

Factors that affect the perception of safety in 40 high crime areas in Gauteng province

Richard Wayne Charlton, Duxita Mistry

¹(Gauteng Department of Community Safety) 64 Pritchard Street, Johannesburg, South Africa
Corresponding Author: Duxita Mistry

ABSTRACT: Much focus is given on crime rates in communities and ways to reduce crime. However, how crime is dealt with by the police also has an impact on citizens perception of safety. Therefore, an important aspect not be ignored is perceptions of safety within a community. These perceptions play a large role because citizens feel unsafe and crime can affect the local economy. If individuals within a community do not feel safe, they will withdraw from society which has the opportunity of increasing crime and fear of crime. This paper examines the factors that can affect the perception of safety in the 40 high crime areas in Gauteng province. The results of the findings in those areas suggest that there are numerous factors that can improve the feeling of safety within a community and inspire confidence in the communities about the police. These include both personal factors (alarm systems, electric fences and private security) and organizational factors (police patrols, lighting in communities, community patrols).

KEYWORDS: Perception of safety, Maslow's Hierarchy of Needs, Broken Windows Theory, Crime Prevention Through Environmental Design, Evidence-Based Policing

Date of Submission: 25-02-2020

Date of Acceptance: 15-03-2020

I. INTRODUCTION

Community safety is an important task every government strives to achieve. It is a concept that attempts to attain a positive state of well-being among individuals within social and physical environments. Reducing crime is one of the priority areas of the South African Government and particularly the South African Police Service (SAPS) and other policing agencies. Furthermore, community safety involves a larger role which includes building strong, cohesive and vibrant communities that have a strong relationship with the police. Therefore, it is imperative to measure the perceptions of safety among individuals in a community as it is as important as measuring crime rates.

Perception is the way in which a person thinks or understands something. It is what a person perceives is real and this perception of reality often shapes their behavior. In essence, if someone perceives their area as unsafe, ultimately their behavior will adjust accordingly, and their actions may include being more suspicious of people or vehicles as well as being paranoid about becoming a victim of crime. Perception of crime or safety is complex in nature and is influenced by numerous factors such as the media, hearsay, age, gender, life experiences, beliefs and previous victimization to name a few (Pfeiffer, Windzio, & Kleimann, 2005). Therefore, with different experiences of crime, one would expect to find different perceptions of safety which need to be addressed. Abraham Maslow (1943) states that humans have a set of inborn needs that motivates their behaviors. Safety is one of these basic needs and comes right after physiological needs. Thus, it is important to understand what leads to somebody feeling safe as this can help in the development or implementation of crime prevention techniques or measures to reduce crime and increase the perception of safety in a community. The purpose of this article is to identify factors that influence the perception of safety at night and supply recommendations to improve feelings of safety in 40 high crime areas in the Gauteng province in South Africa.

II. THEORETICAL FRAMEWORKS

There is an inherent need for safety and security by individuals and Maslow's Hierarchy of Needs is important to understand why it is necessary to improve perceptions of safety. In addition, the Broken Windows Theory will be used as another theoretical framework as a reason for a person's perception of their safety.

Maslow's Hierarchy of Needs

The Maslow Hierarchy of Needs is a theory put forward by Abraham Maslow (1943) which states that people are motivated by five basic principles of needs: physiological, safety, love, esteem and self-actualization (Maslow, 1943). To better understand what motivates humans, Maslow (1943) proposed that human needs can be organized into a hierarchy ranging from more concrete needs, such as food and water, to more abstract

concepts such as self-fulfillment (Hopper, 2019). Maslow asserts that needs lower down in the hierarchy must be satisfied before an individual can attend to needs higher up. For the purpose of this article, only the safety category will be further discussed.

According to Maslow, physiological needs ought to be met before those under safety and only after physiological and safety requirements are met, will someone begin looking at those under belonging and love. Thus, the goal of a human being is to incrementally meet the needs of the individual levels so that they complete the hierarchy (Horne, 2019). According to Hopper (2019), our safety needs are even evident in our early childhood as even children have a need for safe and predictable environments. It is common for both adults and children to react with an increased sense of fear or anxiety when one's safety needs are not met (Hopper, 2019). As humans, we try our best to ensure our own safety. A person's need for safety includes a sense of security of the self, laws, order, policies and job safety (Horne, 2019). Ways in which humans ensure their safety can include purchasing insurance policies, obtaining private security for their homes and installing safety measures in their homes. In essence, it is what someone does that would make him/her feel more comfortable in their life. In short, safety is related to the way in which a person wants to be sure that their physical well-being is protected or is safe.

Safety is an important need because if a member of society wants to move up in the hierarchy they require growth and must have a desire to grow as a person. As people grow, they begin to expand their mental ability, their skills and begin to achieve their full potential. Once they have met their full potential they will reach the highest level which is called self-actualization. Therefore, it can be deduced that progress up the hierarchy of needs is important to ensure a person reaches their maximum potential and fulfilment in life. Obtaining self-actualization is important as it will enable an individual to become a functional law-abiding member of society.

Broken Windows Theory

The broken windows theory is a criminological concept that was first developed by George Kelling and James Wilson in 1982. The theory explores how environmental disorders can shape crime levels and people's perceptions of an environment and crime (Jiang, Mak, Zhong, & Webster, 2018). The broken windows theory claims that policing should promote public order by addressing minor violations, such as loitering, public drunkenness and other minor crimes (Faull, 2019). It is in this notion that orderliness ensures the community is under control and criminals are in check by deterring criminal activity. On the other hand, the theory assumes that disorder makes one believe that the community is not under control (Jiang, Mak, Zhong, & Webster, 2018). Research on disorder has shown it to incite deviance and crime, and lead citizens to withdraw from society, causing neighborhoods to decay and quality of life to decline (Keizer, Lindenberg, & Steg, 2008; O'Brien, 2015). According to Jiang, Mak, Zhong and Webster (2018), the broken windows theory suggests that disorder in a neighborhood influences people's perception of safety. In fact, research suggests that disorder in a neighborhood is the main cause of individuals fear of an environment, even more than actual crime rates or victimization risks (Skogan, 2012; Hinkle & Yang, 2014).

The relationship between physical disorder and perceived safety is cyclical in that the disorder provides visual cues of the likelihood of criminal activity with the built environment (Snyders & Landman, 2018). The likelihood of criminal activity decreases peoples perceived safety; the lower perception of safety then leads to avoidance of space and this avoidance leads to further disorder (Foster, Giles-Corti, & Knuiman, 2014). Thus, the broken windows theory suggests that to break this cycle, environmental signs of disorder should be removed and signs of order ought to be added. By adding signs of order, it will improve the perception of safety among members in a community. According to Snyders and Landman (2018), visual cues or signs of disorder include elements such as un-kept gardens and lawns; un-kept houses and fences (signs of neglect); neglect of open spaces and children play areas; poor or broken street lights; graffiti and vandalism of public property; damaged roads, sidewalks and road signs; and littering or dumping in public areas or open spaces.

