Superhero v bystander effect: Effects of fictional and non-fictional media priming on situational altruism

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Superhero v Bystander Effect
Effects of Fictional and Non-Fictional Media Priming on Situational Altruism

A Thesis Submitted to
Journalism and Mass Communication Department

in Partial Fulfillment of the Requirements for
the degree of MASTER OF ARTS degree

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ABSTRACT

Media priming is one of the most deeply-rooted and wide span theories in media studies. Previous research deploying this theory usually compared the effects of pro-social and anti-social media priming, while this study opted to compare the effects of pro-social fictional and non-fictional media content. Furthermore, the researcher attempts to examine the effects of media priming on situational altruism, as well as, measure the difference between exposure to fictional and non-fictional videos of heroic acts, when it comes to priming an actual helping behavior. An experiment was conducted using a staged manipulation of a sexual harassment situation, as a high cost help situation. The results were statistically insignificant possibly due to the relatively small sample, the one time exposure, or cultural aspects. Nonetheless, the study’s frequencies show that those exposed to non-fictional videos have a higher likelihood of acting altruistically when they encounter a run-in with a naturalistic sexual harassment situation on college campus, than those exposed to fictional videos. Additionally, fiction has been found more likely to prime pleasure-based motivations and non-fiction primes pressure-based motivations. As for the bystander barriers, the findings show that those exposed to non-fiction experience them more than those exposed to fiction.

Keywords: Fiction, Non-Fiction, Media Priming, Altruism, Superhero, Bystander Effect, Sexual Harassment.
DEDICATION

To Guedo who always showed me that honesty, hard work and love are our only legacy, may his soul rest in peace.

“And in the end…the love you take is equal to the love you make”

(The Beatles, Golden Slumber, 1969)

To my Papy who always taught me to do my best, to treat people with love and kindness and to smile no matter what happens.

“When I find myself in times of trouble Mother Mary comes to me speaking words of wisdom let it be”

(The Beatles, Let It Be, 1970)

To my greatest blessing my Mamy who always taught me not to be too proud to apologize when I am wrong nor to be too stubborn to forgive when I’m right.

“How wonderful life is when you’re in the world”

(Elton John, Your Song, 1970)

To my sister and my backbone Nadine who always taught me to stand up for myself and be rebellious and strong as long as I’m right.

“You always get the best of me”

(Bryan Adams, The Best of Me, 1999)

To my lovely dogs Milo and Goofy; you made my life complete.

To my family and my friends, I hope I can make you proud...
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Chapter One

Introduction

“I believe there’s a hero in all of us, that keeps us honest, gives us strength, makes us noble, and finally allows us to die with pride.”

(Movie: Spiderman 2, 2004)

It’s in human nature - even if it is generally dormant - the aspiration to become a hero. Being a hero doesn’t necessarily imply the fictitious connotation of the word, it can be an inner feeling of satisfaction and self-worth from helping others in need without the flare of capes, costumes and cheering crowds. Modern psychology discusses that the willingness to help can be affected by many motives which may or may not be all altruistic.

The term altruism in laymen’s terms means the willingness to help others, without thinking of the benefits or risks that one would gain in return. This selfless helping behavior which is the pinnacle of this study stems from different motivations ranging from feelings driven by duty and norms, to pleasure and ideal. Despite that these motivations are all means to an end, leading ultimately to the altruistic behavior, it is imperative to study them, in order to understand what induces altruism.

Furthermore, altruism could be affected by several exogenous factors including; the cost of helping, the presence of other bystanders, as well as, mood state. Evidently, studies have found that feeling good subsequently leads to being more willing to help and being more inclined to feel benevolent and vice versa. Therefore, studies have attempted to elicit good feelings in participants before putting their helpfulness to the test, in other
words they attempted to prime them to help others (Kirchsteiger, Rigotti and Rustichini, 2006).

Moreover, some people have more pro-social inclined personalities than others due to individual differences and life experiences. Nonetheless, studies show that pro-social behaviors are not only acquired through first-hand experiences, they can be induced to either generate stable and deliberate or situational and spontaneous pro-social behaviors (Gebauer, Riketta, Broemer and Maio, 2008). The notion that people are all fundamentally good might be true, but all people are evil too which means that for people to act pro-socially or anti-socially, they need to be primed by some event or sequence of events to instigate a certain behavior.

Priming is basically an association process that constantly happens inside the human brain; it depends on the frequency and recency with which a stimulus presents itself. A record changer can play records in sequence without any need for user intervention; similarly, one stimulus can automatically activate a sequence of related thoughts within a person’s existing frame of reference, priming that person to formulate certain attitudes, motivations and behaviors based on the activated thoughts. The priming effect can emerge from words, music, drawings, videos, etc. each having a specific effect that might be different from the others.

Consequently, the theory of media priming is primarily concerned with eliciting certain feelings in those exposed to media messages in hope to produce certain behaviors. The theory is a derivative of Bandura’s social learning theory, which entails that people either learn from direct experiences or from vicarious experiences. Media are regarded as
vicarious experiences, which are stored as scripts in the minds of the audience; these scripts when the right stimulus is presented may prime a certain behavior. The priming effect can be instantaneous, belated or latent according to the time taken for a stimulus to present itself (Bryant and Oliver, 2009).

The media content that is generally presented is dichotomous; it’s either fictitious (e.g.; movies, songs, soap operas, etc.) or non-fictitious (e.g.; news, documentaries, talk shows, etc.). Scholars have attempted to study the effects that this dichotomy produces; the findings however have been inconclusive. Some studies found that fictional content is stronger than non-fictional content in terms of impact and others found the opposite. Therefore, the benchmark that might resolve this debacle is the effect under study. Studies have concluded that fictional content is more effective than non-fictional content when it comes to emotional reach, while non-fictional content is more effective when it comes to gaining information (Cao, 2015; Bal and Veltkamp, 2013; Mendelson and Papacharissi, 2007).

This in turn affects the motivations and the behaviors that these contents might prime if they do generate a priming effect at all. In explanation, the media priming effect though inevitable with the plethora of media content that people are exposed to actively and passively everyday, not every content is capable of instigating it. Sometimes for instance, the media content is not powerful enough to generate a priming effect leading to the manifestation of certain motivations or behaviors. Some thoughts need to be activated several times in order to generate a certain motivation or behavior (Bryant and Oliver, 2009). Others are obstructed by factors and considerations which usually adhere to the cost of helping. The higher the cost to help, the more people might reconsider their
altruistic behavior regardless of the media priming. The lower the cost of helping, the more inclined people might be to act altruistically, thus manifesting the priming effect (William, 2007).

However, Bryant and Oliver (2009) stated that “higher intensity primes produce larger priming effects, and these effects dissipate more slowly than lower intensity primes” (P.80). This means that the higher the cost of helping, the more likely are the priming effects to manifest, especially when comparing pro-social media contents, rather than pro-social and anti-social media contents as primes. Furthermore, the existing literature concerning priming and behavioral tendencies mostly measure intentions leading to behaviors, as opposed to measuring actual behaviors. More importantly, media priming has been rarely used as primes to measure actual behaviors. When it comes to helpfulness which is the locus of this study, it’s easy to self-report one’s intended behaviors in hypothetical situations as being altruistic (Abbate, Ruggieri and Boca, 2013).

Additionally, studies concerned with the difference between the effects of fictional and non-fictional media priming on altruistic behavior are very scarce. Most studies when it comes to media and altruism measure the effects of pro-social versus anti-social media content, rather than pro-social fictional versus pro-social non-fictional media content. Limited studies integrate the presence of bystanders and the pleasure-based versus pressure-based motivations to altruistic behaviors; ergo the current study’s research problem worthiness.
Deductively, the study at hand attempts to analyze the effects of media priming on people’s actual helping behaviors using fictional and non-fictional video montages of heroic acts. It focuses on the instantaneous media priming rather than latent priming; it’s also interested in spontaneous and situational altruistic behavior, as opposed to deliberate and stable altruism such as; volunteering. The participants are going to be exposed to an accidental run-in with a naturalistic damsel in distress situation used as the instantaneous stimulus, in order to test the discrepancy between fictional and non-fictional media priming and whether it will translate into an altruistic behavior.

The researcher picked a high cost help situation, in order to measure the effects of two pro-social media contents on altruistic behavior. Taking into consideration the Egyptian culture, one of the situations that require a relatively high cost of helping is sexual harassment. Due to the epidemic spread of this phenomenon, nonetheless on college campuses, the researcher thought that this situation would constitute an adequate measure of the participants’ altruistic behavior, knowing that the sample consists of college students.

Sexual harassment is as the Egyptian Centre for Women’s Rights (ECWR) describes it a “social cancer” spreading within inactive government legislations and societal support. On a micro-level, it’s worth mentioning that a student-driven campaign called “speak up” emerged from the Faculty of Mass Communication in Cairo University in 2014, aiming at breaking the silence when it comes to on-campus sexual harassment. It attempted to encourage the students and even the staff to anonymously report any sexual harassment incidents on Facebook, starting as an awareness campaign and pursuing to demand solutions and sanctions.
Even though these efforts are intrinsically inspiring, still the issue is relatively considered a taboo and people are often reluctant to stop it. On one end, students have a strong sense of belonging when it comes to college, so they might be more protective and feel more comfortable to help in a situation involving people from the same age. On the flipside, they might be constrained by culture, taboos, and the presence of bystanders, thus refraining from intervening. Hence, the researcher chose a sexual harassment situation to measure people’s altruistic behaviors, since it is yet considered in the Egyptian culture as a relatively “high cost help” situation.
Chapter Two

Conceptualization

2.1. Altruism Nomenclature

Krichsteiger et al. (2006) distinguished the concepts of altruism, fairness and reciprocity, where altruism is thinking of another person’s best interest selflessly without thinking of oneself. Fairness indicates thinking of one’s own best interest while not forsaking others’ best interest; as for reciprocity, it’s being solely concerned with one’s best interest and expect to be repaid even if it will jeopardize others’ wellbeing.

In addition, there is indirect reciprocity which implies that the person doesn’t expect the reciprocation to her/his help to come from the same person, such as the case with nepotism or believing in Karma (Morhenn, Park, Piper and Zak, 2008). Arguably, someone who believes in Karma can’t be considered a reciprocator, since they accept the probability that their help may or may not be reciprocated. In tandem, Fiddick and Erlich (2010) described an altruist as someone who goes beyond request, someone who accepts the cost of helping, but does not think of the benefit; unlike cheaters who only take and do not want to pay the cost.

Deductively, a reciprocator equally gives and takes, similarly someone who’s fair gives and takes not necessarily equally but fairly, a cheater takes and doesn’t give, while an altruist is a giver who doesn’t take anything in return. Moreover, help can be either situational and spontaneous or stable and deliberate; meaning that it can range from helping someone out in a certain situation; such as helping an old woman cross the street,
to committing to helping people; such as volunteering (Gebauer, Riketta, Broemer and Maio, 2008).

Kinship is another factor to take into consideration when defining altruism, Williams (2007) studied the differences between kin and non-kin altruism. He found that people tend to help people within their circle of family and friends more than others, but interestingly, relatedness was found to be directly proportionate to reciprocity. Notably, all the precedent perspectives are adherent to the concept of helpfulness, however, the locus of this thesis is situational non kin altruism, since it’s one of the characteristics that define a superhero and that people aspire to subsequently, helping complete strangers in their situational predicaments with no expectations of reciprocation.

2.2. Helping Motivations

The next logical question to raise would be why help, studies show that there are different sets of motivations guiding people’s helpfulness. Gebauer et al. (2008) suggest that help can be motivated by egoistic concerns or pure selflessness, while Morhenn et al. (2008) factor in reciprocity, as well as group selection models, which entail that non-helpful group members may be shunned by the group and helpers may be rewarded. Another interesting motivation that Morhenn et al. coined is sexual selection, where helpfulness - being an admirable behavior - may make a person appealing as a mate.

Moreover, striving to fulfill emotional satisfaction can be a reason for helpfulness (Sire, Guéguen, Meineri, Martin and Bullock, 2014; Van Leeuwen, Van Dijk, and Kaynak, 2013; Gebauer et al., 2008). Lukic (2009) explained that feeling guilty about those less fortunate is one of the emotional aspects that many social marketing campaigns
resort to, in order to get people to help in any particular cause through making them empathize, when they feel that they are more fortunate than others. The fear appeal is mostly used by social marketers to promote causes related to one’s own safety, instead of helping others.

As for positive appeals eliciting feelings such as humor, hope, excitement, etc. they can be used to show people that performing a certain behavior has positive outcomes, and outcomes don’t necessarily mean reciprocation, the outcome can be merely positive feelings of pride, pleasure and higher sense of self-worth (Van Leeuwen et al., 2013; Lukic, 2009). Showing people someone performing the desired behavior emphasizing its positive outcomes/feelings, may inspire them to “model” that behavior, after being primed by this vicarious experience when a stimulus presents itself, which is the very core of this thesis.

Gebauer et al. (2008) added an interesting perspective to what motivates people to help which is the pleasure versus pressure dichotomy. People either help in order to satisfy certain ideals and become what they aspire to be, or to conform to an ought-to behavior and do their duty. The ideal fulfilling behavior does not ask for reciprocation, while the ought-to behavior expects reciprocation whether direct or indirect. The pressure comes from punishment avoidance; that could be simply restricted to cultural norms and fear of social disapproval and scrutiny “normative altruism”. Arguably, that cultural pressure can hardly be considered as a form of altruism, since it defies the selfless criterion.
Another motivation to help can be to establish superiority, power and control, to create feelings of loyalty, indebtedness and submission. This motivation is built on negative intent which is different from motivations stemming from pleasure, selflessness, or even pressure, guilt, fear, etc., in that it has a devious intent for blackmail, subjugation, or extortion in case the helper doesn’t receive the loyalty of the helpee. Though it may seem as a form of reciprocity, reciprocity implies that both parties are relatively equals, whereas this can be considered a form of enslavement.

Moreover, this motivation is not pertinent to the core of the current study, because the study mainly focuses on situational altruism, while the motivation of power and superiority is a stable behavior reflecting a villainous character. On the other hand, the pleasure versus pressure dichotomy is vital, since it is crucial to identify whether the subjects’ behaviors are based on ideal or duty, which is why a self-administered questionnaire will be distributed upon completion of the experiment, in order to examine whether the subjects’ behaviors were motivated by pleasure or pressure.

2.3. Determinants of Altruism

After exploring the different motivations that drive people to be altruistic, there are factors that could predict whether someone would be helpful. Individual differences could be a primary determinant, since there are people who are predisposed to being helpful more than others. Furthermore, beyond individual differences and personal traits, an essential denominator when it comes to altruism is “the cost of helping”. The cost of helping is the cost that the altruist will have to pay in order to help the person in need, as Williams (2007) categorized it the cost of helping can be low, medium or high; where
low-cost help was restricted to emotional support, medium-cost included help during illness, during crises, with everyday living, with housing and financial help, while high-cost help entailed willingness to donate a kidney, risk injury/death saving the life of the person in need.

Williams studied the cost of helping when it comes to helping kin or non-kin examining the correlation between the two variables. Therefore, the cost of helping is weighed by the altruist in terms of time wasted, effort exerted, and level of sacrifice needed; for instance it’s unlikely that someone would give a total stranger their kidney, these high-cost sacrifices are usually directly proportionate to kinship. There are other exogenous factors that could fall under the cost of helping including whether the altruist has time to waste, running late can be an obstruction to offering help.

Another factor that could affect helpfulness and is monumental to this study is the “bystander effect” which postulates that people tend not to help if they see others standing within proximity from the person in need; therefore, studies examine the presence or absence of bystanders as a factor that might prohibit people from helping, with the justification that there are other people present and one of them will surely help, or that a lot of people are present and not doing anything so why should I (Abbate et al., 2013). On the other hand, the presence of bystanders may encourage people to take action and help, whether to enhance their reputation and avoid being judged or to take a stance in disapproval of others’ passiveness. This dichotomy will unravel over the course of this study, the difference between the bystander effect and the superhero effect.
Additionally, people may not feel complied to help when they have already been through the same situation; meaning that people may not be willing to give money to two needy people consecutively, even if their circumstances were different. Individual differences play a role when it comes to this factor along with other intervening variables, one of which is mood state. Mood state is a crucial preamble to helpfulness, as Kirchsteiger et al. (2006) stated “bad mood implies more reciprocity, while a good mood implies more generosity” (P.155). Bad mood can expunge all the precedent factors and motivations to help; amplifying the cost of helping, the time wasted, the effort exerted and the sacrifice needed, either relying on bystanders to help or in case of their absence feeling that no one will know that they didn’t help.

Another justification is belittling others’ need for help, thinking that they are pretending to need help, that they are capable of helping themselves or even that they don’t need help in the first place, inhibiting any sense of guilt or duty and making them refrain from help. Conversely, good mood can encourage people to help multiple times consecutively, even if the situations were the same, since the positive mood may hinder the process of over thinking every situation, being driven solely by motivation to help and brighten others’ moods. In sum, this psychological overview was needed in order to thoroughly understand the concept of altruism, before tackling how it was integrated in media studies.

2.4. Fiction v Non-Fiction

The difference between fictional and non-fiction media in terms of impact has been the scope of a plethora of existing literature. The American Heritage Dictionary
attempted to define fiction as “the category of literature, drama, film or other creative work whose content is imagined and is not necessarily based on fact” while distinguishing non-fiction as “the category of literature, drama, film, or other creative work, including essays, expository prose, and documentaries, whose content is based on fact and is not imagined”. The definition of fiction and non-fiction evolved, blurring the boundaries between them, since fictional work started to be based on true events, and non-fictional work incorporated dramatic effects and reenactments in order to match the attractiveness of fiction (Heyne, 2001).

2.5. Sexual Harassment

Sexual harassment has been taken for granted for many years, and it has been treated as a norm in the Egyptian culture until it has become endemic. In order to attempt to fight sexual harassment in any society, a clear definition that has to be tailored to the mentality of each culture needs to be provided. Nickerson, Aloe, Livingston and Feeley (2014) defined sexual harassment as “unwanted or unwelcomed sexual behavior that interferes with a person’s life” (P.391); this includes verbal, physical, relational or cyber harassment.

On the other hand, HarassMap defined sexual harassment as “any form of unwanted words and/or actions of a sexual nature that violate a person’s body, privacy, or feelings and make the person feel uncomfortable, threatened, insecure, scared, disrespected, startled, insulted, intimidated, abused, offended or objectified”. This definition implies how different the mentalities might need different wording in order to avoid any confusion. There is a common misconception that flirting does not fall under
the umbrella of sexual harassment according to HarassMap, along with may other myths, which is why the definition starts with words instead of actions, in order to eliminate this misconception.

2.6. Superhero Allure

In retrospect, Webster and Saucier (2013) have debated whether the concept of “pure altruism” or “pure good” which is inherent to selfless help truly exists. They’ve outlined the criteria pertinent to pure good entailing intentional selfless help given to anyone in need, without hurting others nor being tainted by corruption; in addition, pure goodness is according to the researchers a stable trait facilitating peace, order and stability, and is a rare trait in the world. The researchers apparently suggest that pure good is a utopian aspiration much like becoming a superhero.

Dictionaries define a “Superhero” as a benevolent fictional character with extraordinary superhuman powers using them to help others and do good (Merriam-Webster, Cambridge Dictionaries Online and Oxford Dictionaries, 2015). Correctively, not all superheroes have superpowers such as; Batman and Iron Man, but what they all have in common is the use of whatever powers they’ve got to help others. Additionally, restricting the definition of a superhero to being a fictional character certifies Webster and Saucier’s utopian description of what pure good entails. Moreover, the nomenclature of a superhero’s characteristics in literature included; a good heart, kind, caring, seeking justice, indomitable spirit and helping others (De-Souza and Radell, 2011; Dighiera, 2009).
Kukkonen (2010) described superheroes’ characteristics as almost always involving costumes and masks to hide their dual identity - as Roblou (2012) called it - sometimes paired with a magical item that possesses superpowers or high-tech gadgets (Palmer, 2007). Jenkins (2006) added another attribute which is immortality and the blurriness of the concept of death. Bukatman (2003) also defined a superhero as an independent figure serving, but not restricted by the law and remains incorruptible fighting to protect the city and all innocent lives.

Furthermore, Nama (2011) stated that “superheroes symbolize societal attitudes regarding good and evil, right and wrong, altruism and greed, justice and fair play” (P.252) which breaks the mold of them being merely a fantasy or a pass time. Reynolds (1994) have another common trait which is embodied in experiencing loss; for instance Bruce Wayne lost his parents, Hal Jordan lost his father and Clark Kent is adopted. Hatfield (2011) pointed out the inevitable presence of super-antagonists who constitute worthy nemeses for the superheroes.

The hook to superheroes resides in giving them the “one of us” persona, in order to foster identification with the characters (Cawelti, 1977). Coogan (2006) has set three predominant requirements for any superhero namely; having a mission, superpowers and multiple identities. Having multiple identities entails having a normal identity that the world can see; this makes the characters more identifiable giving people hope that they can be superheroes too since these protagonists are human too.

On a different note, Robbins (1996) noted that women in comics were restricted to the role of the distressed love interest of the male superhero. Girls didn’t have a
superhero role model as a result, which instigated the emergence of women superheroes, making them an aspiration for girls, and generating another stratum of fandom to superhero movies.

This bulletproof image of superheroes holding that they always do the right thing, that they always help selflessly and that they are always purely good has evolved into more human-like superheroes with character flaws, as well as, weaknesses that make them more relatable and a more real aspiration (Fingeroth, 2007). Logically, the new superhero image redefines the connotation of pure good or pure altruism; despite the researchers’ criterion that it must be a stable trait, pure altruism can be particularistic to a certain situation, it doesn’t have to be a regular behavior, just as superheroes don’t always do the right thing.

Furthermore, Coogan (2006) projected that a superhero can be a metaphor to describe “the power to right wrongs without danger to oneself…a selfless Samaritan imbued with simplistic straightforward goodness and overwhelming efficacy” (P.124), adding that superheroes have a common criterion which is a “calling”; superheroes exist only in the harshest of times when their existence is called for. Coogan’s projection defies the rigidity of the precedent dictionaries’ definitions that restricted a superhero to being solely a term to describe a fictitious character with extraordinary superhuman powers. He added that superheroes rise from the crowds to help.

