PRIMARY RESEARCH

How easy it is to deceive people on social media through photo manipulation, and their attitude towards it

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Abstract

Photo manipulation is an editing method of artists and photographers to enhance an image. However, despite its beneficial intentions, there has been an issue with the effect of manipulated images on the people. It produces idealistic perfection that does not exist and is sometimes used to simply exploit an image for harmful reasons. Unfortunately, since photo manipulation is continuously progressing, people have been exploited into believing these kinds of photos are presumably true. This research aims to discover how easy it is to deceive people online through photo manipulation and their attitude towards it. The participants in the research were separated into two, adults and young people. The result of this research proves the theory that people are easy to deceive online. However, their attitude toward digitally manipulated photos is both completely different.

INTRODUCTION

Photo manipulation is the act of modifying a digital image by utilizing photo editing software, Photoshop, or an application that conforms to the same services. It is practically an artwork in its form and allows digital artists to convey unordinary and remarkable outcomes (Lebendig). Although people might believe that photo manipulation began with Photoshop's invention, there have already been images that were considered fake as early as the 1960s, a couple of decades after Niepce developed the first photograph (Grinter, 2018; Khan, Jam, Akbar, Khan, & Hijazi, 2011). Meaning photography is not foreign to image exploitation. Moreover, with all technology's advancements, the extent of image manipulation services has progressed and has become common as well.

There is no doubt that Photoshop has taken part in a massive role in how we dissipate content as a society. It can define a company, product, or trade name through photos more efficiently than using words as it could attract more people if edited by a photo manipulation software (Haq, Ramay, Rehman, & Jam, 2010; Shahbaz, Jam, Bibi, & Lo-ganathan, 2016). However, the results it has are extensive and frequently changing, is it beneficial or destructive?

Photo manipulation has both harmful and favorable impacts on society, especially on social media. On a positive note, it has enabled artists and photographers to be innovative with images. On the other hand, it produces idealistic perfection that does not exist and is sometimes used to simply exploit an image for harmful reasons (Jam, Khan, Zaidi, & Muzaffar, 2011; Williams, 2021). Unfortunately, since photo manipulation is continuously progressing, people have been exploited into believing these kinds of photos are presumably true.

People use social media as a means to interact with family and friends all around the world. They can utilize social media to showcase their lifestyle, daily routine, entertainment, and many more. But social media has also become a medium for scamming and deceiving people. Individuals who had a background in how social media and digital image editing works are most likely not convinced about the realism of the photos and were less able to tolerate them at face value (Ali, 2019; Fauzia, Farooq, & Farooq, 2012).

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Not surprisingly, more young people are on social media than adults. Young people use social media as a way to keep in touch with friends, learn about recent happenings, and usually stay up to date with the latest content. A study shows that they spend half of their time on social media. Meanwhile, an average adult stays up to 2 to 3 hours a day (Cummins, 2021; Farooq et al., 2011). That alone has a huge difference between adults and young people. It may or may not have an effect on their response and attitude toward manipulated photos online.

Research Objectives

- Determine and differentiate the response of two age sets towards photo manipulation
- Identify the factors and characteristics between the two age sets that make them more or less knowledgeable about their reaction

Research Questions

- Which group is more literate about photo manipulation?
- How does photo manipulation affect their attitude towards the image?
- Which group is more prone to being deceived by image manipulation?
- Do time usage and exposure on social media have a factor in being easily deceived by manipulated images?

LITERATURE REVIEW
Teens, Young Adults, and Adults on Social Media

Social media exert an enormous influence over the lives of everyone. It serves as an online platform for everyone which people use to make social networks and relations with other netizens who share the same interests. The influence of social media among young people is significant. It has become increasingly evident that social media have become part of people's daily lives (Amedie, 2015; Ain, Vaia, DeLone, & Waheed, 2019).

As the young people are the builders of the state, they are considered a part of the so-called "Net Generation". It is easy for them to obtain the latest technology in different forms such as smartphones, digital cameras, computers, etc (Pew Research Center, 2007). However, social media has both positive and negative effects on them.

The benefit of social media among young people is that it allows them to develop their social and communication skills. They are able to bond with their friends, have fun, explore their creativity, and many more. With social media, they are also open to social issues such as climate change, poverty,

etc (Reachout.com, 2021). Social networks give them the feeling of less isolation and a sense of belongingness, which leads us to the next point (Myhre, Råbu, & Feragen, 2021). The need to belong among young people has become vehement that they would do anything to fit into the trend that sometimes compromises their well-being (Myhre et al., 2021; Waheed, Kaur, Ain, & Hussain, 2016). For instance, beauty standards among women are one of the primary reasons. It creates such unattainable ideals of a perfect body that young women get upset whenever they could not achieve such standards, resulting in greatly affecting their mental, physical, and emotional health (Hall & Tran, 2019; Waheed, Kaur, Ain, & Sanni, 2015). They are prone to fake information as well. A study shows that young people have trouble differentiating between authentic news and fake one (Wallace, 2017). These young people are prone to the dangers of social networks as they are always active and have the pressure to be on-trend.