III. LITERATURE REVIEW

The media's impact on perceptions of safety and crime

According to Muraskin and Domash (2007), the public's knowledge of crime is primarily derived from its portrayal in the media. The media is known to affect public opinion of crime and punishment as well as the public's perception of the police (Dowler, 2003). Similarly, it is mentioned that the media has a large role in influencing the public's attitude regarding their crime incidents and their safety (Muraskin & Domash, 2007). Social media and the media are outlets that people rely on to get updated information on current events like crime, socio-economic issues and sports amongst others. Therefore, much of the research available on the perception of crime revealed how the media influences one's perception of crime. In 2004, Ditton, Chadee, Farrall, Gilchrist and Bannister conducted a study in Glasgow (Scotland) that aimed to examine the correlation between media reports and citizens fear of crime. The results of the study suggested that frequent viewers of

television were more likely to believe that they would become a victim of crime (particularly violent crime) compared to that of light television viewers (Ditton, Chadee, Farrall, Gilchrist, & Bannister, 2004). Likewise, research on the media's influence on the perception of crime or safety indicates that regardless of local crime rates, viewing local television news was related to an increased fear of and concern about crime (Romer, Jamieson, & Aday, 2003). Adding to the above, research completed by Jones (2017) attempted to examine the impact media and social media has on American's perception of crime rates in the United States of America (USA). The results of this study suggest that overall, the media, including social media influenced the perceptions of how frequently crime occurs in the USA. Furthermore, the research suggests that social media had a greater influence on the participants' perception of crime rates when compared to that of the media (Jones, 2017).

Locally, the media in South Africa has an important role to play in highlighting and informing the public of Gender-Based Violence (GBV) issues (Dyantyi, 2018). Many stories are portrayed in the media and become public knowledge. These reports include instances of crime against women and children, as well as cases of rape and other GBV crimes. According to Dyantyi (2018), the media in South Africa is part of a social contract that is able to shape people's beliefs, principles, attitudes and behaviors. Hence, the media is able to shape the perception of safety in a community. A highly publicized example of GBV and feeling of safety was the Quantum Taxi rapist in South Africa. During the offender's crime spree, there were numerous publications on the offender's modus operandi and how members of the public ought to be vigilant (Koza, 2017). The publications included statements by victims as well as members of the public who were involved in similar incidences. The exposure from the media allowed for citizens to be more aware, however, it would have also decreased an individual's perception of safety. After the offenders were apprehended, the media closely followed the case and reported back on the verdict of one individual being found guilty on 43 counts of rape and kidnapping (Seleka, 2018). This type of exposure by the media on large public cases can have a positive effect on the public's opinion of the police, which will, in turn, increase the perception of safety in a community.

Factors that influence the perception of safety

The media is just one aspect that can influence the perception of safety and crime. As discussed earlier, the broken windows theory can influence one's perception of an area and influence their perception of crime. A study in Brisbane, Australia investigated the perception of danger in public spaces through a scenario-based investigation. The study aimed to identify how individuals sensed danger, what provoked their sense of danger and how this affects an individual's environmental awareness. The study found that in the exact same public space, with the same environment, safety was perceived in different ways (Svensdotter & Guaralda, 2018). For example, a well-lit highly visible and camera surveyed public space is perceived safer than one where there is no clear presence of authoritarian control. According to Svensdotter and Guaralda (2018), surveillance and lighting seemed to create a perception that there were others nearby.

Crime Prevention Through Environmental Design

Perception of safety was also found to be influenced by lighting levels, graffiti and enclosing structures. The impact of these physical factors are closely linked to both the broken windows theory as well the use of Crime Prevention Through Environmental Design (CPTED). The impact of lighting levels or darkness on the perception of safety has also been found in previous research on dark environments and fear of crime (Nasar & Fisher, 1993; Schneider & Kitchen, 2007; Villarreal & Silva, 2006). It has been suggested that the environment can play a significant role in influencing perceptions of safety, where certain environments can impart a feeling of safety whilst others can induce fear, even in areas where crime is low (CSIR, n.d.). The CSIR (n.d.) states that planning and design measures can be utilized successfully to enhance feelings of safety in areas where people feel vulnerable. In short, according to The Council for Scientific and Industrial Research (CSIR) (n.d.), CPTED "aims to reduce the causes of, and opportunities for, criminal events and address the fear of crime by applying sound planning, design and management principles to the built environment".

CPTED is an approach that offers the potential of decreasing crime and improving perceptions of safety in an environment. According to Shariati and Guerette (2019), research on the impact of CPTED and reducing crime opportunities has shown some promise. However, it is suggested by Shariati and Guerette (2019) that there is little empirical research on the extent to which CPTED can influence one's perception of safety. To this, the authors conducted a quantitative comparative assessment of safety perceptions from two, differently designed residential facilities on a large public university in the USA. The results from the study revealed significant differences in perceptions of the safety of residents of the two locations overall, as well as in different situations (Shariati & Guerette, 2019). The residents from the CPTED structure reported higher perceptions of safety in their rooms, surrounding areas, shared halls, buildings and for their personal belongings – compared to the occupants of the low conformity building (Shariati & Guerette, 2019). The study, therefore, provided support for the CPTED theory and the application of it in the university context.

CPTED was spearheaded by the CSIR in South Africa during 2001, where the CSIR drafted a manual introducing the concept of CPTED for the South African Police Service (Kruger, 2005). The manual provides a background into the basic theory behind CPTED and discusses how CPTED can be explored within the South African context (see Kruger, Landman, & Liebermann, 2001). The manual provides a step-by-step guide of the process that ought to be followed when developing and implementing a CPTED strategy. According to Kruger (2005), the manual covers a range of practical examples that deal with the planning of the physical environment, the design of neighborhoods, public spaces and buildings all within a South African context.

An example of CPTED in South Africa is where a community-based crime prevention strategy was developed for a coastal municipality and contained specific CPTED recommendations to address challenges in the area (Kruger, 2005). The area in question had specific crime problems that were related to the environment, parts that were developed around green areas that had since become crime hot spots and escape routes for offenders (Kruger, 2005). The integrated crime prevention strategy included a program that dealt with the physical environment and according to Kruger (2005), the project intended to identify appropriate uses for the unused land and identified land available for development. Through the use of CPTED, the municipality was able to respond to the crime in the area by altering the environment.

Presence of security measures or target hardening

Another factor that has been found to influence the perception of safety is the presence of security measures in an individual's home or the neighborhood in which they reside. A study by Sakip, Johari, Najib and Salleh (2013) aimed to compare the perception of safety in individual gated residential (IGR) and individual non-gated residential (INGR) areas. The study found that respondents who have been a victim of crime have a higher need to feel safer as compared to respondents who have never been a victim of crime (Sakip, Johari, & Salleh, 2013). Additionally, the results suggest that house owners have a higher feeling of security as compared to house tenants. Overall, the study found that perception of safety is higher in an IGR as compared to that in an INGR (Sakip, Johari, & Salleh, 2013).

