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Gender Differences in Movie Superheroes' Roles, Appearances, and Violence

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Abstract: It is important to understand the content of media, as media can promote stereotypes that communicate what gender roles, appearances, and acts of violence are acceptable in society. This content analysis of 147 superheroes in 80 movies found that male heroes appeared much more frequently than female heroes. Females were more likely to work in a group while males were more likely to work alone. Males were more powerful, muscular, violent, and evil while women were more attractive, thin, sexy/seductive, innocent, afraid, and helpless. Compared to males', females' clothes (both costumes and non-costumes) were more revealing on both the upper and lower bodies. Although both genders frequently have special abilities and use weapons, male characters are more likely than female characters to have more than one special ability and use more than one weapon. Males more often had super strength and resistance to injury, while female characters more often were able to manipulate elements (e.g., fire). Males were significantly more likely to use fighting skills, fire/flame weapons, and guns than females. The messages portrayed through superhero movies are discussed, with emphasis on implications of gender differences in portrayals of characters in movies.

The portrayal of movie superheroes may influence gender-related attitudes and behaviors, and reify socially constructed gender norms. Media portrayals communicate behavioral norms for both males and females (Paek, Nelson, & Vilela, 2011) and have potential to affect behaviors and attitudes. For instance, individuals who watch large amounts of television typically have more stereotypical beliefs about gender than people who watch less (Signorielli, 1989) and viewing superhero programs has been positively related to male stereotyped play for boys and playing with weapons for both

genders (Coyne, Linder, Rasmussen, Nelson, & Collier, 2014). Both adults and children imitate characters' actions or appearance (e.g., Coyne et al., 2014; Dittmar, 2009).

Content analyses of movies (and other media) are one method of understanding messages related to gender norms (e.g., Schultz, Moore, & Spitzberg, 2014). The purpose of this content analysis is to analyze superhero movies and identify gender differences in superheroes' roles, appearance, and violence.

The Importance of Studying Superhero Movies

Superhero movies have grown in popularity, especially in recent years, and attract a large number of viewers (**Time Magazine** (http://time.com/79410/justice-league-superhero-universe/)). As of 2016, six of the top 30 grossing films of all time are superhero movies (**BoxOfficeMojo.com** (http://www.boxofficemojo.com/alltime/domestic.htm)). Superhero films are action-oriented and often depict individuals with extraordinary powers, technology, or skills who combat often equally extraordinary evildoers. Essentially, superheroes serve as exemplars and their depiction may communicate ideas about a wide range of societal norms and values, including those relating to masculinity and femininity.

Children view superheroes as role models because of traits (e.g., appearance) or skills (e.g., weapons, violence) the characters possess (Anderson & Cavallaro, 2002;), which contribute to expectations and perceptions of gender roles (Jaffe & Berger, 1994). Messages about gender are communicated in both the quantity and qualities of male and female characters. For instance, male characters often outnumber female characters in video games (Dietz, 1998; Ivory, 2006; Miller & Summers, 2007; Scharrer, 2004), television shows (including cartoons; Aubrey & Harrison, 2004; Baker & Raney, 2007), and advertising (Paek et al., 2011) perhaps because boy viewers outnumber girl viewers (Thompson & Zerbinos, 1997) or because boys are considered less likely to watch programs that have female lead characters than those that have male leads (Thompson & Zerbinos, 1997). Further, male and female characters are portrayed differently. Male heroes are more often highly aggressive (Milkie, 1994) while female heroes are more often compassionate, nurturing, and understanding (Calvert, Kondla, Ertel, & Meisel, 2001). Underrepresentation may extend beyond gender. For example, many superheroes appear to be White males. The lack of diversity in superhero renditions may add to socially constructed views about race/ethnicity, gender, and their intersection. Also, gender norms might be racialized, such that White superheroes

might be depicted with different qualities than Black superheroes. Considering their popularity, it is important to analyze the messages superhero films convey.

