HIGH SCHOOL EDITION
Journal of Student Research
Volume 14 Issue 1 (2025)

The Algorithmic Gaze: Analyzing Artificial Intelligence Influence on Teenager's Beauty Ideals in Norfolk County

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ABSTRACT

Public perceptions and attitudes toward beauty standards are significantly influenced by the increasing presence of Artificial Intelligence (AI) in image generation, particularly among teenagers aged 13 to 19. With the ongoing research on AI on societal norms and self-image, it is vital to examine these influences to understand their implications on youth. This study aimed to investigate the opinions of teenagers in Norfolk County regarding AI generated images compared to natural images. This was done with an online survey with a total of 61 valid responses. This study concluded that a significant portion of respondents (48%) prefer AI- generated images over natural ones, and 48.3% lack confidence in distinguishing between the two images. Additionally, 81% of respondents believed that social media platforms should implement features to help users identify AI generated content. The research highlights that many teens feel comparing themselves to AI- generated images is detrimental to their well-being. Overall, this study amplifies the urgent need for enhanced media literacy, to promote critical thinking about digital content, which advocates for transparency in AI-generated imagery. Future research should explore the long-term effects of AI on beauty standards and consider interventions to support positive self-image among teens.

Introduction

AI (Artificial Intelligence) is a growing and fast approaching technology that will eventually take over to a certain extent in most fields, and thanks to major advancements in AI this technology will change the world forever both in good and bad ways. AI will help many fields like medicine and finance but fields like social media and online platforms, it is argued that AI does more bad things than it does good. Over the past couple of years, it has been more and more difficult to protect teenagers and children from the effects of AI on social media.

Literature Review

Search Strategies

The sources were detected by searching through many different catalogs with the advanced search feature set to only "peer reviewed" articles to ensure the integrity as well as credibility of the literature. Some main keywords used to collect these works of literature include Artificial Intelligence (AI), AI and teenagers, AI and social media, AI and beauty standards, teenagers, youth, surveys and opinions

Due to Generation Z (Gen Z) being the second youngest generation, the first generation to be completely surrounded by technology their whole lives (McKinsey, 2023). It makes Gen Z a prime target for digital marketing companies, because they are familiar with technology and are likely to do well in jobs including technology, as well

as be influenced faster by digital media due to being a relatively younger generation (Statista, 2023). Advertisements and marketing tactics are now more than ever made for younger people. This is most prominently seen in the beauty industry. Companies, specifically beauty companies, are now trying to get Gen Zs to respond to their needs (Statista, 2023). Companies mainly do this to adapt to the ever-changing digital space. There is significant visible change shown in data; to be specific, the revenues of beauty cosmetic companies are at their all-time high, reaching revenues as high as 14.7 billion U.S. dollars in the U.S. alone in 2021 (Statista, 2023). This number will only grow over the years.

Between 2019-2021, beauty technology app downloads increased across all countries. The United States was by far the leading country for beauty tech app downloads, as the country registered a total of about 44.3 million downloads in that year. The projection for 2022 shows that this upward trend in beauty tech app downloads will likely continue (Statista, 2023). This leads to a more westernized standard of beauty, contributing and reinforcing European beauty standards all over the world (Bryant, 2013).

These Eurocentric ideals that are pushed upon teenagers eventually evolve into comparison and competition especially on social media (Chouette, 2023). Research shows that AI algorithms can perpetuate biases present in data that they may have been trained on (Gracia, 2021). An example of this bias is in Google searches. Something as simple as a name that could potentially cause bias in AI technologies. Names such as DeShawn, Darnell and Jermaine generate ads suggestive of arrests in 81 to 86 percent of name searches on one website and up to 92 to 95 percent on other websites (Sweeney, 2013). This is just one example of the extreme consequences that AI can have over people's life and future.

The same logic is perpetuated in the beauty scene on social media. AI uses more popular and well-liked pictures which usually tend to be Barbie-like, European and almost always skinny. These are the beauty standards of today, even though inclusivity has grown over the past few years. These standards of "beautiful" still stick to this day. AI cannot differentiate popularity and beauty (Deep Media, 2023). But AI isn't wrong, AI knows the beauty standards that the majority of people like. An experiment at the University of Helsinki and the University of Copenhagen provided a machine with knowledge regarding human perception and tested how accurately it would generate information. They first gave a Generative Adversarial Neural Network (GAN), a type of artificial neural network, to generate hundreds of portraits of people. These images were presented to 30 volunteers, whose responses to the photos were recorded through electroencephalography. The volunteers looked at the images while electrodes on their scalp monitored their brain activity. When an individual saw an "attractive" person, the left ventral tegmental area of the brain became active and released dopamine. These new images, which were tailored to the individual's preferences, were matched against the control group to check the accuracy of the program. The results were satisfactory: the generated face aligned with the volunteers' preferences over 80 percent of the time. (Pekkarinen, 2024). "Despite such potential benefits, the software presents several ethical questions. The program ultimately feeds into harmful beauty standards" (n.d. Anand).

