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How Corrective Lens Choices are Associated with the Self-Esteem of College Students

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HOW CORRECTIVE LENS CHOICES ARE ASSOCIATED WITH THE SELF-ESTEEM OF COLLEGE STUDENTS

MARGARET NEENAN

HONORS PROJECT

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UNIVERSITY HONORS

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Introduction

My inspiration for my honors project stems from my current career path pursuit as an Optometrist, as well as my history with corrective eyewear. In 2006, after visiting my Optometrist for my yearly eye exam, it was determined that my vision had changed enough that I would be required to use glasses to see accurately. As a six-year-old kindergartner, it hadn't occurred to me that the blurred objects on the blackboard were letters, words, and important communication of what I should have been learning in school. I met with opticians at the family practice I attended, and they helped me to choose my first ever pair of glasses: plastic cat-eye cheetah print frames. I will never forget walking into school that first day wearing my new glasses and having all of my classmates and teachers compliment me and note how different I looked.

Spanning the course of the next 15 years of my life, I toyed with numerous styles of eyeglass frames: rectangular, slightly square, slightly round, until finally, I found the style that was for me. For the last six years of my life, though I spent three years managing to wear both glasses and contacts, I have consistently chosen a slightly rounded and cat-eye tortoise frame, in varying neutral tones. I choose these frames because I not only enjoy how they look on my face, but the confidence boost I have while wearing them. While contacts gave me great vision, I still felt the pull that something was missing from my face, that it was bare and needed something to make it complete (glasses). Having recognized this aspect of myself, as well as my passion to pursue a career as an Optometrist, I thought this honors project would be a great opportunity to see how other individuals my age, college students, felt about corrective lenses and how their self-esteem while wearing contact lenses or glasses related to my own. I wanted to create an honors project that had the potential to show links between corrective lenses and psychological

aspects such as self-esteem, while also taking the opportunity to learn more about the field I will hopefully be entering in the near future.

Research Questions

As mentioned above, my career pursuit lies within the medical field of Optometry. I am currently studying Biology, specializing in pre-optometry, intending to earn my O.D. in Optometry. In my undergraduate career, I have taken several courses which have shaped my ideas for this honors project, including PSYC 1010: General Psychology, PHYS 2020: College Physics II, and BIOL3500: General Genetics. The combination of my career pursuits, history with wearing corrective lenses, and the courses I have taken have led to my connection of these elements into my honors project. My research questions for my honors project are as follows:

- How corrective lens choices are associated with the self-esteem of college students?
- How do factors such as gender, ethnicity, finances, insurance, recreational and occupational use, or lens options recommended to a patient impact an individual's choice of corrective lenses?

Literature Review

When conducting a survey and report regarding corrective lenses, readers and surveyors must understand what is meant by the term "corrective lens". Corrective lenses may be lenses used in front of the eye, particularly glasses or contact lenses (Kemper, A., Gurney, J., Eibschitz-Tsimhoni, M., & DelMonte, M., 2007). Studies have been conducted on glasses and contacts before in adolescents, such as the 2016 study by the Centers for Disease Control and Prevention, where it was noted that among children aged 6-17, the percentage of children who use corrective

lenses increase as they age such that 51.4% of girls and 38.1% of boys aged 14-17 reported wearing glasses or contacts (CDC, 2021). One study evaluated how children felt about their peers wearing glasses, where it was noted that the children made fewer judgments on physical attributes, and rather noted their peers appeared smarter with glasses (Walline, J. J., Sinnott, L., Johnson, E. D., Ticak, A., Jones, S. L., & Jones, L. A., 2008). An additional study considered children's self-concepts after switching one group of children's corrective lenses from glasses to contact lenses and evaluating their self-concepts over three years. Results from the study noted that children who wore contact lenses tended to have a slightly higher self-concept than children who wore spectacles, though the statistical difference between the two was determined to be insignificant (Terry, R., Soni, P., & Horner, D. 1997). Furthermore, another study directly compared the prescription of eyeglasses to self-esteem, where it was noted that individuals prescribed eyeglasses in childhood (7-12) and adulthood (21 or older) had more negative effects on their self-esteem than those prescribed eyeglasses in adolescence (13-20). Factors attributed to these results are that children may be more likely to internalize negative reactions to eyeglasses, and adults may reflect upon their age and declining of their physical condition (Terry, R.L., Berg, A. J., Phillips, P. E., 1983). Such studies show that corrective lens use and self-concepts have been observed before, except for it being on children.

