

Use of Corrective Eyewear Effect On the Prevalence Glasses Stereotype

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ABSTRACT

Beauty standards are constantly changing over time for women, but specifically teen girls are mostly affected when it comes to these standards changing. These beauty standards are constantly confusing for teen girls and what has stayed constant is the glasses stereotype. This stereotype is explained as one with glasses being looked at as conventionally unattractive, more intelligent, and shy. My correlational study uses a mixed method survey on teen girls aged 14-18 from a suburban New York, predominantly caucasian high school to try and fill this gap. This study specifically looked at if one's own use of corrective eyewear affected their perceptions of other people with glasses and their perception of themselves. A thematic analysis of the qualitative data was used and a statistical analysis for the quantitative data was also used. Those with corrective eyewear being tested were those who used glasses daily, contacts, and those who didn't wear glasses daily. Surprisingly it negatively affected their perceptions to actually see those with glasses more stereotypical. When asked questions about how they feel about wearing glasses most respondents felt that it negatively affected other people's perceptions of themselves. Those who didn't use corrective eyewear were still affected, but less than those wearing glasses. The original hypothesis was supported since the use of corrective eyewear did affect teens' perceptions, however, not entirely. It was hypothesized that the use of corrective eyewear would decrease the possibility of seeing this stereotype, after all it actually increased this possibility.

Introduction

For generations, there has been an increasing prevalence of refractive errors or vision issues. A National Health survey stated that 75.6% of America's population uses corrective eyewear (The Vision Council 2021). Corrective eyewear includes both glasses and contacts. These are prescribed by optometrists to fix refractive errors. Some common types of vision problems include astigmatism or blurry vision, hyperopia or farsightedness, and myopia or nearsightedness (Cleveland Clinic 2022). These different vision issues require different prescriptions of eyewear and can be needed daily or in some cases only for specific things that can be difficult to see. Although using corrective eyewear may seem like a very small change to someone's face and is physically harmless, it has been found that even the smallest of features or accessories can ultimately cause us to create inferences about someone's personality (Harris 1991). This is eventually what can lead to stereotyping.

The glasses stereotype is referred to as assuming someone's character based on them wearing glasses. Some common character traits include attractiveness, intelligence, confidence, trustworthiness and many more. (Leder et al., 2011). These studies have continuously looked at this stereotype but haven't been able to look at if someone's own use of corrective eyewear affects their use of the stereotype. In order to further analyze this, the research question is: To what extent is teenage girls' aged 14-18 perception of glasses affected by their own use of corrective eyewear? Throughout looking at different studies, my hypothesis is that teen girls who use corrective eyewear will have a higher positive perception of themselves and others who wear glasses.

Literature Review

Stereotypes have been around for decades and are extremely common. Stereotyping is the idea of having a fixed, oversimplified, and often biased belief about a group of people that may or may not be truthful (Puddifoot 2019). The glasses stereotype has been conflicted by society and evolved in various ways. Specifically, eyeglasses were originally looked at in a negative light. The reasoning behind this is because it was “closely associated with impairment and wearers were perceived as frail and dependent, needing correction” (Kaplan 2023). Over time, eyeglasses were embraced and started to become normalized within a capitalist society and evolved into a symbol of intelligence (Kaplan 2023).

The glasses stereotype has some positive connotations, but there remains many negative connotations as well. The stereotype was looked at originally in 1974 by Helmut Leder, Micheal Forster and other researchers who explored both of these ideas. This study revisited added in the element of showing rimmed glasses and rimless glasses. They, however, found that the type of glasses being worn in the images being shown had little effect on one’s perceptions. They did find that both types of glasses influenced the attribution of certain personality traits. Overall, it was found that in both men and women aged 20-32 that the downside of wearing glasses is that it influences one’s facial appearances, decreasing the perception of attractiveness, but allowing for one to appear more intelligent, trustworthy, and timid (Leder et al., 2011).

This idea is expanded on in a similar study exploring the stereotype in college students showing them pictures as well. In this study images were shown of people with prescription glasses, non-prescription glasses, and none at all. The results are consistent with previous studies, such as Leder and his team, showing a pattern that those with glasses were perceived as more intelligent, but there was no difference in perceptions based on the type of eyewear being shown in the images (Borgen 2015). Both of these studies did show images of different types of eyewear being used excluding if the person viewing the images used eyewear themselves.