Although people may try to soften its impact by saying it's just based on personal preferences, the truth is that Eurocentric features have become the standard of beauty (n.d. Anand). AI only amplifies this ideal by using these features to generate an "ideal" face. Despite some progress towards more diverse beauty standards, most models, actors, makeup artists, celebrities, and beauty influencers still conform to this Eurocentric ideal. The notion that one particular face with specific features is superior to all others is now further reinforced, as AI is used to combine these "superior" traits into an artificial "perfect" face. This is a step backwards from the idea that beauty can come in all shapes, sizes, and forms (n.d. Anand).

Questions are being raised about the genuine fairness and the discriminatory values of social media platforms, due to the fact that these biased algorithms can lead to discriminatory outcomes for many user groups (Chen, 2020).

When looking at the present data, it becomes compulsory to address and act on these obvious biases and develop algorithms and AI technologies that are more accountable, transparent and, most of all, unbiased (Li, 2018). The present effects of AI in terms of social media algorithms are shown mainly by the influence it has on target advertising, viewer engagement, and content analysis. Al-powered technologies have the capability to analyze and

understand vast amounts of viewer data, personalize content according to what the person has been viewing, and make autonomous decisions, which, in conclusion, shapes the user's social media experiences (Nemitz, 2018).

One of the main ethical issues surrounding AI in social media is transparency. The lack of transparency in algorithmic decision making has led to many implications about the probability for hidden biases and discriminatory outcomes (Oswald, 2018). The accountability of AI in social media algorithms raises questions about the responsibility for the consequences of algorithmic decisions and the need for technologies to address potential dangers (O'Neil, 2016). The ethics surrounding AI in social media algorithms show a wide range of conflicts, concerns, and issues.

Gap in the Research

After reviewing the literature, the question arises: to what extent does Artificial Intelligence promote beauty standards upon teenagers on social media in Norfolk County? This question has a significant academic gap. The age group of teenagers (13-19 years old) is severely under explored in terms of Artificial Intelligence and the influence it has on them, even though they are the ones that will be majorly affected by these growing technologies such as AI which makes this age group a prime target to be studied more in depth in order to predict life with technologies such as AI. The literature currently available on teenagers and AI mostly consists of experiments and studies on students using AI for things like schoolwork, cheating in school, etc. (McAuley, 2011). While there is a moderate amount of data surrounding teenagers, beauty standards, and AI. Most of the data is not peer reviewed nor is it credible.

There are frequent news articles and specific outbursts on this topic with catchy headlines, but most do not go into detail about the effects of AI on teenagers especially when specifying beauty standards most articles go onto college students (20-29 years old). This is due to teenagers being a rather hard age group to survey mostly due to them being expensive as well as complicated, which makes for a major gap for this age group (Lenhart, 2013).

The specific age range of teenagers in terms of AI and beauty standards is rather unexplored and needs more credible and peer reviewed works. In addition to this age range gap, the state of Massachusetts has never conducted a research study like this. Surveys which are primarily visual are done in very scarce amounts to begin with. The most similar study found was a study conducted by/at the University of Waterloo where they had participants take a survey in order to see if participants would be able to differentiate between real and AI-generated images, but this study does not state an age range, nor does it have a specific state or country stated (Pocol et al., 2023).

The researcher concluded that the data towards teenagers is necessary because teenagers are the first in line to deal with the effects of AI and it's good and bad. So, it's ideal to have more data on the age group of teens, especially in terms of beauty ideals because it is something that AI is being consciously trained on. Collecting data on teenagers will help social media companies that implement AI into their systems to see whether AI is a useful tool to have or whether it's there to enforce harmful standards for the young and vulnerable generation on social media platforms using their AI based tools.

The researcher, following the exploration of knowledge in the field of AI, social media and teenagers, hypothesized that this study will expose that the AI-generated images that are specifically posted on social media will surpass and will far better fit today's beauty standards in comparison to their natural counterparts.

Methodology

Study Design

The researcher used a mixed method survey technique by distributing a survey containing both quantitative and qualitative questions. This study explores the vast point of views of teenagers on AI-generated images, as well as exploring the effects of AI-generated and edited photos on teenagers. In order to conduct this, a cross sectional county-wide study was put in place in Norfolk County. This was conducted between January 2024 and April 2024.

This study was designed to take into account practicality and potential future research in consideration, therefore this research is set in Norfolk rather than the entirety of Massachusetts, due to feasibility concerns. If this study was conducted throughout Massachusetts, or even nationally, it would require a significant amount of time and people, which would be difficult due to the time commitment needed to analyze vast amounts of data. In addition to this, a state-wide or country-wide study would require for the researcher to ensure that there are an equal number of responses from each part of the states or country, which further shows the feasibility concerns of a state-wide or country-wide study.

Conducting a study only in Norfolk County helped the researcher keep more concise and manageable data. Making this study a county-wide study made it so the researcher could see the opinions of teenagers in Norfolk County rather than the entire nation or state, making it a quality example for additional studies to be conducted in the future. Having a county-wide set of data makes the opinions much more valuable, rather than the same information conducted on a state level or a national level, making it much broader rather than useful.