Some studies conducted outside of the United States, such as in India, focused on the use of contact lenses among college students, one type of corrective lens, where it was noted that although contacts were sometimes associated with complications such as dry eyes and infections, overall, they were convenient and comfortable. The students used within this particular study were noted to be current contact lens users, indicating that mainly glasses wearers were not included in data collection (Unnikrishnnan, B., & Hussain, S., 2009). Another study in Istanbul,

Turkey on patterns of contact lens use provided some examples of why individuals did not choose to wear glasses, such as a dislike of them, but did not explore the topic further. This study included 836 individuals who wore some type of corrective lens, 577 of which were between the ages of 18-30. Overwhelmingly, participants wore glasses, with 540 of the participants noting that they have never tried contact lenses; one of the foremost reasons for avoidance of contact lenses was noted to be the belief that contact lenses are difficult to use (Şengör, T., Alkibay, S., Ermeç Sertoğlu, A., & Aydın Kurna, S., 2018). Finally, several United States articles and sources have evaluated the numerous advantages and disadvantages of glasses or contact lens use in efforts to distinguish their differences and benefits (Lewsley, J., 2021, Jamrozy, K., 2021, Kumar, K., 2020). Such literature provides some initial research and other factors to explore regarding corrective lens decision-making in individuals that may be separate from self-esteem.

Regarding the role of psychology and self-esteem, Mruk (1999) evaluates several definitions of self-esteem based on perceptions of attitude or psychological responses, as a "function or component of personality", or as defined by social scientists. Of the definitions provided, the definition most relevant and connected to my honors project defined self-esteem as not only a personal judgment of one's worthiness, expressed in attitudes towards oneself but also a "subjective experience which the individual conveys to others by verbal reports and other overt expressive behavior" (Coopersmith, 1967, as cited in Mruk, 1999). The concept of self-esteem can be broad, even multidimensional, which can make it more difficult to research. Therefore, when studying self-esteem, it is important to note that the data collected is a measurement of a subset of self-esteem for a designated group in a specific point of their "life cycle" (Lipka, R. P., & Brinthaupt, T. M. 1992). Some factors that could influence or affect one's self-esteem may be one's self-perception or self-identity. An individual's identity consistently develops, even

throughout adulthood. Kroger (2000) notes that in early adulthood, a range of options relating to an individuals' lifestyle and identity becomes available for expressing oneself as the young adult navigates the world. From the aforementioned sources, it appears as though aspects of corrective lenses and self-esteem have been researched and published. However, a distinct study evaluating the two together appears largely absent from the research community. Therefore, this current study would aid to address some gaps that exist in current literature. More recent studies regarding similar topics have not been published or were unfound by the researcher.

Methods

Research for this honors project was conducted at Bowling Green State University. The research consisted of a twenty-six-question survey, which was conducted online with participation being strictly voluntary and anonymous (Appendix I). Requirements for participants were only that they were 18 years or older. It was assumed that corrective lens-wearing individuals would choose to participate in the study. Exempt IRB approval was granted for the survey and recruitment materials on February 9th, 2022 (Appendix II). Participants were recruited through four main methods: 1) included in the Honors College The Scroll Newsletter, 2) emailed to one campus fraternity and 2 other student organizations, 3) posted on the BGSU Student Replacement Facebook page, and 4) distributed to Anatomy & Physiology I and II courses by primary advisor Amy Wagner. The students accessed the survey via the provided link and were provided an opening statement of informed consent for participation. Students provided their informed consent by proceeding to complete the survey.

In total, 99 participants completed the survey for the honors project. The first five questions gathered demographic information, questions six through fifteen asked students