Dighiera (2009) noted that superheroes do exist in real life not just in works of fiction; their existence – in tandem with fiction - is the natural reflex to the harshness of the world we live in where pure timeless values are traded for wretched decadent ones.
Real-life superheroes may have different connotations; from people such as Gandhi who sacrifice themselves for causes they believe in, people going through immense struggles like cancer survivors, people fighting to protect their country, people struggling to make ends meet to support their families to people selflessly helping others everyday; whether in spontaneous situations or commitment to charity.

On the other hand, success stories such as; people fighting their way to becoming successful though considered for the superheroes connotation, were excluded from the scope of this study. Since they do not help others selflessly, they only helped themselves; whereas the study is predominantly concerned with everyday superheroes who help others selflessly in daily spontaneous situations. To sum up, this section attempted to provide an idea of what the term “Superheroes” entails and their characteristics, in order to understand the fictitious image portrayed through superhero movies, as well as, the non-fictitious image of regular real-life everyday superheroes that people aspire to.
Chapter Three

Literature Review

The researcher reviews existing literature pertinent to fictional and non-fictional media content in terms of impact on their audience. This prelude is followed by reviewing literature on media and altruism, unraveling how different media affect altruism. Consequently, by the end of the chapter, the researcher would hopefully gain a solid perspective on the different methodologies and findings inherent to the study’s main variables.

Fictional v Non-Fictional Media

Early literature about fiction and non-fiction focused on what children read in classrooms. Doiron (1994) suggested that reading fiction is more influential when it comes to creating a motivation to model a certain behavior than non-fiction, stating that fiction is magical and engages people into the stories and characters. On the other hand, Feldt (2011) argued that reading non-fiction creates a link between reading aloud in classrooms and reading comprehension, unlike fiction.

This can also be generalized to visual media where people pay attention to the news for instance, though it doesn’t transport them to another world the way fiction does. Therefore, Feldt made a distinction between learning to read and reading to learn; the former refers to fiction reading while the latter refers to non-fiction. This distinction asserts the previous statement that fiction is more related to modeling and non-fiction is related to gaining information.
The notion of perceived reality which is inherent to the understanding of fiction and non-fiction, was explained by Wright, Kunkel, Pinon and Huston (1989) with three factors; factuality, social realism and production. Factuality refers to whether the story is based on true events, social realism refers to whether it is socially believable and comprehensible and production refers to the effects that could make the story seem less/more authentic. Moreover, even though there is no such thing as absolute reality; non-fiction is perceived as real which drives people to perceive it as it is, without processing or analyzing any implied meaning or intent, unlike fiction which motivates people to analyze the intent of the meanings conveyed (Mendelson and Papacharissi, 2007).

In effect, Mendelson and Papacharissi (2007) conducted an experiment showing people still photographs once with a caption which says that the photos are fictitious, and once saying that they are non-fictitious. They argued that the method of processing fictional, as opposed to, non-fictional violence differs; people are shocked by real violence on the news, while they generally tend to enjoy fictional violence.

Furthermore, Cantor and Sparks (1984) explained that children tend to be more afraid of fiction (e.g. witches, deformities, ghosts, etc.) than non-fiction (e.g. news) and that the more they get older the more they get scared of the realistic context rather than fantasy appearances, since they can imagine the events happening to them. Therefore, relevance and personal experience do play a role when it comes to studying the effects of fiction/non-fiction.

Geen (1975) conducted an experiment where the respondents were either attacked or treated neutrally by a confederate and subsequently shown a fight scene labeled as
either fictitious or non-fictitious. The results of this study showed that respondents who were attacked and perceived the fight scene to be real, experienced more physiological reactions in terms of blood pressure, sweat and emotional arousal than the counter conditions, as well as, being more punitive with the confederate. These findings confirm that relevance, proximity and previous experience play a role in people’s reaction to fictional or non-fictional content, having been subjected to firsthand violence induces emotional, physiological and behavioral reactions to real violence.

Mendelson and Papacharissi (2007) concluded their study by explaining that people tend to interpret and give more thought to fictitious content, making connections within their frame of reference, whereas non-fictitious content limits this internal route, since there is no deeper meaning involved. The respondents reacted more strongly emotionally to the photographs labeled as non-fictional, possibly because of the nature of still photography especially with the accompanied captions, reminding the respondents that they aren’t real and making them feel detached and relate more to the real-captioned photographs.

The magic of fiction lies in its illusionist nature, the make-belief which transports people into that fictitious world with perceived realism. However, once people are reminded that this is not real they could snap out of that illusion, which is why the ambient or the environment around people exposed to fictional content, is a crucial determinant of emotional reactions. Another study by Hendersen and Clark (2007) examined the difference between reading and retelling passages labeled as either fiction or non-fiction.
The researchers found what they called the *fiction superiority effect*, where people tended to remember the fictitious passages and recall certain words verbatim. This might indicate that people reading fiction attempt to preserve the feel of the narrative and its magic, while those reading non-fiction merely summarize the facts. They added that fiction – unlike non-fiction - is more than a memory exam; it’s integrated with the existing frame of reference, which means that it takes more processing.

Narvaez, Broek and Ruiz (1999) conducted a similar study comparing the purposes of reading; they found that people either read for study purposes or for entertainment, or in terms of genre; non-fiction and fiction. The results showed that when reading for study purposes, people tend to repeat and reread to extract the information, whereas reading for entertainment may activate certain schema or scripts since they generate more interest.

Moreover, Bal, Butterman and Bakker (2011) explained that fiction drives people to relate it to their own personal experiences, even though they know it’s fictitious, they identify with the characters and the story. Miall and Kuiken (2002) identified feelings produced by exposure to fiction into four interconnected types namely; evaluative, narrative, aesthetic and self-modifying feelings. Evaluative feelings entail the general feelings of enjoyment before and after exposure, narrative feelings entail the identification with the character, events or story, aesthetic feelings entail the admiration of certain metaphors or details and self-modifying feelings entail the internal evaluation of oneself as a result of the exposure.
In agreement, Gerrig (1993) stated that people get transported and immersed in the fictional world. Similarly, Green and Brock (2000) stated that “individuals are absorbed into a story or transported into a narrative world, they may show effects of the story on their real-world beliefs” (P.701) in reference to the transportation theory.

Mar, Oatley and Peterson (2009) went further, controlling individual differences in order to examine the correlation between exposure to fiction and empathy, the results showed that reading fiction is correlated only with the openness to experience personality trait. Therefore, the results refuted the assumption that individual differences intervene when it comes to empathy, rather than the exposure to fictional content.

Additionally, Mar, Oatley, Hirsh, Paz and Peterson (2006) conducted an experiment asking the respondents about the amount of fiction or non-fiction books they read, in order to examine their social abilities; they were also shown random clips of people interacting and asked what the characters were doing in order to examine their interpersonal perception. Frequent fiction readers scored higher in terms of the social abilities and interpersonal perception tasks (Bal and Veltkamp, 2013). These finding are in agreement with previous findings, that being immersed in fiction makes people more empathetic and pay more attention to details and associations. Also, the findings are inline with the results proposing that fiction creates schema and scripts inside people’s minds that frequent exposure renders them chronically accessible.

Another study by Kidd and Castano (2013) attempted to examine the difference between fiction and non-fiction through multiple experiments, one of which used the Reading the Mind in the Eyes Test. The RMET entailed that the respondents identify
facial expressions; interestingly, people who are exposed to fiction scored higher than those exposed to non-fiction.

Furthermore, Mar and Rain (2015) studied the effect of fiction and non-fiction on university students’ verbal abilities; findings showed that exposure to fiction enhances verbal abilities such as finding synonyms and analogies, unlike non-fiction. These peculiar findings may seem as if defying the prior findings that non-fiction is basically informational which could entail expanding people’s vocabulary repertoire, however, fiction has more freedom and luxury to use a wider verbal spectrum of synonyms and metaphors than non-fiction which is supposed to use clear words to present comprehensible information.

Some of the reasons found in literature explaining why fiction has a stronger impact on people’s emotions include; lack of obligation to the fictional characters, quieting the appraisal system which validates whether the events are realistic and having a safe place to feel all emotions without a need for self-protection (Bal and Veltkamp, 2013; Goldstein, 2009). Other powerful reasons that weren’t the dominant scope in previous literature were coined by Miall and Kuiken (2002) which include the previously mentioned feelings that fiction elicits.

In case of visual media; being the scope of this study; camera angles, actors’ performances, music, script, etc. all contribute to transporting the audience to a whole new world, influencing their feelings before, during and after exposure. In contrast, Bal and Veltkamp (2013) explained the concept of the sleep effect which means that the effects of exposure to fiction do not manifest immediately but rather increase over time as
did Appel and Richter (2007); which contradicts the main hypotheses of the current study. On the other hand, Holmes (2002) reflected that non-fiction has the advantage of honesty and directness, unlike the dominant fictional manipulations.

Arguably, having hybrids of fictional and non-fictional content increase the audience’s identification and familiarity with a fictitious storyline, as well as, presenting raw and universal emotions, augmenting thereby its realism. Also, having non-fictional media content using - usually specific to fiction - aesthetics such as music and different camera angles, as opposed to, the rigid nature of news for example, generates more interest in non-fictional content.

Evidently, a plethora of literature attempted to tackle the effects of fictitious and non-fictitious media on people’s emotions, attitudes and behaviors. Some found that fiction has a stronger and deeper influence than non-fiction eliciting the transportation effect. Nonetheless, other studies show that non-fiction has a stronger influence in terms of persuasion since it’s honest and direct which gives it more credibility. Other studies stood in the middle of this dichotomy arguing that fiction and non-fiction have equal impact on people’s emotions, attitudes, cognitions and behaviors (Cao, 2015).

**Media and Altruism**

The use of media to induce altruism has been a deeply-rooted practice that surged and morphed parallel to media development. It has also been part of the media’s role in terms of social responsibility. Altruism in media studies falls under the umbrella of pro-social behaviors; therefore, the intent is to show how media in all forms affect the audience’s pro-social attitudes and behaviors.
Starting with online social networks, Ma and Chan (2014) conducted a survey on post-high school students asking them about their knowledge-sharing motives through online social networks. Findings show that altruism directly affects knowledge sharing on social media, or in other words social media help people to act altruistically. Similarly, Utz (2009) surveyed online reviewers, in order to examine their motivations in terms of taking the trouble to write a review with no benefits in return, the results identified altruism and the pleasure of interaction as the two preambles to community contribution.

Online knowledge-sharing intentions according to Cho, Chen and Chung’s (2010) findings when they studied the motivations of Wikipedians in knowledge building were not inherent to replenishing their egoistical intentions and their reputations, but rather reinforcing their altruistic motivations, sense of belonging and responsibility towards helping others. They added that subjective norms do play a role in fostering these motivations, or in other words individual differences.

In tandem, Quinton and Fennemore (2012) studied how online social networks are used to promote participation in charity, adding that people get the feeling of self satisfaction through sharing the causes with their peers. Promoting for charity via online social networks is a low cost help and yet it could generate relatively the same feeling of self satisfaction as engaging in any altruistic behavior.

As for still photography, Rubin (2011) examined the effects of photographs portraying a social affiliation on people’s willingness to seek help from others. Results show that people who saw the photographs with two people hand-in-hand were more willing to seek help than those who saw non-affiliation photographs. Over and
Carpenter’s (2009) study complemented Rubin’s where they tested the effects of photographs portraying affiliation versus individuality on 18-month old infants, in order to examine whether they will help a person in need, which turned out to be in favor of the affiliation photographs.

Over and Carpenter’s study divided the participants to 4 conditions; the together condition where participants were shown a photograph of two wooden dolls are standing close to each other, the alone condition where only one doll is standing, the back to back where to dolls are standing back to back and the baseline condition where there are a pile of bricks stacked together. These were the primes portrayed in the photographs next to a familiar household object (e.g.; kettle). Results indicate that the together condition was more likely to help when a situation of dropping sticks was staged, than its baseline, back to back and alone counterparts.

Jacob and Guéguen (2015) attempted to examine the altruistic behavior for organ donations primed by photos of a heart on the confederate’s t-shirt. The first condition had a photo of a realistic heart on the t-shirt, the second had a photo of a symbolic heart, in addition to a control condition. The researchers found that the photo of the realistic heart generated more compliance with the organ donation cause than the two other conditions.

In congruence with literature on fictional and non-fictional media content, the precedent study shows that people were more affected by the non-fictional photo, rather than the fictional photo. The researcher suggests that one reason could be that the non-fictional photo projects an image of seriousness and realism inherent to the cause.
Additionally, these previous studies demonstrate that there are distinct priming effects connected to the context of the photos, even if they hold the same elements.

Speaking of context, Williams, Entwistle, Haddow and Wells (2008) added that people are more likely to be influenced by stories of real people, rather than mere statistics or - as Small and Loewenstein (2003) called it - the identifiable victim effect. This means that people are more likely to empathize for instance with tsunami survival stories, rather than aggregate numbers of deaths reported on the news, which adheres to the argument that people are affected by the context of the primes rather than the primes in their intactness.

Moreover, Ekström (2010) conducted an experiment on whether people in a supermarket can be primed to donate the amount of money they get from recycling to a charity organization, if pictures of human eyes were posted on the recycling machines. Ekström indicated that people tend to be self-conscious and take into account the presence of observers or bystanders, when it comes to their donating behavior.

Surprisingly, contrary to the previous literature, the findings of this study show that the photos had no general effect on the altruistic behavior. The researcher concluded that the subtlest cues of observation could affect the altruistic behavior considerably, and that the participants felt observed by a third party namely; the human eyes.

Dickert, Sagara and Slovic (2011) studied the effects of priming participants with either deliberative or affective thoughts, then showing them photos of sick children with a description of their disease, and asking them to donate. Results of the study show that the main predictor of this altruistic behavior is mood management rather than empathetic
feelings. The participants donated in order to make themselves feel better or to hinder the potential feelings of regret they might experience if they don’t donate. The researchers found that the empathetic feelings usually resulted in the affective priming condition rather than the deliberative.

Furthermore, in relation to print media, Nelson and Norton (2005) studied the effects of word priming on altruistic behaviors. They primed the participants with words related either to superheroes or Superman in particular, asking them to describe the characters’ appearances, lifestyles, values and behaviors. Then, they were asked to identify their helping behaviors in hypothetical situations. The participants were later asked if they would like to register their names to volunteer to tutor children in neighboring communities, and after three months the volunteers were contacted to test whether the priming effect is still viable.

The researchers discovered that those primed with superhero-related words were more likely to hypothetically help, register to volunteer and actually show up in the meeting three months later than their Superman-primed counterparts, since they didn’t necessarily have shared features with the superhuman character. Adhering to literature on fiction and non-fiction, the precedent study shows that fictional semantic priming can affect altruistic behaviors more than the control condition.

Another study on word priming or semantic priming was conducted by Sire et al. (2014). They examined people’s intentions and commitment when it comes to blood donation, using confederates either wearing t-shirts with no inscriptions in the control group condition or with the inscription “Loving= Helping”. Results indicated that the
words did prime altruistic intentions and commitment towards blood donation. Both studies involved primes driving the participants to commit themselves to future altruistic behaviors.

The effects of music on altruism have been a subject of interest to many scholars. Adherent to committing to future altruistic behaviors, North, Tarrant and Hargreaves (2004) conducted a field experiment in a gym, where either uplifting or annoying music was playing in the background, and then people were asked to sign a petition for charity and to help the confederate distribute flyers.

Interestingly, people signed the charity petition in both conditions, while those who listened to the uplifting music helped more with the flyers. Deductively, signing a petition takes neither time nor effort, while wasting time and effort to distribute flyers, involving thereby a commitment to a near-future altruistic behavior could be more daunting, especially if the condition doesn’t promote such a helping behavior. This indicates that the difference between the two conditions might be more noticeable when the cost is higher, which is why the researcher is choosing a relatively high-cost situation in the current study.

Wilson (2003) went further, proposing that different types of music have different effects on the mood and atmosphere of people in a restaurant. Grewe, Kopiez and Altenmuller (2009) studied the physiological reaction to seven musical pieces or in laymen’s terms the “chills” or “goose bumps” that each piece produces. They suggested that unlike doubts in previous literature, every stimulus induces certain emotions that
have been found similar in different listeners. Deductively, different types of music even if they are all pro-social can elicit different moods and behaviors.

North and Hargreaves (1998) conducted a similar study in a cafeteria measuring whether purchase intentions and tipping are affected by the background music, resulting in higher purchase intentions and tipping when the customers enjoy the music. Fried and Berkowitz (1979) echoed previous studies when they examined whether soothing or aversive music might affect mood state, which turned out to be affirmative. Additionally, they examined the effects of music selections on altruistic behavior through asking the participants to participate in another experiment that could take up to two hours. The results showed that there was no significant difference in terms of willingness to help between the two conditions. The researchers concluded that the relatively short period of exposure might have rendered the results incongruent.

These studies indicate how the media have the power to alter people’s moods, consequently inducing pro-social attitudes and behaviors. All in all, studies found that listening to songs with pro-social lyrics affects the listeners’ pro-social attitudes and behaviors, increasing thereby their accessibility as existing schema inside the listeners’ minds.

Consequently, Kennedy (2013) called for - in recognition of the effect of music on listeners’ altruistic behaviors - increasing exposure to pro-social music that will foster pro-social behavior, as opposed to, anti-social music. Kennedy’s experiment involved participants either listening to pro-social songs or neutral songs, then the experimenter
drops a container of pens, resulting in a significantly higher occurrence of altruistic behavior in the pro-social condition.

Studies concerned with the effects of video games harnessed extensive attention in academia. Most of the precedent studies focused on instantaneous priming, albeit, Anderson, Gentile and Buckley (2007) were more interested in long-term media effects. They conducted a longitudinal study on elementary school children for part of the school year, in order to measure the effects of their media habits on their social interactions. They found that children who played violent video games were more likely to be aggressive, modeling the games they play. Greitemeyer and Osswald (2010) subsequently suggested that based on the precedent study, pro-social media might have the same effect as the anti-social media in terms of modeling.

Conveniently, Chambers and Ascione (1987) had already conducted an experiment on children to examine the effects of playing anti- as well as pro-social video games on their donating behavior. Interestingly, they found that playing pro-social video games increase the children’s donations, while the anti-social video games decrease them exponentially. They noted that the likelihood of pro-social behavior was the same when playing pro-social or neutral video games.

Greitemeyer and Osswald (2010) also attempted to measure the effects of pro-social video games on altruistic behaviors through four experiments. The first involved making the participants play pro-social, anti-social or neutral video games, then the experimenter drops her/his pencils which is where their pro-social behavior will be put to the test. The results showed - contrary to what Chambers and Ascione (1987) deducted –
that only pro-social video games increased the helping behavior, while the anti-social and the neutral video games had the same effect.

The second experiment involved asking the participants whether they would participate in further studies, using only pro-social and neutral video games, resulting in an increase in the willingness to participate after playing pro-social games, relative to neutral games. The third experiment - which is relatively similar to the staged situation in the current study - increased the severity of the consequences through examining whether the participants will intervene in case of harassment.

While the female researcher is in the same room as the respondent who is playing video games, a male confederate walks in posing as her deranged ex-boyfriend and attempts to harass her. The results showed that 3 out of 5 participants who played pro-social games intervened to stop the harasser, while 1 out of 5 intervened in the neutral condition.

The precedent result challenges Williams’ (2007) suggestion that an altruistic behavior when it comes to non-kin can be suppressed by the severity of the cost of helping. In Greitemeyer and Osswald’s study, the intervention in case of harassment which might have severe consequences was determined by the pro-social or neutral games played beforehand. These results show that media exposure can overrule the severity of the cost of helping that would have been otherwise amplified.

The fourth and final experiment in their study intended to measure whether pro-social video games increase the accessibility of pro-social thoughts, which might translate into actions, asking the participants to write the thoughts they had while playing the video
game. The results entailed that pro-social video games elicited more pro-social thoughts in the players’ minds than their neutral counterparts.

Whitaker and Bushman (2012) reached the same results when they studied the effects of relaxing and violent video games on the players’ altruistic behaviors. The players first played relaxing or violent video games individually. Then, they entered a competition with a partner, and were told that losers will be punished with loud noise and winners will be rewarded with money. The participants chose at the beginning the amount of money for the reward and the loudness of the noise for the punishment.

The relaxing video game players were more likely to increase the amount of the reward and decrease the harshness of the punishment than the violent video game players. The next experiment attempted to test the participants’ altruistic behaviors when asked to help the experimenter sharpen some pencils. Again the relaxing video game players displayed more altruistic behaviors. Subsequently, the researchers added their voice to the body of existing literature that altruism can be affected by media content.

In tandem, Williams, Entwistle, Haddow and Wells (2008) reviewed 34 studies on children that unanimously indicated that media could positively influence altruism, ushering that media content is “less constrained” than direct communication. Referring to the previously mentioned pleasure-based versus the pressure-based motivations, the researchers suggested that the media; unlike direct communication; do not exert “undue pressure” to generate altruistic behaviors.

Finally in broadcast media, most pro-social effects literature study children’s altruism, making them watch a video clip featuring an altruistic character, then staging a
similar situation for the children to model their favorite media protagonists (Wilson, 2008). Based on Wilson’s meta-analysis, the researcher explained that this rather instantaneous media primed behavior can persist beyond the specified situation. In addition, Wilson gave more significance to what the content the children are watching, rather than to how much time they spend watching.

In contradiction, Mueller and Donnerstein (1983) studied the role of films in arousal and aggressive behaviors. The study supported the excitation transfer theory, in agreement with Rasit (2013) and Ostrov, Gentile and Crick (2006). This theory proposes that the media content is not the determinant of the induced behavior, and that it’s the arousal or the excitation that generates behaviors, may it be from watching erotic, humorous or aggressive media content. Meaning that, even pro-social content can induce aggressive behaviors. The media content elicits excitation which could translate into any kind of behavior depending on the stimuli presented and the period of exposure.

Moreover, Ostrov et al. (2006) conducted a two year longitudinal study examining the effects of media exposure on children’s aggressive and pro-social behaviors using observations and parent/teacher reports. They instructed the parents to rate their child’s three favorite TV shows and movies in terms of how violent or educational they are. The researchers found the effects of educational media content – in terms of being an influencer on children’s helping behaviors and relational inclusion - to be more prominent in girls than boys. They also noted that the amount is more important than the media content consumed in determining the effect, stating that even long-term exposure to educational programs can lead to aggressive behaviors.
Situational altruism, as opposed to long-term effects was investigated by Sprafkin, Liebert and Poulos (1975), who conducted an experiment on children making them either watch an episode of the TV show “Lassie”, where a boy risks his life to save a puppy from a mineshaft, or watch any other episode that doesn’t involve an altruistic behavior. This resulted in a tremendously higher likelihood for the children to save a puppy in distress afterwards, instead of playing a game that they could get a huge prize from if they win.