Since teenagers and young adults are known to be active on social media, how about adults? do they spend their time on social media as much as young people do? Truthfully, they do.

According to a Nielsen Report, adults spend as much time on their phones as younger people do. It is safe to say that they are just as guilty as the younger people are (Scheffler, 2018).

Photo Manipulation on Social Media

In our modern society, photos can be in any form of a platform such as advertisements, magazines, newspapers, books, the internet, or any available medium. It is because photos have the influence to make a story stand out and have the ability to bring a viewer in. Although some are possibly not aware, the majority of these photos have been reworked or retouched since. There are plenty of software applications that enable reworking photos (Coffaney, 2011).

As technology is continuously progressing, applications such as Photoshop are improving as well making the editing process much easier. Photo manipulation is something enjoyed by mostly artists and photographers as it allows them to enhance an image and produce something unique out of it (Williams, 2021).

Photo manipulation is almost as old as photography, but current technology made it possible for easy use and accessibility. Utilizing this photo editing software can practically create a massive difference in an image, from modifying lighting and colors to adding and extracting content. More the reason why it is important to keep an eye on images posted in the media. Photos are implied to either de-

fine reality or be creative. In reality to artistic media, these photos may be exploited for numerous creative intentions and that is completely acceptable. As for images that depict reality, photo manipulation may cause significant problems. Not only is it unethical but changing a photo in the sense that it loses its meaning may cause severe misleading towards the people. Although it does not often occur with legitimate news media, there are many less respected news outlets that are willing to rework photos for public attention. Society depends on media and news to acquire information and these types of photos should not equip them with deceitful information (Coleman, 2007).

Photo manipulation in social media has an effect that is both beneficial and destructive at the same time as it can construct and destroy something due to its influence. Although there is a growing awareness that not every image that is on social media should be assumed to be authentic, society remains vulnerable to image exploitation (Akram & Kumar, 2017).

Effects of Manipulated Photos on the Society

Photo editing has modified the way we perceive society. It obtained beauty and knowledge for us as we can view art and photography differently. It is a game-changer for everyone, especially artists and photographers as it allows them to creatively manipulate the photo however they want to (Digital Media Literacy: The Problem With Photo Manipulation).

Image exploitation is typical in other forms of media such as advertisements. To market something to people, ads have often been guilty of portraying people with products that are less likely than what they originally are. Individuals could also provide themselves with digital makeover transformation with minimal effort using editing tools and filters built in various applications. In that way, users can make themselves who they aim to look like in just a matter of seconds or minutes. But since they are introduced as reality, the edited photos can greatly impact a person's well-being. With the numerous artificial ideal people on the internet, most netizens actually perceive them as authentic, and they can never live up to the idealistic standards (GSF Global, 2021). This type of mindset can lead to all sorts of mental and emotional health problems.

A study that examined the influence of self-disclaimers on internet photos on women's body image, it claimed that women's moods shifted after showing them a before and after photo of their body with image manipulation. Sadly, they were more comfortable with the after photo (McComb, Gobin, & Mills, 2021).

Another situation where photo manipulation with fake news greatly affected a person was when a Taiwanese model got viral for her advertisement. It was an advertisement shoot for a medical clinic that encourages people to obtain plastic surgery. The concept would be a family picture where the parents are attractive while the children aren't. It has a slogan saying that the only problem they could face was an explanation to their children. While it may seem alright at first, it suddenly got viral with different versions of their story hence ruining the life of the female model (BBC News, 2015).

Photo exploitation has evolved overall in the media. It influences people's beauty standards, political parties, humor, opinions, thoughts, etc. Because of this, it became a controversial topic among the people. Photo manipulation is a great tool for enhancements but it is also critical to consider how it would affect society (Kleemans, Daalmans, Carbaat, & Anschütz, 2018).

METHODOLOGY
Research Design

This research is a comparative study that aims to correspond, teenagers, young adults, and adults to exploited photos on social media. The surveys were separated into two and were distributed online via a google form.

Since we are tackling image manipulation on social media, I could not give them an indication that the images on the survey were photoshopped hence giving them a scenario and the freedom to express their thoughts and reactions. The photos on the survey were not from me and were all found on the internet.

Participants

I have gathered 47 participants for teenagers and young adults that range from 13 to 25 years old. On the other hand, 33 respondents from the adult survey range from 26 to 62 years old. All in all, 80 respondents participated in the survey.