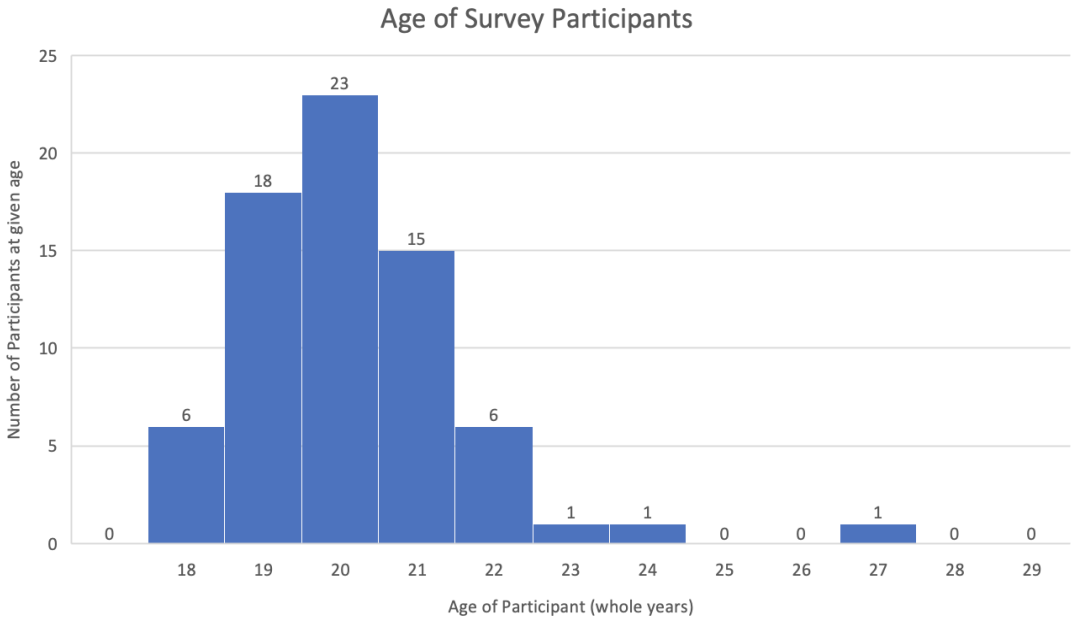
questions regarding their self-esteem using the Rosenberg Self-Esteem measure, and questions sixteen through twenty-seven asked participants questions regarding their corrective lens use, which they wear more often, and explored various factors that may influence these decisions. Questions from and scoring of the Rosenberg Self-Esteem Scale was gathered from the University of Maryland Department of Sociology (SOCY). Data analysis was completed on participants who answered questions 18 and 20 of the survey, which asked specifically which corrective lenses they wear (question 18) and which they wear more often (20). After eliminating participants who did not meet these criteria, 74 participants were eligible: 44 who indicated they wore glasses more often and 30 who indicated they wore contacts more often. Of the 44 participants who indicated they wore glasses more often, one participant did not fully complete their Rosenberg Self-esteem survey. Without this value, the average of their self-esteem would be unequal compared to that of the other participants. Even though we might expect their responses to be similar and we would not expect the overall results to change, it was a personal preference to keep the data as fairly as possible using the answers given. Therefore, this participant's answers were not considered for the t-test. Overall 73 participant responses were used for the data analysis and results.

Results

Age ranges of participants in the survey ranged from 18-27 years old, with 78.9% of participants being 19-21 years old. The mean age of participants was 20.3, with a standard deviation value of 1.879. Refer to Figure 1 below.

Figure 1

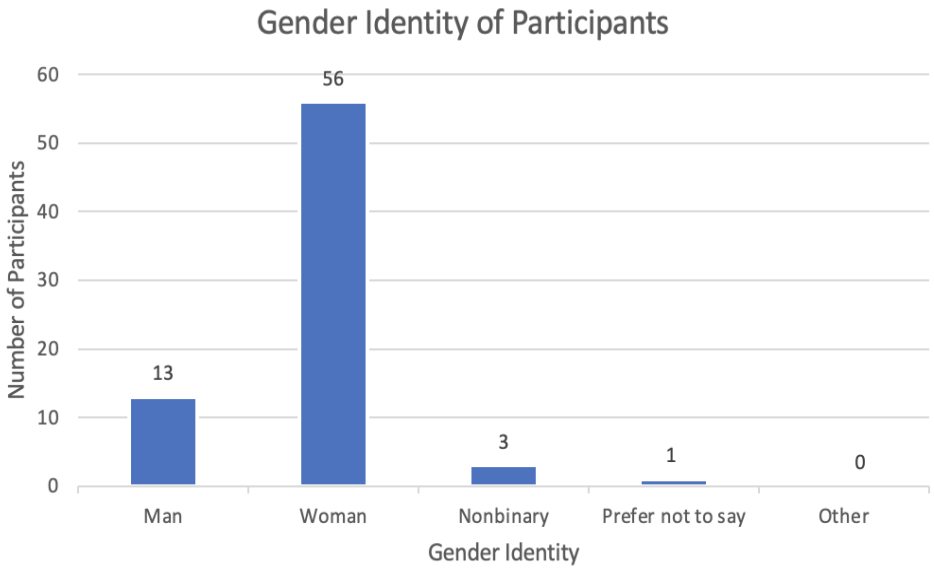
Age of Survey Participants



Age distribution of participant's age. Horizontal axis is the age of the participants. Vertical axis is how many participants for the given age. Numbers on top of the columns refers to how many participants are in that age group. 71 of the 73 selected participants responded.

