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Violence in Advertisements in New York City Subway Stations: A Pilot Study

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Abstract

Violence has become a public health concern in the United States. Violent visually stimulating content encompasses various techniques such as fear, humor, shock, or violence, to stimulate a response or appeal toward awareness of human emotion. Exposing impressionable youth to violent advertisements can be particularly problematic. This is especially true in places like New York City where violent crime is a prevalent problem. With annual ridership reaching over 1.7 billion in 2014, the New York City subway system is abundant with advertisements. The purpose of this pilot study was to determine the frequency and type of violent advertising on the Lexington Avenue/East Side Line in New York City, running through the Bronx and Manhattan to represent the lower and higher median income earning boroughs. There were no statistically different findings in median household income at site of station by number of ads or source of violent. Destruction was the most common form of violence ($n = 32$, 42.7 %) followed by intent to strike ($n = 18$, 24 %), showing a weapon ($n = 15$, 20 %) and horror ($n = 10$, 13.3 %). Most ads ($n = 46$, 61.3 %) were found in stations heading uptown toward and through the Bronx, the borough where median household income is lowest, whereas 29 (38.7 %) were found in stations heading downtown. Future studies could focus on additional boroughs and subway lines, and could be collected at multiple points in time to determine of how prevalent violent advertising is throughout New York City and at different time frames.

Keywords

New York City; Advertising; Subways; Violence

Introduction

Violence is a prevalent problem, claiming the lives of over 1 million people annually around the world [1]. In the United States (US) in 2013, over 50,000 people died as the result of intentional violence [2]. The most recent statistics indicate that there are 23.2 victimizations of violent crime per 1000 US residents [3]. Violence among youth aged 10–24 has become a

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major public health concern in the US [4]. The implications for violent or victimized youth present significant and far-reaching challenges for their mental, physical and social health [4]. For nearly 50 years, the extent to which aggressive or violent media content affects viewers to respond in an aggressive or violent manner has been deliberated [5]. Although the research is mixed, the impact of violent visually stimulating content (VSC) on children and youth that view aggressive or violent media content may be immediately apparent [6].

In 2013, at least three million US citizens encountered at least one violent victimization [3]. It is important to note that experts speculate these numbers to be under-reported [7]. Longitudinal data analysis of adolescent victimization revealed young persons with weak family and social ties encounter more adverse behavioral and health outcomes as they transition into adulthood [8]. Among youth aged 10–24 homicide is the third leading cause of death [4].

According to youth and firearm data from New York City (NYC) Department of Health and Mental Hygiene, firearm violence in neighborhoods with economic stress and high poverty rates such as neighborhoods in the Bronx (22.5 % per 100,000 youth) were at least twice the average of NYC neighborhoods [9]. Crime data for the first 6 months of the year for NYC accounted for 161 murders, 633 shooting victims and 542 shooting incidents [10]. Although recent reports showed dramatic declines in fire-arm injuries, [9] thus far NYC rates have increased from last year [10].

Violent VSC utilize various techniques such as fear, humor, shock, violence, etc. to stimulate a response or appeal toward awareness of human emotion [11]. The literature highlights positive and negative effects of these techniques [12]. Gulas et al. [13] explained an unanticipated twist between violence and/or aggression occurring in media ads. For instance, humorous content in media ads can portray the actions and values of various characters. This portrayal provides a fictitious twist that depicts believable “real-world” actions and values that are not “reasonably representative one”. Pollay [14] explained how these twist evolve into a distorted and incomplete reflection that helps mold the culture. Gulas et al. [13] found females responded lower to humor ads with more violence due to violations of perceived social norms. Moreover, higher positive response rate to violence in humorous ads were perceived with stronger violence for male audiences. Zlatevska and Spence [12] demonstrated that aggressive people that viewed violent social cause advertisements strengthened implied associations.