Another study by Jerry Walline and his team did a study on specifically children and found this same result that they were viewed as smarter but unlike other age groups, glasses had no effect on children’s perception of attractiveness. This could be caused by a variety of factors, but it is inferred that the reason is children are still unable to decipher attractiveness (Walline et al., 2008). This same age group was looked at by Jellesma, where she found that wearing eyeglasses could negatively affect a child by being subjected to an increase of bullying. These researchers claim that children could be playing into the glasses stereotype possibly because of their own use of corrective eyewear, if they had a bad impression on someone with glasses, and how they were raised (Jellesma 2013). All of these inferred reasons are in need of further study in order to explore the real world stereotypes potentially affecting people’s perceptions of others and themselves of wearing glasses. My study aims to explore this to see if the negative perception of glasses is more prevalent amongst those who don’t use corrective eyewear. Specifically, my study will look into if there is a correlation between teens who aren’t exposed to wearing glasses and those who have refractive errors to see if they relinquish the stereotype traits differently.

The glasses stereotype also claims that people who wear glasses are considered less attractive and this hurts the image of those who are required to use glasses. This translates in real life throughout the study by Yasuto Okamura who specifically focused on women and used an experiment showing pictures to participants aged 18-26. They continued to find that women wearing no glasses were judged to be prettier, better looking, and preferred more by others than the women wearing glasses (Okamura 2018). This study is closer to the age group that will be explored and supports how people use the stereotype in a negative way, in terms of attractiveness.

This idea is furthered by Saif Alrasheed and Mohammed Jumaah with a similar study, but with university students. Researchers found a similar idea that people with glasses were seen as less attractive and confident. In this study, they also looked at if the one’s use of spectacles affected these findings and they were unable to completely prove if it did or didn’t because of the conflicting results (Alrasheed et al., 2022). This

was the first study that looked at the people answering the questions to see if using glasses in general affected their results. This led me to deciding to further look at different types of corrective eyewear, not just everyday spectacles since there was no research regarding those that don't need to wear glasses everyday and those who wear contact lenses as a part of the corrective eyewear category.

Those with glasses were found to be less confident which directly relates to self esteem. Those who wear glasses were found to have less self esteem over time compared to those who wore contact lenses. This was found by Lynette Dias and her team where they gave 12-17 year olds a questionnaire over a 6 year period. Dias is an optometrist and shared this questionnaire with her patients so the data could be gathered as the child grew up. They were able to see a regression in self esteem of those who wore glasses and those who wore contact lenses had the same self esteem over that period. This is another interesting element that is one of the many serious effects the glasses stereotype has, since other people are constantly viewing those with glasses differently (Dias et al., 2013). This contributes to the significance of my research because if this stereotype is occurring to this day, it can keep changing people's perceptions for the worse and eventually cause a lack of self esteem.

The lack of self esteem can also be the reason for spectacle non-tolerance. This means that people refuse to wear their glasses as much as they are prescribed to which can commonly be caused by peer pressure, various cosmetic reasons, and lost spectacles. Peer pressure and cosmetic reasons were two major factors of why people choose not to wear their glasses. This can lead to patients becoming unable to have optimal vision and can even cause a worse refractive error (Dias et al., 2013). This is a serious effect the stigma surrounding glasses has caused and can continue to cause.

Roger Terry and his team of researchers, who are very experienced in this topic after conducting multiple studies on the impact of wearing glasses, explored this same idea. Their study looked at adults aged 21-40 who used spectacles and to assess if their self esteem was impacted by the age they were prescribed to wear glasses. This study found that those prescribed to wear glasses during adolescence had a lower self esteem than those prescribed in childhood or adulthood (Terry et. al 1976). It was inferred in this study the reason could be because of bullying faced and his past study in 1983 proved this after interviewing 15 people about their experiences while wearing glasses (Terry & Carol 1983). Since both of these studies are now outdated, it is important to see if bullying as a result of wearing eyeglasses is still occurring and what that is doing to these young girls' self esteem.