The Gender identity of participants were predominantly women (76.7%). Furthermore, 93.2% of participants responded that they were Caucasian, and 97.3% were Not of Hispanic/Latino/Spanish origin. Refer to Figures 2 and 3 below.

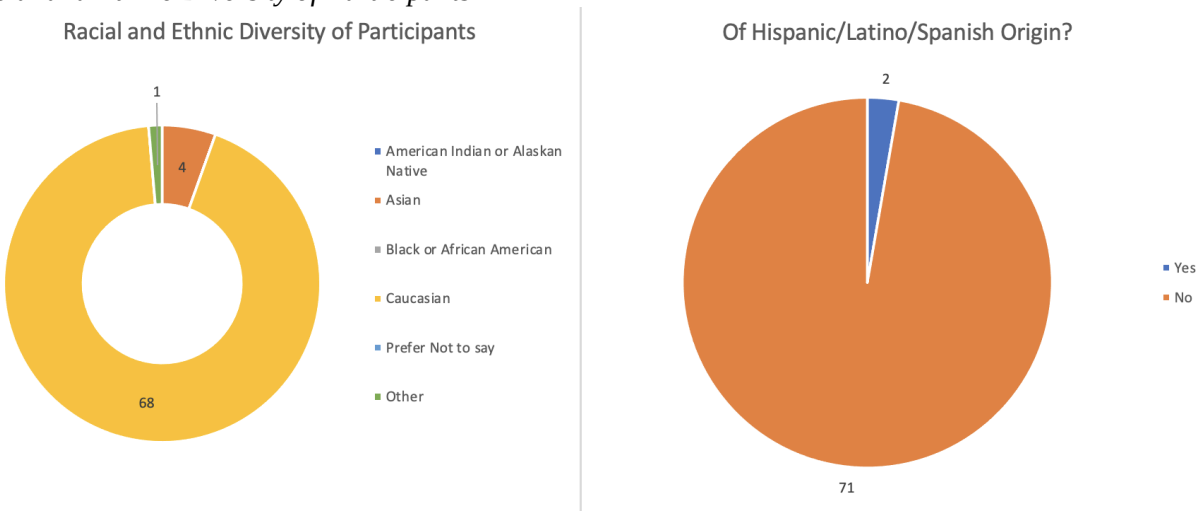
Figure 2
Gender Identity of Participants



Numbers indicate the choice selections of participants. 73 of 73 participants responded.

Figure 3

Racial and Ethnic Diversity of Participants



Numbers indicate the choice selections of participants. 68 participants selected "Caucasian", 4 participants indicated "Asian", and 1 participant indicated "Other" (and text-typed "Asian & White"). No selections for "American Indian/Alaskan Native", "Black or African American", or "Prefer Not to say" were made. 73 of 73 participants responded.

In the survey, participants were asked questions relating to their decision-making of which corrective lens they chose to wear more often. After the participants selected if they wore 1) Glasses, 2) Contacts, 3) Both, or 4) other, they were asked to select reasons why. Some

prompts were given to participants to select from (select all that apply). Should any of these prompts not apply to participants, they could text-answer with their reasons for wearing one corrective lens more often if they wished (Tables 1 and 2). Furthermore, participants were asked if specific factors influenced their self-esteem (Tables 3, 4, 6, and 7). Finally, participants were directly asked if they felt that wearing the corrective lens they used more often increased their self-esteem (Table 5). Refer to the tables below.

Table 1.

If you indicated you wear contacts more frequently, what are some reasons for this?

Answer Prompt	Response
Comfort	19
Required/Preference for Sport/Activity	19
Cost	0
How you look in them	23
Other	1

Question 20 of survey. Numbers of responses are only from the 30 participants who indicated they wear contacts more often. The single participant who selected "Other" explained that contacts are "Easier to get around with (eg, late nights, hanging out with friends)".

Table 2.

If you indicated you wear glasses more frequently, what are some reasons for this?

Answer Prompt	Response
Comfort	29
Preference for activities or hobbies	5
Cost	6
How you look in them	15
Contact lenses are more expensive	6
Contact lenses are difficult to use	17

My eyecare provider did not recommend me for contact lenses	5
Other	4

Question 21 of survey. Numbers of responses are only from the 43 participants who indicated they wear glasses more often. The 4 participants who selected "Other" explained that, respectively, they had 1) a fear of contacts, 2) had allergies, 3) were "too lazy to put contacts in", and 4) (was incomplete).