Closed Circuit Television (CCTV) cameras are often used as a surveillance technique and are commonly used in countries around the world to deter deviant and criminal behavior. The theory behind CCTV cameras is that potential offenders will refrain from criminal activity if they know they are being watched and believe they are at a greater risk of apprehension (GDSCS, 2018a). Likewise, CCTV cameras may also increase perceptions of safety among law-abiding citizens (GDSCS, 2018a). Research conducted by the Gauteng Department of Community Safety (2018a), set out to establish whether the installation of CCTV cameras in the inner cities of four city regions (Johannesburg, Tshwane, West Rand, Sedibeng) has improved the feeling of safety among residents and visitors, as well as bolstering crime deterrence. The overall findings of the research suggest that 94% of the participants felt that CCTV cameras are a good idea and that they should be placed in public areas (88%) (GDSCS, 2018a). Without ignoring other important findings in the research, the research found that 66% of the respondents felt safer after learning that there were cameras in various areas (GDSCS, 2018a). Likewise, feelings of safety because of one's knowledge of the cameras was more prevalent in those who were not victims of crime (79%) (GDSCS, 2018a). This information confirms Balkin (1979), Hough and Mayhew (1985) and Brammar's (2006) argument that there is a commonly accepted belief that people who have been victimized, particularly in their neighborhood, or who know others who have been victimized, will tend to be more afraid.

It is evident from the literature review above that there are numerous factors that can influence an individual's perception of safety. The media, for one, has an important role to play in informing the public on news and events, however, it is also guilty of influencing people's perceptions of safety. Social media also played a role in recent protests (August/September 2019) that were seen in Gauteng (South Africa) regarding foreign nationals. The use of social media in informing residents of the whereabouts of the riots and protests was informative, however, fake news also made its rounds and decreased perceptions of safety in various areas. Likewise, it is clear from the literature that other physical factors such as CCTV cameras (GDSCS, 2018a), lighting and the environment also play a significant role in the feeling of safety (Shariati & Guerette, 2019).

Evidence-Based Policing

According to Newham and Rappert (2018), Evidence-Based Policing (EBP) is a formal attempt to undertake research with the intention of improving policing strategies. It is proposed that research should be able to assist in obtaining better-policing strategies and tactics by providing evidence as to what does or does not work (Newham & Rappert, 2018). Therefore, EBP is using information, crime-science and problem-solving methods to ensure that proven approaches and tactics inform the choices of authorities of what works to reduce crime. According to Faull (2019b), hiring more police officers does not necessarily reduce crime, nor does rapidly responding to calls for assistance and neither does random visible patrols. Faull (2019b) further

elaborates that research has shown that crime can be reduced when police routinely treat people with dignity and respect.

EBP can be strengthened through partnerships with academics and researchers, however, it should ultimately be led by the police (Faull, 2019b). Faull (2019b) cites examples of targeted EBP and violence prevention interventions in Sao Paulo (Brazil) that were used to reduce the murder rate from 49 per 100 000 in 2001, to 5.5 per 100 000 in 2018. In South Africa, EBP has seen some success when used correctly by the SAPS. According to Newham (2017), between 2009 and 2011 the SAPS Gauteng Aggravated Robbery Strategy reduced home invasions by 20%, business robberies by 19% and hijacking by 32% by using an evidence-based strategy. Likewise, in the Eastern Cape, the SAPS used evidence-based tactics against gang-related crime in the Gelvandale area in Port Elizabeth and saw much success. Between 1 October 2016 and 30 June 2017, the police investigated and arrested 1 457 people suspected of being involved in gang-related crimes and confiscated approximately 147 firearms (Newham, 2017). As a result of the arrests and targeted approach, most crimes in the area have declined substantially (Newham, 2017).

To back up previous research on EBP and keeping up to date with international standards, in 2016 the SAPS established the first National Research Division with the core objective of using research to improve policing in South Africa (Newham & Rappert, 2018). This approach by the SAPS is the first step in the right direction in fully implementing EBP in the SAPS and may see valuable results in the near future if utilized and implemented correctly.

IV. METHODOLOGY

The data for this article is obtained from a study that was conducted by the Gauteng Department of Community Safety (GDCS) in the 2017/2018 financial year. The secondary data was originally collected for a report titled “Survey on Citizen Perceptions of Safety in High Crime Areas of Gauteng Province” (GDCS, 2018b). The research design for the original report was a quantitative survey of citizens in the 40 high crime police precincts of Gauteng.

The research used a random multi-stage stratified cluster sampling technique to ensure the findings were representative of the target population across the 40 police precincts (GDCS, 2018b). A sample size of 3 646 individuals was selected for the research to ensure that the results of the perception survey could be reported with statistical precision across all 40 areas (GDCS, 2018b). Out of the 3 646 individuals selected, the final sample size who completed the questionnaire was 3 070. For the purposes of this article, the data was analyzed using the Statistical Package for the Social Sciences (SPSS) and the analysis was descriptive in nature.

V. FINDINGS

As seen in the literature above, there are various factors that influence one’s perception of safety in their community. The findings from this research did not coincide with the findings of the research by Sakip, Johari and Salleh (2013), in that there was no statistical significance in the difference between the perception of safety and homeownership. As can be seen in Table 1 below, 55.3% of the participants who owned their dwelling felt safe (very safe, fairly safe and safe) and 54.7% (very safe, fairly safe and safe) of the respondents who are renting their dwelling felt safe during the day.

Table 1: Perception of safety during the day Vs. renting/owning

		How safe do you feel in your home during the day?								
		Very safe	Fairly safe	Safe	A bit unsafe	Very unsafe	Don't know	No Answer	Total	
Do you own or rent this dwelling?	Own	Count	404	362	426	396	540	14	14	2156
		%	18,7%	16,8%	19,8%	18,4%	25,0%	0,6%	0,6%	100,0%
	Rent	Count	159	135	193	143	249	8	4	891
		%	17,8%	15,2%	21,7%	16,0%	27,9%	0,9%	0,4%	100,0%
	Refuse to answer	Count	4	4	0	1	2	0	0	11
		%	36,4%	36,4%	0,0%	9,1%	18,2%	0,0%	0,0%	100,0%
	Don't know	Count	2	0	2	3	5	0	0	12
		%	16,7%	0,0%	16,7%	25,0%	41,7%	0,0%	0,0%	100,0%
Total		Count	569	501	621	543	796	22	18	3070
		%	18,5%	16,3%	20,2%	17,7%	25,9%	0,7%	0,6%	100,0%

Data Source: (GDCS, 2018b)

Factors that affect the perception of safety in 40 high crime areas in Gauteng province

It is clear that feelings of safety lower at night and there is no major difference between whether the dwelling is owned (42.2%) or rented (40.5%) (see Table 2). Table 2 below shows that approximately 56% of the respondents who own their dwelling felt unsafe (a bit unsafe and very unsafe), while roughly 58% of the participants who rent their dwelling felt unsafe (a bit unsafe and very unsafe).