When thinking about the future of teenagers and their opinions on AI, it can be inferred it would be on smaller groups of teenagers rather than larger groups of teenagers due to the age group presented with, teenagers are not legal adults but are also not children, which makes them a harder group to scale and collect data from. For this reason, the researcher chose to conduct this study in one county rather than on a state or national level, to keep true to the way it would most likely be replicated in the future.

Participants

The participants of this study are teenagers aged 13 to 19. The researcher chose to focus on this age group in order to address the gap of this study and this age group is crucial to the study in order to effectively fill in the research gap. This age group is significant because these young people are the next generation and the people who will be affected by AI the most and its praiseworthy aspects as well as its shortcomings in their adult life. Over half of the world's major countries teens (53%) expect to increase their connections to tech. 9 out of 10 connect to the Internet on their mobile phones, which implies their need to constantly connect to technology (PR newswire, 2009). Therefore, the intent of this study is to see how AI affects teenagers and their current opinions about AI and how it affects them. The opinions of teenagers are extremely important due to them inevitably being the ones who will have to live with AI in the long run.

In this survey, the researcher asked respondents to rate random pictures of women aged 13-45, asking how well they fit today's beauty standards. The pictures were taken from the social media platform “Instagram”, and the researcher used the most followed AI-generating accounts in order to collect the images of AI-generated women. To collect natural images but also stay true to using social media in the images, the researcher used the search bar in Instagram and searched for each age range and picked at random the natural images. The researcher initially was using most followed accounts to find natural images, but later realized that the images in most followed accounts were retouched and also caused biases between teenagers when rating images, due to the most followed accounts usually being influencers or well-known social media personals.

The questionnaire used a Likert scale (1-5)-1 being the least fitting of today's beauty standards and 5 being the most fitting of today’s beauty standards) in order to measure how well the women fit the beauty standards. The responses were then put onto a spreadsheet and analyzed in order to catch any patterns, and make sure the data is evaluated properly for the scope of this study. The researcher chose to keep the questions in the survey that were not rating the images separate and created a separate spreadsheet to analyze those responses in order to reach a more accurate conclusion and terminate any outliers.

Survey Questionnaire

The format of this questionnaire was similar to the survey conducted by the University of Waterloo, which, like this study, intended to explore the bigger picture of whether people can differentiate between AI-generated images and natural images (Pocol et al.,2023). The survey was divided into three separate portions. The first section being the consent portion, where if the participant chose not to consent, the survey came to an end for that respondent. Then in the second portion of the survey, the researcher chose to go straight into the rating of images rather than collecting the multiple choice questions first in order to bring in more teenagers to participate in an intriguing survey rather than a traditional survey. In the last section, the researcher collected additional data in order to better understand the rating of the images above. Questions like "Do you think there should be a distinction on social media to make sure people know when an image is AI generated?" were asked in the additional data section. The researcher used only Likert scales and multiple choice questions in order to maximize the amount of teenagers who take the survey.

This questionnaire, overall, consisted of an informed consent portion, fourteen Likert scales, rating the image questions, and seven additional data questions, which were all cleared by the Institutional Review Board (IRB) at the institute of the researcher. All the questions were added onto a Google Form and then were distributed via email and social media platforms. The responses were then put onto a Google Sheet in order to be recorded and evaluated. All the participants filled out the form anonymously with no way of identifying their identity.

Delimitations

Delimitations were established prior to the survey being released in order to guarantee the human cohort lined up with the research goal. Only teenagers who lived in Norfolk County were to take this survey, the questionnaire was distributed specifically to teenagers, the researcher specifically submitted the survey to universities and schools where the researcher was most likely to find the age group of 13 to 19. Any survey responses that were made outside the age range of 13 to 19 or outside of Norfolk County were eliminated.

Results

After the data collection time came to an end, the researcher arranged all the responses into Google Spreadsheets. Two spreadsheets were created in total, one with all the responses of the picture ratings, and the other with the additional data questions. The point of doing this for the researcher was to draw more concise and specific conclusions from the data. The researcher put the data side by side for the ratings of AI versus natural images and compared and contrasted the responses and created graphs and changed numbers into percentages in order to best evaluate the images and the findings of the images. For the additional data questions, the researcher chose to make graphs of each question on the spreadsheet and compared and contrasted the questions and used the additional data questions to better understand and analyze the quantitative data collected.

Findings

To start, with the very primary information that was collected from the survey, all 61 respondents consented to their participation. Of these 61 participants, 3 indicated that they were from outside Norfolk County and since this study took place exclusively in Norfolk County these 3 responses were eliminated. Then, the researcher defined the term "Beauty standards" for respondents, and asked the participant a yes or no question stating "Do you think the right side looks better than the left?" (figure 1).