Method

This study falls within the realm of social science. To test the research question presented a correlational study was conducted with a mixed method survey. The mixed method survey was dispersed to teenage girls from a local Long Island, New York predominantly white high school, between the ages of 14-18. This was done to specifically look at just women, in order to keep the gender constant to ensure the results were not affected by outside factors. Another reason for particularly looking at women stems from the idea that women are more sensitive in detecting subtle cues about how a person looks in relation to analyzing someone's character. This was proven in studies done by Agneta Fischer and his team where women and men were shown various images and women picked up more negative specific character traits while men didn't see these same character traits while just looking at a picture (Fischer et al., 2018). Another important reason for choosing just to look at women was within this age group, wearing glasses is more common amongst females as opposed to males (QuickStats 2019). The gap of being able to see the perspective of just high school females is important to look at in order to see the reasoning behind these perceptions. The focus of this study is to see if wearing eyewear or the different prescriptions of them being worn impacted how women viewed others with eyeglasses and what they have experienced themselves. A stratified sampling was used to ensure an adequate number of participants were in each subcategory.

Justification of Method

A mixed-method survey was conducted because it was important to get both quantitative and qualitative results to effectively compare the results of why people might have answered the way they did. In existing research examining how glasses influenced people's perceptions of beauty as well as association of character traits, they used an experiment showing different people pictures of people with and without glasses and asked questions about them. Although this may be useful for just gathering perceptions, because more information was needed to prove the hypothesis stated earlier, the decision was made to use pictures in my survey to gather those results as well as others. Specifically, in one study conducted on only western university students they were shown these images but this didn't look into women and see if that person wearing glasses had an effect on these results (AIRyalat S et al. 2022).

Another study used a yearly questionnaire focused on assessing children's self esteem over time comparing those who wore glasses and those who wore contacts. This idea is another element of my research to try to assess if glasses have an effect on an individual's self esteem and the mixed method survey modeled this questionnaire (Dias et al. 2013).

A causal- comparative analysis was also considered to assess different variables such as, low self esteem and twisted perceptions. However, this method was not used because there was no way to directly show that direct cause and effect relationship. This study is aimed to see if there is an overall relationship between using corrective eyewear and twisted perceptions/low self esteem. After seeing other studies within the realm of this use different methods, a correlational study using a mixed method survey was finalized in order to see this relationship and correctly gather all the data needed to answer the research question.

First Section of Survey

The first section of the survey was to assess how people felt about others wearing glasses. Participants were first shown two short movie clips of glasses being shown in the media to see if they felt the message was conveyed that glasses were positive or negative. The reasoning was to see how people reacted to other women wearing glasses in the media being criticized to see if they agreed with it or felt it was wrong. The next group of questions displayed four pictures, two of actresses with glasses, the other two were the same actresses without glasses. The participants were asked to check all character traits they would associate with each person displayed to see if glasses had an effect on how these teenagers perceived others' personality traits. Some character traits listed were intelligent/studious, timid/shy, nice/kind, and unattractive, which were traits that were most commonly associated with wearing glasses. These traits are supported by the study that found that spectacles may make some tweens seen as smarter, more shy, more honest, nicer, and less attractive to their peers (Oechslein & Walline 2008).

Second Section of Survey

The next section of questions presented was more personal, focusing on how those who used corrective eyewear viewed themselves. In the survey, there was a question that asked if participants used corrective eyewear and if they responded yes, they were then asked to indicate what they wore daily. Depending on how questions were answered, they were given a different set of questions accordingly. If participants wore glasses they were asked the reasoning for choosing to wear glasses as opposed to contacts. This was an open ended question that allowed for girls to explain their various reasons for choosing to wear glasses. The next question asked if anyone has commented on their glasses in a negative way to see if in participants' own personal experience they have been stereotyped and looked at differently for wearing glasses. Then, the next question asked if participants felt that their appearance was altered in a negative way and this used a 5-point Likert scale. All of these questions were

given to anyone who answered yes to wearing prescription eyewear, but in different variations depending on what they use daily. There were also questions for specifically those who wore contacts to assess the reasoning behind this decision and to see if other people had an influence on this. This same variation of a question was given to participants who don't wear their glasses everyday and specifically those who are in the non-tolerant category that are required to wear glasses daily but refuse. The next grouping of questions was given to everyone who participated in the survey and acted as a way to see if bullying amongst those who wear glasses is still prominent and asked open ended questions to see what the most common things are being said about those who wear glasses that could be hurtful. This second section was the basis of seeing if wearing different prescription eyewear changed how they answered the questions to the first section. This was in order to test the hypothesis that if a girl used corrective eyewear it would change their perceptions of others wearing glasses in a positive way. The entire survey with all the different sections and questions given to different people can be seen in Appendix A.