Content of Media: Roles, Appearance, and Violence

Previous studies evaluated gender roles in video games (Dietz, 1998; Ivory, 2006; Miller & Summers, 2007), cartoons (Baker & Raney, 2007; Calvert et al., 2001), and TV advertising (Paek et al., 2011), but have not specifically focused on superhero characters. This content analysis expands on previous research by analyzing superhero movies and reveals how superhero movies portray men and women in terms of their roles, appearance, and the type/quantity of violence they commit. Furthermore, although the researchers recognize the importance of examining race as it relates to gender, as will be demonstrated, in order to achieve adequate sample sizes, the current project focuses on gender. We encourage future research to focus on the intersections of race and gender in studying media with larger samples.

Gender Differences in Roles

When females are shown in media, they are sometimes portrayed as non-essential or passive characters (Dietz, 1998; Haninger & Thompson, 2004; Ivory, 2006). Female characters are more likely than males to have a mentor (Baker & Raney, 2007) and majority of female characters work in a team rather than alone (Baker & Raney, 2007). Collectively, these results may suggest to viewers that women are less important, knowledgeable, and capable than men – and less likely to be a hero (Miller & Summers, 2007; Signorielli, 1989; Thompson & Zerbinos, 1997). Further, these portrayals may suggest that males do not need to consult others or require help. In sum, media research suggests that there might be important gender differences in the roles of male and female superhero characters. Prior research has also examined gender differences in appearance (e.g., Ivory, 2006; Miller & Summers, 2007).

Gender Differences in Appearance

Previous content analyses of media characters have revealed that women are shown primarily as sex objects (Miller & Summers, 2007). Females are more likely than males to be portrayed in a sexualized fashion (Ivory, 2006) or as engaging in sexually suggestive behavior (Haninger & Thompson, 2004). In doing so, women typically wear less and more provocative clothing than men (Dietz, 1998; Thompson & Haninger, 2001; Scharrer, 2004). Generally, females are portrayed as attractive, sexy, and feminine

(Baker & Raney, 2007; Dietz, 1998; Ivory, 2006; Miller & Summers, 2007; Scharrer, 2004), while males are portrayed as rugged, tough, masculine, and muscular (Baker & Raney, 2007; Miller & Summers, 2007; Scharrer, 2004). Females are more often portrayed as helpless or as victims than males (Aubrey & Harrison, 2004; Dietz, 1998; Miller & Summers, 2007; Thompson & Zerbinos, 1997). Also, in cartoons, females are depicted as more emotional and superficial or more likely to get overexcited in a crisis than males (Baker & Raney, 2007). Such results indicate that men and women are portrayed very differently in terms of appearance and behaviors, including behaviors associated with power or aggression.

Gender Differences in Violence

Past content analyses have indicated that male characters are frequently violent (Scharrer, 2004), use more weapons, and have more abilities (i.e., invisibility, super speed, martial arts, flying, or using magic) than female characters (Miller & Summers, 2007). Females' victories are achieved through wit, nurturing, compassion, and persuasion rather than the weaponry, physical strength, and aggression of their male counterparts (Calvert et al., 2001). Thompson and Zerbinos (1997) found that both male and female children perceived male cartoon characters as more violent than female characters. In contrast, Baker and Raney (2004) found no significant differences in aggression between male and female characters in cartoons. These studies indicate that, in some contexts, the media portrays men and women differently in terms of violence and conflict resolution. This could reinforce gender stereotypes that women are less powerful or have fewer abilities than men and that men are not capable of nurturing or compassion. The current study finds similar gender differences.

Overview of Study

This study examined full-length superhero movies to determine if there are gender differences in characters' roles, appearances, and violence.

A general research question and several hypotheses were developed based on past content analyses. The general research question asks how characters are portrayed in superhero movies. Specifically, what roles do the superhero characters play (e.g., hero, supplemental character)? Are they portrayed as muscular, attractive, powerful, or sexy? Are they violent, do they have special powers, and do they use weapons?

Hypotheses:

Male characters will have different general roles (e.g., less likely to work in a group) than females (Hypothesis 1a) and different specific roles (e.g., soldier, detective) than females (Hypothesis 1b).

- ¥ Males will appear more muscular and powerful than females, who
 will be more attractive, sexy, and thin (Hypothesis 2a) and wear more
 revealing clothing than male characters (Hypothesis 2b).
- ¥ Males will have more special powers/abilities (e.g., super strength)
 (Hypothesis 3a) and will use weapons more often than females
 (Hypothesis 3b).

