

College Students' Anxiety Levels when Perceived Experience the Spotlight Effect

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Myers and Twenge (2017) define the spotlight effect as a belief when one will overestimate the amount of attention, she or he is receiving from others based on physical appearance or behavior. Timothy Lawson (2010) wanted to further research on the spotlight effect within college students and did so by having them change into a sweatshirt with a certain logo on it, as well as changing the sweatshirt in between interactions with their classmates. This study revealed that only 10 percent of the classmates remembered the original logo on the sweatshirt, while most of the other classmates did not even notice a change in sweatshirts. Gilovich et al. (2000) also performed an experiment that furthered research on the spotlight effect. The researcher gave their participants clothing that the participants would not usually wear, and the participants even labeled these clothes as embarrassing (Gilovich et al., 2000). The results revealed that only 23 percent of observers noticed the clothing. Both of these experiments can be shown as strong examples as to how the spotlight effect can create a negative impact on an individual, specifically a college student, and increase one's anxiety levels.

Anxiety and The Spotlight Effect

According to the Merriam-Webster Online Dictionary (n.d.), anxiety is best defined as an apprehensive uneasiness or nervousness usually over an impending or anticipated ill: a state of being anxious. Which Merriam-Webster Online Dictionary (n.d.) describes the term anxious as an extreme uneasiness of mind or brooding fear about some contingency. Tubbs et al. (2019) characterizes anxiety as uncontrollable feelings of fear and anxiousness, and results in interrupting both everyday physical and psychological functioning. There have been several research studies that have been performed to test on college students' social anxiety when placed in certain scenarios, such as the spotlight effect. Several of these studies will estimate the amount

of attention that a participant was actually receiving, compared to how much the participant believes she or he was receiving. This helps to estimate the amount of social anxiety an individual can grow when believing she or he is the center of attention in a negative way. Moon et al. (2020) performed eight studies that focused on actors estimating the amount of attention they would receive from the audience. The results revealed that the actors overestimated the amount of observation they received, and also revealed that some of the audience members did not even notice when a mistake was made. In 2015, Zhan et al. (2015) performed a study that showed that the participants overestimated how many individuals in their environment would detect the counterfeit apparel. Moon et al. (2020) and Zhan et al. (2015) both performed research that contained the purpose of giving a stronger description on the spotlight effect. Being when individuals are placed in a position to estimate the amount of attention they are receiving, especially when it is over something they find negative or embarrassing, they tend to overestimate it. Individuals can, however, develop the spotlight effect in both a negative and positive way (Lawson, 2010).

Physical appearances that can be changed

People will often make positive changes within their physical appearance in hopes that others will notice these changes (Lawson, 2010). However, when it is an unexpected, negative change, people tend to worry what others will think (Lawson, 2010). Lawson (2010) wanted to further research on the spotlight effect by performing two studies. In these two studies, Lawson's (2010) results suggested two main things; Others are less likely to notice these changes within an individual's appearance and that individuals are highly likely to overestimate the amount of observation they are receiving from others (Lawson, 2010). This study clearly states how the spotlight effect can increase one's social anxiety by containing a belief that everyone within their

environment is judging the individual's physical appearance (Lawson, 2010). Milan et al. (2001) performed a similar research study with college students as participants and wanted to determine how the spotlight effect could impact the college student's mental health. This resulted in revealing that when a participant contained the spotlight effect in a negative way, it created a negative impact on the individuals' mental state of mind. Along with Lawson (2010) and Milan et al. (2001) revealing that the spotlight effect can increase a young person's social anxiety, comes several other scenarios that reveal how this can be developed and create a negative impact on a college student.

Gilovich et al. (2000) explains how most individuals will stand in their own minds and will usually focus on what is occurring to them as well as their own perspectives on their environments. Gilovich et al. (2000) continues on to explain that since individuals tend to focus on their own personal behavior, it can be challenging for individuals to accurately estimate how much others observe them. They performed a study on how much attention the participants believed they were each receiving, and the results revealed that participants overestimated the amount of attention that had been given. In 2002, Gilovich et al. revisited the spotlight effect and performed a similar experiment. However, instead of estimating how much attention the participants believed they were receiving, Gilovich et al. (2002) focused on the audience and received an accurate estimation of how much observation that was actually being given to the participants. The results revealed that most individuals from the audience did not even notice anything wrong with the participants' clothes, whereas the participants believed others would notice their clothing. Several individuals can develop the spotlight effect from their physical appearance, not only clothing. This can also include race, hair, etc (Gilovich et al., 2002).