Results

In this study, the results were gathered within the survey that was created using Google Forms. There were a total of 88 respondents, all were female ranging from ages 14-18. This correlational study contained both quantitative and qualitative data that was then analyzed. A thematic analysis was used to derive specific themes and ideas from the free response questions for a better understanding of my results. A statistical analysis was also used for the quantitative data in my survey for this same better understanding. The data was placed into four subcategories, including those who didn't wear any type of corrective eyewear, the people who wore glasses, those who wore contacts, and those who wear glasses but not everyday. These subcategories are constant throughout the thematic analysis and statistical analysis.

Statistical Analysis

The statistical analysis was used for the second section of the survey where participants were given pictures of people with and without glasses. They were asked to select character traits they would associate with them. This consisted of two different people but four pictures in total. After gathering all my responses, a value was given to the different character traits, 1 being a trait that is most commonly associated with the glasses stereotype and -1 being a trait that goes against this typical stereotype. Then, the data for each respondent and each question was given a total based on adding those values. Once all the values were given to each individual's response and each of these questions, then the mean and standard deviation was found within those subcategories.

In order to see if the data was affected by the use of someone's own use of corrective eyewear, a T-184 Scientific Graphing Calculator was used to do a 2-Sample-T Test to determine a P value. In order for the p-value to be statistically significant it needed to be under 0.05. For a better understanding of the data those with corrective eyewear and those without eyewear were compared and a p-value was calculated. The first statistical test was based on just the pictures of people with glasses. The p-value was 0.02346, which indicates that it was statistically significant. Then, the same test was conducted with the pictures of those without glasses. The p-value was 0.03674, which again indicated it was statistically significant. Therefore, there was a very slight chance that my results were just a coincidence, meaning that wearing corrective eyewear did heavily impact these results.

Use of Corrective Eyewear

When looking further and comparing the different types of corrective eyewear there was no significant statistical difference between contacts and glasses. It was not statistically significant since the p-value was 0.0605. This means their responses were too similar to indicate using glasses or contacts affected the results. Then, comparing those who use glasses daily with those who don't wear glasses everyday, there was a statistical significance since the p-value was a .01532. In Figure 1 below you can see a bar graph of one of the pairs of pictures to help get a better understanding of the overall perception of teenage girls on those who wear glasses. In the darker blue, respondents were shown a picture of a woman wearing glasses and in the lighter blue, respondents were shown a picture of that same woman without glasses. In conclusion, this supports the hypothesis that the use of corrective eyewear does affect one's perceptions of others wearing glasses; however, the type of corrective eyewear did influence the results in a more stereotypical way.



Figure 1.

Dichotomous and Likert Scale:

Next, within my survey there were many different dichotomous scale questions, which were a series of yes or no questions. First there was, two foundational questions to allow me to put participants into these subcategories. Within the 88 respondents, 46 wore some type of corrective eyewear, including 18 wearing contacts, 12 who wore glasses but not daily, 16 who wore glasses daily, while 42 didn't wear any type of corrective eyewear. Each subcategory was then given different but very similar questions based on the type of corrective eyewear used.

Starting with those who wore contacts, when asked if anyone had made a comment towards them while wearing glasses, the majority of people (55.6%) responded with yes. When asked if other people's opinions or the anticipation of their opinions influenced this decision to wear contacts, a majority (61.1%) responded yes. In order to try and assess if their self esteem was affected by wearing glasses, a likert scale was used with a 1-5 scale. The majority of the people who had contacts (61.1%) responded with a 1, meaning strongly agree, and

some (22.2%) responded with a 2 meaning that mostly all (83.3%) felt that glasses did impact their appearance in a negative way.

The next group tested with these similar variations of questions was those who don't wear glasses everyday, the reason for this group was to try to determine if there was a prominent non-tolerance population. When asked if their prescription required them to wear glasses often, 25% responded yes meaning they were amongst this population and when looking at the individual response it was found those same people also responded that someone made a comment toward them while wearing glasses in a negative light. This could potentially be a cause of that non-tolerance. Within the likert scale question, more than half (66.6%) responded that they felt glasses did impact their appearance in a negative way.

Then, the last category of people was those who wore glasses daily, and the minority of people (37.5%) responded with yes, meaning that someone had commented on their glasses in a negative way. They were the only sub-group who had a higher percentage of no's which could be explained by others being used to them wearing glasses. Then, when asked if they felt that wearing glasses altered their appearance in a negative way the same minority (37.5%) responded within the range of agreeing which when looking into the individual responses was the same participants who responded with yes to the question prior.