Table 3.

Is your decision to wear glasses or contacts influenced by sports or other daily activities or hobbies?

Answer Prompt	Response
Yes	42
No	28
Other	2

Question 22 of survey. 72 of 73 participants responded. The two participants who selected "Other" explained that, respectively, 1) contacts were easier to use at work and 2) "it used to be".

Table 4.

Do you believe your choice of wearing glasses or contacts is influenced by how you look in them?

Answer Prompt	Response
Yes	52
No	20
Other	0

Question 23 of survey. 72 of 73 participants responded.

Table 5.

Self-esteem, as it will be used in this study, is defined as a personal judgment of one's worthiness, expressed in attitudes towards oneself. It is also expressed to others in how the individual speaks and acts. Would you say wearing your preferred corrective lenses increases your self-esteem relative too when you wear the other type of corrective lens? (Ex: does wearing contacts increase your self-esteem relative to when you wear glasses?)

Answer Prompt	Response
Yes	46
No	25

Question 24 of survey. 71 of 73 participants responded.

Table 6.

Does your financial situation influence your decision of choosing between contacts, glasses, or both?

Answer Prompt	Response
Yes	13
No	60
Prefer Not to Say	0
Other	0

Question 25 of survey. 73 of 73 participants responded.

Table 7.

Does your access to health insurance or vision insurance influence your decision of choosing a corrective lens?

Answer Prompt	Response
Yes	27
No	45
Prefer Not to Say	1
Other	0

Question 26 of survey. 73 of 73 participants responded.

Further Data Analysis of the participant's results occurred in the form of a two-sample t-test assuming equal variances with the assistance of her secondary advisor. To select and sort the data to be used in this t-test, the following steps were taken. The investigator used Microsoft

Excel and its associated "=" functions to determine how many of the 99 participants wore both glasses and contacts (42 participants). The investigator then created a column where the Excel Functions isolated which corrective lenses the 99 participants used more often, yielding the 74 participants and their corrective lens preferences (44 participants wear their glasses more often, 30 participants wear their contacts more often). This is referred to as the New Variable. Participants who selected they wore each corrective lens equally or those that did not otherwise meet the aforementioned criteria were omitted from the data analysis.

The investigator then summed up and averaged the 74 participants' responses from the Rosenberg Self-Esteem Measure. Questions 2, 5, 6, 8, and 9 required reverse scoring for the summation of the self-esteem measure and were corrected before the Excel "=AVERAGE" function was utilized. One participant of the 74 only completed 9 of the 10 questions for the self-esteem measure. As stated in the Methods section, this participant was omitted from the data analysis to keep the data as fair as possible using the answers given, yielding the 73 participant survey answers analyzed. Larger values for the average Rosenberg Self-Esteem Measure indicate higher self-esteem in participants.

The investigator then separated participants based on their preferred corrective lens: one Excel Sheet for those who wear glasses more often (Glasses Self-Esteem) and those who wear contacts more often (Contacts Self-Esteem). This allowed for easier data selection for the t-test. The two-sample t-test utilized the average Rosenberg Self-Esteem score for both "Glasses Self-Esteem" and "Contacts Self Esteem". Figure 4 below shows the resulting t-test values.

Figure 4

T-test Table of "Glasses Self-Esteem" and "Contacts Self-Esteem"

	Glasses Self-Esteem	*Contacts Self-Esteem*
Mean	2.272093023	2.136666667
Variance	0.135393134	0.187229885
Observations	43	30
Pooled Variance	0.156565891	
Hypothesized Mean Difference	0	
Degrees of Freedom (df)	71	
t Stat	1.438758963	
P(T<=t) one-tail	0.077306361	
t Critical one-tail	1.666599658	
P(T<=t) two-tail	0.154612721	
t Critical two-tail	1.993943368	

The average Rosenberg Self-Esteem Values of Glasses Self-Esteeem were compared with Contacts Self-Esteem. The resulting t-value was 1.438 rounded to 3 significant figures.

The t-test value was 1.438. Smaller t-test values indicate that the two samples being surveyed are similar and do not have a significant difference between them. As such, there was no significant difference in the self-esteem levels of college students who wear contact lenses and the self-esteem levels of college students who wear glasses more often.