It is important to acknowledge that there is no cure for experiencing the spotlight effect, but there are ways to decrease it. Golubickis et al. (2015) performed a study that revealed that mindfulness meditation can reduce the mental development for this effect. Macrae et al. (2016) performed research on this effect and was able to show a decrease in one's anxiety when containing proper knowledge on this subject.

Statement of the Problem

The purpose of this study will be to explore college students' anxiety levels and their perceived experience of the spotlight effect. Specifically, when a college student believes she or he is receiving negative attention and being judged from their peers based on physical appearance. Previous research has not taken a deep look into the college population when it comes to the spotlight effect. The research study could benefit the general public, by providing an opportunity to become more educated on social psychology and discover ways to help one on how to cope with their anxiety.

Subproblems

Four problems will guide this study:

1. The first subproblem is to measure students' anxiety levels.
2. The second subproblem is to explore how a students' anxiety levels can increase when believing that they are receiving judgement by their peers.
3. The third subproblem is to examine how much attention a student believes they give and receive to their peers.

Hypothesis

One research hypothesis will guide this study:

1. There will be an increase in participants' anxiety levels when believing that they are receiving negative attention from their peers.

Null hypothesis: There will be no increase on the participants' anxiety levels when believing that they are receiving negative attention from their peers.

Research Questions

Three research questions will be addressed in this study:

1. Will there be a difference in class standing for the spotlight effect?
2. Are there anxiety level differences between class standing?
3. Are there anxiety level differences on gender?

Definition of Terms

The following terms are operationally defined for this study:

1. Participants' levels of anxiety will be measured by the Depression Anxiety Stress Scale *DASS-21* (Kia-Keating et al., 2018). Which is a qualitative measure of distress along the 3 axes of depression, anxiety, and stress. It is not a categorical measure of clinical diagnoses.

Participants' feelings when experiencing the spotlight effect will also be measured by the *Social Comparison Survey* (Park & Baek, 2018). A survey that was developed to investigate how social networking site users' social comparison orientations and their relation with specific types of social comparison-based emotions and how it affects their psychological well-being.

2. Gender will be measured in the demographic section. For example, Female = 1, Male = 2, and Other = 3.

3. Class standing will be measured using a portion of the demographic questionnaire that will be created by the researcher. For example, Freshman = 1, Sophomore = 2, Junior = 3, and Senior = 4.
4. Race will be measured using a portion of the demographic questionnaire that will be created by the researcher. For example, White = 1, Black or African American = 2, Hispanic or Latino = 3, Asian = 4, American Indian or Native American = 5, Pacific Islander = 6, and Other = 7.
5. Religion will be measured using a portion of the demographic questionnaire that will be created by the researcher. For example, Christian = 1, Jewish = 2, Muslim = 3, Buddhist = 4, Hindu = 5, Unaffiliated = 6, Agnostic = 7, Atheist = 8, and Other = 9.
6. Whether or not students know what the term ‘spotlight effect’ is will be measured by participants’ self-report on the demographic section of the survey.
Yes = 1, No = 2

Delimitations and Limitations of the Study

This is a study focused on anxiety levels’ and perceived experience of the spotlight effect, which will take place at Southern Adventist University. There are 3 major limitations in this study:

1. If a student experiences anxiety, it may not come from experiencing the spotlight effect.
2. The sample size will not be large enough to allow the results to be generalizable to other college campuses.
3. Since self-report measures will be used, there is a probability of the participants not answering honestly or to the best of their knowledge. This can occur due to students not wanting to open up about a personal manner, such as their anxiety.

Assumptions of Study

Three assumptions are made explicit in this study:

1. The time frame for completing this study is accurate.
2. The study will have scientific merit.
3. Participants have a strong interest in participating in this research study, and will answer honestly.

Importance of Study

Studying the relationship between anxiety levels and the spotlight effect, being that one believes she or he is receiving negative judgment from his or her own peers, is important because if the results support the hypothesis, it could educate others on what the spotlight effect is and bring a form of reassurance. This study could benefit college students who find themselves having anxiety, specifically when it comes to their physical appearance, or when hanging out with peers. This could also help to educate college students on social psychology and find ways to decrease anxiety levels.

