legislation, pediatricians must warn parents of the safety and developmental concerns associated with baby walker usage.

Conclusions

The majority of the infants observed in the baby walker public videos were significantly younger than 8 to 12 months, with an overall mean of 6.7 months. This indicates that anticipatory guidance on baby walkers must take place at earlier well-child visits than suggested. Recommendations against baby walker purchase and use should be made prior to 4 to 6 months of age as many infants are already using these devices at earlier ages. Earlier pediatrician intervention and outreach may prove critical to preventing the purchase and use of baby walkers.

Author Contributions

RS: Contributed to conception and design; contributed to acquisition, analysis, and interpretation; drafted manuscript; critically revised manuscript; gave final approval; agrees to be accountable for all aspects of work ensuring integrity and accuracy.

PD: Contributed to conception and design; contributed to acquisition, analysis, and interpretation; drafted manuscript; critically revised manuscript; gave final approval; agrees to be accountable for all aspects of work ensuring integrity and accuracy.

RM: Contributed to conception and design; contributed to acquisition, analysis, and interpretation; drafted manuscript; critically revised manuscript; gave final approval; agrees to be accountable for all aspects of work ensuring integrity and accuracy.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Prithwijit Das https://orcid.org/0000-0002-4022-3538

References

1. American Academy of Pediatrics Committee on Injury and Poison Prevention. Injuries associated with infants walkers. Pediatrics. 2001;108:790-792. doi:10.1542/peds.108.3.790
2. Thein MM, Lee J, Tay V, Ling SL. Infant walker use, injuries, and motor development. Inj Prev. 1997;3:63-66. doi:10.1136/ip.3.1.63
3. Siegel AC, Burton RV. Effects of baby walkers on motor and mental development in human infants. J Dev Behav Pediatr. 1999;20:355-361. doi:10.1097/00004703-199910000-00010
4. Garrett M, McElroy AM, Staines A. Locomotor milestones and babywalkers: cross sectional study. BMJ. 2002;324:1494. doi:10.1136/bmj.324.7352.1494
5. Rieder MJ, Schwartz C, Newman J. Patterns of walker use and walker injury. Pediatrics. 1986;78:488-493.
6. Krivova AV, Sharov AN. Baby walkers and the phenomenon of toe-walking. *Pediatric Traumatol Orthop Reconstr Surg*. 2018;6:23-32.

7. Bar-on ME, Boyle RM, Endriss EK. Parental decisions to use infant walkers. *Inj Prev*. 1998;4:299-300. doi:10.1136/ip.4.4.299.

8. Weiss HB. Limitations of child injury data from the CPSC’s National Electronic Injury Surveillance System: the case of baby walker related data. *Inj Prev*. 1996;2:61-66.

9. American Academy of Pediatrics. Movement: 8-12 months. https://www.healthychildren.org/English/ages-stages/baby/Pages/Movement-8-to-12-Months.aspx. Accessed June 19, 2018.

10. Government of Canada. Injury data analysis leads to baby walker ban. https://www.canada.ca/en/health-canada/services/science-research/activity-highlights/food-drugs-consumer-products/injury-data-analysis-leads-baby-walker-science-research-health-canada.html. Accessed June 22, 2018.