Methods

Movies were selected from a list of "comic book /superhero" movies categorized by Blockbuster.com. The list contained 146 movies released between 1978 (starting with *Superman: The Movie*) and 2009. Eighty full-length motion pictures (listed in Appendix A) or cartoons available for rent in the English language were selected for analysis from this list. The remainder were excluded due to a lack of availability (not available for rent) or because they were offered in only a foreign language. Researchers selected the *two* main male superheroes (if two were available; if more than two were available, two were selected randomly) and *all* female superheroes. A total of 147 hero characters were evaluated. Despite over sampling of female heroes, there were only 47 female heroes and 100 male heroes, a rate of 1 female for every 2.13 male characters.

A codebook was developed based on past content analyses and a literature review. Researchers watched one movie in order to operationalize study definitions (e.g., societal standards of size, attractiveness, behavior). Facial expressions (e.g., angry, happy) were assessed with an explicit smile or frown for both male and female characters. Assessments of other characteristics, such as muscularity, were gendered. For example, female characters were rated on muscularity relative to other females. Changes to the codebook were made based on discussion between researchers.

Next, inter-rater reliability analysis ensured that researchers had a common understanding of the questions and operational definitions of variables. Two researchers watched the same movie and completed their codebooks individually. They then compared responses and settled disagreements through discussion. Sixteen movies were included in the inter-rater reliability analysis. Holsti's coefficient revealed

an overall inter-rater reliability rate of .90, indicating that coders had a high level of overall agreement (see Table 1). Coefficients for individual variables ranged from 0.66 for the sexy/seductive variable to 0.97 on other variables. One researcher coded the remaining 64 movies.

Table 1: Holsti's coefficient of reliability for all factors

Variable	Holsti	Variable	Holst
Gender of main character	0.97	Role of character	0.97
Character's looks: muscular	0.84	Character's looks: sexy or seductive	0.66
Character's looks: attractive	0.7 0.78	Character's looks: thin	0.69
Character's looks: powerful	0.84	Character's looks: helpless	0.88
Character's looks: helpful	0.81	Character's looks: evil	0.91
Character's looks: happy	0.72	Character's looks: mad	0.78
Character's looks: carefree	0.84	Character's looks: innocent	0.84
Character's looks: afraid	0.81	Character's looks: violent	0.69
Character's ability: invisible	0.97	Character's ability: super speed	0.94
Character's ability: martial arts	0.94	Character's ability: skate/board/bike	0.97
Character's ability: special senses	0.97	Character's ability: flying	0.97
Character's ability: magic	0.97	Character's ability: using weapons	0.97
Character's ability: swim	0.97	Character's ability: super strength	0.94

Character's ability: resistance to injury	0.97	Character's ability: manipulates elements	0.97
Character's weapon: gun	0.97	Character's ability: other	0.97
Character's weapon: fire	0.97	Character's weapon: knife/sword	0.91
Character's weapon: fighting	0.94	Character's weapon: grenades	0.97
Character's weapon: tank	0.97	Character's weapon: ice	0.97
Character's weapon: magic spells	0.97	Character's weapon: bow and arrow	0.97
Character's weapon: rope	0.97	Character's weapon: poison	0.97
Character wears costume	0.94	Character's weapon: other	0.97
Costume: overall	0.84	Costume: overall tightness	0.84
Costume: revealing lower body	0.94	Costume: revealing upper body	0.91
Non-costume clothes: overall	0.88	Non-costume clothes: overall tightness	0.84
Non-costume clothes: revealing lower body	0.91	Non-costume clothes: revealing upper body	0.88
Overall Holsti coefficient	0.90		

Measures

The codebook included variables measuring gender, appearance, special abilities, and weapons. Appearance and attire variables were rated using a Likert scale of 0 (not at all) to 4 (extreme). Special abilities and weapon usage variables were scored as "yes" (present) or "no" (not present). "Yes/no" questions assessed characters' roles (e.g., does hero work in a group?).

Results

Difference of proportions tests determined the variation between male and female superheroes in regard to roles, weapon usage, and special abilities. Difference of means tests (t-tests) assessed significant differences between male and female superhero appearance and attire.