The impact these products have on underdeveloped or impressionable minds can alter lived experiences. For example, Krahe et al. explained that advances in technology have created smaller but powerful graphically high definition devices equipped with capabilities to allow children and adolescents to view violent content in privacy or with little parental supervision [6]. The effects associated with the use of violent words and acts long after the “advertisement has decayed” can influence judgements and behaviors [12]. Krahe et al. explains how new concepts, feelings, and memories are distinguished from what we already know through short-term processes in the brain. Any type of “violent scene” a child is exposed to activates several nodes to spread throughout the neural network [6]. Krahe et al. concluded the behavioral tendency primes the associated nodes and the behavior is highly

probable to manifest [6]. However, this process is not certain but more likely to occur. Another important neural factor associated with short-term effects is mirror neurons. These specialized neurons promote mimicry. Mirror neurons activate or fire in response to performing or observing a particular behavior. Humans are wired like other primates to mimic the behaviors of others, particularly young children [6].

The human experience involves an array of complex and dynamic lived experiences entangled in a web of concepts, feelings and emotions. These attributes illustrate how potential neural triggers activate a “schema or script” in our brain that represents a “complex knowledge structure” [6]. Huesmann describes these scripts as long-term effects that hold the potential to operate and influence behavior outside of our conscious [15]. The experience of violent VSC surrounds today’s child and further cements how children will form beliefs and learn scripts and schemas since messages from “media determines what is learned” [6].

NYC public transportation provided by the Metropolitan Transportation Authority (MTA) [16] offers transportation service to varied destinations throughout NYC. On average, 5,597,551 NYC residents chose the subway for their mode of transportation in 2015 [16]. The MTA website states, “Direct your message to the millions of people each day who use the MTA system [17]” confirming that many of these riders come into contact with advertisements on the subway. Public open spaces such as subway platforms ties into the assumption held by the “multibillion dollar advertising industry” that exposure to media advertisements enact options toward purchase of the product through mechanisms such as (1) influence; (2) store an affective condition; (3) perform a maladaptive behavior choice toward purchase of the product [6]. Under this assumption, violent VSC often contained in advertisements offer a neurological stimulus that can influence how the observer might think, feel, and act about the perceived benefits or risks associated with real life decision-making [6].

The advertising industry use of violent VSC can drive mass exposure with the sole intent to generate capital through delivery of content capable of influencing behavior [11]. The argument of whether violent media or aggressive content translates into real life acts of violence remains debatable. However, access to view violent VSC is readily accessible for public or private viewing by all human beings. The components that make up this landscape consist of a multitude of products targeted to influence people’s behavior. Moreover, the timeframe to process these products may be “gradual, cumulative, and have other significant adverse effects” especially for children and youth [6]. There are no published studies that examine the prevalence of violent advertisements on NYC subways. Therefore, the purpose of this pilot study was to determine the frequency and type of violent advertising on one popular subway line in NYC.

Methods

This was a cross-sectional pilot study in which advertisements assessed on a particular subway line running through the Bronx and Manhattan in NYC. The Lexington Avenue/East Side Line was chosen, as it had the most stops running on a regular (vs. express) schedule throughout each of the two boroughs. These two boroughs were chosen to highlight lower

and higher income boroughs in NYC [18]. Outside stations ($n = 56$) and major transfer stations ($n = 28$) were excluded, as when passengers exit these stations, there are no advertisements. There were a total of 17 stations included in this study ($n = 17$).

A coding sheet was created and pilot tested at three subway stations not included in this study. Coding included enumerating and categorizing all ads, and when an ad was determined to be violent, additional data was collected that captured the type of violence the advertisement was depicting. The zip code of each station was used to collect current census data [19] on median income. The most recent annual ridership for information was obtained and recorded for each station included in the sample [16]. Statistics were calculated using IBM SPSS version 21. The Institutional Review Boards at William Paterson University and Teachers College do not review protocols that are not human subjects research.

Results

A total of 657 advertisements were observed, those, which depicted violence comprised 11 % of the sample. The mean household income of zip codes where stations were situated was \$115,091.37 ($SD = \$86,934.57$) and mean ridership across stations was 821,070,07.57 ($SD = 718,254,3.195$). Median incomes at different stations were related to the frequency of several types of advertisements. Income was positively correlated with (a) the overall number of advertisements ($r = .44, p = .01$), (b) advertisements for television shows ($r = .43, p = .01$), (c) advertisements for websites ($r = .38, p = .03$), and (d) negatively correlated with the number of employment themed advertisements ($r = -.69, p < .001$).