Discussion

The expected result of this survey was to expand research to evaluate if there existed a significant connection between corrective lens choices and self-esteem further than previously documented research on how individuals felt they looked in certain corrective lenses (glasses vs contacts). Therefore, there was no hypothesis to be supported or rejected, but rather research questions to be explored. One result that could have been expected in connecting corrective lens choice and self-esteem may have been any observation that college students who wore one form of the preferred corrective lens over another would have, on average, higher self-esteem. One

example of this could have been if college students who wear contact lenses more often had, on average, higher self-esteem than college students who wear glasses more often. The actual result of this research showed that there was no significant difference in the self-esteem of college students who wore a specific corrective lens more often.

This study aligned with previous research regarding the study of children's self-concepts over three years in different corrective lenses. As stated in the Literature Review, that study found that children who wore contact lenses tended to have a slightly higher self-concept than children who wore spectacles, though the statistical difference between the two was determined to be insignificant (Terry, R., Soni, P., & Horner, D. 1997). Similarly, the results of this research indicated that the self-esteem of college students did not have a significant statistical difference regarding their corrective lens choices. One difference between these studies, aside from the 1994 study being conducted on minors, was that the results indicated "Glasses Self-Esteem" had slightly higher average self-esteem (a difference of 0.15) compared to that of "Contacts Self-Esteem". This was opposite from that of the 1994 study. The data analysis and utilization of a two-sample t-test assuming equal variances aided in exploring the first research question of this honors project (how corrective lens choices affect the self-esteem of college students).

The inclusion of questions 20-26 in the survey aided in the exploration of the second research question of this honors project (how factors such as gender, ethnicity, finances, insurance, recreational and occupational use, or lens options recommended to a patient impact an individual's choice of corrective lenses). In this observational study, factors such as gender, and ethnicity were not directly compared or tested. On a more surface level, however, factors such as finances, insurance, recreational use, and more could be observed through the survey responses. Though a t-test or other data analysis was not conducted on these remaining factors, it still gives

readers some insight as to an individual's decision-making for corrective lenses. For example, most participants answered that they were more likely to make decisions about their corrective lenses due to their sports or daily activities as well as how they look in them. In contrast, most participants responded that their financial situation and access to health or vision insurance did not influence their decision-making for their corrective lenses. Such data shows that, perhaps, the actual cost of the corrective lenses in this observed population did not have as much bearing in their decision-making as personal preferences. Overall, research was indeed expanded on this topic but did not show a significant connection between corrective lens choice and self-esteem.

Limitations and Implications For Future Research and Practice

There are two main limitations to this research. One limitation of the research conducted was the sample size results, consisting of 73 participants. While 99 participants in total completed the survey, not all answers were able to be included due to specific criteria, which included omitting participants who 1) indicated they wore both glasses and contacts equally and 2) did not fully complete the Rosenberg Self-esteem scale. These specific criteria were needed to conduct the t-test as accurately as possible. Participants who met these criteria but did not fully complete the rest of the survey, such as omitting some demographic information or not answering all of the remaining questions, remained included primarily because the participation is completely voluntary. The responses they did fill out were useful for exploring my second research question. Furthermore, only students at Bowling Green State University were invited to participate in the survey and research. This ensured that the researcher isolated one population in any geographic area from which to collect responses and analyze at any given time. If the

research was able to be conducted on a broader scale to gather data from students, it would help to increase the number of responses for data, as well as to increase the diversity of the participants in the sample size to represent various racial and ethnic diversities.

The second main limitation of the research was the composition of the participants in the sample size. The majority of the participants reported themselves to be primarily one gender and race: Caucasian and female. While the number of responses was adequate for conducting data analysis, there was not much diversity in the demographic composition of the participants. I feel it is beneficial to have a diverse demographic sample when conducting this research to have representation from various racial and ethnic diversities and reflect the diversity of our surroundings. Research results would be unable to be generalized for a specific geographical region without such diversity in the research participation.

The remaining limitations to the research consist of errors attributed to the self-reporting method of the survey. Because the survey is anonymous and voluntary, errors may also be attributed to survey responses from participants who may have faked some responses, or anyone who may have rushed through the survey without taking the time to fully comprehend the questions. Because data analysis was included in the research, limitations may also occur in the form of errors by the researcher in sorting and calculating data from the responses.

Implications for future research and practice include the ability of researchers, with more knowledge, experience, and means to conduct similar research on a larger scale, or with the ability to evaluate more variables. The present research specifically tested two variables in the evaluation of the first research question related to the self-esteem of participants who wore specific corrective lenses more often. Given the time and means, the research could potentially evaluate more variables, such as the self-esteem of a participant both when they wore the

corrective lens they used more often compared to when they wore the corrective lens they used less often.