Research Question: General Portrayal of Characters

The research question asks how characters are portrayed in superhero movies. For example, what abilities do they have? What roles do they play? Are they muscular, attractive, powerful, or sexy? Males were rated an average of 2.83 (out of 4) on the powerful scale, with 84% of characters scoring above the scale midpoint. Similarly, males scored 2.42 on the muscular scale, with 77% scoring above the scale's midpoint. Females averaged 2.36 on the sexy/seductive scale, with 74.5% scoring above the midpoint. Similarly, females scored 2.66 on a scale measuring thinness, with 78.8% scoring above the scale's midpoint. They also averaged 3.15 in attractiveness, with 100% scoring above the midpoint. Thus, the majority of male characters were portrayed as powerful and muscular, while the majority of females were portrayed as sexy, thin, and attractive.

Twenty of 47 (42.6%) female characters and 75 of 100 (75%) male characters had more than one special ability, indicating 1 female for every 3.75 male characters. Twelve of 47 female characters (25.5%) and 58 of 100 male characters (58%) had more than one weapon, indicating 1 female for every 4.83 male characters.

Hypothesis 1 investigated gender differences in superheroes' roles.

Hypothesis 1a was partially supported: male characters had different general roles than females. Most (71.9%) male characters did *not* work in a group while 66% did so; further, 46.8% of women were supplemental characters.

Hypothesis 1b was partially supported: males and females have different specific roles. The only significant gender difference was that men were more likely to be detectives or secret agents (see Table 2).

Table 2: Difference of proportions: Gender differences of character roles

	Female (n=47)	Male (n=100)	<i>95%</i> CI	p value	z- score
Looks like real man/woman	93.6%	83.0%	[0.47%, 20.77%]	0.04	2.05
Detective, secret agent	0.0%	7.0%	[-12.00%, -2.00%]	0.006	-2.74
Robot	0.0%	2.0%	[-4.74%, 0.74%]	0.153	-1.43
Zombie or other "undead"	0.0%	6.0%	[-10.65%, -1.35%]	0.012	-2.53
Non-human cartoon	2.1%	14.0%	[-19.83%, -3.93%]	0.003	-2.93
Police officer or security officer	2.1%	7.0%	[-11.36%, 1.61%]	0.141	-1.47
Soldier, warrior, ninja	10.6%	19.0%	[-20.06%, 3.34%]	0.161	-1.4
Human that can transform into something else	12.8%	22.0%	[-21.76%, 3.29%]	0.149	-1.44
Other	8.5%	16.0%	[-18.23%, 3.25%]	0.172	-1.37

Hypothesis 2 determined whether there were gender differences in characters' appearance and attire.

Hypothesis 2a was mostly supported: there were gender differences in the appearance of characters. Table 3 indicates means for males were significantly higher than means for females on the items measuring power, muscularity, violence, and evil. In comparison, means for females were significantly higher than means for males on attractiveness, thinness, sexiness/seductiveness, innocence, fear, and helplessness.

Table 3: Difference of means: Gender differences in character appearance

	Female M (n = 47)	Male M (n = 100)	95% CI	p value	t-Score
Evil	0.128	0.33	[-0.4, -0.004]	0.045	-2.02
Afraid	1.32	0.704	[0.236, 0.994]	0.002	3.23
Helpless	1.3	0.81	[0.155, 0.821]	0.005	2.92
Innocent, Sweet	1.85	0.96	[0.48, 1.303]	0.000	4.3
Sexy or Seductive	2.36	0.97	[0.954, 1.829]	0.000	6.33
Carefree	0.81	0.97	[-0.528, 0.205]	0.383	-0.88
Нарру	1.85	1.69	[-0.212, 0.534]	0.394	0.86
Angry	1.36	1.78	[-0.843, 0.006]	0.053	-1.96
Attractive	3.149	1.8	[1.01, 1.688]	0.000	7.87
Thin	2.66	2.14	[0.092, 0.945]	0.018	2.42
Violent	1.37	2.23	[-1.296,0425]	0.000	-3.92
Muscular	0.872	2.42	[-1.929, -1.166]	0.000	-8.03
Helpful	2.4	2.58	[-0.548, 0.197]	0.352	-0.94
Powerful	1.66	2.83	[-1.663, -0.678]	0.000	-4.74

Hypothesis 2b was mostly supported: female characters wore more sexy and revealing clothing than males. Table 4 indicates means for female characters were significantly higher than means for male characters on variables measuring the revealing nature of non-costume clothing (e.g., clothes the character wore when not acting as the superhero) and costume clothing (e.g., superhero costume). This result held for both the upper body *and* the lower body. Similarly, females' non-costume clothing was significantly tighter than males'. The only category not significant was the overall tightness of the costume clothing, which may be confounded by the tight clothing inherent to the genre.