The number and type of violent ads are depicted in Table 1. Destruction was the most common ($n = 32, 42.7\%$) followed by intent to strike ($n = 18, 24\%$), showing a weapon ($n = 15, 20\%$) and horror ($n = 10, 13.3\%$). An ANOVA was conducted to determine if the types of violence portrayed in advertisements differed in relation to median incomes at different stations. Violent advertisements were coded as intent to strike, destruction, horror, and weapon(s) involved. The resulting ANOVA was statistically non-significant $F(3, 71) = 1.26, p = .30$.

Crosstabs analyses were conducted to determine if there were relations between line directions (i.e., uptown vs. downtown) and (a) the media targeted by violent advertisements (i.e., television vs. movies) $\chi^2(1) = .03, p = .86$ and (b) the types of violence portrayed in the advertisements [i.e., intent to strike, destruction, horror, and weapon(s) involved] $\chi^2(3) = 5.63, p = .13$. No statistically significant differences were noted, but most ads ($n = 46, 61.3\%$) were found in stations traveling uptown, whereas 29 (38.7 %) were found in stations traveling downtown.

An independent t test was conducted to determine if the media source of violence portrayed in advertisements (i.e., movies vs. television) differed in relation to median incomes at different stations. No statistically significant difference was found $t(73) = 1.16, p = .25$. The number of advertisements grouped by media source is depicted in Table 2.

Discussion

The findings of this pilot study are important for several reasons. First, those stations in areas of greater median household income were exposed to more advertisements overall. Second, while the type of violent advertisement did not vary throughout the subway stations, the most common types of violence depicted were destruction and intent to strike. Bushman and Huesmann [20], noted exposure such as these magnify aggressive child leaning scripts and support aggressive cognitions that result from observing advertisements that depict individuals engaged in violent behavior. In NYC, violence accounts for about 20 % and 8.2 % of all children in NYC are affected by these reported adverse childhood experiences [21]. Third, there were more violent ads on the subway lines traveling uptown toward the Bronx, the borough with the lowest median household income [18]. New York census tract data revealed neighborhoods with higher affluent markers such as higher median income and managerial positions reported better safety and less violence compared to poorer NYC neighborhoods [22]. The findings of this pilot study suggest that violence is depicted throughout NYC, where violent acts are commonplace.

Research suggests that exposure to regularly violent media was found to translate toward an aggressive behavior in many cross-sectional and longitudinal studies [6]. The growing body of violent television and films revealed “Sphysically and verbally aggressive behavior, aggressive thoughts, and aggressive emotions” were likely to increase during short-term exposure [23]. Many studies have confirmed an inordinate amount of screen time is consumed by children and youth [23]. More importantly, cognitive “priming” is very prevalent during short-term exposure to media violence, which creates an instinctive response to mimic observed violent behavior [23].

In addition, longitudinal evidence supports child aggression later in life is linked with high frequency of media exposure during childhood. Fitzpatrick et al. [24], examined the relationship between early media violence exposure and long-term consequences or adjustments made by children later in life in relation to socio-emotional and academic outcomes. The report concluded violent television represented a threat to population health for children that averaged 1.8 h of mixed (violent) television programming per day during early childhood [24]. The extent to which these results can be extended to advertisements is not clear.

This study is limited by the cross-sectional design. Given the nature of advertising, content can change on a regular basis. In addition, advertisement coding was conducted by one researcher, and was only conducted on one subway line running through two boroughs of NYC. Despite these limitations, this is the first study to examine the presence of violent advertisements in an area frequented by so many young and impressionable riders. Future studies could focus on additional boroughs and subway lines, and could be collected at multiple points in time to determine how prevalent violent advertising is throughout NYC.

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Table 1

Type of violence depicted in subway advertisement

Type of violence	Frequency	(%)
Intent to strike	18	24.0
Destruction	32	42.7
Horror	10	13.3
Weapon	15	20.0
Total	75	100.0

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Table 2

Media source of violence

Media source of violence	Frequency	(%)
Television	32	42.7
Movie	43	57.3

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