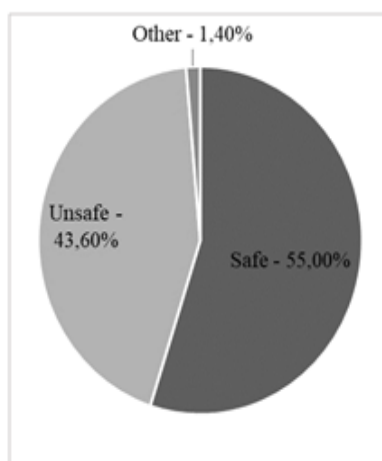
Table 2: Perception of safety at night Vs. renting/owning

		How safe do you feel in your area at night?									Total
		Very safe	Fairly safe	Safe	A bit unsafe	Very unsafe	Refuse to answer	Don't know	No Answer		
Do you own or rent this dwelling	Own	Count	328	258	323	404	816	1	13	13	2156
		%	15,2%	12,0%	15,0%	18,7%	37,8%	0,0%	0,6%	0,6%	100,0%
	Rent	Count	126	105	130	149	373	0	5	3	891
		%	14,1%	11,8%	14,6%	16,7%	41,9%	0,0%	0,6%	0,3%	100,0%
	Refuse to answer	Count	1	4	2	0	4	0	0	0	11
		%	9,1%	36,4%	18,2%	0,0%	36,4%	0,0%	0,0%	0,0%	100,0%
	Don't know	Count	2	0	3	1	6	0	0	0	12
		%	16,7%	0,0%	25,0%	8,3%	50,0%	0,0%	0,0%	0,0%	100,0%
Total		Count	457	367	458	554	1199	1	18	16	3070
		%	14,9%	12,0%	14,9%	18,0%	39,1%	0,0%	0,6%	0,5%	100,0%

Data Source: (GDCS, 2018b)

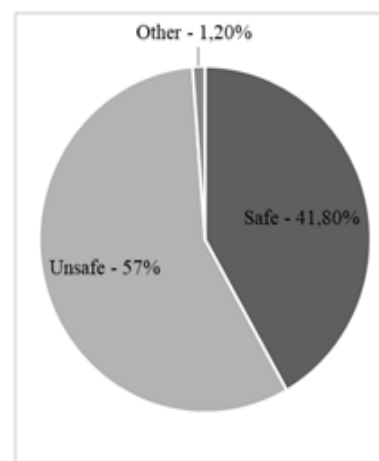
The results do suggest, however, that there is a general decrease in the feeling of safety according to the time of day. These results are also found in the duration a participant has lived in the dwelling. Where the duration is not a factor that increases the perception of safety and rather the time of day that affects their perception. It is evident from Figures 1 and 2 below that overall, the respondents generally felt more unsafe at night (57%), as compared to during the day (43.6%). This supporting evidence serves as the reason why this article will specifically look at the factors that can influence the perception of safety at night.

Figure 1: Feeling of safety during the day



Data Source: (GDCS, 2018b)

Figure 2: Feeling of safety at night



Data Source: (GDCS, 2018b)

It is assumed that one's income can influence their perception of safety due to various safety measures he/she can put in and around their homes. However, according to the data collected, one's income does not play a factor in their perception of safety at night (see Table 3 below). Just over 57% (a bit unsafe 18%, very unsafe 39.1%) of the participants felt unsafe at night and the only income bracket that differed (or showed a feeling of safety) was the R24 001 – R48 000 bracket. It was originally presumed that this could be because an individual may have the available finances to obtain security measures, or due to their neighborhood, however, the bracket above R48 000 shows an overall perception of feeling unsafe, thus disputing the argument.

Table 3: Household income Vs. Feeling of safety?

	How safe do you feel in your area at night?								Total
	Very	Fairly	Safe	A bit	Very	Refuse	Don't	No	

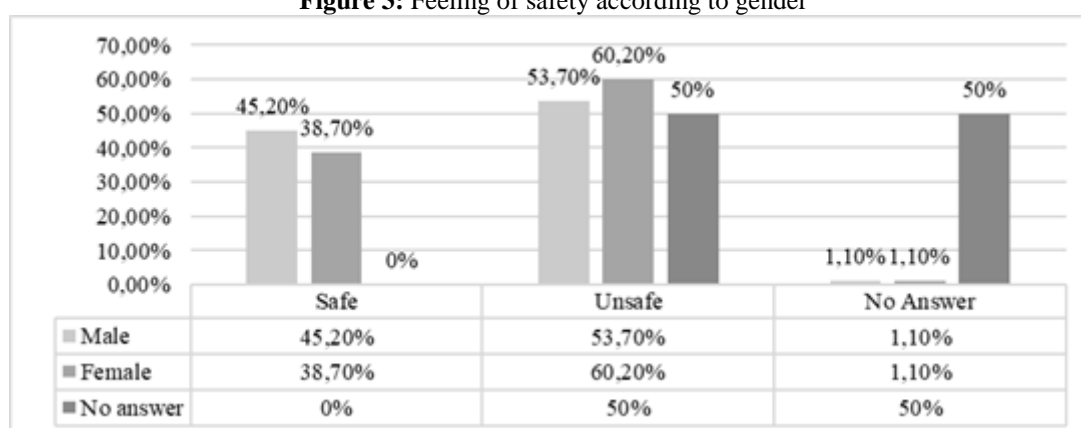
Factors that affect the perception of safety in 40 high crime areas in Gauteng province

		safe	safe		unsafe	unsafe	to answer	know	Answer		
What is your household income?	No income	Count	32	33	26	40	124	0	0	0	255
		%	12,5%	12,9%	10,2%	15,7%	48,6%	0,0%	0,0%	0,0%	100,0%
	R1-R12 000	Count	256	220	247	304	713	0	6	3	1749
		%	14,6%	12,6%	14,1%	17,4%	40,8%	0,0%	0,3%	0,2%	100,0%
	R12 001 - R24 000	Count	29	12	16	17	36	0	0	2	112
		%	25,9%	10,7%	14,3%	15,2%	32,1%	0,0%	0,0%	1,8%	100,0%
	R24 001 - R48 000	Count	16	5	9	11	6	0	0	1	48
		%	33,3%	10,4%	18,8%	22,9%	12,5%	0,0%	0,0%	2,1%	100,0%
	R48 000+	Count	2	3	0	4	2	0	0	0	11
		%	18,2%	27,3%	0,0%	36,4%	18,2%	0,0%	0,0%	0,0%	100,0%
	No answer	Count	122	94	160	178	318	1	12	10	895
		%	13,6%	10,5%	17,9%	19,9%	35,5%	0,1%	1,3%	1,1%	100,0%
Total		Count	457	367	458	554	1199	1	18	16	3070
		%	14,9%	12,0%	14,9%	18,0%	39,1%	0,0%	0,6%	0,5%	100,0%

Data Source: (GDCS, 2018b)

In order to best quantify the feeling of safety, the following variables (gender, citizenship, race, marital status) will simplify the feeling of safety into three categories, safe, unsafe or no answer. According to Figure 3 below, both males and females feel unsafe at night in their area as compared to feeling safe. Figure 3 shows that just over 53% of the male participants feel unsafe at night, and just over 60% of the females feel unsafe at night in their area.