Table 4: Difference of means: Gender differences of character attire

	Female M (n = 44)	Male M (n = 89)	95% CI	p value	t- score
Non-costume Clothing Revealing Overall	0.86	0.34	[0.163, 0.891]	0.005	2.88
Non-costume Clothing Upper Body Revealing	1.16	0.52	[0.256, 1.029]	0.001	3.31
Non-costume Clothing Lower Body Revealing	1.23	0.66	[0.153, 0.976]	0.008	2.73
Non-costume Clothing Tightness	1.36	0.76	[0.158, 1.041]	0.008	2.71
	(n = 32)	(n = 70)			
Costume Revealing Overall	1.50	0.59	[0.386, 1.442]	0.001	3.48
Costume Lower Body Revealing	1.13	0.53	[0.096, 1.097]	0.020	2.39
Costume Upper Body Revealing	1.44	0.69	[0.183, 1.321]	0.011	2.65

Costume Overall Tightness	2.65	2.09	[-0.063, 1.182]	0.077	1.80

^{**}Note that the n varies because some characters wore only costumes, some only wore non-costumes, and some wore both.

Hypothesis 3 determined whether there were gender differences in characters' special abilities and weapons.

Hypothesis 3a was partially supported: there were differences in *special abilities* of male and female characters. Table 5 indicates males have significantly more special abilities. Males more often had super strength and resistance to injury, while female characters more often were able to manipulate elements (e.g., fire, water,).

Table 5: Difference of proportions: Gender differences of character special abilities

	Female (n=47)	Male (n=100)	95% CI	P- Value	Z- Score
Special Abilities Overall	68.1%	85.0%	[-31.97%, -1.86%]	0.028	-2.20
Become invisible	2.1%	1.0%	[-3.44%, 5.59%]	0.628	0.48
Swim	0.0%	2.0%	[-4.74%, 0.74%]	0.153	-1.43
Skateboarding/snowboarding/ bike riding	0.0%	2.0%	[-4.74%, 0.74%]	0.153	-1.43
Manipulate elements (fire, water, ice, wind, etc)	21.3%	7.0%	[1.55%, 27.00%]	0.028	2.20
Magic	4.3%	7.0%	[-10.38%, 4.89%]	0.481	-0.70
Flying	17.0%	20.0%	[-16.28%,	0.661	-0.44

			10.32%]		
Special senses (seeing, hearing)	12.8%	22.0%	[-21.76%, 3.29%]	0.149	-1.44
Super speed	17.0%	23.0%	[-19.52%, 7.57%]	0.387	-0.87
Resistance to injury	10.6%	32.0%	[-34.06%, -8.66%]	0.001	-3.3
Martial arts	29.8%	40.0%	[-26.43%, 6.01%]	0.217	-1.23
Super strength	17.0%	44.0%	[-41.47%, -12.48%]	<0.005	-3.65
Using weapons	36.2%	52.0%	[-32.70%, 1.04%]	0.066	-1.84
Other	14.9%	8.0%	[-4.59, 18.38%]	0.239	1.18

Hypothesis 3b was partially supported: male characters used more *weapons* than females. Table 6 indicates males were significantly more likely to use fighting skills, fire or flame weapons, and guns.