Another interesting study was conducted by Roberts and Strayer (1996) showing children eight short vignettes carrying different emotions. In an attempt to assess the children’s facial expressions while watching, as well as, their self reports in comparison to their teachers’ and parents’ reports on whether the answers were characteristic of the child, to ultimately examine the children’s empathy and pro-social behaviors post exposure. As a side note, findings reflected that there are socialization pressures when it comes to gender, where girls are expected to be more pro-social, while boys acting aggressively is more tolerated, influencing thereby the effect of the exposure.

Funk, Baldacci, Pasold and Baumgardner (2004) studied the anti-social effects of the media when they compared the effects of real-life violence to entertainment violence on desensitization. The results showed that exposure to entertainment violence is more likely to affect pro-violent behaviors and with frequent exposures lead to desensitization. They added that intense engagement when it comes to media violence and observing the violent behaviors rewarded, as well as, downplaying the consequences of such violence, could explain the stronger effect of entertainment violence. Depending on what
Greitemeyer and Osswald (2010) previously suggested, these effects might be applicable for pro-social media content as well.

Summing up this section, there is a myriad of literature tackling the effects of the media on pro-social behaviors dwarfing the rather condensed overview presented in the current study, but hopefully, it did give an insight to pro-social media effects.
Chapter Four

Theoretical Framework

Media Priming Theory

The Media Priming Theory purports that media create scripts for social behavior, these scripts are stored in the viewer’s memory. The duration of the scripts’ resilience in the memory is determined by their effect and repetition, making them either chronically or temporarily accessible whenever a stimulus presents itself, consequently priming related thoughts and possibly behaviors. Moreover, priming is mainly concerned with temporary scripts that are easily accessible and activated. It primarily relies on associations stimulating related thoughts, emotional reactions and behavioral tendencies which are not necessarily identical to the media message causing the priming effect, as Bushman (1998) suggests.

The priming effect was first coined through experimental studies by Storms in 1958, who found that through words, the participants’ memory was primed to use the same words in an indirect word association task. It was Segal and Cofer who called this effect – as we know it today - priming in 1960; previous studies that attempted to study priming have addressed it with a different definition as an intentional state of mental preparedness (Bargh and Chartrand, 2000). However, subsequent literature have found the effect to be unconscious and that the primed reactions are subliminal, unlike the social learning and modeling theories which suggest that viewers consciously acquire and copy thoughts and behaviors they are exposed to in the media.
Bargh and Chartrand (2000) have so eloquently defined priming as “how recent or current experience passively (without an intervening act of will) creates internal readinesses” (P.3). Sparrow and Wegner (2006) have added that this internal readiness and the likelihood of a primed behavior to be manifested are directly proportionate to the prime’s relevance to a possible behavior. The priming theory has been used in a plethora of literature measuring different kinds of perceptual, emotional and behavioral reactions and tendencies from hostility, rudeness, and thoughts of the elderly, to behaviors of conformity, intelligence and most importantly to the locus of this study; helpfulness. It should be duly noted that most of the Egyptian literature concerning the theory of media priming revolves around attitudes as opposed to actual behaviors (Zoghaib, 2000; Abouzeid, 2012; Akl, 2006).

Abbate, Boca, Spadaro and Romano (2014) have studied the priming effects on commitment to help and real helping behavior, as opposed to intention to help which may or may not come into effect; it’s easy to respond to a questionnaire testing the willingness to help with socially desirable answers. They added that priming the presence of bystanders may decrease the likelihood of helping based on the concept of unaccountability.

Molinsky, Grant and Margolis (2012) studied the effect of priming self-interest on compassion when delivering bad news; noticeably, managers and physicians sometimes have less compassion when delivering bad news, in order to protect themselves from distress and to preserve their perceived professionalism. They found that when primed with economic schema; such as the scenario of students losing their scholarships, participants tended to have lower compassion when delivering the bad news.
Nelson and Norton (2005) found that priming people with words can inhibit or disinhibit their helping behavior; telling people that they are running late can inhibit them from helping others and priming them with words about superheroes can increase their likelihood to help. Additionally, they discovered that situational priming can affect instantaneous and spontaneous helping behavior, as well as predict future helping through increasing volunteering behavior months after the initial prime.

So did Sire et al. (2014) who found that semantic priming with the concept of love increases likelihood of blood donation intention and commitment. These findings counter previous notions that priming is a temporary short-term effect, although it can be argued that the priming effect was indeed instantaneous, since it drove the participants to express willingness in volunteering; as for following through months later there could be other variables at play. Nelson and Norton concluded that they committed participants “to future behavior while temporary goals were salient” (P.429).

Furthermore, as previously mentioned, Jacob and Guéguen (2015) found that people are more compliant to take a form for organ donation when primed with a picture of a realistic heart, as opposed to a fictitious symbolic one, suggesting that it was too trivial to initiate a priming effect; this might contradict with the pillars of the current study that are yet to be supported or refuted. On a different note, Morhenn et al. (2008) have interestingly discovered that touch can prime people with trust and consequently, to sacrifice money, showing that women are more susceptible to touch priming effect. Abbate et al. (2013) concluded as previously mentioned that priming people with help inducing words increases their likelihood to help even in the presence of bystanders, unlike in a no prime situation.
Aggregately, based on existing literature tackling media and altruism, pro-social media content was found to be correlated with pro-social attitudes and behaviors which cradle altruism (Kennedy, 2013; Quinton and Fennemore, 2012; Whitaker and Bushman, 2012; Greitemeyer and Osswald, 2010; Grewe, Kopiez and Altenmüller, 2009; Williams, Entwistle, Haddow and Wells, 2008; Wilson, 2008; Williams, 2007; North, Tarrant and Hargreaves, 2004; Wilson, 2003; North and Hargreaves, 1998; Roberts and Strayer, 1996; Chambers and Ascione, 1987; Berkowitz, 1979; Sprafkin, Liebert and Poulos, 1975).

Furthermore, studies haven’t reached a consensus over whether fiction or non-fiction has the stronger impact on people’s attitudes and behaviors (Cao, 2015; Mar and Rain, 2015; Bal and Veltkamp, 2013; Kidd and Castano, 2013; Bal, Butterman and Bakker, 2011; Feldt, 2011; Goldstein, 2009; Mar, Oatley and Peterson, 2009; Hendersen and Clark, 2007; Mendelson and Papacharissi, 2007; Mar, Oatley, Hirsh, Paz and Peterson, 2006; Holmes, 2002; Heyne, 2001; Miall and Kuiken, 2002; Narvaez, Broek and Ruiz, 1999; Doiron, 1994; Gerrig, 1993; Pinon and Huston, 1989; Geen, 1975).

However, the behavior investigated in the current study namely; situational altruism is an emotion-oriented behavior rather than information-oriented, and fiction in previous studies has been found to generate more interest, emotions and mental processing, while non-fiction has been found to be a more honest and reliable source of information. Therefore, based on reviewed literature, the study at hand proposes that fiction has a stronger influence than non-fiction in priming altruistic behavior.

Moreover, it should be duly noted that the previous statement read that fiction has a stronger influence than non-fiction when it comes to priming, as opposed to suggesting
that non-fiction wouldn’t prime altruistic behavior altogether. The importance of this statement resides in the fact that there is no such thing as an absence of media priming; priming is an inevitable and involuntary process as illustrated in previous studies.

Bryant and Oliver (2009) dissected the priming process, explaining that every piece of information acquired is stored as a node inside the brain. Consequently, all the body of information forms a tangled network of interconnected nodes based on the person’s frame of reference. Whenever a person is exposed to media which is virtually all the time, the information presented prime related nodes like clicking wires.

The priming effect, which should be distinguished from the more comprehensible term “media priming”, refers to the primed person’s reaction to the media priming. This reaction can be manifested or not, depending on the presence of a certain stimulus allowing the effect to emerge (Ramsland, 2009). The absence of a stimulus, a prolonged period of time separated the exposure to the media content and the subsequent stimulus, the media content wasn’t strong enough, or the stimulus primed another effect, are some of the reasons that might intercept the manifestation of a priming effect.

Another prominent reason in literature is the presence of other bystanders (Abbate et al., 2013) and the emergence of what Burn (2009) called “the bystander barriers” including; noticing the event, identifying the situation as intervention appropriate, taking intervention responsibility, deciding how to help, and acting to intervene. The emergence of such obstacles would manifest “the Bystander Effect” proposed in the current study which explains the absence of a priming effect. Bottom-line is that the process of media priming is constantly happening, while the priming effect can either appear or not.
In case of the presence of a priming effect, it could be manifested through thoughts, attitudes, motivations or actual behaviors. Therefore, priming behaviors in general, and altruistic behaviors in particular, is preceded by motivations. Gebauer et al. (2008) clarified that motivations leading to altruistic behaviors are either pleasure-based or pressure-based. Meaning that people can be either motivated by ideals or duty, by what they aspire to be or who they ought to be. Thus, it’s essential to study the motivations leading up to altruistic behaviors, in order to understand whether the motivations to a certain behavior originate from pleasure or pressure.

Previous literature concerning the image of superheroes and their appeal to their fandom suggest that people look up to superheroes as their role models (Hatfield, 2011; Nama, 2011; Dighiera, 2009; Fingeroth, 2007; Coogan, 2006; Robbins, 1996; Reynolds, 1994; Cawelti, 1977). Being modeling targets by fans, as well as, their fictitious nature which presumably has the potential to generate even more interest and influence, could be enough to prime pleasurable motivations and subsequent behaviors leading to the proliferation of “the Superhero Effect”.

On the standing of the precedent arguments, the researcher attempted to create a propositional model, in order to examine the difference between fictional and non-fictional media priming on pro-social motivations and subsequently, altruistic behaviors. The researcher is hypothesizing - as the following propositional model shows - that exposure to fictional videos of heroic acts will produce a priming effect on the participants and when a stimulus presents itself in the presence of other bystanders, the priming effect will lead to pleasure-based pro-social motivations.
Since as previously mentioned, fictional content induces pleasurable emotions and interest and subsequently, the performance of an altruistic behavior; that is proposed to be called “the Superhero Effect” because being primed and motivated by pleasure to act altruistically despite any bystander barriers that might hamper the behavior is similar – as far as modeling goes – to a superhero facing her/his fears to save the day.

On the other hand, exposure to non-fictional videos depicting heroic acts will – as the propositional model illustrates - prime the participants and when a stimulus presents itself in the presence of bystanders, the priming effect will lead to pressure-based pro-social motivations. Since non-fictional media content according to previous literature, can induce more stress rather than pleasure, but ultimately resulting in the performance of the altruistic behavior.

**Figure 1**
*Propositional Model of Fictional and Non-Fictional Media Priming Altruistic Behavior*
In case the stimulus does not produce a priming effect, what Burn (2009) called “bystander barriers” will be produced instead, resulting in not performing the altruistic behavior; that is proposed to be called “the Bystander Effect”. Since as previously mentioned, the presence of bystanders generally tends to hamper altruistic behaviors, as well as, other barriers that go under the umbrella of bystander barriers. The model proposes that bystander barriers along with the type of media content are the only reasons for the absence of a priming effect, because the rest of the reasons are irrelevant in this study; a stimulus is presented shortly after the prime.

**Hypotheses**

After reviewing the existing literature on the concept of altruism, as well as, studies tackling media and altruism, making the distinction between the effects of fictional and non-fictional media content, describing the superhero allure and laying the bricks for the theoretical framework, the study’s hypotheses naturally become concrete.

*H1: Exposure to fictional videos of heroic acts increases the likelihood of altruistic behavior more than non-fictional videos of heroic acts.*

Previous literature concluded that fiction is more effective than non-fiction when it comes to generating interest and emotions, as opposed to gaining information. Also, studies show that fiction involves more processing during exposure and faster reactions to stimuli than non-fiction (Mar and Rain, 2015, Mendelson and Papacharissi, 2007; Narvaez, Broek, and Ruiz, 1999). Since altruistic behavior is an emotionally-driven behavior, rather than information oriented, the study hypothesizes in *H1* that the exposure
to fictional videos of heroic acts is more likely to prime the participants to act altruistically than those exposed to non-fictional videos.

**H2:** Exposure to non-fictional videos of heroic acts is positively correlated with pressure-based pro-social motivation.

Non-fiction has been found to elicit feelings of pressure and stress, since it generally requires more concentration to extract the information presented (Goldstein, 2009; Mendelson and Papacharissi, 2007). Therefore, the study hypothesizes in **H2** that exposure to non-fictional videos of heroic acts will generate pressure-based motivations to act altruistically.

**H3:** Exposure to fictional videos of heroic acts is positively correlated with pleasure-based pro-social motivation.

Fiction has been found as previously mentioned; to elicit interest and emotions according to the content the participants are exposed to, since the content is pro-social, good feelings can be anticipated which could translate to pleasure-based motivations (Miall and Kuiken, 2002). Consequently, the study hypothesizes in **H3** that exposure to fictional videos of heroic acts will generate pleasure-based motivations to act altruistically.

**H4:** Exposure to non-fictional videos of heroic acts increases the likelihood of bystander barriers more than fictional videos of heroic acts.

Fiction has been found to prime related schema inside the human brain which makes it faster to take action than non-fiction. Since people exposed to non-fiction tend
to concentrate on the information presented instead of thinking of related schema, driving them to consume more time to think about the situation, which is where bystander barriers may arise, unlike those exposed to fiction who tend to have faster reactions and readily accessible schema in mind (Mar and Rain, 2015, Mendelson and Papacharissi, 2007; Narvaez, Broek, and Ruiz, 1999). Therefore, the study hypothesizes in $H4$ that exposure to non-fictional videos of heroic acts could drive the participants to over think the situation, leading to the likelihood of emergence of bystander barriers more than the exposure to fictional videos.
Chapter Five

Methodology

The study depended on field experiment, and the researcher deployed the posttest-only control group design, dividing the participants into three groups. One group was exposed to a fictional video clip montage of heroic acts from a combination of superhero movies, the other was shown a raw non-fictional video clip montage of heroic acts performed by real people “e.g. pulling someone from in front of a moving train” and the third was a control group who was not be exposed to anything. The non-fictional video montage was obtained from readily made videos on YouTube of real-life superheroes. As for the fictional video montage, there are so many fan-made videos on YouTube, but the researcher wanted to show the participants full scenes from select movies, as opposed to flashes that may not make any sense to the participants. Therefore, the researcher made the fictional video clip montage from select superhero movies.

The length of both fictional and non-fictional media was approximately 12 minutes, so that no group was exposed to the content more than the other with a risk of tampering with the process of media priming. The duration of the videos was set so that it wouldn’t be too short or too long; Potter (1999) stated that the short end of a video in an experimental study based on previous literature is 90 seconds; the typical length is from 5-7 minutes. Additionally, both videos were introduced briefly and ambiguously by the researcher as either a fictitious video montage of superhero movies or a non-fictionitious video montage of real-life superheroes. The videos share the characteristics of heroic acts which involve self sacrifice, saving someone in distress, rising from the cheering crowds.
to help. After watching the clips, the participants were asked to go upstairs one by one for a one-on-one interview with the researcher.

Once each participant is in front of the other office waiting for the interview, a staging took place, where a girl was heard threatening a boy to call security for harassing her and the boy won’t let her pass, with one confederate sitting at the same distance as the participant. The purpose is to test the participants’ altruistic behavior and the emergence of the proposed Superhero *versus* the Bystander effect.

The researcher’s confederates (harasser, potential victim and bystander) were picked from students in the Faculty of Mass Communication in Cairo University who showed interest in the staged manipulation, they rehearsed the script and communication was established between the researcher and the confederates, as well as, the researcher and the research assistants who organize the groups and send the participants one by one to the office.

An important note is that the girl’s “the confederate” clothing is humble and common, in order to control the justification of “she deserves it” pertinent to the victim’s worthiness in the bystander barriers. Additionally, the whole study took place in the Faculty of Mass Communication in Cairo University, since the researcher is a teaching assistant in the faculty, so it was more convenient to be able to accommodate the logistics of the staging. The participants watched the videos in the faculty’s studio and the office where the staging took place is on the top floor of the faculty building; it’s relatively secluded and quiet, which was an attempt of the researcher to control the justification of “I didn’t notice the situation”.
The researcher was monitoring the situation from the office and as soon as the participant intervenes in any way, she opened the door and called her/him in for the interview, if the participant did not intervene, the researcher opened the door in one minute and a half. After the staging, the researcher received the participant in her office and asked her/him to answer a self-administered questionnaire, measuring whether they have seen these videos before, and their pro-social personality.

Then, the participants were thoroughly debriefed and given another questionnaire to answer to measure the reasons for their altruistic/non-altruistic behaviors, in terms of their pleasure versus pressure motivations, when it comes to the altruistic behavior and their bystander barriers, when it comes to their non-altruistic behavior. Finally, the participants were thanked for their cooperation and asked not to talk about the study to anyone, since it could ruin the experiment.

**Sample**

A volunteer sample of 96 undergraduate Mass Communication students was drawn from the Faculty of Mass Communication in Cairo University. An announcement was made in class asking if anyone is interested to participate in a study, knowing that it will take approximately three hours of their time and promising to waive their class attendance during this period. The participants were asked to sign up for the study, then 24 participants were drawn from each level respectively; freshman, sophomore, and junior and senior students. The researcher is dividing the sample by college year, in order to hinder any chances that the students might encounter one another and spoil the experiment.
The researcher conducted the experiment over four days; each day the researcher carried out the experiment on 24 students from the same college year, in order to make it easier to accommodate the logistics of the experiment and to hinder any chances that the students might encounter their colleagues and spoil the experiment. The 24 participants were then randomly divided into 3 groups; each consisting of 8 students who were randomly assigned to one of the three conditions; fiction, non-fiction or control.

Out of the 96 participants, 3 volunteers who signed up their names didn’t come and 1 participant has been discarded from the sample during the data analysis, for not answering several questions in the posttest questionnaire, rendering the sample size 92 participants instead. Moreover, since the study depended on a volunteer sample, and taking into account that the female population in the Faculty of Mass Communication in Cairo University is larger than the male population, the gender representation in the sample was asymmetric, albeit possibly proportionate, with 77 female participants and 15 male participants.

**Variables and Measurements**

The study has one independent variable which is the type of video clip montage of heroic acts; this variable refers to the fictional and non-fictional videos that the participants will be exposed to. This independent variable as the study hypothesizes affects the dependent variable of altruistic behavior which will be measured through the staging; if the participant helps the person “confederate” in any way and intervenes to stop the harasser, it would fulfill the measure of altruistic behavior.
The other dependent variable of the type of motivation, be it pleasure-based or pressure-based motivation will be measured as indicated by Gebauer et al. (2008) through identifying the pro-social personality using the 20-item *Rushton Altruism Scale* which is a 5 point scale ranging from 1 (never) to 5 (very often), in an attempt to identify the individual differences when it comes to the participants’ pro-social personalities. Rushton validated the scale through several criteria and reported that Cronbach’s Alpha ranged from 0.78 to 0.87. The researcher calculated the scale’s reliability which resulted in Cronbach’s Alpha= 0.817.

In addition, the *Pleasure and Pressure based Pro-social Motivation Scale (3PMS)* will be used, which is a 4-item pressure-based and a 4-item pleasure-based motivation subscale and a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree), in order to examine the same dependent variables. The reliability for the pleasure-based motivations resulted in Cronbach’s Alpha= 0.987, and for the pressure-based motivations resulted in Cronbach’s Alpha= 0.975. The researcher has added to the scale two statements measuring whether the altruistic behavior was a result of pressure, since no one else was helping or pleasure to help even if someone else intended to help. These statements raised the pleasure and pressure-based motivations’ reliability to 0.989 and 0.983 respectively.

The last dependent variable is the bystander barriers which as the study hypothesizes subsequently lead to the non-altruistic behavior. Burn (2009) listed the steps of bystander intervention or barriers inhibiting intervention through designing a 16-item, 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scale contains 5 subscales namely; Failure to notice the event, Failure to identify the situation as high
risk, Failure to take intervention responsibility, Failure to intervene due to skill deficit, and Failure to intervene due to audience inhibition. The researcher calculate the scale’s reliability which resulted in Cronbach’s Alpha= 0.974.

Moreover, Burn’s first barrier; “Failure to notice the event” will be examined through the confederate’s observation of the participant. The second barrier; “Failure to identify the situation as high risk” will try to test whether the participants think the person needs their intervention, as well as the bystanders’ concern which would indicate whether the participant should intervene through 3 items on the scale. “Failure to take intervention responsibility” is divided into 8 items on the scale, under the umbrella of 4 subscales; diffusion of responsibility, worthiness, relationship to potential victim and relationship to the harasser. As for “Failure to intervene due to skill deficit”, it is set to measure whether the participants know how to intervene through 2 items, and the “Failure to intervene due to audience inhibition” tries to examine the bystanders’ effect on the altruistic behavior through 2 items.

The researcher omitted one of the scale’s statements examining the likelihood to help someone who is intoxicated, since it is almost impossible in the Egyptian culture to be intoxicated on a college campus. Therefore, the sentence was replaced with a statement measuring whether the participant felt the intervention could endanger their Figure 2  
Bystander Barriers Subscales
wellbeing, which is inherent to the taking intervention responsibility subcategory of worthiness.

**Statistical Procedures**

The researcher will deploy Chi-Square to test the first hypothesis involving the exposure to fictional or non-fictional videos of heroic acts and altruistic behavior. The T-test will be used to examine the second and third hypotheses pertaining to exposure to fictional or non-fictional videos of heroic acts and pleasure-based or pressure-based pro-social motivation. Additionally, the T-test will be used to explore the effect of exposure to fictional or non-fictional videos of heroic acts on the emergence of bystander barriers leading to non-altruistic behavior. Finally, Pearson’s correlation will be used in an attempt to examine whether there’s a correlation between the pro-social personality and the emergence of bystander barriers and the pressure-based or pleasure-based pro-social motivation. The researcher used the (SPSS) software program to calculate the study’s statistics.
Chapter Six

Results

The study attempts to measure the effects of media priming on altruistic behavior, pleasure and pressure-based motivations, as well as, bystander barriers. These dependent variables were measured along three experimental conditions; fiction, non-fiction and control groups.