Finally, the research conducted can add the research results to the limited amount of literature and peer-reviewed studies on the subject. Results can be used in either the fields of Optometry or Psychology to know research has been conducted on such topics and is capable of being conducted more in the future to explore these research questions and all their facets.

Appendix

I. Survey for How Corrective Lenses Affect the Self-Esteem of College Students

INFORMED CONSENT FOR How Corrective Lens Choices Affect the Self-Esteem of College Students

Hello, my name is Margaret Neenan. I am a third-year student in the College of Arts and Sciences, studying Biology on the Pre-Optometry track. For my chosen Honors Project topic, I will be researching corrective lens choices in college students (such as wearing glasses or contacts), and if there is any connection to how wearing your preferred corrective lens choice affects your self-esteem. I am working alongside my faculty advisors Amy Wagner (Biology Department) and Dr. Meagan Docherty (Psychology Department) to complete this project. Because the study research is on college students, this survey has been sent to undergraduate students in the BGSU community. Furthermore, participants must be 18 years or older to participate in this study.

PURPOSE: The purpose of my research is to collect data to increase research and statistics regarding corrective lens choices (glasses and contacts) among college-aged students, as well as evaluate how these choices relate to an individual's self-esteem or not. The benefits of this study would increase data and knowledge for the Optometry field by determining corrective lens wear choices in a selected population of college-aged students, as well as increasing knowledge for the Psychology field in determining if there exist any connections between corrective lens wear choices and the individual's self-esteem. There are no direct benefits to the individual participants of this research, but rather information and data collected to benefit the research as a whole.

PROCEDURE: Participation in this research is limited to a roughly 30-question anonymous survey/ The survey is entirely electronic and will take around 15-20 minutes to complete. There are no pre-testing, post-testing, or follow-up interviews for this research. The survey begins with related to demographics (age, gender, and race), followed by a series of questions for a self-esteem measure and questions related to your corrective lens choices.

VOLUNTARY NATURE: This study adheres to current BGSU COVID-19 guidelines. Your participation in this research is completely voluntary. You are free to withdraw or discontinue the survey at any time and may skip questions, all without the need for explanation or risk of penalty. Your decision to participate will not affect your relationship with Bowling Green State University, The Honors College, or any Department or Faculty members associated with this research.

CONFIDENTIALITY/ANONYMITY PROTECTION: Anonymous indicates that no individual, including the researcher, can determine the identities of the participants. Confidential indicates that the researcher can determine the identity of the participants but will not reveal their identity. This survey associated with this research is completely anonymous. The data will be stored on a Microsoft Excel document, protected by password-locking the file and only being accessible on a password-protected computer. Only the researcher and their faculty advisors will have access to the information collected by the survey. The data will be kept until the completion of the Honors Project (end of the Spring 2022 semester), where it will then be destroyed to maintain anonymity. Because the survey is electronic, participants should 1) consider using a personal computer in the event any employers utilize tracking software, 2) not leave the survey open if using a public computer or other computer others may access, and 3) clear your browser cache and page history after the completion of the survey.

RISKS: The data collected from the survey will be stored on a locked file on the researcher's password-protected computer. The file will also be accessible the faculty advisors of the research. Any data elements of research kept off BGSU's campus increases risk to the subjects.

CONTACT INFORMATION: If you have any questions regarding the research or your participation in the survey, please do not hesitate to contact us:

Margaret Neenan	Amy Wagner	Meagan Docherty
(Student Researcher)	(Faculty Advisor)	(Faculty Advisor)
neenanm@bgsu.edu	akwagne@bgsu.edu	mdocher@bgsu.edu

(Office) 419-372-9387 (Office) 419-372-4939

You may also contact the Chair of the Bowling Green State University Institutional Review Board, at 419-372-7716 orirb@bgsu.edu, if you have any questions about your rights as a participant in this research.

Thank you for your time.

"I have been informed of the purposes, procedures, risks and benefits of this study. I have had the opportunity to have all my questions answered and I have been informed that my participation is completely voluntary. I agree to participate in this research."

By taking the survey or continuing to the data collection portion of this research, you are indicating your consent to participate in this research.