Table 6: Difference of proportions: Gender differences of character weapon usage

	Female (n=47)	Male (n=100)	95% CI	P-Value	Z-Score
Were weapons used	70.2%	87.0%	[-31.43%, -2.15%]	0.025	-2.25
Ice / Freezing Device	4.3%	0.0%	[-1.52%, 10.03%]	0.148	1.45
Rope	0.0%	1.0%	[-2.95, 0.95%]	0.315	-1.01
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Bow & Arrow	4.3%	1.0%	[-2.84%, 9.35%]	0.295	1.05
Tank or other vehicle	0.0%	2.0%	[-4.74%, 0.74%]	0.153	-1.43
Magic Spells	2.1%	2.0%	[-4.83%, 5.08%]	0.96	0.05
Grenades	2.1%	9.0%	[-13.84%, 0.09%]	0.053	-1.93
Fire / Flame	2.1%	13.0%	[-18.65%, -3.10%]	0.006	-2.74
Knife / Sword	21.3%	32.0%	[-25.57%, 4.13%]	0.157	-1.42
Guns	23.4%	40.0%	[-32.05%, -1.15%]	0.035	-2.11
Fighting	34.0%	62.0%	[-44.51%, -11.40%]	0.001	-3.31
Other	31.9%	28.0%	[-12.06%, 19.89%]	0.631	0.48

Additional Observations

Although not a major focus of the research, we noted some interesting patterns regarding the race of the female characters. For instance, they often were stereotyped, masked, and/or non-humans in movies targeted toward a non-White audience (e.g., homogeneous group of actors of color). In the entire sample, 101 characters were White, 17 were Black, 4 were Latino, and 4 were Asian. The race of the others was unidentifiable (e.g., they wore a costume, were non-human). Because of the very small sample of characters of color, it is not statistically meaningful to do quantitative comparisons of interactions between genders. However, a few notes can be made about the intersections of race and gender. While a detailed qualitative analysis is beyond the scope of this paper, there are some notable observations about the portrayal of female characters of color.

Of the 47 female characters, only 11 were characters of color. Five female characters were Black—but this is misleading because three of them were the same character

appearing in three different movies (*X-Men*'s Storm who is a mutant). One is Patience (a very stereotypical feminine name) Phillips, who plays Catwoman. Of interest, both Storm and Catwoman characters are played by Halle Berry whose mother is White and father is Black (although she identifies as Black). The final Black character is Vanessa from *Blade*, who is a vampire. Notably, of these three characters, none is a "normal human"; they are mutants or vampires, and wear costumes to hide their identity.

Four female characters were Asian. *Silver Hawk* is a Hong Kong movie with a female masked hero whose stereotypical expertise is martial arts. Two movies were part of a Hong Kong produced trilogy in which all the characters are Asian (e.g., *Thief Catcher, the Heroic Trio*). The fourth was a female martial artist in the Japanese film *Red Shadow*. All of these are likely marketed for Asian audience, and all three portray Asian women in a stereotypical way.

Only 2 were Latina, including one that was a stereotypical role: Maria from *Zorro*. The other is the Pink Power Ranger who wears a costume when fighting crime. Note that they have stereotypically Latina names (Maria) or wear femininized colors (Pink). Given the large (and growing) Latino population in the U.S., the lack of Latino characters is especially problematic. We hope that future research will investigate issues of race, gender, and superheroes further.

Discussion

This content analysis revealed significant gender differences in the portrayal of superhero characters' roles, appearance, and violence. Supporting earlier findings of video games characters (e.g., Miller & Summers, 2007), television shows (including cartoons; e.g., Baker & Raney, 2007), and advertising (Paek et al., 2011), female characters are less represented than male characters. Researchers selected and analyzed *only two* male heroes and *all* female heroes per movie, yet there were still twice as many males. Also similar to past studies (e.g., Baker & Raney, 2007), males were portrayed more often as individual heroes rather than teams working in groups.

Current findings replicated previous studies, which found males were portrayed as more powerful and muscular (e.g., Scharrer, 2004) and females as more sexy and attractive (e.g., Ivory, 2006). Female characters wore significantly more revealing clothing, in both non-costume and costume (e.g., Miller & Summers, 2007) and were portrayed as more helpless than males (e.g., Aubrey & Harrison, 2004).

Finally, male characters were more likely to have more than one special ability and use more than one weapon.

Results have implications for superhero movie viewers, and society more broadly. If media frequently and consistently underrepresent female characters and portray them as supplemental characters who need the help of others, then viewers might believe that these depictions apply to women in general (Aubrey & Harrison, 2004). Gender differences in media role portrayals are influential because these portrayals can perpetuate stereotypes about behavioral norms for males and females (Paek et al., 2011). For example, when media portray females as helpless and passive, males might expect females to act accordingly, and females might underestimate their ability to protect themselves.