6.1. Results for the control group:

The control group was not exposed to any videos; the participants were directly subjected to the staging. The group which consists of 29 participants and demonstrated a pro-social personality mean score of 2.79, with a standard deviation of 0.6 using the 5-point 20-item Rushton Altruism Scale. As for the group’s display of altruistic behavior, 24.1% did help the potential victim, while the remaining 75.9% did not. One-way Analysis of Variance shows that within the control group, pro-social personality doesn’t significantly affect altruistic behavior with p= 0.12.

Figure 3
Altruistic Behavior within the Control Group
Furthermore, the pleasure-based motivations within the control group scored a M= 4.06 and a SD= 0.32, similarly, the pressure-based motivations scored M=3.66 and SD= 0.51. The bystander barriers which attempt to explain the non-altruistic behavior within the control group scored M= 3.02 and SD= 0.53.

Table 1
The means, standard deviations and reliability of the Pro-social Personality, Pleasure & Pressure-based Motivations and the Bystander Barriers Scales

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-social Personality</td>
<td>29</td>
<td>2.79</td>
<td>0.6</td>
<td>0.817</td>
</tr>
<tr>
<td>Pleasure-based Motivations</td>
<td>7</td>
<td>4.06</td>
<td>0.32</td>
<td>0.989</td>
</tr>
<tr>
<td>Pressure-based Motivations</td>
<td>7</td>
<td>3.66</td>
<td>0.51</td>
<td>0.983</td>
</tr>
<tr>
<td>Bystander Barriers</td>
<td>22</td>
<td>3.02</td>
<td>0.53</td>
<td>0.974</td>
</tr>
</tbody>
</table>

The bystander barriers’ scale is divided into five subscales namely; failure to notice the event (M= 2.27 and SD= 1.12), failure to identify the situation as high risk (M= 3.48 and SD= 0.61), failure to take intervention responsibility (M= 2.88 and SD= 0.66), failure to intervene due to a skills deficit (M= 3.4 and SD= 1.05) and failure to intervene due to audience inhibition (M= 2.84 and SD= 0.99).

Within the failure to take intervention responsibility there are four other subscales; the diffusion of responsibility (M= 2.8 and SD= 1.1), worthiness (M= 2.43 and SD= 0.76), relationship of bystander to potential victim (M= 3.91 and SD= 1.38) and relationship of bystander to potential perpetrator (M= 3.82 and SD= 1.05).
Table 2
The means and standard deviations of the Bystander Barriers Subscales within the Control Group

<table>
<thead>
<tr>
<th>Bystander Barriers</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Failure to Notice the Situation</td>
<td>2.27</td>
<td>1.12</td>
</tr>
<tr>
<td>2- Failure to Identify Situation as High Risk</td>
<td>3.48</td>
<td>0.61</td>
</tr>
<tr>
<td>3- Failure to take Intervention Responsibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Diffusion of Responsibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Worthiness</td>
<td>2.8</td>
<td>1.1</td>
</tr>
<tr>
<td>c) Relationship to Potential Victim</td>
<td>2.43</td>
<td>0.76</td>
</tr>
<tr>
<td>d) Relationship to Harasser</td>
<td>3.91</td>
<td>1.38</td>
</tr>
<tr>
<td>4- Failure to Intervene due to Skill Deficit</td>
<td>3.4</td>
<td>1.05</td>
</tr>
<tr>
<td>5- Failure to Intervene due to Audience Inhibition</td>
<td>2.84</td>
<td>0.99</td>
</tr>
</tbody>
</table>

Moreover, the correlation between pro-social personality and bystander barriers on one end and pleasure/pressure-based motivations on the other was measured. Results show that for the former the r= -0.13 and p=0.57, meaning that the relationship between having a pro-social personality and the emergence of bystander barriers is very weak and inversely proportionate, and that pro-social personality doesn’t significantly affect bystander barriers.

Pro-social personality and pleasure-based motivations scored r=0.34 and p= 0.46, while pressure-based motivations scored r=0.75 and p=0.05, meaning that the correlation between pro-social personality and pleasure-based motivations is weak and insignificant, while it is strong and significant when it comes to pressure-based motivations.
Chi-square test was used to test the association between the undergraduate year and the altruistic behavior, resulting in \( p = 0.009 \) and \( \chi^2 = 11.53 \), meaning that the relationship is statistically significant; the senior year students are more likely to act altruistically than freshman year students. Additionally, despite the asymmetric gender representation, 24% of the female participants and 25% of the male participants acted altruistically.

Within the pro-social personality scale, helping a stranger push their car that broke down scored a mean of 1.79 and SD= 1.29, giving directions to a stranger scored a mean of 3.62 and SD= 1.24, providing change for a stranger scored a mean of 2.9 and SD= 1.18, giving money to a charity scored a mean of 3.41 and SD= 1.12, and giving money to a stranger who needed it or asked for it scored a mean of 3.1 and SD= 1.14. Additionally, donating goods or clothes to a charity scored a mean of 3.72 and SD= 1.1, doing volunteer work for a charity scored a mean of 2.62 and SD= 1.4, donating blood scored a mean of 1.24 and SD= 0.83, helping carry a stranger’s belongings scored a mean of 2.86 and SD= 1.13, and delaying an elevator and held the door open for a stranger scored a mean of 2.9 and SD= 1.42.

Allowing someone to go ahead of them in a lineup scored a mean of 3.07 and SD= 1.1, standing up for a stranger being bullied/harassed scored a mean of 2.07 and SD= 1.31, pointing out a clerk’s error (in a bank, at a supermarket) in undercharging them for an item scored a mean of 2.55 and SD= 1.35, letting a neighbor they don’t know too well borrow an item of some value to them scored a mean of 2.31 and SD= 1.17, buying “charity” goods deliberately because they know it was a good cause scored a mean of 2.59 and SD= 1.18, and helping a classmate they don’t know that well with an
assignment when their knowledge was greater than hers/his scored a mean of 3.9 and SD= 0.86.

Looking after a neighbor’s pets or children voluntarily without being paid for it scored a mean of 2.24 and SD= 1.33, offering to help a handicapped or elderly stranger across a street scored a mean of 3.07 and SD= 1.33, offering their seat on a bus or train to a stranger who was standing scored a mean of 4 and SD= 0.89, and helped an acquaintance to move households scored a mean of 1.79 and SD= 1.15.

Table 3

\textit{Rushton’s 20-item Altruism Scale means and standard deviations within the Control Group}

<table>
<thead>
<tr>
<th>Statement</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have helped push a stranger’s car that was broken down or out of gas</td>
<td>1.79</td>
<td>1.29</td>
</tr>
<tr>
<td>2. I have given directions to a stranger</td>
<td>3.62</td>
<td>1.24</td>
</tr>
<tr>
<td>3. I have provide change for a stranger (i.e.; coins or paper money that you give in exchange for the same amount of money in a larger unit)</td>
<td>2.9</td>
<td>1.18</td>
</tr>
<tr>
<td>4. I have given money to a charity</td>
<td>3.41</td>
<td>1.12</td>
</tr>
<tr>
<td>5. I have given money to a stranger who needed it or asked me for it</td>
<td>3.1</td>
<td>1.14</td>
</tr>
<tr>
<td>6. I have donated goods or clothes to a charity</td>
<td>3.72</td>
<td>1.1</td>
</tr>
<tr>
<td>7. I have done volunteer work for a charity</td>
<td>2.62</td>
<td>1.4</td>
</tr>
<tr>
<td>8. I have donated blood</td>
<td>1.24</td>
<td>0.83</td>
</tr>
<tr>
<td>9. I have helped carry a stranger’s belongings (books, parcels, etc)</td>
<td>2.86</td>
<td>1.13</td>
</tr>
<tr>
<td>10. I have delayed an elevator and held the door open for a stranger</td>
<td>2.9</td>
<td>1.42</td>
</tr>
<tr>
<td>11. I have allowed someone to go ahead of me in a lineup (in a supermarket, at a copy machine, at a fast-food restaurant)</td>
<td>3.07</td>
<td>1.1</td>
</tr>
<tr>
<td>12. I have stood up for a stranger being bullied/harassed</td>
<td>2.07</td>
<td>1.31</td>
</tr>
<tr>
<td>Statement</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>13. I have pointed out a clerk’s error (in a bank, at a supermarket) in undercharging me for an item</td>
<td>2.55</td>
<td>1.35</td>
</tr>
<tr>
<td>14. I have let a neighbor whom I didn’t know too well borrow an item of some value to me (e.g. dish, tools, etc)</td>
<td>2.31</td>
<td>1.17</td>
</tr>
<tr>
<td>15. I have bought “charity” goods deliberately because I knew it was a good cause</td>
<td>2.59</td>
<td>1.18</td>
</tr>
<tr>
<td>16. I have helped a classmate who I did not know that well with an assignment when my knowledge was greater than hers/his</td>
<td>3.9</td>
<td>0.86</td>
</tr>
<tr>
<td>17. I have, without being asked, voluntarily looked after a neighbor’s pets or children without being paid for it</td>
<td>2.24</td>
<td>1.33</td>
</tr>
<tr>
<td>18. I have offered to help a handicapped or elderly stranger across a street</td>
<td>3.07</td>
<td>1.33</td>
</tr>
<tr>
<td>19. I have offered my seat on a bus or train to a stranger who was standing</td>
<td>4</td>
<td>0.89</td>
</tr>
<tr>
<td>20. I have helped an acquaintance to move households</td>
<td>1.79</td>
<td>1.15</td>
</tr>
</tbody>
</table>

The pleasure and pressure-based motivations inherent to the altruistic behavior have been broken down to 10 items, the first is pertinent to feeling happy for supporting others which scored a mean of 4.43 and SD= 0.79. The feeling of obligation to be selfless scored a mean of 3.29 and SD= 0.76. Having a great feeling of happiness when acting unselfishly scored a mean of 3.43 and SD= 0.98. Similarly, feeling indebted to stand up for others scored a mean of 3.29 and SD= 1.38, when able to help other people it always feels good afterwards scored a mean of 4.43 and SD= 0.53. Not regarding it as their duty to act selflessly scored a mean of 3.43 and SD= 0.98.

Furthermore, helping people who are in trouble does raise one’s own mood scored a mean of 3.86 and SD= 0.69, and having a feeling of strong duty to help others in every situation where it is possible scored a mean of 4.14 and SD= 0.9. Having a feeling of
obligation to help since no one else was helping scored a mean of 4.14 and SD= 0.69, as well as, wanting to help despite the presence of others who could have helped too.

Table 4
*Pleasure and Pressure-based Motivations Scale means and standard deviations within the Control Group*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Motivation</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Supporting other people makes me very happy.</td>
<td>Pleasure</td>
<td>4.43</td>
<td>0.79</td>
</tr>
<tr>
<td>2) I do not feel obligated to perform selfless acts towards others.</td>
<td>Pressure</td>
<td>3.29</td>
<td>0.76</td>
</tr>
<tr>
<td>3) I do not have a great feeling of happiness when I have acted unselfishly.</td>
<td>Pleasure</td>
<td>3.43</td>
<td>0.98</td>
</tr>
<tr>
<td>4) I feel indebted to stand up for other people.</td>
<td>Pressure</td>
<td>3.29</td>
<td>1.38</td>
</tr>
<tr>
<td>5) When I am able to help other people, I always felt good afterwards.</td>
<td>Pleasure</td>
<td>4.43</td>
<td>0.53</td>
</tr>
<tr>
<td>6) I do not regard it as my duty to act selflessly.</td>
<td>Pressure</td>
<td>3.43</td>
<td>0.98</td>
</tr>
<tr>
<td>7) Helping people who are in trouble does not raise my own mood.</td>
<td>Pleasure</td>
<td>3.86</td>
<td>0.69</td>
</tr>
<tr>
<td>8) I feel a strong duty to help other people in every situation where it is possible for me.</td>
<td>Pressure</td>
<td>4.14</td>
<td>0.9</td>
</tr>
<tr>
<td>9) I felt obligated to help since no one else was helping.</td>
<td>Pressure</td>
<td>4.14</td>
<td>0.69</td>
</tr>
<tr>
<td>10) I wanted to help despite the presence of others who could have helped too.</td>
<td>Pleasure</td>
<td>4.14</td>
<td>0.69</td>
</tr>
</tbody>
</table>

On the other hand, the bystander barriers inherent to the non-altruistic behavior have been broken down to 16 items; the first is pertinent to being too busy to be aware of whether someone is at risk for sexual harassment which scored a mean of 2.27 and SD=
1.12. Finding it hard to tell whether a guy is at risk for sexually harassing someone scored a mean of 3.36 and SD= 0.95. In tandem, feeling uncertain when it comes to whether the girl was at risk of being sexually harassed scored a mean of 3.86 and SD= 1.04.

Thinking the situation might be high in sexual harassment risk, but not saying or doing anything since others appeared unconcerned scored a mean of 3.23 and SD= 1.41. Thinking that the girl was at risk for being sexually harassed, but that they left it up to others to intervene scored a mean of 2.77 and SD= 1.34.

Similarly, leaving it up to the friends of the one being harassed to intervene, in case they don’t know them scored a mean of 2.82 and SD= 1.33. Being less likely to intervene to reduce a person’s risk of sexual harassment, if they think the person being harassed made choices that increased their risk scored a mean of 2.77 and SD= 1.27. Being less likely to intervene if the girl being harassed was dressing or acting provocatively scored a mean of 1.64 and SD= 0.95.

Furthermore, thinking their intervention in the situation could endanger their wellbeing in any way which is why they didn’t intervene scored a mean of 3.36 and SD= 1.29. Feeling less responsible for preventing others from harassing someone who is dressing or acting provocatively scored a mean of 1.96 and SD= 1.25. Being more likely to intervene to prevent the sexual harassment if they know the harasser scored a mean of 3.91 and SD= 1.38, as for the likelihood of intervention in case of knowing the person being harassed than if they don’t know them, it scored a mean of 3.82 and SD= 1.05.

In addition, wanting to intervene when a guy’s sexual conduct is questionable but not knowing what to say or do scored a mean of 3.27 and SD= 1.16. Correspondingly, the
item stating that even if they thought it was their responsibility to intervene to prevent sexual harassment, the participants didn’t know how to intervene scored a mean of 3.55 and SD= 1.18.

Being hesitant to intervene when the guy’s sexual conduct was questionable because they weren’t sure other people would support them scored a mean of 3.32 and SD= 1.29, while even if they thought it was their responsibility to intervene to prevent a sexual harassment, they didn’t intervene out of a concern they would look foolish scored a mean of 2.36 and SD= 1.22.

**Table 5**

*Bystander Barriers Scale means and standard deviations within the Control Group*

<table>
<thead>
<tr>
<th>Statement</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I was too busy to be aware of whether someone is at risk for sexual harassment.</td>
<td>2.27</td>
<td>1.12</td>
</tr>
<tr>
<td>2) I find it hard to tell whether a guy is at risk for sexually harassing someone.</td>
<td>3.36</td>
<td>0.95</td>
</tr>
<tr>
<td>3) I was uncertain as to whether the girl was at risk for being sexually harassed.</td>
<td>3.86</td>
<td>1.04</td>
</tr>
<tr>
<td>4) I thought the situation might be high in sexual harassment risk, but I didn’t say or do anything since other people appeared unconcerned.</td>
<td>3.23</td>
<td>1.41</td>
</tr>
<tr>
<td>5) I thought the girl was at risk for being sexually harassed, I thought I would leave it up to others to intervene.</td>
<td>2.77</td>
<td>1.34</td>
</tr>
<tr>
<td>6) If I saw someone I didn’t know was at risk for being sexually harassed, I would leave it up to her friends to intervene.</td>
<td>2.82</td>
<td>1.33</td>
</tr>
<tr>
<td>7) I am less likely to intervene to reduce a person’s risk of sexual harassment if I think she made choices that increased their risk.</td>
<td>2.77</td>
<td>1.27</td>
</tr>
<tr>
<td>8) The girl was dressed provocatively, or acted provocatively, that is why I was less likely to intervene.</td>
<td>1.64</td>
<td>0.95</td>
</tr>
<tr>
<td>Statement</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>9) I thought my intervention in the situation could endanger my wellbeing in any way (verbal or physical, etc.) So I didn’t intervene.</td>
<td>3.36</td>
<td>1.29</td>
</tr>
<tr>
<td>10) If a person is dressed provocatively, or acts provocatively, I feel less responsible for preventing others from harassing them.</td>
<td>1.96</td>
<td>1.25</td>
</tr>
<tr>
<td>11) I am more likely to intervene to prevent sexual harassment if I know the potential victim than if I do not.</td>
<td>3.91</td>
<td>1.38</td>
</tr>
<tr>
<td>12) I am more likely to intervene to prevent sexual harassment if I know the person that may be at risk for committing sexual harassment than if I do not know him.</td>
<td>3.82</td>
<td>1.05</td>
</tr>
<tr>
<td>13) Although I would like to intervene when a guy’s sexual conduct is questionable, I am not sure I would know what to say or do.</td>
<td>3.27</td>
<td>1.16</td>
</tr>
<tr>
<td>14) Even if I thought it was my responsibility to intervene to prevent sexual harassment, I didn’t know how to intervene.</td>
<td>3.55</td>
<td>1.18</td>
</tr>
<tr>
<td>15) I was hesitant to intervene when the guy’s sexual conduct was questionable because I was not sure other people would support me.</td>
<td>3.32</td>
<td>1.29</td>
</tr>
<tr>
<td>16) Even if I thought it was my responsibility to intervene to prevent a sexual harassment, I didn’t intervene out of a concern I would look foolish.</td>
<td>2.36</td>
<td>1.22</td>
</tr>
</tbody>
</table>

As for the confederate’s notes, 100% noticed the situation, meaning that they had their eyes on the sexual harassment situation, 75.9% turned away when they saw the situation, either by walking away or simply turning their heads, while 24.1% did not turn away. 55.2% checked if anyone else can see the situation, while 44.8% didn’t.
6.2. Results for the fiction group:

The fiction group which consists of 34 participants and demonstrated a pro-social personality mean score of 2.87, with a standard deviation of 0.45 using the 5-point 20-item Rushton Altruism Scale. As for the group’s display of altruistic behavior, 35.3% did help the potential victim, while the remaining 64.7% did not. One-way Analysis of Variance shows that within the fiction group, pro-social personality doesn’t significantly affect altruistic behavior with p= 0.936.

Figure 4
Altruistic Behavior within the Fiction Group

![Altruistic Behavior Diagram]

Furthermore, a Chi-squared test was conducted to examine the relationship between being in the fiction group and altruistic behavior, resulting in p= 0.34 and a chi-square value of 0.93, meaning that the relationship between exposure to fictional videos of heroic acts and altruistic behavior is statistically insignificant.
Table 6
Chi-Square test measuring the relationship between being exposed to Fiction and Altruistic Behavior

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.925a</td>
<td>1</td>
<td>.336</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.471</td>
<td>1</td>
<td>.493</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.934</td>
<td>1</td>
<td>.334</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td>.934</td>
<td>1</td>
<td>.334</td>
<td>.414</td>
<td>.247</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.910</td>
<td>1</td>
<td>.340</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>63</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A t-test was then conducted to measure the relationship between being in the fiction group and pleasure, as well as, pressure-based motivations, resulting respectively in p= 0.596, and p= 0.817.

Table 7
T-test measuring the relationship between being exposed to Fiction and Pleasure-based Motivations

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>t</td>
<td>df</td>
<td>Sig. (2-tailed)</td>
<td>Mean Diff.</td>
</tr>
<tr>
<td>Pleasure-Based Motivation</td>
<td>2.597</td>
<td>.125</td>
<td>.541</td>
<td>17</td>
<td>.596</td>
<td>.54762</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.599</td>
<td>.557</td>
<td>16.452</td>
<td>.557</td>
<td>.54762</td>
<td>.91352</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 8
*T-test measuring the relationship between being exposed to Fiction and Pressure-based Motivations*

<table>
<thead>
<tr>
<th>Pressure-Based Motivation</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.10</td>
<td>.75</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.23</td>
<td>9</td>
</tr>
</tbody>
</table>

Evidently, the results show that the relationship between exposure to fictional videos of heroic acts and pleasure and pressure-based motivations is statistically insignificant. The pleasure-based motivations within the fiction group scored a M= 4.17 and a SD= 0.47, similarly, the pressure-based motivations scored M=3.72 and SD= 0.54.
Table 9
The means, standard deviations and reliability of the Pro-social Personality, Pleasure & Pressure-based Motivations and the Bystander Barriers Scales

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-social Personality</td>
<td>34</td>
<td>2.87</td>
<td>0.45</td>
<td>0.817</td>
</tr>
<tr>
<td>Pleasure-based Motivations</td>
<td>12</td>
<td>4.17</td>
<td>0.47</td>
<td>0.989</td>
</tr>
<tr>
<td>Pressure-based Motivations</td>
<td>12</td>
<td>3.72</td>
<td>0.54</td>
<td>0.983</td>
</tr>
<tr>
<td>Bystander Barriers</td>
<td>22</td>
<td>2.87</td>
<td>0.59</td>
<td>0.974</td>
</tr>
</tbody>
</table>

The bystander barriers which attempt to explain the non-altruistic behavior, when measured in relation to the fiction group using t-test, resulted in p = 0.39; therefore, the relationship between exposure to fictional videos of heroic acts and the emergence of bystander barriers is statistically insignificant. The bystander barriers within the fiction group scored M = 2.87 and SD = 0.59.
Table 10
*T*-test measuring the relationship between being exposed to Fiction and Bystander Barriers

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>---</td>
<td>------</td>
</tr>
<tr>
<td>Equal variance assumed Bystander Barriers</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Equal variance not assumed</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>.86</td>
</tr>
</tbody>
</table>

The bystander barriers’ scale is divided into five subscales namely; failure to notice the event (M= 2.55 and SD= 1.26), failure to identify the situation as high risk (M= 4.08 and SD= 1.09), failure to take intervention responsibility (M= 2.74 and SD= 0.67), failure to intervene due to a skills deficit (M= 3.43 and SD= 0.9) and failure to intervene due to audience inhibition (M= 2.45 and SD= 0.95).