Figure 3: Feeling of safety according to gender



Data Source: (GDCS, 2018b)

Xenophobic attacks are not something that is unique or new to South Africa, hence it was expected that due to these attacks, foreign nationals would have a lower perception of safety than that of South Africans. Table 4 below, however, confirms that in fact, South Africans (57.7%) more so than other Africans (50.9%) or individuals who immigrated from outside of Africa (48.3%) feel unsafe during the night. It can be concluded that South Africans may be more aware of their surroundings and the different areas, rather than foreigners due to South African participants living in the area for a long time. Their knowledge of the area, as well as interaction with other members of a community, can influence their perception of safety.

Table 4: Feeling of safety according to citizenship

	South African	Immigrant from African country	Immigrant from outside Africa	Refuse to answer	Don't know	Other
Safe %	41,3%	48,5%	51,7%	33,3%	75,0%	0,0%
Safe count	1180	82	15	2	3	0
Unsafe %	57,7%	50,9%	48,3%	50,0%	25,0%	0,0%
Unsafe count	1649	86	14	3	1	0

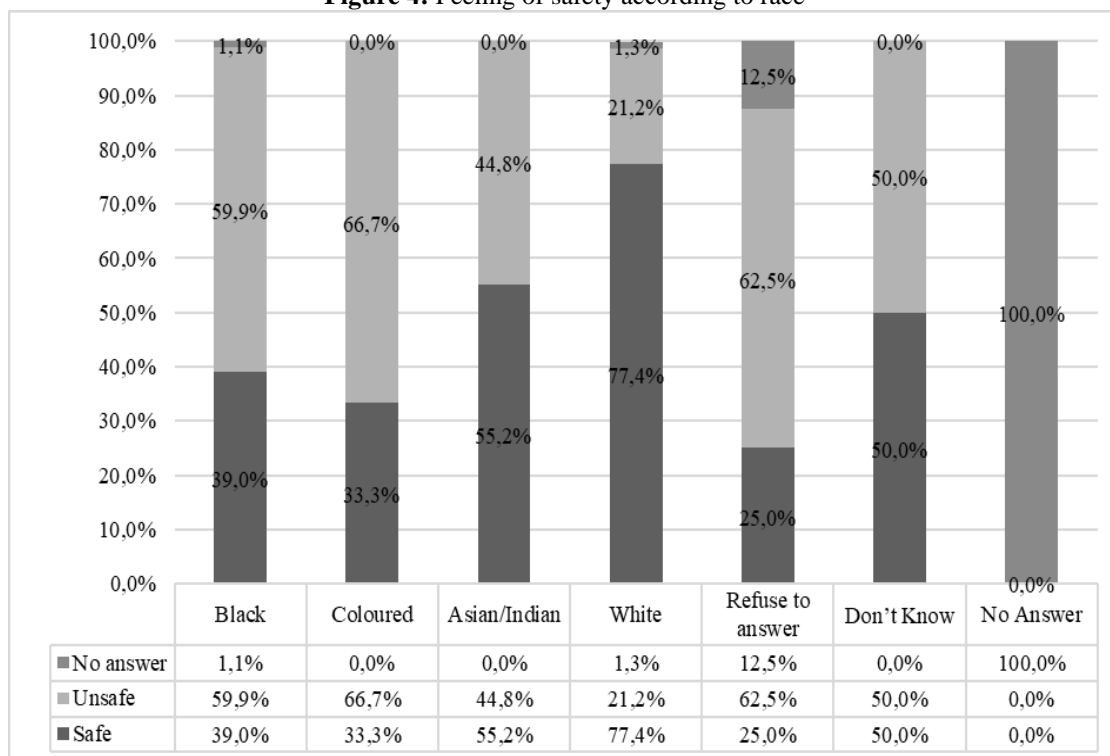
Factors that affect the perception of safety in 40 high crime areas in Gauteng province

No answer %	1,0%	0,6%	0,0%	16,7%	0,0%	100,0%
No answer count	30	1	0	1	0	3

Data Source: (GDCS, 2018b)

Race seems to play an important factor when understanding the perception of safety in the 40 high crime areas in Gauteng. As seen in Figure 4 below, the majority of White (77.4%) and Asian/Indian (55.2%) participants feel safe in their areas at night. Black (59.9%) and Coloured (66.7%) participants, however, felt unsafe in their areas at night. A possible reason for this data is due to many of the Black and Coloured participants living in areas with higher crime rates such as Hillbrow, Eldorado Park, Johannesburg Central and Reiger Park (GDCS, 2018b).

Figure 4: Feeling of safety according to race

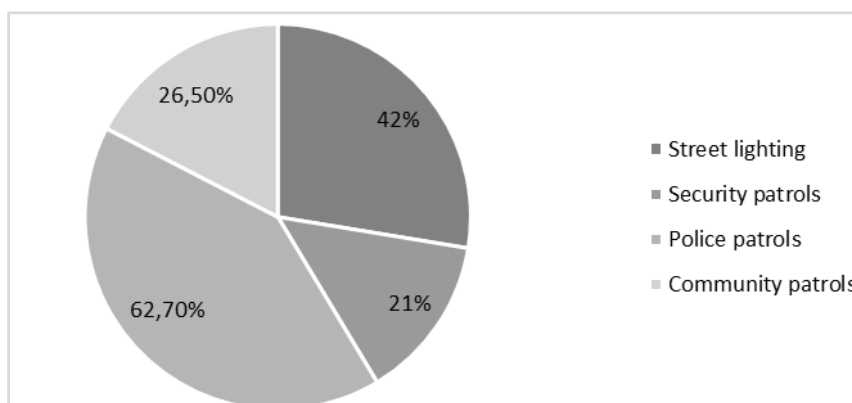


Data Source: (GDCS, 2018b)

Another factor that is believed to increase a sense of security and safety is to live with your partner or spouse. It is generally agreed that safety in numbers can increase the feeling of safety for individuals. However, it was found that living with one's spouse or partner does not significantly increase one's perception of safety. In fact, the data suggests that 45.10% of the participants who are married and living with their spouse and 38.20% of the participants who are in a relationship and living together feel safe. Overall, it is clear that one's perception of safety is low regardless of their marital status (GDCS, 2018b). This concerning information could be linked to the recent cases of Gender-Based Violence (GBV) found in South Africa. Hence, it is important to reduce GBV and ensure that members of a society can feel safe with their partners or spouses.

In the study, numerous questions were asked of the participants to what extent certain features make them feel safe at night. As per the data, it is evident in Figure 5 below, that street lighting (42%) and patrols by the police (62.7%) are the two most common factors that will make participants feel safer. Two other aspects that were mentioned that can make participants feel safer is that of private security patrols (21%) and community patrols (26.5%). Improved street lighting is the only section from the broken windows theory that was found to be an integral part of the perception of safety. In fact, other aspects such as abandoned buildings, vagrants on the streets or uncut grass were less of a concern to the participants.

Figure 5: Factors that make people feel safer



Data Source: (GDCS, 2018b)

Other physical security features such as having an electric fence or razor wire or spikes on a boundary wall were found to have a large influence on how safe one feels in their area at night. Table 5 below illustrates that approximately 77% of the participants who confirmed having an electric fence feel safe in their area at night. Likewise, Table 6 below shows that 63% of the participants who confirmed having razor wire or wall spikes feel safe in their area at night.