Method

Participants

At least 30 participants will be recruited through a sample of convenience. Each participant will have to be at least 18 years old, and an undergraduate student that attends Southern Adventist University. The students will be recruited at various locations across campus, such as Summerour Hall, McKee Library, and the Promenade. Participants will be offered a cookie as an incentive to participate in the research study. All participants will be treated in accordance with the Ethical Principles of Psychologists and Code of Conduct of the American Psychological Association (American Psychological Association, 2010).

Materials

In this research study, the participant will be given a questionnaire titled *Gomez' Anxiety Levels Survey (GALS)*. There will be three sections and 36 questions in total. The first section will measure the spotlight effect. This will be measured using the *Social Comparison Survey* (Park & Baek, 2018). This is made up of a 5-point Likert scale and has a total of 11 questions with questions 5 and 11 being reversed scored. Reliability and Validity were not tested for this instrument and will be measured upon the completion of the study. The *Social Comparison Survey* was used to psychologically measure individuals' thoughts and ideas on social comparison. This survey has been used in various other studies, especially focusing on social psychology and comparing oneself to peers. The second section will measure participants' anxiety levels. This will be measured using the *DASS-21* (Kia-Keating et al., 2018). The DASS-21 was used to measure between three variables, being depression, anxiety, and stress. The DASS-21 has been used in various other studies. Especially focusing on negative reactions to their environments. This is made up of a 4-point Likert scale and has a total of 21 questions. No questions are reversed scored. Reliability was tested in the following areas: Depression, anxiety, and stress subscales with scores of 0.96, 0.94, 0.87, and 0.89 respectively. Validity was not found for this instrument. The third section will be a demographics section and will be self-reported, and contains questions concerning gender, race, class standing, and religious affiliation. Both of these questionnaires will be measured using a self-report method. This is a pilot study, therefore the reliability and validity of the GALS will be measured after completion of the study.

Design and Procedure

This study will be completed using a descriptive correlational research design using a survey methodology. In order to have substantial data, at least 30 students that are ages 18 and older will need to participate and completely fill out the questionnaires given. Students will be

recruited through visiting multiple areas. Such as Summerour Hall, McKee Library, and the Promenade.

At Summerour Hall, McKee Library, and the Promenade, the researcher will approach students, introduce themselves, and ask if they are willing to sign-up and participate in the research study that is part of the requirements for the course, Research Design and Statistics II. The sign-up sheet will be a spreadsheet including an area for the full names of students, and their email. The participants will be given a QR code that will take them to the GALS. When participants begin the survey, they will be informed that by completing the survey they are consenting to their personal information being used in the survey. The participants will then be asked to complete these forms and should take no later than 30 minutes. All participants will also be informed an incentive in the form of cookies will be offered if they choose to volunteer and once they have completed the questionnaire. After participants have completed the survey, they are free to email the researcher about the spotlight effect for any needed clarification. The researcher will then follow-up with thanking the students who signed up to participate.

Data Analysis

After the data has been collected, questionnaires will be scored and coded using the appropriate answer keys and analyzed as follows using SPSS (IBM Corp., 2016):

1. Participants' feelings when experiencing the spotlight effect will be measured by using the *Social Comparison Survey* (lowest score = 11, highest score = 55).
2. Participants' level of anxiety will be measured by the *DASS-21* (lowest score = 0, highest score = 63).

Demographics

After the surveys are collected, the demographics will be coded as follows:

1. Gender: Female = 1, Male = 2, and Other = 3
2. Class standing: Freshman = 1, Sophomore = 2, Junior = 3, and Senior = 4
3. Race: White = 1, Black or African American = 2, Hispanic or Latino = 3, Asian = 4, American Indian or Native American = 5, Pacific Islander = 6, and Other = 7
4. Religious affiliation: Christian = 1, Jewish = 2, Muslim = 3, Buddhist = 4, Hindu = 5, Unaffiliated = 6, Agnostic = 7, Atheist = 8, and Other = 9
5. Knowledge on the spotlight effect: Yes = 1, No = 2

PHASE 1: Descriptive statistics will be calculated for all major variables in this study. Mode will be used for class standing, gender, race, and religious affiliation.

PHASE 2: Statistical Inference:

One hypothesis will be tested in this study:

1. There will be an increase in one's anxiety levels when believing that s/he is receiving negative attention from their peers. A Pearson's r will be used to measure the relationship between one's anxiety levels and believing that they are experiencing the spotlight effect.