Figure 1. Comparison on the same face

The researcher asked the respondent to rate the image using today's beauty standards and gave examples of today's beauty standards but also wanted them to interpret the definition of today's "beauty standards" in their own words but gave them a broad idea of what "beauty ideals" generally mean in today's society. Specifically, the researcher wrote examples including: button noses, clear skin, etc., but left it up to the respondents to come up with the inclusive meaning of today's beauty standards. The broad understanding was given in order to get their personal opinions while also keeping the impact of social media on them by giving examples of beauty standards. The researcher found that 48% of the respondents thought that the right side (the AI edited side) was better, with a 9.6% saying "maybe" (figure 2). A vast majority of the respondents replied that they find the right side of the face (AI edited) to be better looking in today's beauty standards.

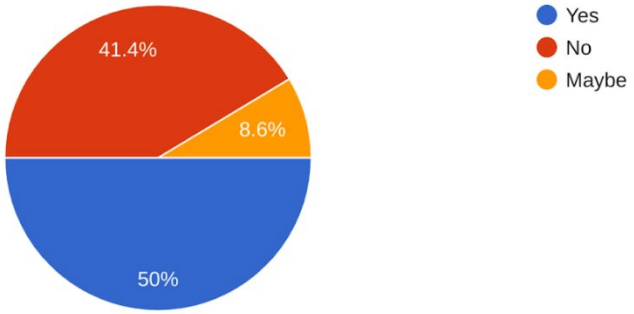

Figure 2. Which side of the face is better?

Then, the researcher went straight into the main (rating) portion of the survey in order to accommodate the short attention span of adolescents (Burns et al.). An example of comparing two images one being natural and the other being AI-generated were (figure 3) and (figure 4) (figure 3), The left photo (the AI-generated image) scored significantly higher than its natural counterpart with the AI image scoring a perfect 5 while the natural equivalent only

scored a 3. The researcher repeated this process of comparing two images, one being an AI-generated image with the other being a natural image a total of 6 times (a total of 12 images including the AI and natural images).

Figure 3. AI generated image

Figure 4. Natural image

In order to better interpret the data collected, the researcher created a bar graph (figure 5). The researcher used this bar graph in order to evaluate the results by looking at how many times the AI-generated image was preferred over natural images and how many times they scored the same as well as the amount of times the natural image was preferred in terms of fitting today's beauty standards. The researcher evaluated that 4 out of 6 times the AI-generated image was preferred by teenagers in terms of the beauty standards of today and attractiveness. In the same terms, the researcher found that 1 out of 6 times, the respondents rated the natural image to be more attractive and fit today's beauty standards better than the AI-generated version of the image. Including these results, the researcher also found that 1 out of 6 times the results were tied and the respondents rated both the AI-generated image and the natural image the same score in terms of fitting today's beauty standards.

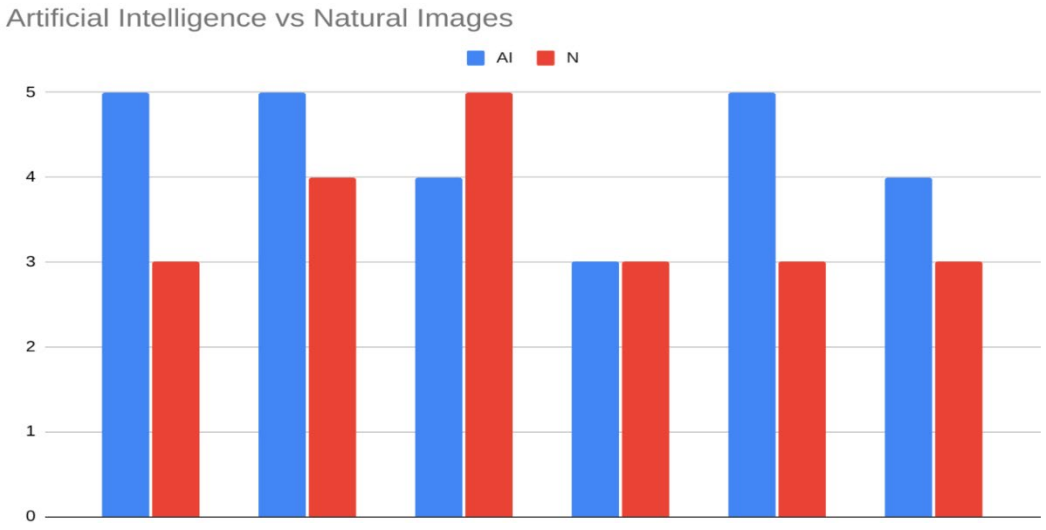

Figure 5. Bar graph of AI vs natural images on social media

After asking a sufficient number of questions that were rating-based, the researcher moved onto the additional data questions which consisted of Likert scale questions as well as multiple choice questions. The researcher did this in order to better interpret the results of the rating portion of the survey and understand the thought process behind the results that were collected. The researcher started the additional data section with the question, "On a scale 1-5 how frequently do you come across AI-generated beauty filters or enhancements on social media platforms?" The researcher found that 82.7% of the respondents rated a 3 or higher on the frequency of AI-enhanced or AI-generated imaging on their specific social media platform (figure 7). Through this question, the researcher concluded that the teenagers who responded to the survey had a thorough understanding of AI-generated imaging and enhancing on social media, thus helping the researcher better interpret the rating portion of the survey. The researcher saw that the respondents came to this survey with an underlying understanding of the topic, making the data significantly more reliable.