Within the failure to take intervention responsibility there are four other subscales; the diffusion of responsibility (M= 2.68 and SD= 0.84), worthiness (M= 2.24 and SD= 0.77), relationship of bystander to potential victim (M= 4 and SD= 1.15) and relationship of bystander to potential perpetrator (M= 3.64 and SD= 1.4).
Table 11
*The means and standard deviations of the Bystander Barriers Subscales within the Fiction Group*

<table>
<thead>
<tr>
<th>Bystander Barriers</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Failure to Notice the Situation</td>
<td>2.55</td>
<td>1.26</td>
</tr>
<tr>
<td>2- Failure to Identify Situation as High Risk</td>
<td>4.08</td>
<td>1.09</td>
</tr>
<tr>
<td>3- Failure to take Intervention Responsibility</td>
<td>2.74</td>
<td>0.67</td>
</tr>
<tr>
<td>a) Diffusion of Responsibility</td>
<td>2.68</td>
<td>0.84</td>
</tr>
<tr>
<td>b) Worthiness</td>
<td>2.24</td>
<td>0.77</td>
</tr>
<tr>
<td>c) Relationship to Potential Victim</td>
<td>4</td>
<td>1.15</td>
</tr>
<tr>
<td>d) Relationship to Harasser</td>
<td>3.64</td>
<td>1.4</td>
</tr>
<tr>
<td>4- Failure to Intervene due to Skill Deficit</td>
<td>3.43</td>
<td>0.9</td>
</tr>
<tr>
<td>5- Failure to Intervene due to Audience Inhibition</td>
<td>2.45</td>
<td>0.95</td>
</tr>
</tbody>
</table>

Moreover, when measuring the correlation between pro-social personality and bystander barriers on one end and pleasure/pressure-based motivations on the other, results show that for the former the r= -0.142 and p=0.53, meaning that the correlation between having a pro-social personality and bystander barriers is negative, weak and insignificant. As for the latter, pro-social personality and pleasure-based motivations scored r=0.581 and p= 0.048 which means that it is moderate and significant, while pressure-based motivations scored r=0.557 and p=0.06 which means that it is moderate and insignificant.
Chi-squared test was used to test the association between the undergraduate year and the altruistic behavior, resulting in $p=0.32$ and chi-square= 3.53. This means that the relationship between undergraduate year and altruistic behavior is statistically insignificant. Additionally, despite the asymmetric gender representation, 30% of the female participants and 75% of the male participants acted altruistically.

Within the pro-social personality scale, helping a stranger push their car that broke down scored a mean of 1.67 and SD= 1.09, giving directions to a stranger scored a mean of 4.09 and SD= 0.79, providing change for a stranger scored a mean of 3.03 and SD= 1.03, giving money to a charity scored a mean of 3.71 and SD= 0.97, and giving money to a stranger who needed it or asked for it scored a mean of 2.53 and SD= 1.24. Additionally, donating goods or clothes to a charity scored a mean of 3.82 and SD= 1.19, doing volunteer work for a charity scored a mean of 2.77 and SD= 1.48, donating blood scored a mean of 1.38 and SD= 0.74, helping carry a stranger’s belongings scored a mean of 2.94 and SD= 1.18, and delaying an elevator and held the door open for a stranger scored a mean of 3.21 and SD= 1.34.

Allowing someone to go ahead of them in a lineup scored a mean of 2.97 and SD= 1.19, standing up for a stranger being bullied/harassed scored a mean of 2.29 and SD= 1.22, pointing out a clerk’s error (in a bank, at a supermarket) in undercharging them for an item scored a mean of 3.29 and SD= 1.38, letting a neighbor they don’t know too well borrow an item of some value to them scored a mean of 2.15 and SD= 0.99, buying “charity” goods deliberately because they know it was a good cause scored a mean of 2.68 and SD= 1.12, and helping a classmate they don’t know that well with an
assignment when their knowledge was greater than hers/his scored a mean of 4 and SD= 0.98.

Looking after a neighbor’s pets or children voluntarily without being paid for it scored a mean of 1.85 and SD= 1.31, offering to help a handicapped or elderly stranger across a street scored a mean of 3.03 and SD= 1.03, offering their seat on a bus or train to a stranger who was standing scored a mean of 3.88 and SD= 1.17, and helped an acquaintance to move households scored a mean of 2.09 and SD= 1.14.

Table 12
Rushton’s 20-item Altruism Scale means and standard deviations within the Fiction Group

<table>
<thead>
<tr>
<th>Statement</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I have helped push a stranger’s car that was broken down or out of gas</td>
<td>1.67</td>
<td>1.09</td>
</tr>
<tr>
<td>2) I have given directions to a stranger</td>
<td>4.09</td>
<td>0.79</td>
</tr>
<tr>
<td>3) I have provide change for a stranger (i.e.; coins or paper money that you give in exchange for the same amount of money in a larger unit)</td>
<td>3.03</td>
<td>1.03</td>
</tr>
<tr>
<td>4) I have given money to a charity</td>
<td>3.71</td>
<td>0.97</td>
</tr>
<tr>
<td>5) I have given money to a stranger who needed it or asked me for it</td>
<td>2.53</td>
<td>1.24</td>
</tr>
<tr>
<td>6) I have donated goods or clothes to a charity</td>
<td>3.82</td>
<td>1.19</td>
</tr>
<tr>
<td>7) I have done volunteer work for a charity</td>
<td>2.77</td>
<td>1.48</td>
</tr>
<tr>
<td>8) I have donated blood</td>
<td>1.38</td>
<td>0.74</td>
</tr>
<tr>
<td>9) I have helped carry a stranger’s belongings (books, parcels, etc)</td>
<td>2.94</td>
<td>1.18</td>
</tr>
<tr>
<td>10) I have delayed an elevator and held the door open for a stranger</td>
<td>3.21</td>
<td>1.34</td>
</tr>
<tr>
<td>11) I have allowed someone to go ahead of me in a lineup (in a supermarket, at a copy machine, at a fast-food restaurant)</td>
<td>2.97</td>
<td>1.19</td>
</tr>
<tr>
<td>12) I have stood up for a stranger being bullied/harassed</td>
<td>2.29</td>
<td>1.22</td>
</tr>
<tr>
<td>Statement</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>-----------</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>13) I have pointed out a clerk’s error (in a bank, at a supermarket) in undercharging me for an item</td>
<td>3.29</td>
<td>1.38</td>
</tr>
<tr>
<td>14) I have let a neighbor whom I didn’t know too well borrow an item of some value to me (e.g. dish, tools, etc)</td>
<td>2.15</td>
<td>0.99</td>
</tr>
<tr>
<td>15) I have bought “charity” goods deliberately because I knew it was a good cause</td>
<td>2.68</td>
<td>1.12</td>
</tr>
<tr>
<td>16) I have helped a classmate who I did not know that well with an assignment when my knowledge was greater than hers/his</td>
<td>4</td>
<td>0.98</td>
</tr>
<tr>
<td>17) I have, without being asked, voluntarily looked after a neighbor’s pets or children without being paid for it</td>
<td>1.85</td>
<td>1.31</td>
</tr>
<tr>
<td>18) I have offered to help a handicapped or elderly stranger across a street</td>
<td>3.03</td>
<td>1.03</td>
</tr>
<tr>
<td>19) I have offered my seat on a bus or train to a stranger who was standing</td>
<td>3.88</td>
<td>1.17</td>
</tr>
<tr>
<td>20) I have helped an acquaintance to move households</td>
<td>2.09</td>
<td>1.14</td>
</tr>
</tbody>
</table>

The pleasure and pressure-based motivations inherent to the altruistic behavior have been broken down to 10 items, the first is pertinent to feeling happy for supporting others which scored a mean of 4.5 and SD= 0.52. The feeling of obligation to be selfless scored a mean of 3.25 and SD= 1.06. Having a great feeling of happiness when acting unselfishly scored a mean of 3.92 and SD= 1.16. Similarly, feeling indebted to stand up for others scored a mean of 3.33 and SD= 0.78, when able to help other people it always feels good afterwards scored a mean of 4.33 and SD= 0.65. Not regarding it as their duty to act selflessly scored a mean of 3.58 and SD= 0.79.

Furthermore, helping people who are in trouble does raise one’s own mood scored a mean of 4.25 and SD= 0.62, and having a feeling of strong duty to help others in every situation where it is possible scored a mean of 4.42 and SD= 0.79. Having a feeling of obligation to help since no one else was helping scored a mean of 4 and SD= 0.95, and
wanting to help despite the presence of others who could have helped too scored a mean of 3.83 and SD= 0.83.

Table 13

_Pleasure and Pressure-based Motivations Scale within the Fiction Group_

<table>
<thead>
<tr>
<th>Statement</th>
<th>Motivation</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Supporting other people makes me very happy.</td>
<td>Pleasure</td>
<td>4.5</td>
<td>0.52</td>
</tr>
<tr>
<td>2) I do not feel obligated to perform selfless acts towards others.</td>
<td>Pressure</td>
<td>3.25</td>
<td>1.06</td>
</tr>
<tr>
<td>3) I do not have a great feeling of happiness when I have acted unselfishly.</td>
<td>Pleasure</td>
<td>3.92</td>
<td>1.16</td>
</tr>
<tr>
<td>4) I feel indebted to stand up for other people.</td>
<td>Pressure</td>
<td>3.33</td>
<td>0.78</td>
</tr>
<tr>
<td>5) When I am able to help other people, I always felt good afterwards.</td>
<td>Pleasure</td>
<td>4.33</td>
<td>0.65</td>
</tr>
<tr>
<td>6) I do not regard it as my duty to act selflessly.</td>
<td>Pressure</td>
<td>3.58</td>
<td>0.79</td>
</tr>
<tr>
<td>7) Helping people who are in trouble does not raise my own mood.</td>
<td>Pleasure</td>
<td>4.25</td>
<td>0.62</td>
</tr>
<tr>
<td>8) I feel a strong duty to help other people in every situation where it is possible for me.</td>
<td>Pressure</td>
<td>4.42</td>
<td>0.79</td>
</tr>
<tr>
<td>9) I felt obligated to help since no one else was helping.</td>
<td>Pressure</td>
<td>4</td>
<td>0.95</td>
</tr>
<tr>
<td>10) I wanted to help despite the presence of others who could have helped too.</td>
<td>Pleasure</td>
<td>3.83</td>
<td>0.83</td>
</tr>
</tbody>
</table>

On the other hand, the bystander barriers inherent to the non-altruistic behavior have been broken down to 16 items; the first is pertinent to being too busy to be aware of whether someone is at risk for sexual harassment which scored a mean of 2.55 and SD=
Finding it hard to tell whether a guy is at risk for sexually harassing someone scored a mean of 3.23 and SD= 1.02. In tandem, feeling uncertain when it comes to whether the girl was at risk of being sexually harassed scored a mean of 3.77 and SD= 1.31.

Thinking the situation might be high in sexual harassment risk, but not saying or doing anything since others appeared unconcerned scored a mean of 2.68 and SD= 1.29. Thinking that the girl was at risk for being sexually harassed, but that they left it up to others to intervene scored a mean of 2.5 and SD= 0.91.

Similarly, leaving it up to the friends of the one being harassed to intervene, in case they don’t know them scored a mean of 2.86 and SD= 1.04. Being less likely to intervene to reduce a person’s risk of sexual harassment, if they think the person being harassed made choices that increased their risk scored a mean of 2.5 and SD= 1.26. Being less likely to intervene if the girl being harassed was dressing or acting provocatively scored a mean of 1.77 and SD= 0.92.

Furthermore, thinking their intervention in the situation could endanger their wellbeing in any way which is why they didn’t intervene scored a mean of 2.5 and SD= 1.14. Feeling less responsible for preventing others from harassing someone who is dressing or acting provocatively scored a mean of 2.18 and SD= 1.1. Being more likely to intervene to prevent the sexual harassment if they know the harasser scored a mean of 3.64 and SD= 1.4, as for the likelihood of intervention in case of knowing the person being harassed than if they don’t know them, it scored a mean of 4 and SD= 1.15.

In addition, wanting to intervene when a guy’s sexual conduct is questionable but not knowing what to say or do scored a mean of 3.64 and SD= 1. Correspondingly, the
item stating that even if they thought it was their responsibility to intervene to prevent sexual harassment, the participants didn’t know how to intervene scored a mean of 3.23 and SD= 1.19.

Being hesitant to intervene when the guy’s sexual conduct was questionable because they weren’t sure other people would support them scored a mean of 2.64 and SD= 1.14, while even if they thought it was their responsibility to intervene to prevent a sexual harassment, they didn’t intervene out of a concern they would look foolish scored a mean of 2.27 and SD= 1.12.

**Table 14**

*Bystander Barriers Scale means and standard deviations within the Fiction Group*

<table>
<thead>
<tr>
<th>Statement</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I was too busy to be aware of whether someone is at risk for sexual harassment.</td>
<td>2.55</td>
<td>1.26</td>
</tr>
<tr>
<td>2) I find it hard to tell whether a guy is at risk for sexually harassing someone.</td>
<td>3.23</td>
<td>1.02</td>
</tr>
<tr>
<td>3) I was uncertain as to whether the girl was at-risk for being sexually harassed.</td>
<td>3.77</td>
<td>1.31</td>
</tr>
<tr>
<td>4) I thought the situation might be high in sexual harassment risk, but I didn’t say or do anything since other people appeared unconcerned.</td>
<td>2.68</td>
<td>1.29</td>
</tr>
<tr>
<td>5) I thought the girl was at risk for being sexually harassed, I thought I would leave it up to others to intervene.</td>
<td>2.50</td>
<td>0.91</td>
</tr>
<tr>
<td>6) If I saw someone I didn’t know was at risk for being sexually harassed, I would leave it up to her friends to intervene.</td>
<td>2.86</td>
<td>1.04</td>
</tr>
<tr>
<td>7) I am less likely to intervene to reduce a person’s risk of sexual harassment if I think she made choices that increased their risk.</td>
<td>2.50</td>
<td>1.26</td>
</tr>
<tr>
<td>8) The girl was dressed provocatively, or acted provocatively, that is why I was less likely to intervene.</td>
<td>1.77</td>
<td>0.92</td>
</tr>
<tr>
<td>Statement</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>-----------</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>9) I thought my intervention in the situation could endanger my wellbeing in any way (verbal or physical, etc.) So I didn’t intervene.</td>
<td>2.5</td>
<td>1.14</td>
</tr>
<tr>
<td>10) If a person is dressed provocatively, or acts provocatively, I feel less responsible for preventing others from harassing them.</td>
<td>2.18</td>
<td>1.1</td>
</tr>
<tr>
<td>11) I am more likely to intervene to prevent sexual harassment if I know the potential victim than if I do not.</td>
<td>4</td>
<td>1.15</td>
</tr>
<tr>
<td>12) I am more likely to intervene to prevent sexual harassment if I know the person that may be at risk for committing sexual harassment than if I do not know him.</td>
<td>3.64</td>
<td>1.4</td>
</tr>
<tr>
<td>13) Although I would like to intervene when a guy’s sexual conduct is questionable, I am not sure I would know what to say or do.</td>
<td>3.64</td>
<td>1</td>
</tr>
<tr>
<td>14) Even if I thought it was my responsibility to intervene to prevent sexual harassment, I didn’t know how to intervene.</td>
<td>3.23</td>
<td>1.19</td>
</tr>
<tr>
<td>15) I was hesitant to intervene when the guy’s sexual conduct was questionable because I was not sure other people would support me.</td>
<td>2.64</td>
<td>1.14</td>
</tr>
<tr>
<td>16) Even if I thought it was my responsibility to intervene to prevent a sexual harassment, I didn’t intervene out of a concern I would look foolish.</td>
<td>2.27</td>
<td>1.12</td>
</tr>
</tbody>
</table>

As for the confederate’s notes, 97.1% noticed the situation meaning that they had their eyes on the sexual harassment situation, 64.7% turned away when they saw the situation, either by walking away or simply turning their heads, while 35.3% did not turn away. 50% checked if anyone else can see the situation.
6.3. Results for the non-fiction group:

The non-fiction group which consists of 29 participants and demonstrated a pro-social personality mean score of 2.82, with a standard deviation of 0.6 using the 5-point 20-item Rushton Altruism Scale. As for the group’s display of altruistic behavior, 37.9% did help the potential victim, while the remaining 62.1% did not. One-way Analysis of Variance shows that within the non-fiction group, pro-social personality doesn’t significantly affect altruistic behavior with p = 0.19.

Figure 5
Altruistic Behavior within the Non-Fiction Group

Furthermore, a Chi-squared test was conducted to examine the relationship between being in the non-fiction group and altruistic behavior, resulting in p = 0.26 and a chi-square value of 1.29, which means that the relationship is statistically insignificant.
Table 15
Chi-Square test measuring the relationship between being exposed to Non-Fiction and Altruistic Behavior

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.289</td>
<td>1</td>
<td>.256</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.725</td>
<td>1</td>
<td>.395</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>1.297</td>
<td>1</td>
<td>.255</td>
<td></td>
<td>.395</td>
</tr>
<tr>
<td>Fisher’s Exact Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.197</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>1.267</td>
<td>1</td>
<td>.260</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A t-test was then conducted to measure the relationship between being in the non-fiction group and pleasure, as well as, pressure-based motivations, resulting respectively in p= 0.77, and p= 0.36; both results are statistically insignificant.

Table 16
T-test measuring the relationship between being exposed to Non-Fiction and Pleasure-based Motivations

<table>
<thead>
<tr>
<th>Pleasure-Based Motivation</th>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>1.32</td>
<td>.267</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.306</td>
<td>14.83</td>
</tr>
</tbody>
</table>
Table 17
*T-test measuring the relationship between being exposed to Non-Fiction and Pressure-based Motivations*

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Pressure-based Motivations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variance assumed</td>
<td>.94</td>
<td>.34</td>
</tr>
<tr>
<td>Equal variance not assumed</td>
<td>.99</td>
<td>.77</td>
</tr>
</tbody>
</table>

The pleasure-based motivations within the non-fiction group scored a M= 4.11 and a SD= 0.39, similarly, the pressure-based motivations scored M= 3.93 and SD= 0.63.

Table 18
*The means, standard deviations and reliability of the Pro-social Personality, Pleasure & Pressure-based Motivations and the Bystander Barriers Scales*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-social Personality</td>
<td>29</td>
<td>2.82</td>
<td>0.6</td>
<td>0.817</td>
</tr>
<tr>
<td>Pleasure-based Motivations</td>
<td>11</td>
<td>4.11</td>
<td>0.39</td>
<td>0.989</td>
</tr>
<tr>
<td>Pressure-based Motivations</td>
<td>11</td>
<td>3.93</td>
<td>0.63</td>
<td>0.983</td>
</tr>
<tr>
<td>Bystander Barriers</td>
<td>18</td>
<td>2.88</td>
<td>0.32</td>
<td>0.974</td>
</tr>
</tbody>
</table>
The bystander barriers which attempt to explain the non-altruistic behavior, when measured in relation to the non-fiction group using t-test, resulted in p= 0.33 which is statistically insignificant. The bystander barriers within the non-fiction group scored M= 2.88 and SD= 0.32.

**Table 19**

*T-test measuring the relationship between being exposed to Non-Fiction and Bystander Barriers*

<table>
<thead>
<tr>
<th></th>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Bystander Barriers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>8.13</td>
<td>.00</td>
</tr>
<tr>
<td>Equal variances not</td>
<td>1.02</td>
<td></td>
</tr>
<tr>
<td>assumed</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

The bystander barriers’ scale is divided into five subscales namely; failure to notice the event (M= 2.39 and SD= 0.98), failure to identify the situation as high risk (M= 3.06 and SD= 0.49), failure to take intervention responsibility (M= 2.73 and SD= 0.42), failure to intervene due to a skills deficit (M= 3.64 and SD= 1.05) and failure to intervene due to audience inhibition (M= 2.69 and SD= 1.07).
Within the failure to take intervention responsibility there are four other subscales; the diffusion of responsibility (M= 2.91 and SD= 0.58), worthiness (M= 2.17 and SD= 0.59), relationship of bystander to potential victim (M= 3.61 and SD= 1.2) and relationship of bystander to potential perpetrator (M= 3.72 and SD= 1.18).

Table 20
The means and standard deviations of the Bystander Barriers Subscales within the Non-Fiction Group

<table>
<thead>
<tr>
<th>Bystander Barriers</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Failure to Notice the Situation</td>
<td>2.39</td>
<td>0.98</td>
</tr>
<tr>
<td>2- Failure to Identify Situation as High Risk</td>
<td>3.06</td>
<td>0.49</td>
</tr>
<tr>
<td>3- Failure to take Intervention Responsibility</td>
<td>2.73</td>
<td>0.42</td>
</tr>
<tr>
<td>a) Diffusion of Responsibility</td>
<td>2.91</td>
<td>0.58</td>
</tr>
<tr>
<td>b) Worthiness</td>
<td>2.17</td>
<td>0.59</td>
</tr>
<tr>
<td>c) Relationship to Potential Victim</td>
<td>3.61</td>
<td>1.2</td>
</tr>
<tr>
<td>d) Relationship to Harasser</td>
<td>3.72</td>
<td>1.18</td>
</tr>
<tr>
<td>4- Failure to Intervene due to Skill Deficit</td>
<td>3.64</td>
<td>1.05</td>
</tr>
<tr>
<td>5- Failure to Intervene due to Audience Inhibition</td>
<td>2.69</td>
<td>1.07</td>
</tr>
</tbody>
</table>

Moreover, when measuring the correlation between pro-social personality and bystander barriers on one end and pleasure/pressure-based motivations on the other, results show that for the former the r= 0.36 and p=0.142, meaning that the correlation between pro-social personality and bystander barriers is positive, weak and insignificant. As for the latter, pro-social personality and pleasure-based motivations scored r=0.17 and
p= 0.62, while pressure-based motivations scored r=0.33 and p=0.33, which is statistically insignificant and weak on both accounts.

Chi-squared test was used to test the association between the undergraduate year and the altruistic behavior, resulting in p= 0.573 and chi-square= 1.998, which means that the undergraduate year doesn’t significantly affect altruistic behavior. Additionally, despite the asymmetric gender representation, 40.91% of the female participants and 28.57% of the male participants acted altruistically.

Within the pro-social personality scale, helping a stranger push their car that broke down scored a mean of 1.69 and SD= 1.11, giving directions to a stranger scored a mean of 3.93 and SD= 0.96, providing change for a stranger scored a mean of 2.97 and SD= 0.87, giving money to a charity scored a mean of 3.38 and SD= 0.9, and giving money to a stranger who needed it or asked for it scored a mean of 3.07 and SD= 0.99. Additionally, donating goods or clothes to a charity scored a mean of 3.24 and SD= 1.09, doing volunteer work for a charity scored a mean of 2 and SD= 1.34, donating blood scored a mean of 1.28 and SD= 0.65, helping carry a stranger’s belongings scored a mean of 3.07 and SD= 1.16, and delaying an elevator and held the door open for a stranger scored a mean of 3.45 and SD= 1.02.