1. Please type your age (ex: If you are 18, type "18")
    - (Type Answer)
2. Please indicate the gender with which you identify.
    - Man
    - Woman
    - Nonbinary
    - Prefer not to say
    - Other (Type Answer)
3. Please indicate your sex assigned at birth

- Male
- Female
- Intersex
- Other (Type Answer)

4. Please indicate your race.
    - American Indian or Alaska Native
    - Asian
    - Black or African American
    - Caucasian
    - Prefer not to say
    - Other (Type Answer)
5. Are you of Hispanic/Latino/Spanish origin?
    - Yes
    - No

Rosenberg Self-Esteem Scale

6. On the whole, I am satisfied with myself.
    - Strongly agree
    - Agree
    - Disagree
    - Strongly Disagree
7. At times I think I am no good at all.
    - Strongly agree
    - Agree

- Disagree
- Strongly Disagree

8. I feel that I have a number of good qualities.
    - Strongly agree
    - Agree
    - Disagree
    - Strongly Disagree
9. I am able to do things as well as most other people.
    - Strongly agree
    - Agree
    - Disagree
    - Strongly Disagree
10. I feel I do not have much to be proud of.
    - Strongly agree
    - Agree
    - Disagree
    - Strongly Disagree
11. I certainly feel useless at times.
    - Strongly agree
    - Agree
    - Disagree
    - Strongly Disagree
12. I feel that I'm a person of worth, at least on an equal plane with others.

- Strongly agree
- Agree
- Disagree
- Strongly Disagree

13. I wish I could have more respect for myself.
    - Strongly agree
    - Agree
    - Disagree
    - Strongly Disagree
14. All in all, I am inclined to feel that I am a failure.
    - Strongly agree
    - Agree
    - Disagree
    - Strongly Disagree
15. I take a positive attitude toward myself.
    - Strongly agree
    - Agree
    - Disagree
    - Strongly Disagree
16. Corrective lenses may be lenses used in front of the eye, particularly glasses or contact lenses. Do you wear corrective lenses?
    - Yes
    - No

- Other. If other, please explain (LASIK, etc)

17. Please select which corrective lenses you wear.
    - Glasses
    - Contacts
    - Both glasses and contacts
    - Other (please explain)
18. How long have you been wearing corrective lenses? Please type your answer. If it has been less than a year, please use decimals to indicate time (ex: 3 months = "0.25")
    - (Type Answer)
19. If you indicated that you wear <u>both</u> glasses and contacts, please indicate which you wear more often:
    - Glasses
    - Contacts
    - I wear them equally
    - Other (please explain)
20. If you indicated you wear contacts more frequently, what are some reasons for this? (May select more than one)
    - Comfort
    - Required/Preference for sport or other activity
    - Cost
    - How you look in them
    - Other (please explain)

21. If you indicated you wear glasses more frequently, what are some reasons for this? (May select more than one)
    - Comfort
    - Preference for activities or hobbies
    - Cost
    - How you look in them
    - Other (please explain)
    - Contact lenses are more expensive
    - Contact lenses are difficult to use
    - My eyecare provider did not recommend me for contact lenses
    - Other (please explain)
22. Is your decision to wear glasses or contacts influenced by sports or other daily activities or hobbies?
    - Yes
    - No
    - Other (please explain)
23. Do you believe your choice of wearing glasses or contacts is influenced by how you look in them?
    - Yes
    - No
    - Other (please explain)
24. Self-esteem, as it will be used in this study, is defined as a personal judgment of one's worthiness, expressed in attitudes towards oneself. It is also expressed to others in how

the individual speaks and acts. Would you say wearing your preferred corrective lenses increases your self-esteem relative too when you wear the other type of corrective lens? (Ex: does wearing contacts increase your self-esteem relative to when you wear glasses?)

- Yes
- No

25. Does your financial situation influence your decision of choosing between contacts, glasses, or both?
    - Yes
    - No
    - Prefer not to say
    - Other (please explain)
26. Does your access to health insurance or vision insurance influence your decision of choosing a corrective lens?
    - Yes
    - No
    - Prefer not to say
    - Other (please explain)

II. Recruitment Materials for Survey

“Hello, my name is Maggie Neenan. I am a third-year student in the College of Arts and Sciences, studying Biology on the Pre-Optometry track. For the completion of my Honors

project, I will be researching corrective lens choices in college students (such as wearing glasses or contacts), and if there is any connection to how wearing your preferred corrective lens choice affects your self-esteem. I am asking undergraduate BGSU students (over 18) if they would consider participating in my anonymous (electronic) survey. It would take around 15-20 minutes to complete and is entirely voluntary!

By clicking the link below, you will be directly taken to the survey and allowed to read the consent document before the survey begins. More information about the survey is included in that document.

Thank you in advance for your consideration to participate! Please don't hesitate to reach out to me with any questions (neenanm@bgsu.edu).

Link: https://corexms9zq98pl8qp7fk.qualtrics.com/jfe/form/SV_9vQyT9SoRycSa7I "

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