Table 5: Do you have an electric fence VS. How safe do you feel in your area at night?

			How safe do you feel in your area at night?			Total
			Safe	Unsafe	Other	
Electric fence	No	Count	708	1034	8	1750
		%	40,5%	59,1%	0,5%	100,0%
	Yes	Count	167	48	0	215
		%	77,7%	22,3%	0,0%	100,0%
	No Answer	Count	407	671	27	1105
		%	36,8%	60,7%	2,4%	100,0%
Total		Count	1282	1753	35	3070
		%	41,8%	57,1%	1,1%	100,0%

Data Source: (GDCS, 2018b)

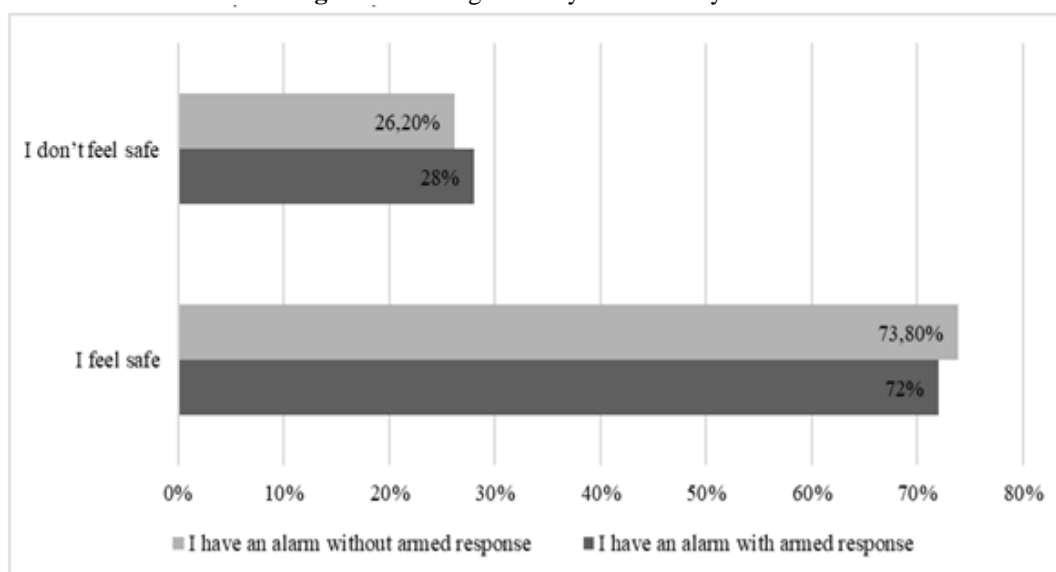
Table 6: Do you have razor wire or wall spikes Vs. How safe do you feel in your area at night?

			How safe do you feel in your area at night?			Total
			Safe	Unsafe	Other	
Razor wire or wall spikes	No	Count	804	1041	8	1853
		%	43,4%	56,2%	0,4%	100,0%
	Yes	Count	71	41	0	112
		%	63,4%	36,6%	0,0%	100,0%
	No Answer	Count	407	671	27	1105
		%	36,8%	60,7%	2,4%	100,0%
Total		Count	1282	1753	35	3070
		%	41,8%	57,1%	1,1%	100,0%

Data Source: (GDCS, 2018b)

Another important safety measure found in the research was the use of alarm systems. The data revealed that regardless of whether an alarm system is connected to an armed response or not, participants felt safer (see Figure 6 below). The use of neighborhood watches was found to be an important element in making people feel safe in their areas. Of the participants who had neighborhood watches in their area, 78% felt safe, whilst the participants who did not have a neighborhood watch, only 43.5% of the participants felt safe (GDCS, 2018b).

Figure 6: Feeling of safety and alarm systems



Data Source: (GDCS, 2018b)

The data also demonstrates that just over 70% of the respondents felt safer due to them having CCTV cameras as a security measure in their area. On the other hand, only 43.6% of the respondents felt safe who did not have CCTV cameras in their area. This data corresponds with the results of the research conducted by the GDCS (2018a) in that participants feel safer when knowing there are CCTV cameras in the area. It is clear from Table 7 below that there were a minority of participants that had CCTV cameras in their area (63), however, of these 63 participants the majority felt safer. Additionally, Table 7 below displays that perhaps not knowing if there are CCTV cameras may impact a person’s feeling of safety in their area at night.

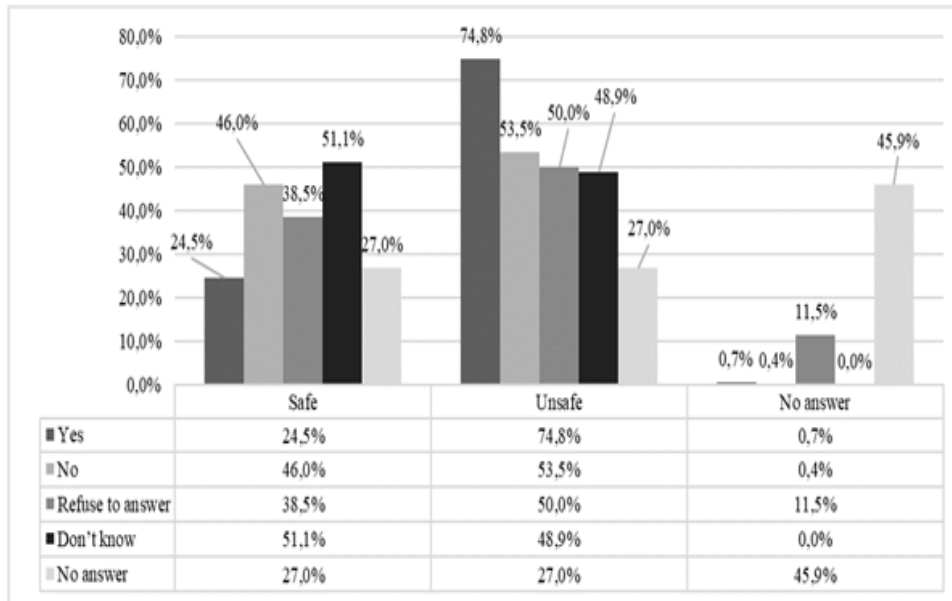
Table 7: CCTV and feeling of safety

			How safe do you feel in your area at night?			Total
			Safe	Unsafe	Other	
Are there CCTV Cameras in your area?	No	Count	830	1064	8	1902
		%	43,6%	55,9%	0,4%	100,0%
	Yes	Count	45	18	0	63
		%	71,4%	28,6%	0,0%	100,0%
	No Answer	Count	407	671	27	1105
		%	36,8%	60,7%	2,4%	100,0%
Total		Count	1282	1753	35	3070
		%	41,8%	57,1%	1,1%	100,0%

Data Source: (GDCS, 2018b)

Jewkes (2015) acknowledges that victims of crime are likely to be more fearful and have a lower perception of safety or increased fear of future victimization. Recognizing this, the data for the current research suggests that participants who have been a victim of crime (74.8%) within the past year feel somewhat more unsafe than their counterparts who have not been a victim of crime (53.5%) (see Figure 7 below). The information is also confirmed when looking further back at victimization rates. Participants who have been a victim of crime within the past five years feel more unsafe (73.9%) than those who have not been a victim of crime (51.9%). The information provided in the data confirms the results of the studies by Balkin (1979), Hough and Mayhew (1985) and Brammar (2006).