Allowing someone to go ahead of them in a lineup scored a mean of 3.17 and SD= 1, standing up for a stranger being bullied/harassed scored a mean of 2.69 and SD= 1.39, pointing out a clerk’s error (in a bank, at a supermarket) in undercharging them for an item scored a mean of 2.86 and SD= 1.48, letting a neighbor they don’t know too well borrow an item of some value to them scored a mean of 2.17 and SD= 1.07, buying
“charity” goods deliberately because they know it was a good cause scored a mean of 2.79 and SD= 1.11, and helping a classmate they don’t know that well with an assignment when their knowledge was greater than hers/his scored a mean of 3.72 and SD= 1.13.

Looking after a neighbor’s pets or children voluntarily without being paid for it scored a mean of 2.03 and SD= 1.37, offering to help a handicapped or elderly stranger across a street scored a mean of 3.14 and SD= 1.13, offering their seat on a bus or train to a stranger who was standing scored a mean of 3.93 and SD= 1.13, and helped an acquaintance to move households scored a mean of 1.79 and SD= 1.05.

Table 21

Rushton’s 20-item Altruism Scale means and standard deviations within the Non-Fiction Group

<table>
<thead>
<tr>
<th>Statement</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I have helped push a stranger’s car that was broken down or out of gas</td>
<td>1.69</td>
<td>1.11</td>
</tr>
<tr>
<td>2) I have given directions to a stranger</td>
<td>3.93</td>
<td>0.96</td>
</tr>
<tr>
<td>3) I have provide change for a stranger (i.e.; coins or paper money that you give in exchange for the same amount of money in a larger unit)</td>
<td>2.97</td>
<td>0.87</td>
</tr>
<tr>
<td>4) I have given money to a charity</td>
<td>3.38</td>
<td>0.9</td>
</tr>
<tr>
<td>5) I have given money to a stranger who needed it or asked me for it</td>
<td>3.07</td>
<td>0.99</td>
</tr>
<tr>
<td>6) I have donated goods or clothes to a charity</td>
<td>3.24</td>
<td>1.09</td>
</tr>
<tr>
<td>7) I have done volunteer work for a charity</td>
<td>2</td>
<td>1.34</td>
</tr>
<tr>
<td>8) I have donated blood</td>
<td>1.28</td>
<td>0.65</td>
</tr>
<tr>
<td>9) I have helped carry a stranger’s belongings (books, parcels, etc)</td>
<td>3.07</td>
<td>1.16</td>
</tr>
<tr>
<td>10) I have delayed an elevator and held the door open for a stranger</td>
<td>3.45</td>
<td>1.02</td>
</tr>
<tr>
<td>11) I have allowed someone to go ahead of me in a lineup (in a supermarket, at a copy machine, at a fast-food restaurant)</td>
<td>3.17</td>
<td>1</td>
</tr>
</tbody>
</table>
The pleasure and pressure-based motivations inherent to the altruistic behavior have been broken down to 10 items, the first is pertinent to feeling happy for supporting others which scored a mean of 4.64 and SD= 0.5. The feeling of obligation to be selfless scored a mean of 3.18 and SD= 1.33. Having a great feeling of happiness when acting unselfishly scored a mean of 3.55 and SD= 1.29. Similarly, feeling indebted to stand up for others scored a mean of 4.09 and SD= 0.94, when able to help other people it always feels good afterwards scored a mean of 4.36 and SD= 0.5. Not regarding it as their duty to act selflessly scored a mean of 3.82 and SD= 1.25.

Furthermore, helping people who are in trouble does raise one’s own mood scored a mean of 4 and SD= 1, and having a feeling of strong duty to help others in every situation where it is possible scored a mean of 4.55 and SD= 0.69. Having a feeling of
obligation to help since no one else was helping scored a mean of 4 and SD= 1, and wanting to help despite the presence of others who could have helped too scored a mean of 4 and SD= 0.89.

Table 21

Pleasure and Pressure-based Motivations Scale within the Non-Fiction Group

<table>
<thead>
<tr>
<th>Statement</th>
<th>Motivation</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Supporting other people makes me very happy.</td>
<td>Pleasure</td>
<td>4.64</td>
<td>0.5</td>
</tr>
<tr>
<td>2) I do not feel obligated to perform selfless acts towards others.</td>
<td>Pressure</td>
<td>3.18</td>
<td>1.33</td>
</tr>
<tr>
<td>3) I do not have a great feeling of happiness when I have acted unselfishly.</td>
<td>Pleasure</td>
<td>3.55</td>
<td>1.29</td>
</tr>
<tr>
<td>4) I feel indebted to stand up for other people.</td>
<td>Pressure</td>
<td>4.09</td>
<td>0.94</td>
</tr>
<tr>
<td>5) When I am able to help other people, I always felt good afterwards.</td>
<td>Pleasure</td>
<td>4.36</td>
<td>0.5</td>
</tr>
<tr>
<td>6) I do not regard it as my duty to act selflessly.</td>
<td>Pressure</td>
<td>3.82</td>
<td>1.25</td>
</tr>
<tr>
<td>7) Helping people who are in trouble does not raise my own mood.</td>
<td>Pleasure</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>8) I feel a strong duty to help other people in every situation where it is possible for me.</td>
<td>Pressure</td>
<td>4.55</td>
<td>0.69</td>
</tr>
<tr>
<td>9) I felt obligated to help since no one else was helping.</td>
<td>Pressure</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>10) I wanted to help despite the presence of others who could have helped too.</td>
<td>Pleasure</td>
<td>4</td>
<td>0.89</td>
</tr>
</tbody>
</table>

On the other hand, the bystander barriers inherent to the non-altruistic behavior have been broken down to 16 items; the first is pertinent to being too busy to be aware of whether someone is at risk for sexual harassment which scored a mean of 2.39 and SD= 0.98. Finding it hard to tell whether a guy is at risk for sexually harassing someone scored
a mean of 3.11 and SD= 0.96. In tandem, feeling uncertain when it comes to whether the girl was at risk of being sexually harassed scored a mean of 3.72 and SD= 0.89.

Thinking the situation might be high in sexual harassment risk, but not saying or doing anything since others appeared unconcerned scored a mean of 2.33 and SD= 0.91. Thinking that the girl was at risk for being sexually harassed, but that they left it up to others to intervene scored a mean of 2.94 and SD= 0.8.

Similarly, leaving it up to the friends of the one being harassed to intervene, in case they don’t know them scored a mean of 2.89 and SD= 0.96. Being less likely to intervene to reduce a person’s risk of sexual harassment, if they think the person being harassed made choices that increased their risk scored a mean of 2 and SD= 0.91. Being less likely to intervene if the girl being harassed was dressing or acting provocatively scored a mean of 1.44 and SD= 0.62.

Furthermore, thinking their intervention in the situation could endanger their wellbeing in any way which is why they didn’t intervene scored a mean of 3.11 and SD= 1.18. Feeling less responsible for preventing others from harassing someone who is dressing or acting provocatively scored a mean of 2.11 and SD= 1.28. Being more likely to intervene to prevent the sexual harassment if they know the harasser scored a mean of 3.72 and SD= 1.18, as for the likelihood of intervention in case of knowing the person being harassed than if they don’t know them, it scored a mean of 3.61 and SD= 1.19.

In addition, wanting to intervene when a guy’s sexual conduct is questionable but not knowing what to say or do scored a mean of 3.67 and SD= 1.24. Correspondingly, the item stating that even if they thought it was their responsibility to intervene to prevent
sexual harassment, the participants didn’t know how to intervene scored a mean of 3.61 and SD= 1.09.

Being hesitant to intervene when the guy’s sexual conduct was questionable because they weren’t sure other people would support them scored a mean of 3.22 and SD= 1.35, while even if they thought it was their responsibility to intervene to prevent a sexual harassment, they didn’t intervene out of a concern they would look foolish scored a mean of 2.17 and SD= 1.25.

**Table 22**

*Bystander Barriers Scale means and standard deviations within the Non-Fiction Group*

<table>
<thead>
<tr>
<th>Statement</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I was too busy to be aware of whether someone is at risk for sexual harassment.</td>
<td>2.39</td>
<td>0.98</td>
</tr>
<tr>
<td>2) I find it hard to tell whether a guy is at risk for sexually harassing someone.</td>
<td>3.11</td>
<td>0.96</td>
</tr>
<tr>
<td>3) I was uncertain as to whether the girl was at-risk for being sexually harassed.</td>
<td>3.72</td>
<td>0.89</td>
</tr>
<tr>
<td>4) I thought the situation might be high in sexual harassment risk, but I didn’t say or do anything since other people appeared unconcerned.</td>
<td>2.33</td>
<td>0.91</td>
</tr>
<tr>
<td>5) I thought the girl was at risk for being sexually harassed, I thought I would leave it up to others to intervene.</td>
<td>2.94</td>
<td>0.8</td>
</tr>
<tr>
<td>6) If I saw someone I didn’t know was at risk for being sexually harassed, I would leave it up to her friends to intervene.</td>
<td>2.89</td>
<td>0.96</td>
</tr>
<tr>
<td>7) I am less likely to intervene to reduce a person’s risk of sexual harassment if I think she made choices that increased their risk.</td>
<td>2</td>
<td>0.91</td>
</tr>
<tr>
<td>8) The girl was dressed provocatively, or acted provocatively, that is why I was less likely to intervene.</td>
<td>1.44</td>
<td>0.62</td>
</tr>
<tr>
<td>Statement</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>9) I thought my intervention in the situation could endanger my wellbeing in any way (verbal or physical, etc.) So I didn’t intervene.</td>
<td>3.11</td>
<td>1.18</td>
</tr>
<tr>
<td>10) If a person is dressed provocatively, or acts provocatively, I feel less responsible for preventing others from harassing them.</td>
<td>2.11</td>
<td>1.28</td>
</tr>
<tr>
<td>11) I am more likely to intervene to prevent sexual harassment if I know the potential victim than if I do not.</td>
<td>3.61</td>
<td>1.19</td>
</tr>
<tr>
<td>12) I am more likely to intervene to prevent sexual harassment if I know the person that may be at risk for committing sexual harassment than if I do not know him.</td>
<td>3.72</td>
<td>1.18</td>
</tr>
<tr>
<td>13) Although I would like to intervene when a guy’s sexual conduct is questionable, I am not sure I would know what to say or do.</td>
<td>3.67</td>
<td>1.24</td>
</tr>
<tr>
<td>14) Even if I thought it was my responsibility to intervene to prevent sexual harassment, I didn’t know how to intervene.</td>
<td>3.61</td>
<td>1.09</td>
</tr>
<tr>
<td>15) I was hesitant to intervene when the guy’s sexual conduct was questionable because I was not sure other people would support me.</td>
<td>3.22</td>
<td>1.35</td>
</tr>
<tr>
<td>16) Even if I thought it was my responsibility to intervene to prevent a sexual harassment, I didn’t intervene out of a concern I would look foolish.</td>
<td>2.17</td>
<td>1.25</td>
</tr>
</tbody>
</table>

As for the confederate’s notes, 100% noticed the situation meaning that they had their eyes on the sexual harassment situation, 82.8% turned away when they saw the situation, either by walking away or simply turning their heads, while 17.2% did not turn away. 65.5% checked if anyone else can see the situation, while 34.5% didn’t.

**6.4. General Results:**

The three groups (control, fiction and non-fiction) which consist of 92 participants in total have demonstrated a mean score of 2.83, when it comes to their pro-social personality, with a standard deviation of 0.54 using the 5-point 20-item Rushton Altruism
As for the groups’ display of altruistic behavior, 32.6% did help the potential victim, while the remaining 67.4% did not. One-way Analysis of Variance shows that within these groups, pro-social personality doesn’t significantly affect altruistic behavior with p= 0.31.

**Figure 6**
*Altruistic Behavior within the Three Groups*

Furthermore, the pleasure-based motivations within the three groups scored a M= 4.12 and a SD= 0.4, similarly, the pressure-based motivations scored M=3.78 and SD= 0.56. The bystander barriers which attempt to explain the non-altruistic behavior scored M= 2.93 and SD= 0.497. The bystander barriers’ scale is divided into five subscales namely; failure to notice the event (M= 2.4 and SD= 1.12), failure to identify the situation as high risk (M= 3.27 and SD= 0.7), failure to take intervention responsibility
(M= 2.79 and SD= 0.599), failure to intervene due to a skills deficit (M= 3.48 and SD= 0.99) and failure to intervene due to audience inhibition (M= 2.66 and SD= 0.999).

Within the failure to take intervention responsibility there are four other subscales; the diffusion of responsibility (M= 2.79 and SD= 0.87), worthiness (M= 2.29 and SD= 0.72), relationship of bystander to potential victim (M= 3.85 and SD= 1.24) and relationship of bystander to potential perpetrator (M= 3.73 and SD= 1.2).

Moreover, when measuring the correlation between pro-social personality and bystander barriers on one end and pleasure/pressure-based motivations on the other, results show that for the former the r= -0.047 and p=0.71, which means that the correlation is negative, weak and insignificant. As for the latter, surprisingly, pro-social personality and pleasure-based motivations scored r=0.34 and p= 0.068, which is weak and statistically insignificant.

On the other hand, pressure-based motivations scored r=0.45 and p=0.012, which is weak and statistically significant. Chi-squared test was used to test the association between the undergraduate year and the altruistic behavior, resulting in p= 0.009 and chi-square= 11.55. This means that the relationship between undergraduate year and altruistic behavior is statistically significant. Additionally, despite the asymmetric gender representation, 31.17% of the female participants and 40% of the male participants acted altruistically.

In an attempt to test the study’s hypotheses, a comparison of the results of the three groups needs to be presented. Helping the potential victim in the staging situation scored 24.1% in the control group, 35.3% in the fiction group and 37.9% in the non-
fiction group. The Chi-squared test measuring the relationship between exposure to fictional or non-fictional videos of heroic acts and altruistic behavior scored p= 0.34 and p= 0.26 respectively.

**Figure 7**

*Comparison between the Altruistic Behavior in the Three Groups*

Accordingly, the *first hypothesis* stating that “exposure to fictional videos of heroic acts increases the likelihood of altruistic behavior more than non-fictional videos of heroic acts” has been rejected. Since, the relationship between the exposure and the altruistic behavior is statistically insignificant and the percentages show the contrary, that those exposed to the non-fictional video were more likely to help.

Moreover, the pressure-based motivations scored M= 3.66 and SD= 0.51 in the control group, M= 3.72 and SD= 0.54 in the fiction group, and M= 3.93 and SD= 0.63 in
the non-fiction group. The t-test measuring the relationship between exposure to fictional or non-fictional videos of heroic acts and pressure-based motivations scored $p= 0.817$ and $p= 0.36$ respectively.

Table 23
The means, standard deviations and reliability of the Pro-social Personality, Pleasure & Pressure-based Motivations and the Bystander Barriers Scales

<table>
<thead>
<tr>
<th></th>
<th>Control Group</th>
<th>Fiction Group</th>
<th>Non-Fiction Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Pro-social Personality</td>
<td>2.79</td>
<td>0.6</td>
<td>2.87</td>
</tr>
<tr>
<td>Pleasure-based Motivations</td>
<td>4.06</td>
<td>0.32</td>
<td>4.17</td>
</tr>
<tr>
<td>Pressure-based Motivations</td>
<td>3.66</td>
<td>0.51</td>
<td>3.72</td>
</tr>
<tr>
<td>Bystander Barriers</td>
<td>3.02</td>
<td>0.53</td>
<td>2.87</td>
</tr>
</tbody>
</table>

Consequently, the second hypothesis stating that “exposure to non-fictional videos of heroic acts is positively correlated with pressure-based pro-social motivation” has been rejected. Since, the relationship between the two variables turned out to be statistically insignificant; $p> 0.05$. Additionally, the mean score of pressure-based motivations within the non-fiction group is the highest in comparison to the control and the fiction groups and so are the percentages of the items within the pressure-based motivations scale; albeit slightly higher.

The pleasure-based motivations scored M= 4.06 and SD= 0.32 in the control group, M= 4.17 and SD= 0.47 in the fiction group, and M= 4.11 and SD= 0.39 in the
non-fiction group. The t-test measuring the relationship between exposure to fictional or non-fictional videos of heroic acts and pleasure-based motivations scored $p=0.596$ and $p=0.77$ respectively.

This means that the *third hypothesis* stating that “exposure to fictional videos of heroic acts is positively correlated with pleasure-based pro-social motivation” has been rejected. Since, the relationship between the exposure and the pleasure-based motivations is statistically insignificant; $p > 0.05$. On the other hand, the mean score of pleasure-based motivations within the fiction group is the highest in comparison to the control and the non-fiction groups and so are the percentages of the items within the pleasure-based motivations scale; albeit slightly higher.

The bystander barriers scored $M= 3.02$ and $SD= 0.53$ in the control group, $M= 2.87$ and $SD= 0.59$ in the fiction group, and $M=2.88$ and $SD= 0.32$ in the non-fiction group. The t-test measuring the relationship between exposure to fictional or non-fictional videos of heroic acts and bystander barriers scored $p= 0.39$ and $p= 0.33$ respectively.

As a result, the *fourth hypothesis* stating that “exposure to non-fictional videos of heroic acts increases the likelihood of bystander barriers more than fictional videos of heroic acts” has been rejected. Since, the relationship between the two variables is statistically insignificant; $p > 0.05$. Nonetheless, the mean score of the bystander barriers within the non-fiction group is the highest in comparison to the control and the fiction groups and so are the percentages of the items within the bystander barriers scale; albeit slightly higher.
The pro-social personality scored M= 2.79 and SD= 0.6 in the control group, M= 2.87 and SD= 0.45 in the fiction group, and M= 2.82 and SD= 0.6 in the non-fiction group. When measuring the correlation between pro-social personality and bystander barriers, the results show that r= -0.13 and p=0.57 in the control group, r= -0.142 and p=0.53 in the fiction group and r= 0.36 and p=0.142 in the non-fiction group. As for the correlation between pro-social personality and pressure-based motivations r=0.75 and p=0.05 in the control group, r=0.557 and p=0.06 in the fiction group and r=0.33 and p=0.33 in the non-fiction group. The correlation between pro-social personality and pleasure-based motivations r=0.34 and p= 0.46 in the control group, r=0.581 and p= 0.048 in the fiction group, and r=0.17 and p= 0.62 in the non-fiction group.

The pro-social personality measurement or the Rushton Altruism Scale or the Self-Report Altruism Scale has been treated in previous literature as an interval level of measurement (Rushton, Chrisjohn, and Fekken, 1981; Gebauer, Riketta, Broemer, and Maio, 2008). Accordingly, the author has calculated the precedent results using correlations. However, the author when taking a closer look at the points of the scale (Never, Once, More than Once, Often, and Very Often), thought that the scale is ordinal, since there are no equal distances between the points of the scale.

Therefore, the author opted to treat the scale as ordinal, using the corresponding measures, and found that the relationship between pro-social personality and pleasure and pressure-based motivations are more statistically significant. There has been a surge of literature debating the difference between ordinal and interval measures, confusing measurement theory with statistical theory (Gaito, 1980; Townsend and Ashby, 1981). Consequently, the author is proposing to treat the Rushton Altruism Scale as an ordinal
scale, instead of interval, since there is no evidence that the distance between more than once and often for instance is the same as the distance between often and very often.

Table 24

Results treating the Rushton Altruism Scale as Interval

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Fiction</th>
<th>Non-Fiction</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-social Personality and Altruistic Behavior using ANOVA</td>
<td>p= 0.12</td>
<td>p= 0.936</td>
<td>p= 0.19</td>
<td>p= 0.31</td>
</tr>
<tr>
<td>Pro-social Personality and Bystander Barriers using Correlation</td>
<td>r= -0.13 and p=0.57</td>
<td>r= -0.142 and p=0.53</td>
<td>r= 0.36 and p=0.142</td>
<td>r= -0.047 and p=0.71</td>
</tr>
<tr>
<td>Pro-social Personality and Pleasure-based motivations using Correlation</td>
<td>r=0.34 and p= 0.46</td>
<td>r= 0.581 and p= 0.048</td>
<td>r= 0.17 and p=0.62</td>
<td>r=0.34 and p=0.068</td>
</tr>
<tr>
<td>Pro-social Personality and Pressure-based motivations using Correlation</td>
<td>r=0.75 and p=0.05</td>
<td>r=0.557 and p=0.06</td>
<td>r=0.33 and p=0.33</td>
<td>r=0.45 and p=0.012</td>
</tr>
</tbody>
</table>

Table 25

Results treating the Rushton Altruism Scale as Ordinal

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Fiction</th>
<th>Non-Fiction</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-social Personality and Altruistic Behavior using chi-square</td>
<td>p= 0.24</td>
<td>p= 0.79</td>
<td>p= 0.258</td>
<td>p= 0.315</td>
</tr>
<tr>
<td>Pro-social Personality and Bystander Barriers using ANOVA</td>
<td>p= 0.145</td>
<td>p= 0.67</td>
<td>p= 0.202</td>
<td>p= 0.348</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>Fiction</td>
<td>Non-Fiction</td>
<td>General</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------</td>
<td>---------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>Pro-social Personality and Pleasure-based motivations using ANOVA</td>
<td>p=0</td>
<td>p=0</td>
<td>p=0.05</td>
<td>p=0.042</td>
</tr>
<tr>
<td></td>
<td>p=0</td>
<td>p=0</td>
<td>p=0.318</td>
<td>p=0.04</td>
</tr>
</tbody>
</table>

As for the confederate’s notes, 98.9% noticed the situation meaning that they had their eyes on the sexual harassment situation, 73.9% turned away when they saw the situation, either by walking away or simply turning their heads, while 26.1% did not turn away. 56.5% checked if anyone else can see the situation, while 43.5% didn’t. The comments that the confederate wrote on how the participants reacted to the situation; the reactions of those who didn’t intervene varied from standing there expressionless/stunned doing nothing, taking a selfie, playing with their cell phones, to turning their heads and walking away.