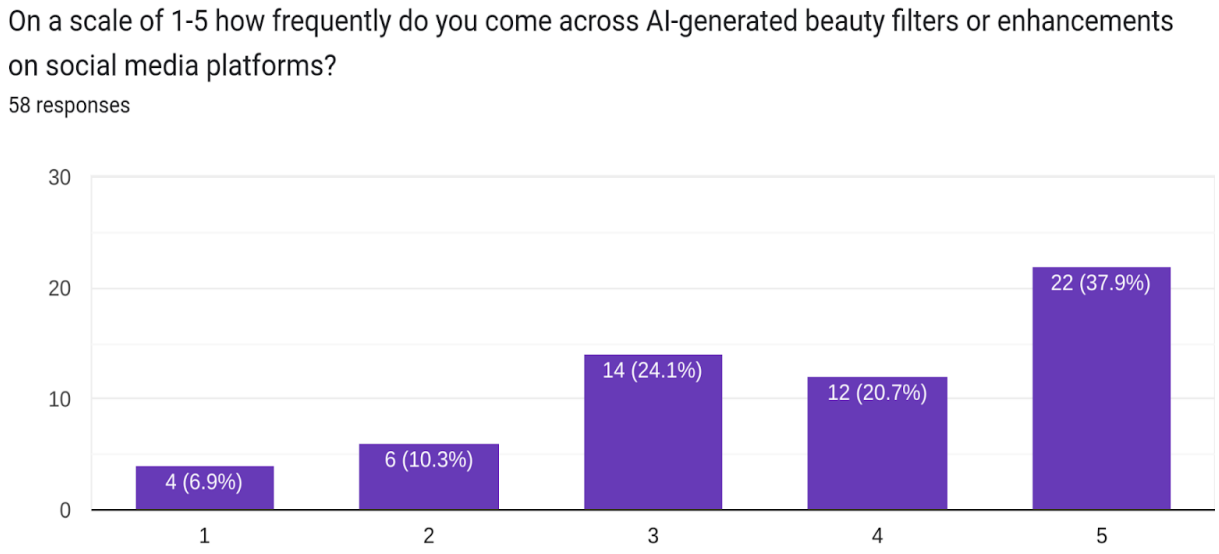

Figure 6. Responses to: "On a scale 1-5 how frequently do you come across AI-generated beauty filters or enhancements on social media platforms?"

Next, the researcher asked the participants, "How confident are you in telling apart AI altered images and non AI altered images?" The researcher found that 48.3% of the respondents said that they neither think they are good at telling the images apart nor are they bad. This shows a level of skepticism from the respondents. It showed to the researcher that teenagers are not yet confident in telling apart AI from natural images. The researcher concluded from this question that teenagers are aware of the growing accuracy and precision of AI-generated imaging and find that these images are hyper realistic and cannot be told apart accurately by people.

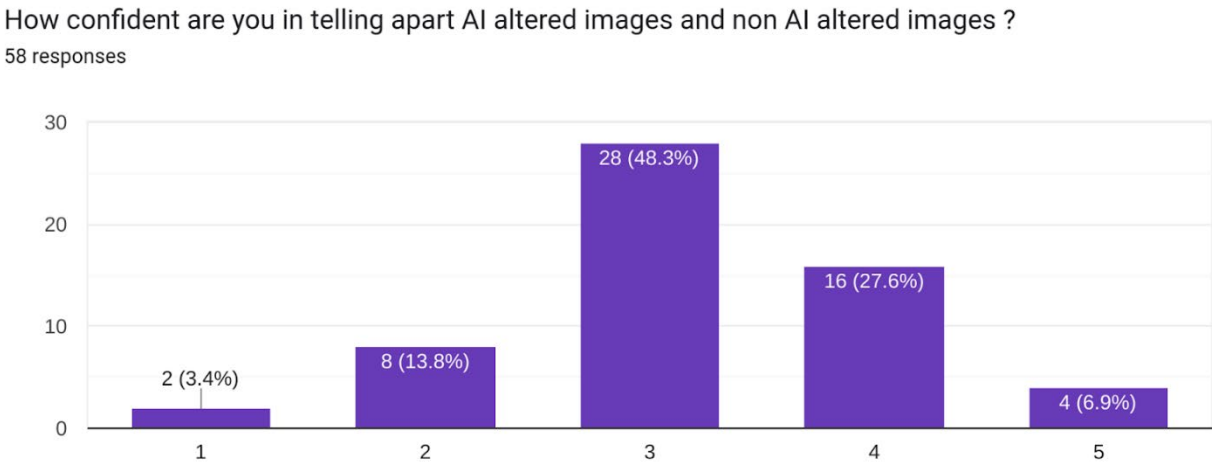

Figure 7. Responses of: "How confident are you in telling apart AI altered images and non AI altered images?"