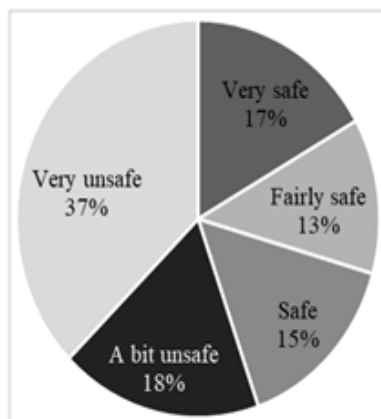
Figure 7: Victim of crime in the past yearVs. Feeling of safety



Data Source: (GDCS, 2018b)

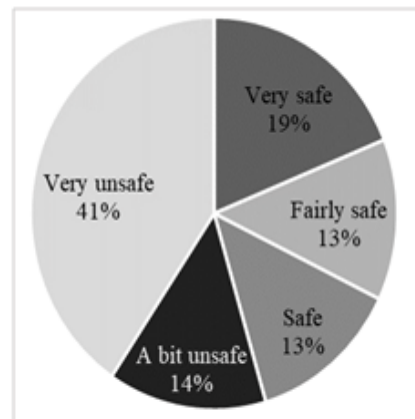
The data also revealed that living in a security village or estate (e.g.: townhouse, apartment, flat) does not increase the perception of safety. In fact, only 45% of the participants who lived in a security village/estate felt safe (see Figure 8 below). When evaluating the feeling of safety in participants who lived in a security village/estate (Figure 8) and those who did not (Figure 9), there is no difference. In both instances, 45% of the participants feel safe (very safe, fairly safe and safe) and 55% of the participants feel unsafe (very unsafe and a bit unsafe) (GDCS, 2018b). This shows that despite the increased security measures in security villages or estates, living in a security village or estate does not improve one's perception of safety. This information does not conform to the notion, as cited by Sakip, Johari, Najib and Salleh (2013), that perception of safety is higher in individual gated residents than in individual non-gated residential areas.

Figure 8: Live in security village



Data Source: (GDCS, 2018b)

Figure 9: Do not live in security village



Data Source: (GDCS, 2018b)

VI. RECOMMENDATIONS

It is clear that the perception of safety plays an important role in society and impacts individuals' daily lives. Therefore, the following recommendations can be made to improve the perception of safety in the 40 high crime areas in Gauteng province at night.

- The media's influence on the perception of crime and safety

To reduce the fear of crime and increase an individual's perception of safety, the media needs to publish more positive stories about the combating of crime by all Law Enforcement Agencies (LEAs) in Gauteng province. By publishing more feel-good stories and reports on successful arrests and convictions it will assist in growing the public's trust in the police as well as the criminal justice system. The increase in trust in

the police will aid in improving societies perception of safety as it was already established that the participants in this research feel safer when police are visible and patrolling.

- Evidence-based policing approach

To best reduce crime and increase perceptions of safety the LEAs in Gauteng province need to use an evidence-based approach to policing. Participants suggested that they feel safer when police are visible, however, merely increasing police numbers in an area or random visible patrols will not reduce crime and enhance the perception of safety (Faull, 2019b). It is evident that EBP has shown positive results when the SAPS has used it previously. Therefore, the National Research Division of the SAPS as well as other research departments in the other LEAs should use EBP to identify customised crime prevention strategies for specific locations.

- Greater involvement of private security companies and community members

Reducing crime and improving the perception of safety should be done by all members involved in a community. According to the results of this study, participants had indicated that visible patrols by private security companies and members of the community make them feel safe. The Community Policing Forums (CPFs) that have been established should be bolstered and more community members need to get involved in their local CPFs. CPFs are already established and have great involvement with both LEAs in the areas as well as the private security companies. Therefore, there needs to be a drive to increase community members involvement in the fight against crime.

- Expanding the use of the Memeza alarm system

The Memeza alarm system consists of a community or home alarm and a personal alarm (GDCS, 2018b). When the alarm is triggered, the system sends an SMS to the local police sector van, CPF personnel and any others nominated by the person in distress (GDCS, 2018b). The results from this research prove that participants feel safer with an alarm system in their home, regardless if it is connected to armed security or not. Therefore, if the Memeza alarm system is expanded and more people have access to it, it will assist in increasing perceptions of safety. Such a system can also be linked to private WhatsApp groups in communities that are used by LEAs, CPFs and private security companies. This will ensure a holistic approach to reducing crime and increasing one's perception of safety in their neighbourhood.

- Increased use of CPTED

CPTED has commonly been cited as a method to use to prevent crime. Likewise, it can be used to change members of a communities' perception regarding their safety. Two aspects that were highlighted in the research is the use of street lights and CCTV cameras. It is apparent that these two aspects play an important role in increasing the participant's perception of safety. Therefore, it is recommended that municipalities conduct audits on the street lighting within their geographical boundaries. Likewise, regular maintenance and attending to complaints about lights not working will make sure that the street lights are working. The CSIR created an in-depth manual on CPTED for the SAPS and this manual should be used to increase the likelihood of implementing successful CPTED techniques.

The final recommendation linked to CPTED is through the increased use of CCTV cameras. Participants stated that cameras made them feel safer and CCTV cameras have a plethora of benefits. Not only can they be used to improve the perception of safety, but they are able to assist in reducing crime and enabling the LEAs and security companies to be more pro-active in the fight against crime. Therefore, it is recommended that the CCTV coverage in high crime areas ought to be bolstered and monitored (including maintenance of the devices) efficiently to guarantee results.

VII. CONCLUSION

Safety and security are an important matter in all societies around the world. Ensuring individuals are safe in a community should not solely rely on LEAs, rather it should be a joint effort involving LEAs, communities and government agencies. The perception of safety in communities is important to study as it informs researchers and policymakers how individuals are feeling and what makes them feel this way. By increasing perception of safety in an area, communities will feel they are able to move around freely which will boost the local economy and improve socio-economic difficulties in the area.

The research has provided evidence on a variety of factors that can influence the perception of safety in an area at night. Additionally, the data was able to both confirm and deny previous research on the factors that can expand the perception of safety among the public. What is apparent, however, is there is a general sense of feeling unsafe in the 40 high crime areas in Gauteng province. Due to this feeling, it is important to evaluate current crime prevention initiatives in these areas and tailor-make initiatives that will work in the environments in question. By using the correct methods and using approaches such as EBP, authorities will be able to improve the feeling of safety among citizens in Gauteng.