The reactions of those who intervened also varied from asking the potential victim what’s wrong, telling her not to talk to him, asking her if she knows him, holding her hand and pulling her closer, giving her their cell phone, shouting at the harasser to stop bothering her, threatening to call security, telling the harasser that he is disrespectful and a jerk, telling him to shut up, holding him back and telling him to chill, telling him to let her pass, and that she doesn’t want to talk to him, actually trying to call someone from an office, telling the researcher, asking the bystander if they were kidding and why isn’t she interfering.
Chapter Seven

Discussion

The study attempted to examine the effects of exposure to fictional and non-fictional videos of heroic acts on altruistic behaviors. After conducting an experiment using a staging manipulation of a sexual harassment situation post-exposure, the participants’ pro-social personality was measured, along with the reasons for their altruistic/non-altruistic behavior; in terms of pressure and pleasure-based motivations and bystander barriers.

The results have shown that overall 32.6% acted altruistically in the staged situation, indicating that the situation can be considered a high cost help situation, which explains why over two thirds of the sample did not act altruistically. Moreover, those exposed to non-fictional videos of heroic acts were found to be more likely to act altruistically than those in the fiction and control conditions, which is the opposite to what the study hypothesized.

In addition, these results are contrary to the transportation theory which postulates that fiction transports the audience to another world possibly having a lasting effect even after the exposure (Green and Brock, 2000; Gerrig, 1993), as well as, the studies suggesting that fiction involves more interpretation and generates more emotions and interest, making the reaction to a stimulus faster, since the schema become more easily accessible (Bal and Veltkamp, 2013; Narvaez, Broek, and Ruiz, 1999). It’s possible that the transportation effect did not take place, because the videos were montages taken from
different movies, while in order for the effect to manifest the audience may need to be immersed in the entire story in order to identify with the characters.

However, this result is in line with previous literature suggesting that non-fiction has the advantage of honesty, directness, proximity and perceived realism over fiction (Holmes, 2002). Studies show that fiction takes more time in interpretation and processing to create scripts and consult with the existing frame of reference, while non-fiction doesn’t dwell on this internal route. Consequently, studies that found that people reacted more strongly to non-fiction indicate that non-fiction instigates instantaneous reactions based on proximity, as well as, cost of helping (Mendelson and Papacharissi, 2007; Geen, 1975).

This means that people are more likely to be primed by real people in real situations that could happen to them rather than by fictional situations. When it comes to risking one’s own wellbeing, in other words a high cost help situation, non-fiction provides a realistic priming of real people bravely helping in more dangerous situations.

Superheroes though inspiring, are perceived as fictitious when it comes to a real relatively risky situation. Another valid perspective could be that superheroes doing extraordinary things and risking their lives for others is perceived as their duty, while real people with no superhuman powers risking their lives and wellbeing for others can be more inspiring.

Having said that, the fiction and non-fiction conditions displayed more altruism than the control condition. This indicates that exposure to pro-social media, whether the
content is fictional or non-fictional does prime the audience to act altruistically more than those who weren’t subjected to media priming which is congruent to previous literature.

Therefore, the reasons for the rejection of the first hypothesis proposing that those exposed to fiction are more likely to act altruistically than those exposed to non-fiction based on the previous arguments, can be that the situation is a high cost help situation, which rendered non-fiction – characterized by perceived realism- more effective in terms of impact.

Another reason can be that the fictional videos were montages cut from movie context, so the transportation effect didn’t get the chance to be manifested, however; attempts to preserve the videos’ context were executed, and showing an entire movie(s) was inherently difficult. In addition, superheroes may be perceived as idols as studies show, but when faced with a situation that puts one’s wellbeing in risk, people tend to be primed by ordinary people doing extraordinary things, as opposed to extraordinary people doing extraordinary things.

Furthermore, results pertaining to the effects of exposure to fiction or non-fiction on pressure-based motivations were statistically insignificant. This could be due to the relatively small sample, as will be highlighted in the study limitations; a larger sample could have yielded more significant results; especially since slight differences emerged within the study’s frequencies. Another reason could be that for a more significant effect to emerge, the participants needed to be exposed to the content over a longer period of time, since this is a high cost help situation that could have more resilience when it comes to generating actual behaviors, needing repeat exposures. Additionally, some participants
may have confused the concepts of duty and ideal, reporting that they acted altruistically because they think it is their duty and they are happy to do it.

The researcher hypothesized that non-fiction would be more likely to generate pressure-based motivations. The findings showed that the individual items of the pressure-based motivations scale within the non-fiction group generally scored higher percentages than the other two groups. Additionally, the mean score of the pressure-based motivations within the non-fiction condition is higher than the fiction and the control, albeit slightly higher rendering the association statistically insignificant.

The study’s frequencies could be attributed to as previous studies show that exposure to non-fiction could put some kind of stress or pressure on the audience, meaning that people feel that they are obligated or that it’s their duty to perform certain behaviors, since ordinary people like them have performed these behaviors, which could exert a virtual feeling of peer pressure (Goldstein, 2009; Mendelson and Papacharissi, 2007). Findings of previous research indicate that helpfulness is an ought-to behavior as opposed to being an ideal for most people, unless there’s an exogenous variable at play (Gebauer, Riketta, Broemer, and Maio, 2008).

The precedent study shows that being primed with non-fictional videos could be more likely to yield pressure-based motivations. Since without a priming effect, usually most helping behaviors are initiated by pressure-based motivations related to peer pressure, and punishment avoidance. Consequently, priming people with realistic videos reinforces the motivations that normally generate altruistic behaviors, with these videos possibly acting as a form of peer pressure.
A study found that people can be primed with virtual bystanders, affecting thereby their helping behavior. The study primed the participants with either a video of a movie theater with a group of friends or an empty movie theater where there’s only one person and empty seats. The findings showed that people in the group condition were less likely to act altruistically in a subsequent situation than the single condition, which resembles to the situation in real-life without priming, where studies show that people are less likely to help in the presence of bystanders (Abbate, Boca, Spadaro and Romano, 2014).

Similarly, the exposure to non-fictional videos of heroic acts may have replicated the pressure-based motivations that normally generate altruistic behaviors related to peer pressure, based on the study’s frequencies. Through virtually priming pressure-based motivations by non-fictional media primes, participants acted altruistically out of an ought-to motivation; it’s a form of self-regulation. Deductively, people could feel pressured to model others who have helped in similar situations; they feel that it is their duty to step forward and act altruistically, as if they are being judged by a virtual third party.

Moreover, results pertaining to the effects of exposure to fiction or non-fiction on pleasure-based motivations were statistically insignificant. As previously mentioned, a larger sample could have yielded more significant results; especially since slight differences emerged within the study’s frequencies. Repeat exposures could have also yielded different results; in addition, the line between duty and ideal could be blur to some participants.
The researcher hypothesized that fiction would be more likely to generate pleasure-based motivations. The findings showed that the individual items of the pleasure-based motivations scale within the fiction group generally scored higher percentages than the other two groups. Additionally, the mean score of the pleasure-based motivations within the fiction condition is higher than the non-fiction and the control, albeit slightly higher rendering the association statistically insignificant.

The study’s frequencies could be attributed as previous studies show that exposure to fiction generates emotions, interest and general enjoyment. One of the studied reasons for the stronger impact of fictitious content in existing literature is that it involves less pressure, and obligation towards the characters and having a safe place to feel all emotions (Bal and Veltkamp, 2013; Goldstein, 2009). On a different note, pleasure-based motivations are based on ideals and values, as opposed to should dos (Gebauer, Riketta, Broemer, and Maio, 2008).

Fiction in general and superheroes in particular represent what can be considered a virtual and idealistic image, in other words, superheroes present aspired-to ideals, which could have encouraged people to model them out of pleasure and aspiration. Additionally, the participants know that the content is fictitious, which could eliminate the peer pressure entailing that in a real situation a real person has acted altruistically, thereby implying that the viewer should do the same. In fiction, the viewer aspires to be brave and act selflessly, without the added pressure of a should-do motivation; rather a want-to motivation might be instigated.
Another perspective entails that fiction usually involves more interpretation and processing, while non-fiction focuses on comprehension and limits this internal route. Studies have found that exposure to fiction tends to make schema more easily accessible, making the reactions to any stimulus faster than non-fiction (Mendelson and Papacharissi, 2007). In tandem, when evaluating pleasure versus pressure-based motivations, it can be deducted that the pleasure-based motivations do not need processing, if someone is acting out of pleasure or ideal, it won’t need as much time as acting out of pressure.

Pressure-based motivations on the other hand, need processing to assess the situation and the risks involved, as well as, their duty. Non-fiction involves less interpretation during the exposure than fiction, however, it involves more processing when a stimulus presents itself, and studies show that those exposed to non-fiction usually have a slower reaction to a stimulus which is inherent to pressure-based motivations.

Accordingly, the difference between fiction and non-fiction is that fiction represents an ideal, aspired-to and surreal world, while non-fiction represents a realistic world portraying an ought-to behavior. In addition, fiction involves processing and interpretation during the exposure and less processing when a stimulus presents itself, oppositely, non-fiction involves limited processing during the exposure and more processing when a stimulus presents itself. This distinction could be congruent to the results of this study, indicating that non-fiction and pressure-based motivations on one end and fiction and pleasure-based motivations on the other could be associated.
Results pertaining to the effects of exposure to fiction or non-fiction on bystander barriers were statistically insignificant. As previously mentioned, a larger sample could have yielded more significant results; especially since slight differences emerged within the study’s frequencies. Repeat exposures could have also yielded different results; in addition, the line between duty and ideal could be blur to some participants. Additionally, the cultural aspect cannot be overlooked, since sexual harassment is considered a high risk situation in the Egyptian culture, people may be more reluctant to help.

Taking into consideration that the sample predominantly consists of females, they could be more intimidated to help and risk their own wellbeing. It should be duly noted that contrary to the expectation that females will try to call someone to help instead of addressing the harasser themselves, female participants tended to address the harasser by telling him to stay away from her, threatening him to call security and calling him disrespectful.

The researcher hypothesized that bystander barriers would be more likely to emerge in the non-fiction condition. The findings showed that the individual items of the bystander barriers scale within the non-fiction group generally scored higher percentages than the other two groups. Additionally, the mean score of the bystander barriers within the non-fiction condition is higher than the fiction and the control, albeit slightly higher rendering the association statistically insignificant.

The bystander barriers attempt to measure the reasons for not acting altruistically, involving whether the participant noticed the situation, identified it as a high risk situation, took intervention responsibility, had skills to intervene, experienced audience
inhibition. A distinction needs to be made between scoring high on altruistic/non-altruistic behavior and scoring high on bystander barriers.

Non-fiction scored less than fiction when it comes to the non-altruistic behavior, while it did score higher when it comes to the individual frequencies within the bystander barriers scale. These frequencies could be attributed to the perceived realism in non-fiction (Mendelson and Papacharissi, 2007; Holmes, 2002), which drives people to either go through pressure-based motivations and perform the altruistic behavior, or to emphasize the bystander barriers and not perform the altruistic behavior.

Additionally, exposure to fiction does promote ideals which could have made the participants in a state of denial, rather than a state of realism, meaning that since non-fiction involves more processing when a stimulus presents itself than fiction does, the participants in the non-fiction group could have made the decision not to help based on an evaluation of the risks, which could have rendered them more aware of the bystander barriers at play.

On the other hand, fiction involves less processing when a stimulus presents itself than non-fiction does; therefore, the participants could be more likely to resort to justifications for their non-altruistic behavior other than the bystander barriers. One of the common comments that the researcher observed in the fiction group was that the participants said they knew the confederates were acting, which is highly unlikely as confirmed by the confederates’ and the researcher’s observations of the participants’ reactions prior to the debriefing and after. Another common justification is denying that this was a sexual harassment situation, stating that he didn’t touch her, which either
reflects lack of awareness of what the term “sexual harassment” entails or merely a justification to the non-altruistic behavior.

Consequently, the non-fiction group’s bystander barriers’ frequencies scored higher, possibly indicating that the participants were aware of the barriers that prevented their altruistic behavior, due to their on the spot processing, while the fiction group reacted faster with less processing involved, which could explain why they scored lower on the barriers and resorted to other justifications for their non-altruistic behaviors.

Within the bystander barriers scale, there are five subscales. When it comes to failure to notice the situation, the non-fiction group was more in disagreement than fiction with it being a reason for their non-altruistic behavior, which is in line with the previous argument that the fiction group could be in a state of denial, denying that they noticed the situation, despite the confederate’s notes that confirm otherwise.

Additionally, the failure to identify the situation as high risk scored higher with the fiction group than the non-fiction, as well as, the failure to take intervention responsibility. However, non-fiction scored higher on failure to intervene due to skill deficit and audience inhibition. This implies that the fiction group was more likely to refer their non-altruistic behavior to reasons pertinent to noticing the situation, not believing that the person is being harassed, not believing the person is worth helping and leaving it up to others to intervene.

On the other hand, the non-fiction group was more likely to refer their non-altruistic behavior to reasons pertinent to not knowing how to intervene, as well as, being discouraged by the presence of the other bystander “confederate”. The failure to take
intervention responsibility subscale includes four other subscales; the fiction group scored higher in factors related to worthiness of the situation and the potential victim, as well as, relationship to potential victim, while non-fiction scored higher in factors related to diffusion of intervention responsibility and relationship to the harasser.

The frequencies comparing the fiction and non-fiction groups could be an indication that the fiction group, being the group exposed to the idealistic world, resorted to justifications that diffuse the responsibility from them. As for the non-fiction, being the group exposed to the realistic world, it resorted to justifications that are pertinent to their abilities and extrinsic pressure.

Interestingly, Rushton’s 20-item Altruism Scale scored higher percentages in the individual items within the fiction group, in comparison to the non-fiction group, despite that the non-fiction condition displayed more altruistic behavior than the fiction condition. The researcher divided the scale into low cost and high cost help items, participants scored lower on the high cost help items which explains the ratio of altruistic to non-altruistic behavior.

Items such as pushing a stranger’s car that broke down, volunteering, donating blood, standing up for someone being bullied or harassed, and helping someone move households can be considered as high cost help situation, since they invest effort and time in these behaviors. One reason that could explain the higher percentages of pro-social personality on the altruism scale in the fiction group could be that the group had higher rates of non-altruistic behavior, which could have driven the participants to refine their image and self-report with socially desirable answers.
Noticeably, even though the fiction condition reported having a higher pro-social personality, when it comes to the item tackling whether the participant helped someone being bullied or harassed, the non-fiction group reported higher percentages than fiction, which also explains the study’s results.

Interestingly, the researcher thought that the undergraduate year could be a variable when it comes to altruistic behavior, however, the results show that 20.8% of freshman year, 56.5% of sophomore year, 13.6% of junior year, and 39.1% of senior year students acted altruistically. It was expected that students in freshman year might be reluctant to help, however, the results of the sophomore and junior year students were inconsistent with this expectation, showing that altruistic behavior is not significantly affected by undergraduate year.

On a different note, the results show that females tended to help more in the non-fiction condition, while males tended to help more in the fiction condition, albeit there’s no equal gender representation in the study. These findings can be an indication to gender discrepancies when it comes to superheroes allure, that possibly males identify with them more than females, even though the videos portrayed female superheroes.

**Conclusion**

The study attempted to measure the effects of fictional and non-fictional videos of heroic acts on situational altruism. The results were statistically insignificant possibly because of the sample size, one-time exposure, confusion between duty and ideal, as well as, the cultural aspect. Despite the efforts made to fight sexual harassment, it is still considered a social taboo and a high risk help situation.
Nonetheless, the study’s frequencies could indicate that those exposed to non-fictional videos had a higher likelihood of acting altruistically when they encounter a run-in with a naturalistic sexual harassment situation on campus than those exposed to fictional videos. Additionally, fiction has scored slightly higher when it comes to priming pleasure-based motivations and non-fiction in priming pressure-based motivations. As for the bystander barriers, the descriptive results indicate that those exposed to non-fiction experience them more than those exposed to fiction.

Deductively, even in a high cost help situation such as sexual harassment, it was noticed that those subjected to media priming had a higher likelihood of generating an altruistic behavior than a condition with no media priming. Furthermore, previous research usually compared pro-social and anti-social media priming, while this study opted to compare the effects of pro-social fictional and non-fictional media content.

Concluding that fiction involves ideals and role models, it involves more processing during exposure leading to faster reactions to stimuli, which could trigger want-to motivations, since there is no pressure to act altruistically from the fictitious media prime, and it generates defensive justifications to not acting altruistically pertaining to noticing the situation, identifying it as high risk and identifying its worthiness.

Non-fiction on the other hand, involves realistic situations revolving around ordinary people, it involves limited processing during exposure leading to more processing when a stimulus presents itself, which could trigger ought-to motivations, since the realistic media prime exerts virtual pressure to act altruistically, and it does
generate less defensive justifications to not acting altruistically pertaining to skill deficit and audience inhibition, rather than attempting to diffuse the responsibility.

In conclusion, based on the pro-social personality scale, the fiction, non-fiction and control conditions scored lower on the high cost helping situations, which indicates that media priming could have an effect when it comes to acting altruistically in a high cost help situation. Especially, since this situation is culturally considered a taboo, which could discourage people from helping rendering the results statistically insignificant.

The non-fictional media priming –portraying ordinary people in extraordinary situations- concerning high cost help situations could be more likely to generate altruistic behavior than fictional media priming portraying superheroes in extraordinary situations, based on the study’s frequencies. Finally, since the fictional media priming, resulting in an altruistic behavior in the study’s propositional model is labeled “Superhero Effect”, the researcher suggests that the non-fictional media priming resulting in an altruistic behavior be labeled “Real Hero Effect”.

**Limitations**

The study involved a lot of limitations, starting with time constraints; the thesis was executed over a period of three months, and the researcher had less than a month for data collection, analysis and discussion. Other limitations were related to the logistics of the execution of the experiment including; finding a vacancy in the faculty’s studio for the students to watch the videos, finding a quiet location for the staging, since the researcher wanted to make sure that there are no other distractions, as well as, ensure the safety of the confederates and minimize the possibility of anyone else unexpectedly
interfering, and trying to find a time where most of the students have a gap between lectures.

Recruiting the confederates to act in the staging was a major challenge, at first the researcher opted to hire actors from a professional agency, but it was high cost and it would have involved a lot of paperwork for the actors to be allowed on campus. Therefore, volunteers from the Arabic department in the Faculty of Mass Communication in Cairo University were recruited, so that the English section students in the study’s sample cannot identify the confederates. The confederates were recruited with great difficulty, since a lot of students didn’t want to waste their time and effort and were not feeling up for the task.

The confederates were trained and the situation was rehearsed, however, the human factor could not be controlled; their acting intensity differed within the same day, though this is inevitable to occur when they do the same situation for 24 times in a row. The researcher tried to contain it whenever she could, bringing it to the confederates’ attention. The other limitation is that each day of the four days where the experiment was conducted the researcher had to recruit new confederates to act, because most confederates didn’t want to do the whole four days, they agreed to do one. This has uncontrollably created differences in acting even though they all had the same script and the researcher’s remarks.

Accordingly, the researcher each day had to coordinate with the students, the confederates, the studio, as well as, the floor where the staging happens. Timing synchronization was of monumental importance, since the research assistants needed to
be in constant contact with the researcher and the researcher with the confederate “the bystander” and the confederate with the other confederates “the actors”, an ironclad network needed to be established between all parties, since any miscommunication could lead to the whole situation falling apart.

Gathering the volunteers was challenging too, since most of them didn’t want to skip their lectures even if the professor agreed for them to be excused, so the researcher had to find their gap hours and re-coordinate. Additionally, the sample needed to be larger, but within the time constraints and the logistical constraints, the researcher couldn’t make the sample bigger. Moreover, the absence of symmetrical gender representation in the sample was another limitation, however, since this was a volunteer sample, the researcher couldn’t control who volunteers, and it should be duly noted that a large proportion of the students in the Faculty of Mass Communication in Cairo University are females.

A pilot study needed to be conducted prior to the actual execution of the experiment, a sample of students needed to see and evaluate the videos before conducting the experiment as well, but this was not possible, since it jeopardized the experiment, the students could spread the word to their colleagues, and ruin the experiment. Also, any pretest conducted on the sample under study could prime the participants and taint the results. In terms of measurement, questions measuring whether the participants were affected by the videos needed to be included.
Future Studies

The study’s limitations present valid issues to be discussed in further studies, as previously mentioned, a larger sample could eliminate the problem of statistical insignificance of the results, as well as resolving the gender misrepresentation, and measuring the effects of the videos individually. Another suggestion is to study the effects of anti-social fictional and non-fictional media priming on altruism, and examine whether the media will negatively affect altruistic behavior and which type has a stronger effect if any; fiction or non-fiction.

Conducting multiple experiments involving low, moderate and high cost help situations could generate different results in terms of the distinction between fiction and non-fiction. Future studies could examine the effects of pro-social priming in different media such as, a newspaper/magazine, videos and video games on altruistic behavior. Studying the effects of media priming on future altruistic behaviors, as opposed to instantaneous altruistic behaviors could indicate the strength of media priming when it comes to period span for the effect to manifest. Finally, the effects of media priming on altruistic intentions versus actual altruistic behaviors merits further scrutiny.
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APPENDICES
Appendix I

A. Rushton Altruism Scale

This 20-item 5-point scale attempts to measure pro-social personality, starting with 1 (Never), 2 (Once), 3 (More than Once), 4 (Often), 5 (Very Often) to measure the following items.

1. I have helped push a stranger’s car that was broken down or out of gas
2. I have given directions to a stranger
3. I have provide change for a stranger (i.e.; coins or paper money that you give in exchange for the same amount of money in a larger unit)
4. I have given money to a charity
5. I have given money to a stranger who needed it or asked me for it
6. I have donated goods or clothes to a charity
7. I have done volunteer work for a charity
8. I have donated blood
9. I have helped carry a stranger’s belongings (books, parcels, etc)
10. I have delayed an elevator and held the door open for a stranger
11. I have allowed someone to go ahead of me in a lineup (in a supermarket, at a copy machine, at a fast-food restaurant)
12. I have stood up for a stranger being bullied/harassed
13. I have let a neighbor whom I didn’t know too well borrow an item of some value to me (e.g. dish, tools, etc)
14. I have bought “charity” goods deliberately because I knew it was a good cause
15. I have helped a classmate who I did not know that well with an assignment when my knowledge was greater than hers/his
16. I have, without being asked, voluntarily looked after a neighbor’s pets or children without being paid for it
17. I have offered to help a handicapped or elderly stranger across a street
18. I have offered my seat on a bus or train to a stranger who was standing
19. I have helped an acquaintance to move households
20. I have helped an acquaintance to move households
B. Pleasure and Pressure-based Motivations Scale

This 10-item 5-point scale attempts to measure the motivations related to the altruistic behavior, and whether they are pleasure or pressure-based motivations. Starting with 1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), 5 (Strongly Agree) in order to measure the following items.