Based on the question above, the researcher felt that it would be fit to add a question asking, "Do you think there should be a distinction on social media to make sure people know when an image is AI generated?" The researcher found that this question had a majority (81%) of people that felt that it was important for online social media platforms to have distinguishing features that would help people spot the differences between AI-generated images and natural images. The researcher concluded from this question that most people feel that AI in today's world is becoming very high tech and something that is surpassing the distinction of the human brain in terms of telling apart real and unreal images. The respondents recognized that spotting the distinction between AI and natural images will only get more difficult to do and recognize that a feature that distinguishes AI and natural images would be necessary in the near future.

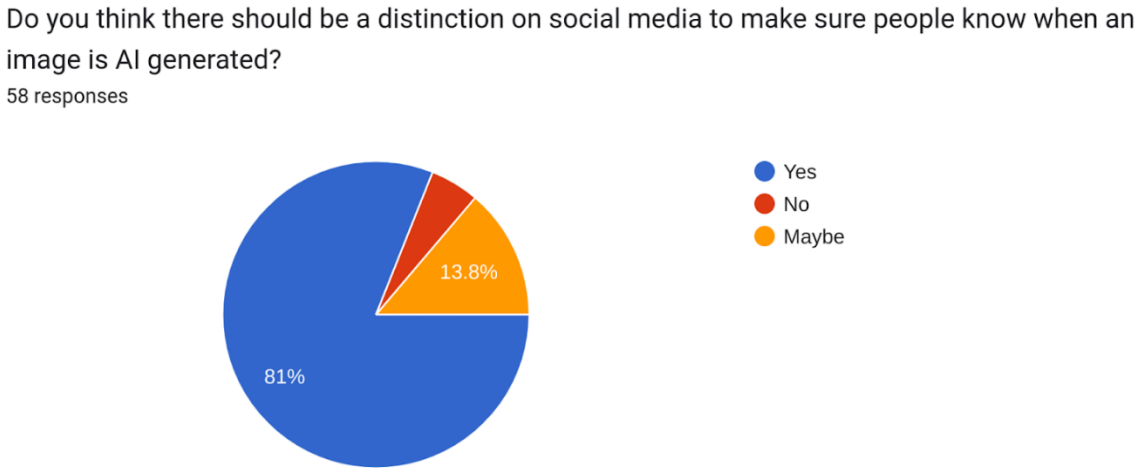

Figure 8. Response to: "Do you think there should be a distinction on social media to make sure people know when an image is AI generated?"

Based on the question above, the researcher felt that it was important to add a question asking the respondents directly whether or not they think there should be a feature on social media platforms to help distinguish AI and natural imaging. The researcher asked, "Based on the question above would you support a feature on social media platforms that distinguish between AI-altered or generated images and natural images?" The researcher found that an additional

1.5% of people supported the AI and natural image distinction tool on social media platforms. The researcher concluded through this question that people would like to have a tool that would help them distinguish between AI and natural imaging, helping them keep a distinction between real and fake imaging.

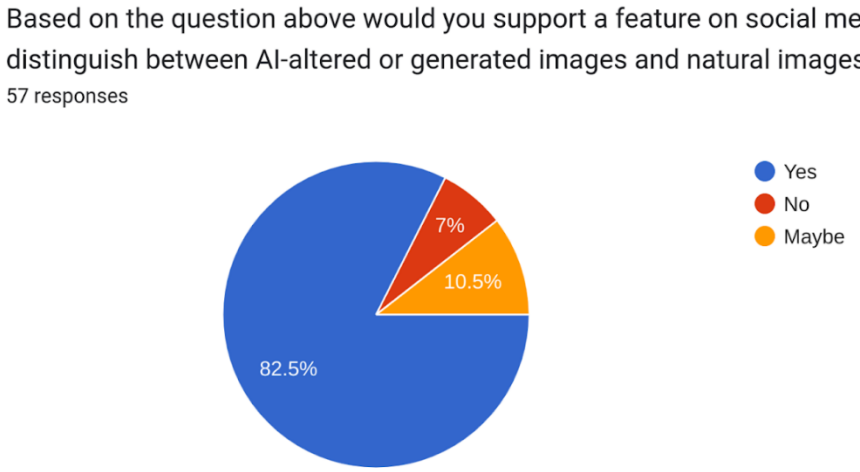

Figure 9. Responses to: "Based on the question above would you support a feature on social media platforms that distinguish between AI-altered or generated images and natural images?"

Before completely concluding the survey, the researcher felt that it would be appropriate to see what percent of these people who use social media actually have trained or know anything about social media content on a professional level. The researcher found that only 13.8% of the teenagers who took this survey were professionally trained on social media content. The researcher concluded that the vast majority of teenagers do not have the skills to handle social media best. The researcher found that teenagers have little to no professional training on something so powerful that is on their fingertips.

Figure 10. Responses to: Have you ever been professionally trained on AI, social media, tech, etc.