Results of this study correspond with previous research (e.g., Ivory, 2006): media portray men as powerful and muscular and women as attractive, sexy, and thin. Such portrayals might have effects on self-esteem and body image. Females might feel compelled to participate in more sexualized behavior by wearing more revealing clothing in order to gain acceptance from males. Females might also adopt unhealthy eating habits to be thin like their media role models. Similarly, men might feel inferior after comparing themselves to unrealistically muscular and powerful male superhero characters. This could result in negative self-esteem, steroid usage, or other drastic attempts to create a muscular physique. According to Dittmar (2009), body image contributes to mental and physical well-being. Depression and social anxiety can result from dissatisfaction with one's physical appearance when comparisons are made to fictional or real people,

Finally, the study has implications for viewers of violent media. This content analysis confirms that male heroes more frequently used violence to resolve conflict (e.g., more use of abilities and weapons) as compared to females (who were portrayed as significantly more helpless and afraid). Viewers might infer that it is not acceptable for a man to be compassionate; instead, he must be violent. These media portrayals might relate to aggressive or uncooperative behavior (Anderson, Gentile, & Buckley, 2007) or bullying (American Academy of Pediatrics, 2009). Viewers may perceive that because there is so much violence (e.g., usage of weapons) in the media that violence in real life is an acceptable solution to resolving conflict.

Limitations

One limitation of this study is that not all movies on the list were evaluated. This content analysis examined approximately 55% of the movies provided on the full list from Blockbuster. Due to the lack of availability or because of a foreign language, researchers were unable to determine if there are systematic differences in gender roles, appearance, and violence presented in those movies that were excluded. Further, it is possible that some superhero movies were left off the Blockbuster.com list and not considered in this study.

Another limitation is that not all superhero characters were analyzed. Researchers chose all females, but only two *main* male characters. Male characters who appeared only briefly in the movie may differ from main characters. This procedure also means that *main* male characters were compared to *all* female characters. A comparison of only main male and main female characters would be a more direct evaluation.

Finally, tests of interrater reliability measured whether the researchers were coding similarly to each other, however this does not address the validity of the coding. Both researchers could have the same bias (e.g., perceiving females as more angry than males), but this is difficult to assess.

Future Directions

As mentioned previously, future research may benefit from an examination of race/ethnicity in addition to gender as they relate to superheroes and they ways in which they are portrayed. A quick perusal of contemporary popular superhero movies (e.g., *Batman vs. Superman, Iron Man 3* (http://www.imdb.com/title/tt1300854/) , *Spider-man* (http://www.imdb.com/title/tt0145487/)) indicates that most leading characters are White males. On the rare occasion that a female is a leading superhero character (e.g., *Supergirl* (http://www.imdb.com/title/tt4016454/?ref_=nv_sr_1) , *Jessica Jones* (http://www.imdb.com/title/tt2357547/)) or the most powerful character (e.g., *X-Men's* Jean Grey/Phoenix), the character is also White.

Media portrayals can perpetuate sexist social norms and the objectification of women. Furthermore, mainstream media commonly trivialize or hypersexualize women of color (Guzmán & Valdivia, 2004; Manatu, 2002; Martinez, 2004) and promote impossible standards of beauty (Perry, 2003). Also, women of color are often seen as characters that assimilate to a White, Westernized culture and are repeatedly dominated or defined by men (Brooks & Hérbet, 2004; Guzmán & Valdivia, 2004). In the brief review

of our sample, we noted that characters of color were often masked, given stereotypical names, or portrayed as characters that were not human. Interestingly, Halle Berry (who is biracial) was chosen to play the Black character—epitomizing the need for Blacks to be "as White" as possible.

The current content analysis confirmed that women were underrepresented in superhero movies. Future research could examine the frequency with which members of marginalized groups are represented in superhero movies and the degree to which their roles, appearance, and tendency for violence may differ, especially in terms of gender.

Future research should identify the impacts of these gender differences on movie viewers. Also, more research needs to be conducted in order to determine the impact media, specifically superhero movies, have regarding gender role expectations and stereotypes.