Then, all participants were asked if they have witnessed any comments on another person's appearance in a negative way for wearing glasses and more than half (54.7%) responded with yes, where they were then asked to create a list of these comments, which will be analyzed in my thematic analysis.

Thematic Analysis

In the mixed method survey, the qualitative data was then analyzed using a thematic analysis where different popular themes were derived from each of the short response questions. A total of 4-6 themes for each question was used to categorize these answers. In the first section of questions, two movie clips playing out the typical makeover trope supporting the glasses stereotype was shown. These questions asked for a message they had developed from watching the clip. For both of these questions, there were very similar themes that were created into six themes together, which can be seen in Table A. The first theme had to do with beauty standards or impressing others. Amongst these questions, responses from both included, "that girls are supposed to look a certain way in today's society to fit males wants" and "beauty is what makes a person". This theme incorporated 57 responses that fit those similar ideas. The next theme was that glasses made people look less attractive, and 38 responded with these ideas. For example, a response included "women are prettier without glasses". Another theme was that people with glasses were only seen as intellectual and only 26 responses reflected that, one example being, "this image conveys that the girl is seen more as an intellectual rather than beautiful as a result of her glasses". The next theme talked about the importance of the makeover process and examples include, "it's like the nerdy girl changing into someone unrecognizable" and "that she isn't pretty enough to be a princess so she needs a makeover to be pretty enough to be one". These both fit the criteria for this theme as opposed to other themes, even though it is similar, with the number of respondents being 34 it was important to make it its own theme. The following theme was for the responses that didn't understand the message and responded with answers that were outliers or didn't fit any of the themes presented. This was a total of 13 responses. Some examples included, "she is ugly" and "bullying, taking others down". These questions were also not answered by 6 people which could be a possible limitation and skewing the data. Overall, in both of these clips, the message in all of these themes was supporting my hypothesis that people can view the makeover trope as many different messages, including that glasses change people's perceptions and movies can potentially capitalize on this idea.

Table A.

Theme	Definition
Beauty Standards	Response talked about general beauty standards that woman have to live up to in order to impress others
Intellectual Benefits	Response talked about how with the glasses on she was perceived as smart but nothing else
Glasses affecting attractiveness	Response talked about how glasses were portrayed as an individual being unattractive/ not pretty
Importance of the makeover	Response included how the clip showing a change in appearance or that the makeover was extremely important
Didn't interpret the message/no theme	Response did not understand the clip/no message was derived from the clip

The final section of questions asked if there were any negative comments they heard and asked to briefly list them. There were four themes that derived from this which can be seen in Table C below. The first theme was relating to talking about someone in glasses being nerdy or shy. A total of 16 participants responded with something relating to this theme. Some examples include, "they seem smart/nerdy, and are shy in social settings" and "it makes them look nerdy or strange". The next theme was created based on responses fitting the criteria of someone's looks being impacted in a negative way while wearing glasses. A total of 8 people responded with something along the lines of this. Some examples include, "she would look so much prettier without glasses" and "they would look better without glasses and they aren't attractive". Another theme to this question was that people make assumptions that people with glasses are weird and the majority of responses in this category heard people saying different harsh phrases. A total of 13 people responded with something similar to this category. Some examples are "4-eyed and she/he/they look weird" and "the classic 'four eyes' insult". The final theme was responses that included something relating to suggesting contacts, and a total of 5 people answered with this. An example includes, "people suggesting contacts to improve someone's appearance". All of the responses obviously have negative connotations and continue to support the glasses stereotype.

Table C.

Theme	Definition
Nerdy/Shy	Response included talking about how glasses makes them smart and only being timid
Weird/ 4-eyes	Response talked about how glasses makes them look weird and comments that are negative like classic jokes such as 4-eyes
Unattractive	Response included something similar to that someone wearing glasses effects their looks in a negative

Suggesting contacts	Response included telling someone with glasses they should try contacts in a negative condescending way
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Conclusion

Based on the results previously stated, it was determined that teenage girls' use of corrective eyewear generally does change their perceptions of other women wearing glasses. In each subsection of the survey there were different goals to try and fully be able to answer the research question. The results warranted many different conclusions that were drawn that partially support my hypothesis. Overall, when comparing both the pictures of the women with and without glasses both showed that in general just using corrective eyewear does change these young women's perceptions. When looking at the different types of corrective eyewear glasses and contacts were both consistent with these findings that there was a negative perception, however, those who answered they don't wear glasses daily had different, more harsh perceptions on those wearing glasses which was contrary to my hypothesis. This could potentially be because those wearing glasses consistently everyday could feel more comfortable in them. Those who don't wear glasses everyday could have a greater chance of having insecurities, as seen in the results. It can be concluded that those who wore glasses and contacts in general had insecurities about themselves wearing glasses. The comments other people had said to them also go to support the prevalence of the glasses stereotype and could potentially be part of the reasoning behind these results since most respondents said they had received a negative comment towards them when wearing glasses.