The researcher concluded with the question, "Do you think it is better that people are comparing themselves to edited versions of themselves, rather than celebrities like in the past?" The researcher added this question in order to evaluate the respondents feelings better. The researcher found that the majority of respondents felt that people

comparing themselves to edited versions of themselves was detrimental to their well-being. Respondents felt that comparison to somebody who physically exists is better than comparison to someone who does not actually exist in the real world.

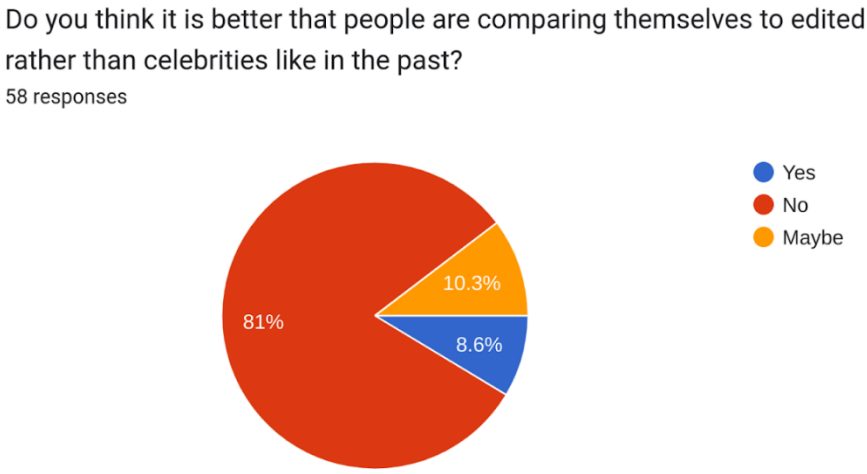

Figure 11. Responses to: "Do you think it is better that people are comparing themselves to edited versions of themselves, rather than celebrities like in the past?"

Overall Findings

The overall findings of this study are that teenagers in Norfolk County think the AI generated version of an image on social media is better than its natural counterpart. This study also found that a lot of teenagers are not media literate and thus are not fit to be on these technologies. In addition to this, it was also found that teenagers do realize that AI generated imaging is becoming a problem and feel that dealing with it is necessary. To face this problem there was a great outcome to have distinguishing features on online platforms so everyday people can tell whether an image is AI or natural. With these findings it was also found that teenagers feel that overall comparison to AI generated imaging is detrimental and should be regulated at least to some extent.

Discussion

Implications

This study found that AI promotes narrow and unrealistic beauty standards in the realm of social media among teenagers in Norfolk County. This finding is significant because it highlights the potential harmful impact of AI on teenagers' self-perception and body image. Teenagers, parents, educators, and the beauty industry are all impacted by this finding. The potential consequences include a negative impact on self-esteem, body dissatisfaction, and the reinforcement of harmful beauty standards. To address this, education programs could be implemented to promote media literacy and critical thinking. The beauty industry could also be encouraged to promote more diverse and inclusive beauty standards.

Limitations

This study had some limitations that should be acknowledged. Firstly, time constraints significantly impacted the scope of the research, resulting in a smaller sample size due to the limited time available for data collection. Additionally, the focus on women only was a necessary compromise due to time constraints, which may limit the generalizability of the findings to other gender identities. Furthermore, despite efforts to include diverse racial and ethnic perspectives, the study's racial and ethnic representation could have been more comprehensive. Lastly, the limited availability of visual survey examples hindered the development of the survey tool, as the researcher had to rely on a limited number of existing visual surveys, which may not have fully captured the complexity of the research question. These limitations highlight areas for future research to build upon and improve.

Future Directions

The future directions for this topic of research are vast and growing day by day. One potential avenue for future study is to expand the sample population to include diverse gender identities and racial/ ethnic groups, allowing for a more comprehensive understanding of how AI influenced beauty standards across different demographics. Additionally, a longitudinal study could be conducted to investigate the long term effects of AI on teenagers' beauty ideals and self-perception, providing valuable insights into the potential lasting impacts of AI on young people's lives.

Another potential direction is to design an interventional study to test the effectiveness of media literacy programs or workshops aimed at promoting positive body images and self esteem among teenagers, offering a potential solution to the issues raised by this research.

Furthermore, exploring new research methods and tools, such as using AI itself to analyze and understand the impact of AI on beauty standards, could provide valuable insights and methodological advancements. This could involve utilizing machine learning algorithms to analyze large datasets of social media content or developing new survey tools that incorporate visual and interactive elements to better capture teenagers' experiences with AI.

Finally, examining the policy and educational implications of this research could lead to important changes in the way we address the impact of AI on beauty standards, such as incorporating media literacy education into school curriculums or advocating for more diverse and inclusive representation in media and advertising. By pursuing these future directions, researchers can continue to uncover the complex relationships between AI, beauty standards and teenagers' self perception, ultimately working towards a more inclusive and empowering digital landscape.

Acknowledgments

I would like to thank my advisor Jennifer Orlinski for the guidance provided.