REFERENCES

- [1]. Balkin, S. (1979). Victimization rates, safety and fear of crime. *Social Problems*, 26(3), 343-358.
- [2]. Brammar, J. (2006). *Fear of Crime and the Impact of Crime: A Consultative Report of Older People Living in Stoke on Trent*. Stoke-on-Trent: Beth Johnson Foundation.
- [3]. CSIR. (n.d). *Introduction to Crime Prevention through Environmental Design (CPTED)*. Pretoria: Council for Scientific and Industrial Research.
- [4]. Ditton, J., Chadee, D., Farrall, S., Gilchrist, E., & Bannister, J. (2004). From imitation to intimidation: A note on the curious and changing relationship between the media, crime and fear of crime. *British Journal of Criminology*, 44(4), 595-610.
- [5]. Dowler, K. (2003). Media consumption and public attitudes toward crime and justice: The relationship between fear of crime, punitive attitudes, and perceived police effectiveness. *Journal of criminal justice and popular culture*, 10(2), 109-126.
- [6]. Dyantyi, Y. (2018, May). SA: Media Important in Highlighting GBV Issues. Retrieved September 2019, from Gender Links for Equality: <https://genderlinks.org.za/news/media-important-in-highlighting-gender-based-violence/>
- [7]. Faull, A. (2019a). Fixing South Africa's broken windows. Retrieved September 2019, from ISS Africa: <https://issafrica.org/iss-today/fixing-south-africas-broken-windows>
- [8]. Faull, A. (2019b). Are South Africa's police ready to lead with the evidence? Retrieved September 2019, from ISS Today: <https://issafrica.org/iss-today/are-south-africas-police-ready-to-lead-with-the-evidence>
- [9]. Foster, S., Giles-Corti, B., & Knuiiman, M. (2014). Does fear of crime discourage walkers? A social-ecological exploration of fear as a deterrent to walking. *Environment and Behavior*, 46(6), 698-717.
- [10]. GDCS. (2018a). Assessment of the effectiveness of CCTV cameras in crime prevention in the Gauteng Province. Johannesburg: Gauteng Department of Community Safety.
- [11]. GDCS. (2018b). Survey on Citizen Perceptions of Safety In High Crime Areas of Gauteng Province. Johannesburg: Gauteng Department of Community Safety.
- [12]. Hinkle, J. C., & Yang, S. M. (2014). A new look into broken windows: What shapes individuals' perceptions of social disorder? *Journal of Criminal Justice*, 42(1), 26-35.
- [13]. Hopper, E. (2019, February). Maslow's hierarchy of needs. Retrieved September 2019, from Thought Co: <https://www.thoughtco.com/maslows-hierarchy-of-needs-4582571>
- [14]. Horne, K. (2019, February). Maslow's hierarchy of needs: Why it still matters in 2019. Retrieved September 2019, from Digital.Com: <https://digital.com/blog/maslows-hierarchy/>
- [15]. Hough, M., & Mayhew, P. (1985). *Taking Account of Crime: Key Findings From the 1984 British Crime Survey*. London: Home Office Research.
- [16]. Jewkes, Y. (2015). *Media and Crime*. London: SAGE Publications.
- [17]. Jiang, B., Mak, C. N., Zhong, H., & Webster, C. J. (2018). From broken windows to perceived routine activities: Examining impacts of environmental interventions on perceived safety of urban alleys. *Frontiers in psychology*, 9, 1-16.
- [18]. Jones, J. (2017). Media and social media's impact on citizens' perception of the frequency of crime occurrence in the United States. *American International Journal of Social Science*, 6(3), 97-102.
- [19]. Keizer, K., Lindenberg, S., & Steg, L. (2008). The spreading of disorder. *Science*, 322(5908), 1681-1685.
- [20]. Koza, N. (2017, March). Are serial rapists targeting Joburg taxi commuters? Retrieved September 2019, from 702: <http://www.702.co.za/articles/249425/cops-probe-reports-of-serial-taxi-rapists-in-soweto>
- [21]. Kruger, D. M. (2005). Carrots, sticks and apples-mechanisms to encourage the use of CPTED. *Council for Industrial and Scientific Research*, 1-10.
- [22]. Kruger, T., Landman, K., & Liebermann, S. (2001). *Designing Safer Places - A Manual for Crime Prevention through Planning and Design*. Pretoria: CSIR.
- [23]. Maslow, A. H. (1943). A Theory of Human Motivation. *Psychological Review*, 370-396.
- [24]. Muraskin, R., & Domash, S. F. (2007). *Crime and the media: Headlines versus reality*. Prentice Hall.
- [25]. Nasar, J. L., & Fisher, B. (1993). 'Hot spots' of fear and crime: A multi-method investigation. *Journal of environmental psychology*, 13(3), 187-206.
- [26]. Newham, G. (2017). How evidence-based policing reduces crime in South Africa. Retrieved from ISS Today: <https://issafrica.org/iss-today/how-evidence-based-policing-reduces-crime-in-south-africa>
- [27]. Newham, G., & Rappert, B. (2018). Policing for impact: Is South Africa ready for evidence-based policing? *SA Crime Quarterly*, 7-16.
- [28]. O'Brien, D. T. (2015). Disorder perception is the adaptive interpretation of social cues, not just a sensitivity to randomness. *Frontiers in psychology*.
- [29]. Pfeiffer, C., Windzio, M., & Kleimann, M. (2005). Media Use and its Impacts on Crime Perception, Sentencing Attitudes and Crime Policy. *European Journal of Criminology*, 2(3), 259-285.
- [30]. Romer, D., Jamieson, K. H., & Aday, S. (2003). Television news and the cultivation of fear of crime. *Journal of communication*, 53(1), 88-104.
- [31]. Sakip, S. R., Johari, N., & Salleh, M. N. (2013). Perception of safety in gated and non-gated neighborhoods. *Procedia-social and behavioral sciences*, 85, 383-391.
- [32]. Schneider, R. H., & Kitchen, T. (2007). *Crime prevention and the built environment*. Abingdon: Routledge.
- [33]. Seleka, N. (2018, October). Taxi driver found guilty on 43 counts of rape and kidnapping. Retrieved October 2019, from News 24: <https://www.news24.com/SouthAfrica/News/taxi-driver-found-guilty-on-43-counts-of-rape-and-kidnapping-20181015>
- [34]. Shariati, A., & Guerette, R. T. (2019). Resident Students' Perception of Safety in On-Campus Residential Facilities: Does Crime Prevention through Environmental Design (CPTED) Make a Difference? *Journal of School Violence*, 1-15.
- [35]. Skogan, W. G. (2012). Disorder and crime. In D. P. Farrington, & B. C. Welsh (Eds.), *The Oxford Handbook of Crime Prevention* (pp. 173-188). New York, NY: Oxford University Press.
- [36]. Snyders, E., & Landman, K. (2018). Perceptions of crime hot-spots and real locations of crime incidents in two South African neighbourhoods. *Security Journal*, 31(1), 265-284.
- [37]. Svensdotter, A., & Guaralda, M. (2018). Dangerous Safety or Safely Dangerous. Perception of safety and self-awareness in public space. *The Journal of Public Space*, 3(1), 75-92.
- [38]. Villarreal, A., & Silva, B. F. (2006). Social cohesion, criminal victimization and perceived risk of crime in Brazilian neighborhoods. *Social Forces*, 84(3), 1725-1753.