TABLE 1. Survey summary: Teens and young adults

Response Summary	Count	Percentage
Gender		
Female	36	76.5%
Male	11	23.4%
Age		
13	8	17%
14	3	6.3%
15	5	10.6%
16	3	6.3%
17	4	8.5%
18	8	17%
19	9	19.1%
20	1	2.1%
21	1	2.1%
22	1	2.1%
23	2	4.2%
24	1	2.15
25	1	2.1%

TABLE 2. Survey summary: Adults

Response Summary	Count	Percentage
Gender		
Female	18	54.5%
Male	15	45.4%
Age		
26	1	3%
27	2	6%
28	2	6%
30	1	3%
31	2	6%
32	2	6%
33	2	6%
34	1	3%
36	1	3%
37	3	9%
38	1	3%
39	1	3%
40	2	6%
41	1	3%
42	1	3%
43	1	3%
44	1	3%
45	1	3%
51	1	3%
53	2	6%
58	1	3%
59	1	3%
61	1	3%
62	1	3%

TABLE 3. Survey data: Teens and young adults

Number of respondents who noticed that a photo is photoshopped (per image)		
Response Summary	Count	Percentage
A young woman in a brand photoshoot	5	10.6%
Poor planning of signage in college of architecture department	0	0%
Conflict between Israeli Soldiers and Palestinian Youth	0	0%
Life in Haiti	0	0%
Pooping cheerleader midair	0	0%
A rare black lion	4	8.5%
An astronaut smoking marijuana in space	1	2.1%
Overall Count		
Respondents who DID NOT notice that an image is photoshopped.	42	89.3%
of Respondents who DID notice that a image is photoshopped.	5	10.6%
Respondents who DID notice that ALL images were photoshopped.	0	0%

TABLE 4. Survey data: Adults

Number of respondents who noticed that a photo is photoshopped (per image)		
Response Summary	Count	Percentage
A young woman in a brand photoshoot	6	18.1%
Poor planning of signage in the college of architecture department	0	0%
Conflict between Israeli Soldiers and Palestinian Youth	0	0%
Life in Haiti	0	0%
Pooping cheerleader midair	2	6%
A rare black lion	4	12.1%
An astronaut smoking marijuana in space	1	3%
Overall Count		
Respondents who DID NOT notice that an image is photoshopped.	27	81.8%
Respondents who DID notice that an image is photoshopped.	6	18.1%

TABLE 5. All participants who noticed that an image is photoshopped

Response Summary	Count	Percentage
Respondents who DID NOT notice that an image is photoshopped.	69	86.2%
Respondents who DID notice that an image is photoshopped.	11	13.7%
Respondents who DID notice that ALL images were photoshopped.	0	0%

FINDINGS AND DISCUSSION

The primary purpose of this research is to examine and differentiate the response between two age sets. The survey includes a scenario, provided with seven images. The setting is about what would be their initial response if they were to scroll down through the provided photos. The survey gave them the freedom to express their thoughts and opinions on the current situation. The goal is to find out how many respondents would notice that somehow the images are photoshopped, proving the theory of how easy it is to deceive people on social media. According to the survey data that I have collected through the teen and young adult's section, only 5 out of 47 respondents noticed that some photos were photoshopped. Meanwhile, only 3 out of the remaining images were called out to be photoshopped.

All in all, none of them noticed that all of them are photoshopped.

On the other hand, the survey data for adults somehow shows similar data. Only 6 out of 33 respondents claim that some photos were photoshopped. While 4 out of 7 photos were called out to be photoshopped. All in all, none of them noticed that all photos were photoshopped.

The survey between the two age sets shows an almost similar response. It is not exactly surprising as everyone is vulnerable to image manipulation, not unless you are familiar with digital image editing. From what I have noticed from the adult survey, almost all of them did not care and skipped most of the time. As for their comments, Their response toward the image has a massive difference between the teens and young adults. For instance, the photo of the improper

planning of the college department and the pooping cheer leading midair was supposed to be funny. The adults did not exactly take it lightly as much as the young people did. It's either they skipped or they took it seriously. On the other note, the teens and young adults' surveys are somehow predictable. The initial response of each photo is what they exactly did. An example would be the life in Haiti and the picture of the ongoing war. They showed compassion if they needed to and laughed if they had to.

All in all, adults, young adults, and teenagers are all vulnerable to image exploitation but their attitudes towards it are completely different.

CONCLUSION

In conclusion, society is not safe from manipulated images especially now that technology is progressing. We have seen that both adults and young people are prone to it no matter how much usage and exposure they have on social media.

But which group is more prone to being deceived? The answer would be the teens, even though the results of the two surveys are similar. Comparing the survey results and their response to the adults' survey, they do not think twice about whether an image is photoshopped or not. While the adults usually just skip or just do not care. The rise of social media began in the 2000s, so I believe that it is normal for adults to know more about how social media works since they've been using it for a long time. All in all, the result proved that everyone is prone to fake information and both groups have different attitudes towards it.

LIMITATIONS AND RECOMMENDATIONS

The limitation of the study is the lack of participants of the adults, teens, and young adults. The teens and young adults should have a different survey to allow an in-depth study of the two.

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