Conclusion

The current study revealed significant gender differences in the portrayal of superhero characters in movies. Male superheroes outnumbered females and more often did not work in a group. At the same time, females were more likely to work in groups, and were often supplemental characters. These portrayals might signify to viewers that females are of a lower status and less capable of fending for themselves than males. Females wore more revealing clothing than men, which comports with other studies that find women objectified in media. Male characters were more muscular and powerful while female characters were more attractive, sexy, thin, afraid, and helpless. Lastly, males used special abilities and weapons more often than females, while females were more likely to manipulate natural elements. Collectively, these depictions may communicate ideas about women as nurturing and fertile, passive non-agentic background characters and (White) men as powerful masters of reason who operate in the foreground (Plumwood, 1993).

Media influences gender roles (Signorielli, 1989), appearances (Anderson & Cavallaro, 2002), and the propensity for violence (American Academy of Pediatrics, 2009). Gender inequality may be harmful because it limits socially accepted roles and reinforces stereotypes within society, which might affect how people judge and treat others (Paek et al., 2011).

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Appendix A

Films Included in Analyses

Barb Wire	1996	R
Batman	1989	PG-13
Batman & Mr. Freeze Subzero	1998	NR
Batman and Robin	1997	PG-13
Batman Beyond: Return of the Joker	2002	PG-13
Batman Forever	1995	PG-13
Batman Returns	1992	PG-13
Blackmask	1999	R
Blade	2004	R
Blade	1998	R
Blade Trinity	2004	R
Blankman	1994	PG-13

Catwoman	2004	pg-13
Daredevil	2003	PG13
Dark Man 2	1995	R
Darkman	1994	R
Darkman III: Die Darkman Die	2007	R
Dick Tracy	1990	PG
Fantastic Four Rise of the Silver Surfer	2007	pg-13
Flash Gordon	1980	PG
Ghost Rider	2007	PG 13
Green lantern: First Flight	2009	PG-13
Hancock	2008	PG-13
Hellboy II	2008	PG13
Hellboy	2004	PG-13
Hulk Vs	2009	PG-13
Ironman	2008	PG-13
Judge Dred	1995	Action
Justice League: The New Frontier	2008	PG-13

Gender Differences in Movie Superheroes' Roles, Appe	Jaranocs, and	noience - Ada New Medi
Meteor Man	1993	PG
My Super Ex-Girlfriend	2006	PG-13
Mystery Men	1999	PG-13
Popeye	1980	NR (Not Rated)
Power Rangers Mystic Force Dark Wish	2006	PG
Red Shadow	2001	NR (Not Rated)
Sidekick	2005	not rated
Silver Hawk	2005	PG 13
Sky High	2005	PG
Spawn	1997	PG-13
Spider-man	2001	PG-13
Spider-man 2	2004	PG-13
Spider-Man 3	2007	PG-13
Super Capers	2008	PG
Superhero Movie	2008	PG-13
Superman/Batman: Public Enemies	2009	PG-13
Teenage Mutant Ninja Turtles II: The Secret of the Ooze	1991	PG
The Crow	1994	R

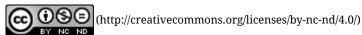
The Crow: City of Angels	1996	R
The Crow: Wicked Prayer	2005	R
The Crow: Salvation	2000	R
The Dark Knight	2008	PG13
The Fantastic Four	2007	PG-13
The Heroic Trio	1992	N/a
The Hulk	2003	PG-13
The Incredible Hulk	2008	PG-13
The incredible Hulk	2003	PG-13
The Incredibles	2004	PG
The Invincible Iron man	2007	PG-13
The League of Extrodinary Gentlemen	2003	PG-13
The Ninja Turtles 3	1993	PG
The Phantom	1996	PG
The Punisher	2004	R
The Punisher 1989	1989	R
The Shadow	1994	PG-13

Gender Differences in Movie Superficioes Role		
The Spirit	2008	R
TMNT	2007	PG
Ultimate Avengers 2	2006	PG-13
Unbreakable	2000	PG-13
Underdog	2007	PG
Watchmen	2009	R
Wonder Woman	1975	NR (Not rated)
X-men	2000	PG-13
X-Men 2: United	2003	PG-13
X-Men, Origins	2009	PG-13
X-Men: The Last Stand	2006	PG-13
Zoom	2006	G
Zorro: Return to the Future	2007	NR (not rated)

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