Implications

This study as previously said was just on teen girls keeping gender constant. This helps to see a new perspective of just teen girls since in past research there was added an independent variable. This study provides insight on just this specific age group. Other various studies, specifically looked into mostly children and adults.

Since the glasses stereotype has been going on for generations, it is important to see if today's teens are still having those underlying assumptions they make when looking at someone with glasses. This can potentially be a reason these young girls feel that their glasses affect their appearance in a negative way. There is a concern that this age group is constantly exposed to the media and expected to fit many beauty standards. This negative connotation that those with corrective eyewear feel towards others as well as themselves can be detrimental for these young teens future opinions on themselves and others. These assumptions that these teens can further affect their friendships and relationships with others. If those with corrective eyewear are more likely to stereotype others wearing glasses as well, this could be a reflection of how they see themselves which is an even bigger issue that needs to be addressed. These young minds are still being shaped and an increase in positive affirmations in not only school, but at home and on social media can be beneficial to helping this issue. Teaching these teens about their self worth and continuing to give them positive role models with glasses can help to change their subconscious opinions of those wearing glasses.

Parents can help reduce the use of this stereotype by teaching their children that negative comments towards people with glasses can be hurtful. If their child receives negative comments, positive affirmations can teach their child to be resilient. This resilience can continue to help these teens wearing glasses to not constantly judge themselves or others around them for something that they cannot control. Another added factor is to not automatically recommend wearing contacts to their children, and instead try to allow them to become comfortable in their glasses.

Limitations

In this study there were numerous limitations that could have in turn affected the results. Since a survey had to be used in order to gather perceptions of teen girls, there were some questions participants decided not to answer, or they didn't answer the questions as asked. This left room for human error which could have potentially skewed my results.

Another possible issue was the sample size. The reasoning for this issue could be that although 88 respondents can seem like a lot, with there being many subcategories each participant was placed in, it would be ideal to have more participants in each category. With more participants it could have validated each comparison better since the categories were not large enough in this study.

As stated prior, there were multiple different subsections. These included those who didn't use corrective eyewear, and those who did. Those who used corrective eyewear were then separated into those who wore glasses daily, those who wore contacts daily, and those who used glasses but not daily. Since each young woman used a different type of eyewear when they responded, they were given different similar questions since some questions could not be answered by different categories. This goes into the limitations when specifically looking at those who didn't wear corrective eyewear because they were not given these same questions. This same part of the survey also asked self esteem questions to see if glasses affected their self esteem. Since those without corrective eyewear did not receive any of those questions, there was no possibility to fully compare these results to directly link a low self esteem to those wearing glasses.

This study did use a total of four photographs of two different actresses to ask participants about their perceptions. The first two were women with glasses and the next was those same two women without glasses. The results could have been skewed because of a variety of different outside factors. During this transformation between the two different photographs, the women could have potentially changed more in this dramatic transformation including their hairstyle, their makeup, and many other factors that could have influenced their perceptions including age and just the familiarity with the actress in general. The small number of pairs of pictures being used could have also been a limitation because of the factors stated previously.

Future Directions

As stated priorly, the female perspective was kept constant throughout the study and there were no male participants.

It could be interesting to make other factors constant and compare both men and women's results of a mixed gender wearing glasses and those not wearing glasses to see if that gives different results. This could be important to further analyze these glasses on the entirety of the teen population including males.

Since the results warranted that glasses did affect an individual's self esteem in a negative way when talking about appearance, it might be interesting to compare both people with glasses, with contacts, and without glasses self esteem. This could be gathered by asking them exact same questions with a likert scale to completely analyze these findings to then compare.