References

Anand, S. (n.d.). *A.I. Understands the "Beauty Standard"*. The Stuyvesant Spectator. Retrieved February 5, 2024, from https://stuyspec.com/article/a-i-understands-the-beauty-standard

Beauty tech app downloads selected countries 2022. (2023, January 27). Statista. Retrieved February 2, 2024, from https://www.statista.com/statistics/1297989/beauty-tech-app-downloads-selected-countries/

Burns, R. D. (2019, July 9). *Adolescent Health Behaviors and Difficulty Concentrating, Remembering, and Making Decisions*. NCBI. Retrieved April 2, 2024, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8669897/

Chen, Z. (2023). *(PDF) Ethics and discrimination in artificial intelligence-enabled recruitment practices*. ResearchGate. Retrieved February 5, 2024, from

https://www.researchgate.net/publication/373948488_Ethics_and_discrimination_in_artificial_intelligence-enabled_recruitment_practices

Chouette, L. (2023, July 13). *The Impact of Evolving Beauty Standards on Teenage Girls: Unveiling the Struggles and Consequences*. Teen Ink. Retrieved February 5, 2024, from https://www.teenink.com/nonfiction/academic/article/1194443/The-Impact-Of-Evolving-Beauty-Standards-On-Teenage-Girls-Unveiling-The-Struggles-And-Consequences

Lenhart, A. (2013, June 21). *The challenges of conducting surveys of youth*. Pew Research Center. Retrieved April 28, 2024, from https://www.pewresearch.org/short-reads/2013/06/21/the-challenges-of-conducting-surveys-on-youths/

McAuley, J. (2011). *Raising School Counselor Awareness Regarding Students' Inappropriate Use of Cell Phones by Jami McAuley A Research Paper Submitt*. CiteSeerX. Retrieved February 6, 2024, from https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=296fccbc3ffef876a35432d9bc57e6f37b72c165

Nemitz, P. (2018, October 15). *Constitutional democracy and technology in the age of artificial intelligence*. PubMed. Retrieved February 5, 2024, from https://pubmed.ncbi.nlm.nih.gov/30323003/

The New Beauty Standard: Driven by Generative AI. (2023, June 12). Medium. Retrieved February 5, 2024, from https://medium.com/@deepmedia/the-new-beauty-standard-driven-by-generative-ai-990a9e6912a9

Ostrowski, S. (2009, June 3). *Teens and Tech: CompTIA Report Explores Views on Their Use of Technology, Career Options and the Future of Work.* prnewswire.com. Retrieved March 13, 2024, from https://www.prnewswire.com/news-releases/teens-and-tech-comptia-report-explores-views-on-their-use-of-technology-career-options-and-the-future-of-work-301549365.html

Oswald, M. (2018, August 7). *Algorithm-Assisted Decision-Making in the Public Sector: Framing the Issues Using Administrative Law Rules Governing Discretionary Power*. SSRN Papers. Retrieved February 5, 2024, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3216435

Pekkarinen, A. (2021, March 5). *Beauty is in the brain of the beholder: An AI generates personally attractive images by reading brain data*. University of Helsinki. Retrieved February 5, 2024, from https://www.helsinki.fi/en/news/human-centric-technology/beauty-brain-beholder-ai-generates-personally-attractive-images-reading-brain-data

Petruzzi, D. (2023, December 18). *Topic: Gen Z and the beauty industry in the United States*. Statista. Retrieved February 2, 2024, from https://www.statista.com/topics/9238/gen-z-and-the-beauty-industry-in-the-united-states/#topicOverview

Pocol, A., Istead, L., Siu, S., Mokhtari, S., & Kodeiri, S. (2023, December 29). Seeing is No Longer Believing: A Survey on the State of Deepfakes, AI-Generated Humans, and Other Nonveridical Media. *Lecture Notes in Computer Science*, *LNCS,volume 14496*. https://link.springer.com/chapter/10.1007/978-3-031-50072-5_34#citeas

Smith, M., Patil, D., & Munoz, C. (2016, May 4). *Big Risks, Big Opportunities: the Intersection of Big Data and Civil Rights*. Obama White House. Retrieved February 5, 2024, from https://obamawhitehouse.archives.gov/blog/2016/05/04/big-risks-big-opportunities-intersection-big-data-and-civil-rights

Susan, B. (2013). *The Beauty Ideal: The Effects of European Standards of Beauty on Black Women Susan L. Bryant Black women are particularly vulner*. Columbia's Academic Commons. Retrieved February 2, 2024, from https://academiccommons.columbia.edu/doi/10.7916/D8BV7T44/download

Sweeney, L. (2013, January 29). *Discrimination in Online Ad Delivery by Latanya Sweeney :: SSRN*. SSRN Papers. Retrieved February 5, 2024, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2208240

U.S.: cosmetics market revenue 2015-2028. (2023, September 15). Statista. Retrieved February 2, 2024, from https://www.statista.com/forecasts/1272319/united-states-revenue-cosmetics-market

What is Gen Z? (2023, March 20). McKinsey. Retrieved February 2, 2024, from https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-gen-z