1. Supporting other people makes me very happy. (Pleasure)
2. I do not feel obligated to perform selfless acts towards others. (Pressure) Reversed
3. I do not have a great feeling of happiness when I have acted unselfishly. (Pleasure) Reversed
4. I feel indebted to stand up for other people. (Pressure)
5. When I am able to help other people, I always felt good afterwards. (Pleasure)
6. I do not regard it as my duty to act selflessly. (Pressure) Reversed
7. Helping people who are in trouble does not raise my own mood. (Pleasure) Reversed
8. I feel a strong duty to help other people in every situation where it is possible for me. (Pressure)
9. I felt obligated to help since no one else was helping. (Pressure) Added by the researcher
10. I wanted to help despite the presence of others who could have helped too. (Pleasure) Added by the researcher
C. Bystander Barriers Scale

This 16-item 5-point scale attempts to measure the barriers that led to the non-altruistic behavior, starting with 1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), 5 (Strongly Agree) in order to measure the following items.

A) Failure to Notice the Situation

1. I was too busy to be aware of whether someone is at risk for sexual harassment.

B) Failure to Identify the Situation as High Risk

2. I find it hard to tell whether a guy is at risk for sexually harassing someone.

3. I was uncertain as to whether the girl was at-risk for being sexually harassed.

4. I thought the situation might be high in sexual harassment risk, but I didn’t say or do anything since other people appeared unconcerned.

C) Failure to Take Intervention Responsibility

5. I thought the girl was at risk for being sexually harassed, I thought I would leave it up to others to intervene. (Diffusion of Responsibility)

6. If I saw someone I didn’t know was at risk for being sexually harassed, I would leave it up to her friends to intervene. (Diffusion of Responsibility)

7. I am less likely to intervene to reduce a person’s risk of sexual harassment if I think she made choices that increased their risk. (Worthiness)

8. The girl was dressed provocatively, or acted provocatively, that is why I was less likely to intervene. (Worthiness)

9. I thought my intervention in the situation could endanger my wellbeing in any way (verbal or physical, etc.) So I didn’t intervene. (Worthiness)

10. If a person is dressed provocatively, or acts provocatively, I feel less responsible for preventing others from harassing them. (Worthiness)

11. I am more likely to intervene to prevent sexual harassment if I know the potential victim than if I do not. (Relationship to Potential Victim)
12. I am more likely to intervene to prevent sexual harassment if I know the person that may be at risk for committing sexual harassment than if I do not know him. *(Relationship to Harasser)*

**D) Failure to Intervene Due to Skill Deficit**

13. Although I would like to intervene when a guy’s sexual conduct is questionable, I am not sure I would know what to say or do.

14. Even if I thought it was my responsibility to intervene to prevent sexual harassment, I didn’t know how to intervene.

**E) Failure to Intervene Due to Audience Inhibition**

15. I was hesitant to intervene when the guy’s sexual conduct was questionable because I was not sure other people would support me.

16. Even if I thought it was my responsibility to intervene to prevent a sexual harassment, I didn’t intervene out of a concern I would look foolish.
Appendix II

RA Instructions

These instructions are meant to guide the researcher and the research assistants on what to say at each stage of the experiment, so that no group gets more or less information than the other.

- **When the students are gathered (24 students):** Hello, thank you so much for coming, we truly appreciate it. Firstly, we are going to divide you into 3 groups of eights. Each group will enter the studio to find the RA Ms…waiting for you. The RA will show you a 15 minute video, then one by one will go upstairs to the office for your one-on-one interview with MS….It won’t take more than half an hour. You are free to withdraw at any time, but kindly inform the RA.

- **When the Fiction group enters the studio:** I will show you a 15 minute video montage from superhero movies, then one by one will go upstairs to the office for your one-on-one interview with MS…

- **When the Non-Fiction group enters the studio:** I will show you a 15 minute video montage of real-life situations, then one by one will go upstairs to the office for your one-on-one interview with MS…

- **When the control group enters the studio:** Kindly wait here comfortable and one by one will go upstairs to the office for your one-on-one interview with MS…

- **In the Office:** Please answer this questionnaire…

- **Debriefing:** this study attempts to measure the effects of media on helping behaviors. Did you see the sexual harassment situation outside the office? This was a staged situation to examine actual helping behaviors. So, kindly answer this questionnaire as well. If you have any inquiries or if you are experiencing any feelings of discomfort please don’t hesitate to communicate with me. Thank you so much for your time and effort, your volunteering is a true testament to your helping behavior. Please don’t tell anyone about this experiment, since it is yet to be executed on your colleagues, and if any information is leaked it will ruin the entire experiment.
Appendix III

Script (in English)

This is the script that the confederates will recite in the staging, so that all participants are subjected to the same situation.

Girl: Are you following me!
Boy: I don’t know why you’re making such a fuss we’re in the same faculty
Girl: You have no self-respect
Boy: why are you being nasty. Just tell me your name
Girl: I don’t know you I’m not telling my name and if you don’t leave me alone I’m calling security
Boy: there’s no security here and no one is going to help you
Girl: You’re an animal. I’ll show you what I can do to you…there’s no network in this thing. Move away from me.
Boy: Who are you going to call…the president!
Girl: I am not going to dignify you with an answer. I’ll get them to confiscate your college ID
Boy: You’re beautiful even when you’re mad!

Script (in Arabic)

البنت: إنت ماتشي ورايا!
الولد: أنا مش فاهم إنت عاملة حوار ليه ده اجينا ف كلية واحدة
البنت: على فكرة إنت بني أدم مش محترم
الولد: ليه الغلط كده طبالوللي اسمك بس
البنت: أنا أعرفك! مش هفولتك حاجة ولو مبعدتش عنى هندلتك الأمن
الولد: مفيش أمن هنا ولا حد هيعبرك لو عملتي إيه
البنت: إنت حيوان وهتشوف أنا هعمل فيك إيه...مفيش شبكة في الزفت ده..وعي من وشي بقى!
الولد: يعني هكلم من رئيس الجمهورية!
البنت: أنا مش هارد عليك إنت أصلاً حفي..أنا هخلبهم يسحبوا منك الكارثة
الولد: والله جميل حتى وانت مترفزة!
Appendix IV
Confederate’s Notes

These are the notes that the confederate “the other bystander” will fill, while observing the situation.

Group Number:
Participant Number:

1- Did she/he notice the situation?
   o Yes
   o No

2- Did she/he turn away?
   o Yes
   o No

3- Did she/he check if anyone else sees the situation?
   o Yes
   o No

4- Did she/he intervene in any way?
   o Yes
   o No

5- What did she/he do or say?
Appendix V

Documentation of Informed Consent for Participation in Research Study

Project Title: “Superhero v Bystander Effect: Effects of Fictional and Non-Fictional Media Priming on Situational Altruism”
Principal Investigator: Nermine Mourad Aboulez
E-mail: nermineabulez@aucegypt.edu
Mobile: 01225202887

You are being asked to participate in a research study. The purpose of the research is to examine the effects of the media on society, and the findings may be published, or presented. The expected duration of your participation is 30 minutes maximum. The procedures of the research will be as follows. If you agree to participate in this research, you will watch a 15 minute video montage, then you will be called for a one-on-one interview to answer a questionnaire, and lastly, the researcher would like to discuss with you in more detail the purposes of the study you participated in. there will be no further requirements or future follow up.

There will not be benefits to you from this research. However, the benefit from this research can be shown in its contribution to knowledge. If you are interested, we can share the results of this research with you. Your participation is entirely voluntary, the information you provide for the purposes of this research is completely confidential.

There will be no major risks or discomfort associated with this research. However, if you have any questions about the research, your rights, research-related discomfort or any negative feelings after the completion of your participation, don’t hesitate to contact the Principal Investigator Nermine Mourad Aboulez at 01225202887.

Since participation in this study is voluntary, refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or the loss of benefits to which you are otherwise entitled.

Your participation in this study might be video recorded by the researcher solely for research purposes. However, you do not have to agree to your participation being video recorded, you have the right to ask the researcher not to use a video recording at any point of your participation in the study and to take legal action should your decision be ignored or abused by the researcher.

Signature

Printed Name

Date
**Project Title:** “Superhero v Bystander Effect: Effects of Fictional and Non-Fictional Media Priming on Situational Altruism”

**Principal Investigator:** Nermine Mourad Aboulez  
**E-mail:** nermineabulez@aucegypt.edu

**Mobile:** 01225202887

You are being asked to participate in a research study. The purpose of the research is to examine the media effects on society, and the findings may be published, or presented. The expected duration of your participation is 15 minutes maximum. The procedures of the research will be as follows. If you agree to participate in this research, you will be called for a one-on-one interview to answer a questionnaire, then the researcher would like to discuss with you in more detail the purposes of the study you participated in. There will be no further requirements or future follow up.

There will not be benefits to you from this research. However, the benefit from this research can be shown in its contribution to knowledge. If you are interested, we can share the results of this research with you. Your participation is entirely voluntary, the information you provide for the purposes of this research is completely confidential.

There will be no major risks or discomfort associated with this research. However, if you have any questions about the research, your rights, research-related discomfort or any negative feelings after the completion of your participation, don’t hesitate to contact the Principal Investigator Nermine Mourad Aboulez at 01225202887.

Since participation in this study is voluntary, refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or the loss of benefits to which you are otherwise entitled.

Your participation in this study might be video recorded by the researcher solely for research purposes. However, you do not have to agree to your participation being video recorded, you have the right to ask the researcher not to use a video recording at any point of your participation in the study and to take legal action should your decision be ignored or abused by the researcher.

**Signature**  

**Printed Name**  

**Date**
The Questionnaire

1- Have you seen these videos before? (Skip Q.1 if you didn’t watch anything)

   A. Yes
   B. No

2- Using the following scale, please select the category that conforms to the frequency with which you have carried out the following acts:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Never</th>
<th>Once</th>
<th>More than once</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have helped push a stranger’s car that was broken down or out of gas</td>
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<tr>
<td>2. I have given directions to a stranger</td>
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<td>3. I have provide change for a stranger (i.e.; coins or paper money that you give in exchange for the same amount of money in a larger unit)</td>
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<tr>
<td>4. I have given money to a charity</td>
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<td>5. I have given money to a stranger who needed it or asked me for it</td>
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<td>6. I have donated goods or clothes to a charity</td>
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<td>7. I have done volunteer work for a charity</td>
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<td>8. I have donated blood</td>
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<td>9. I have helped carry a stranger’s belongings (books, parcels, etc)</td>
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<td>11.</td>
<td>I have allowed someone to go ahead of me in a lineup (in a supermarket, at a copy machine, at a fast-food restaurant)</td>
<td></td>
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<tr>
<td>12.</td>
<td>I have stood up for a stranger being bullied/harassed</td>
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<td></td>
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<tr>
<td>13.</td>
<td>I have pointed out a clerk’s error (in a bank, at a supermarket) in undercharging me for an item</td>
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<td></td>
<td></td>
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<tr>
<td>14.</td>
<td>I have let a neighbor whom I didn’t know too well borrow an item of some value to me (e.g. dish, tools, etc)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>15.</td>
<td>I have bought “charity” goods deliberately because I knew it was a good cause</td>
<td></td>
<td></td>
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<tr>
<td>16.</td>
<td>I have helped a classmate who I did not know that well with an assignment when my knowledge was greater than hers/his</td>
<td></td>
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<tr>
<td>17.</td>
<td>I have, without being asked, voluntarily looked after a neighbor’s pets or children without being paid for it</td>
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<td>I have offered to help a handicapped or elderly stranger across a street</td>
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<td>19.</td>
<td>I have offered my seat on a bus or train to a stranger who was standing</td>
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<tr>
<td>20.</td>
<td>I have helped an acquaintance to move households</td>
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</table>
Appendix VI

Post-Debriefing Questionnaire

1- Did you intervene in the previous situation?

A. Yes
B. No

2- Express your attitude towards the following statements by checking the box that best describes your behavior:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Supporting other people makes me very happy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2) I do not feel obligated to perform selfless acts towards others.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) I do not have a great feeling of happiness when I have acted unselfishly.</td>
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<td>4) I feel indebted to stand up for other people.</td>
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<td>5) When I am able to help other people, I always felt good afterwards.</td>
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<td>6) I do not regard it as my duty to act selflessly.</td>
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<td>7) Helping people who are in trouble does not raise my own mood.</td>
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<td>8) I feel a strong duty to help other people in every situation where it is possible for me.</td>
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<td>9) I felt obligated to help since no one else was helping.</td>
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</table>
10) I wanted to help despite the presence of others who could have helped too.

3- Express your attitude towards the following statements by checking the box that best describes your behavior:

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<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I was too busy to be aware of whether someone is at risk for sexual harassment.</td>
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<td>2) I find it hard to tell whether a guy is at risk for sexually harassing someone.</td>
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<td>3) I was uncertain as to whether the girl was at-risk for being sexually harassed.</td>
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<td>4) I thought the situation might be high in sexual harassment risk, but I didn’t say or do anything since other people appeared unconcerned.</td>
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<td>5) I thought the girl was at risk for being sexually harassed, I thought I would leave it up to others to intervene.</td>
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<td>6) If I saw someone I didn’t know was at risk for being sexually harassed, I would leave it up to her friends to intervene.</td>
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<td>7) I am less likely to intervene to reduce a person’s risk of sexual harassment if I think she made choices that increased their risk.</td>
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<tr>
<td>8) The girl was dressed provocatively, or acted provocatively, that is why I was less likely to intervene.</td>
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</tbody>
</table>
9) I thought my intervention in the situation could endanger my wellbeing in any way (verbal or physical, etc.) So I didn’t intervene.

10) If a person is dressed provocatively, or acts provocatively, I feel less responsible for preventing others from harassing them.

11) I am more likely to intervene to prevent sexual harassment if I know the potential victim than if I do not.

12) I am more likely to intervene to prevent sexual harassment if I know the person that may be at risk for committing sexual harassment than if I do not know him.

13) Although I would like to intervene when a guy’s sexual conduct is questionable, I am not sure I would know what to say or do.

14) Even if I thought it was my responsibility to intervene to prevent sexual harassment, I didn’t know how to intervene.

15) I was hesitant to intervene when the guy’s sexual conduct was questionable because I was not sure other people would support me.

16) Even if I thought it was my responsibility to intervene to prevent a sexual harassment, I didn’t intervene out of a concern I would look foolish.
4- Gender:
   A. Female
   B. Male
5- Year in College:
   A. Freshman
   B. Sophomore
   C. Junior
   D. Senior

Thank you for your time & effort
Appendix VII

A. Non-Fictional Video Clip Description

The non-fictional video clip montage of heroic acts that the researcher showed to the non-fiction group is an approximately eleven minute long muted montage of clips showing real people helping/saving others.

The first clip (00:00-00:28) shows a security guard stopping a passenger from throwing himself in front of the train rails right before the train arrives to the station.

The second clip (00:28-01:04) shows a truck stuck on train rails; one of two men on a motorbike behind this truck get off and go push the truck until it's past the rails and rallies back fast to his ride missing the train by almost a second.

The third clip (01:04-01:46) shows a child playing by hanging himself on the stair-rod of an escalator in a shopping mall; the child is going up hanging to the side as the escalator moves. One man comes running to the child to pick him up right when he drops down. The clip shows the act from two different angles.

The fourth clip (01:46-02:07) shows a man pushing a woman down on train rails in a train station followed by another man punching the attacker twice, then going to pull the woman up to the platform. Seeing the attack, a security guard runs to catch the now fleeing attacker. Once the woman pulls herself together, the man also runs to catch the attacker.

The fifth clip (02:07-02:34) shows a woman standing to throw herself from a window on the top floor of an under-construction building; a man then dangled himself
from the roof pushing the woman inside the room with his legs, stopping her from committing suicide.

*The sixth clip* (02:34-03:06) shows a railway station where a man falls on the train rails from one platform; people on the opposite platform start waving to the coming train to stop, and another man goes down from this opposite platform to drag the man to the other rails away from the coming train, escaping it right before it almost hits them both.

*The seventh clip* (03:06-03:27) is also another one showing a passenger saving a fellow passenger after falling on train rails right before the train hits him.

*The eighth clip* (03:27-04:04) shows a man choking on something he ate in a restaurant; another man saved him by wrapping his arms around the choking man's chest from behind and performing first aid till he coughed what has been choking him out.

*The ninth clip* (04:04-04:13) shows a woman straddling the wall of a building's roof preparing to throw herself down. Then a man moved straddling the wall from behind her, then held her moving them both inside.

*The tenth clip* (04:13-04:40) shows a burning car with a man trapped under. A groups of bystanders cooperate and lift up the car while another pulls the man from under, and move him away to safety.

*The eleventh clip* (04:40-05:12) shows a man falling on the train rails, passengers waving at the coming train to stop, and a man runs down on the rails from far to save him. He dragged him away from the train.
The twelfth clip (05:12-05:40) shows a baby cart moving down the street unattended, then a man runs to save it from being run over by a truck. The mother then comes running and takes her baby back.

The thirteenth clip (05:40-06:04) is a clip of someone falling on the train rails, failing to get himself back up. Passengers from the opposite platform wave at the trains to stop and a man runs down the rails towards him to help him up.

The fourteenth clip (06:04-06:20) shows moving cars at an intersection. A pet jumps out of one of the cars, the following car stops right away and a woman from the first car runs to save the pet.

The fifteenth clip (06:20-06:56) shows a drowning car in a lake or a river. A group of people gathered around and kept swimming to save passengers from the drowning car. They saved the five or six people trapped there.

The sixteenth clip (06:56-07:24) shows a broken car with a man trapped under. People cooperate and lift the car and one of them drags the man from under it saving him.

The seventeenth clip (07:24-07:52) shows a woman falling down the train rails from a crowded platform; two men jumps down and they drag her up.

The eighteenth clip (07:52-08:35) shows a security guard stopping a passenger from throwing himself on the train rails in a train station right before the train arrives to the station.

The nineteenth clip (08:45-09:13) is also a clip of a man falling on the train rails and two men jumping down to help him up.
The twentieth clip (09:13-09:52) shows a robbery in a supermarket. A man attacks the owner and tries to rob the cash register when a man in a wheelchair attacks him trying to stop him. In his attempt to stop the attacker, the man falls down from his chair, other customers then gather and help him stop the attacker.

The twenty first clip (09:52-10:17) shows a man on a wheel chair falls down on train rails before he could stop. Then three men jump down and carry him and his chair back up.

The twenty second clip (10:17-10:53) shows a hall in a prison where a guard is sitting behind a counter. A prisoner then attacks him until the rest of the prisoners interfered to help the guard and save him from the brutal attack.

B. Fictional Video Clip Description

The fictional video clip montage of heroic acts that the researcher showed to the fiction group is an approximately twelve minute long montage of clips selected from superhero movies helping/saving others.

The first clip (00:00-01:49) is selected from the movie “Thor” (2011) and it shows Thor sacrificing himself to save innocent lives, by approaching the destroyer and telling him to take him instead. The destroyer knocks him down, then Thor gets his powers back for being worthy and kills the destroyer.

The second clip (01:50-02:44) is selected from the movie “Man of Steel” (2013) and it shows Superman saving Lois Lane from a burning spaceship right before it hits the ground.
The third clip (02:44-04:15) is selected from the movie “The Avengers” (2012) and it shows Scarlet Witch freaking out in the middle of the battle and Hawkeye encouraging her, then she saves his life.

The fourth clip (04:16-04:44) is selected from the movie “The Dark Knight Rises” (2012) and it shows Robin on his knees held at gun point and Batman saves his life.

The fifth clip (04:45-05:39) is selected from the movie “Spiderman 3” (2007) and it shows Gwen Stacy dangling from a falling building and Spiderman saves her before she hits the ground.

The sixth clip (05:40-06:54) is selected from the movie “The Avengers” (2012) and it shows Loki commanding the people to kneel before him, then an old man stood up to him, and he nearly killed him, but Captain America came to the rescue.

The seventh clip (06:55-07:48) is selected from the movie “Man of Steel” (2013) and it shows Zod trying to kill innocent people and Superman kills him to save them.

The eighth clip (07:49-09:00) is selected from the movie “The Dark Knight Rises” (2012) and it shows Batman sacrificing himself by taking a bomb away from the city to the middle of the ocean to explode, in the midst of the cheering crowds.

The ninth clip (09:01-10:59) is selected from the movie “Green Lantern” (2011) and it shows Hal Jordan saving the people from a crashing helicopter and then flying away.

The tenth clip (11:00-11:59) is selected from the movie “The Avengers” (2012) and it shows Captain America saving people from Chitauri and a waitress thanking the Avengers for saving her life.
To: Nermine Abouelez
Cc: Caroline Mikhail
From: Atta Gebril, Chair of the IRB
Date: April 20, 2016
Re: Approval of study

This is to inform you that I reviewed your revised research proposal entitled “Superhero v Bystander Effect: Effects of Fictional and Non-Fictional Media Priming on Situational Altruism” and determined that it required consultation with the IRB under the "expedited" heading. As you are aware, the members of the IRB suggested certain revisions to the original proposal, but your new version addresses these concerns successfully. The revised proposal used appropriate procedures to minimize risks to human subjects and that adequate provision was made for confidentiality and data anonymity of participants in any published record. I believe you will also make adequate provision for obtaining informed consent of the participants.

This approval letter was issued under the assumption that you have not started data collection for your research project. Any data collected before receiving this letter could not be used since this is a violation of the IRB policy.

Please note that IRB approval does not automatically ensure approval by CAPMAS, an Egyptian government agency responsible for approving some types of off-campus research. CAPMAS issues are handled at AUC by the office of the University Counsellor, Dr. Amr Salama. The IRB is not in a position to offer any opinion on CAPMAS issues, and takes no responsibility for obtaining CAPMAS approval.

This approval is valid for only one year. In case you have not finished data collection within a year, you need to apply for an extension.

Thank you and good luck.

Atta Gebril
IRB chair, The American University in Cairo
2046 HUSS Building
T: 02-26151919
Email: agebril@aucegypt.edu