Another interesting finding that was found in this study was those who didn't wear glasses everyday differed in their perceptions of others when compared to those who did wear glasses everyday. Since the sample size of those not wearing glasses was much less than those who did wear glasses everyday a study solely focusing on this and not other factors as well needs to be further analyzed. This further research could potentially try to find the reason for the non-tolerance population and try to potentially help these people become more comfortable with wearing glasses.

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References

- Abrams, P., Levy, R., & Gladstein, R. (Producers), & Prince, F., & Iscove, R. (Directors). (1999). *She's all that* [Film]. Miramax Films.
- AlRyalat, S. A., Jumaah, M., Al Hajaj, S. W., Al-Noaaimi, F., Alawneh, Y., & Al-Rawashdeh, A. (2022). The effect of wearing eyeglasses on the perception of attractiveness, confidence, and intelligence. *Cureus*. <https://doi.org/10.7759/cureus.23542>
- Bist, J., Kaphle, D., Marasini, S., & Kandel, H. (2021). Spectacle non-tolerance in clinical practice – a systematic review with meta-analysis. *Ophthalmic and Physiological Optics*, 41(3), 610-622. <https://doi.org/10.1111/opo.12796>
- Borgen, A. (2015). The effect of eyeglasses on intelligence perceptions. *The Red River*, 1(2015).
Cleveland Clinic. (2022, January 14). *Common Eye Diseases and Vision Problems*. [clevelandclinic.org. https://my.clevelandclinic.org/health/diseases/17130-eye-diseases](https://my.clevelandclinic.org/health/diseases/17130-eye-diseases)
- Dias, L., Manny, R. E., Weissberg, E., & Fern, K. D. (2013). Myopia, contact lens use and self-esteem. *Ophthalmic and Physiological Optics*, 33(5), 573-580. <https://doi.org/10.1111/opo.12080>
- Houston, W., Chase, D., & Iscovich, M. (Producers), & Marshall, G. (Director). (2001). *The Princess Diaries* [Film]. Walt Disney Pictures.
- Jellesma, F. C. (2013). Do glasses change children's perceptions? Effects of eyeglasses on peer- and self-perception. *European Journal of Developmental Psychology*, 10(4), 449-460. <https://doi.org/10.1080/17405629.2012.700199>
- Kaplan, J. (2023). Eyeglasses as a social status symbol. *20th Century Drama*. Retrieved April 17, 2024, from <https://digitalrepository.trincoll.edu/trinitypapers/120>
- Leder, H., Forster, M., & Gerger, G. (2011). The Glasses Stereotype Revisited. *Swiss Journal of Psychology*, 70(4), 211-222. <https://doi.org/10.1024/1421-0185/a000059>
- Okamura, Y. (2018). Judgments of women wearing eyeglasses: A focus on specific dimensions of physical attractiveness. *Romanian Journal of Applied Psychology*, 20(1), 7-10. <https://doi.org/10.24913/rjap.20.1.02>
- Puddifoot K. (2019). Stereotyping Patients. *Journal of social philosophy*, 50(1), 69–90. <https://doi.org/10.1111/josp.12269>

QuickStats: Percentage of Children Aged 2–17 Years Who Wear Glasses or Contact Lenses by Sex and Age Group (2019) — National Health Interview Survey, United States, MMWR Morb Mortal Wkly Rep 2021;70:865. DOI: <http://dx.doi.org/10.15585/mmwr.mm7023a4>

The Vision Council. (2021, December). *VisionWatch Vision Correction and Frame reports*. [thevisioncouncil.org.https://thevisioncouncil.org/sites/default/files/assets/media/TVC_OrgOverview_sheet_2021.pdf](https://thevisioncouncil.org/sites/default/files/assets/media/TVC_OrgOverview_sheet_2021.pdf)

Terry, R. L., Berg, A. J., & Phillips, P. E. (1983). The effect of eyeglasses on self-esteem. *Journal of the American Optometric Association*, 54(10), 947–949.

Terry, R. L., & Brady, C. S. (1976). Effects of framed spectacles and contact lenses on self-ratings of facial attractiveness. *Perceptual and motor skills*, 42(3), 789–790.
<https://doi.org/10.2466/pms.1976.42.3.789>

Walline, J. J., Sinnott, L., Johnson, E. D., Ticak, A., Jones, S. L., & Jones, L. A. (2008). What do kids think about kids in eyeglasses? *Ophthalmic and Physiological Optics*, 28(3), 218–224.
<https://doi.org/10.1111/j.1475-1313.2008.00559.x>