Three research questions will be addressed in this study:

1. Will there be a difference in the experiences of Freshman and Seniors for spotlight effect? An independent samples t-test will be used to determine the differences between Freshman and Seniors experience with the spotlight effect.
2. Are there anxiety level differences between class standing? This research question will be answered using a One-way ANOVA analysis.
3. Are there anxiety level differences on gender? This research question will be answered using a One-way ANOVA analysis.

Results

The results of this research study are expected to not only reject the null hypothesis, but also support the alternative hypothesis which states that there will in fact be an increase on one's anxiety levels when believing that s/he is receiving negative attention from his or her peers. This would suggest that one's anxiety level can be impacted when negatively experiencing the spotlight effect. The data could also result in differences of anxiety levels when experiencing the spotlight effect on the basis of gender, class standing, and race.

Discussion

If the results of this research study support the hypothesis, and students' anxiety levels increase when experiencing the spotlight effect, then this information will be beneficial for Southern Adventist University's community and surrounding areas. This could benefit people who are not educated on social psychology or how one's anxiety levels can increase when experiencing the spotlight effect. This information could also benefit the general public on the spotlight effect. This study could also be beneficial for future researchers interested in the relationship between anxiety levels and the spotlight effect. Future research could include a larger sample size, other campuses in the country, and further research can benefit college students in knowing the spotlight effect and decreasing anxiety levels.

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Appendices

Questionnaire Script

Hello, my name is Bianca Gomez, I am currently enrolled in Research Design and Statistics II in the department of Education and Psychology which is taught by Dr. Tron Wilder. I am here to invite you to participate in my study which focuses on the relationship between anxiety levels and the spotlight effect. Your participation will help fill a gap in our knowledge on this subject here at Southern Adventist University. If you decide to participate you will complete a demographic questionnaire. This should take no more than INSERT TIME minutes to complete. As an incentive for participating in my study, participants will be offered cookies if choosing to participate and complete the questionnaire. Thank you for your consideration in being part of my study, it is greatly appreciated.

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Informed Consent Form

My name is Bianca Gomez, and I am an undergraduate student, majoring in Psychology, at Southern Adventist University. I am doing this research study in order to fulfill the requirements on a course I am currently enrolled in, being Research Design and Statistics II, under the tutelage of Dr. Tron Wilder. You are being invited to participate in a study that examines anxiety levels when experiencing the spotlight effect among undergraduate college students. Although there has been research on the spotlight effect, there is not enough that measures anxiety levels with a population of undergraduate college students. Your participation will help fill a gap in our knowledge here on Southern's campus regarding anxiety and social psychology.

If you make the decision to participate, you will be asked to complete a constructed survey that will be used for the first time in this study, along with a demographic questionnaire. This should take no more than 15 minutes to complete. Although all research studies maintain some level of risk, the potential risks involved in this study are minimal.

As an incentive to participate, cookies will be offered if you choose to participate in the research study. Your participation is voluntary, and you are free to withdraw from this study at any time and for any reason without prejudice.

All information concerning your personal identity will be kept confidential and your name will not be used or placed anywhere either on the questionnaire or the final report. A copy of your

results for this study and of this form will be made available to you upon request to the principal investigator, Bianca Gomez.

If you have any further questions, comments, or concerns, please feel free to contact Bianca Gomez, Principal Investigator by email at biancagomez@southern.edu.

AUTHORIZATION: I have read the above and understand the nature of this research study. I understand that by agreeing to participate in this study I have not waived any legal or human right. I understand that my identity will be kept in the strictest of confidence and that I am free to withdraw my consent at any time and for any reason. I also understand that if I have any questions or concerns, I can contact Bianca Gomez at Southern Adventist University.

Questionnaire

Thank you for taking the time to complete this survey. Please answer each question and/or statement as honestly as you can. There are no right or wrong answers. Do not write your name anywhere on this questionnaire.

Section I

Survey (Social Comparison)

Please indicate how much you agree or disagree with the following statements.

1 = Strongly disagree

2 = Disagree

3 = Neither disagree nor agree

4 = Agree

5 = Strongly agree

1. I often compare how my loved one (boy or girlfriend, family member, etc.) are doing with how others are doing.
2. I always pay a lot of attention to how I do things compared with how others do things.
3. If I want to find out how well I have done something, I compare what I have done with how others have done it.
4. I often compare how I am doing socially (e.g. social skills, popularity) with other people.
5. I am not the type of person who compares often with others.
6. I often compare myself with others with respect to what I have accomplished in life.
7. I often like to talk to others about mutual opinions and experiences.
8. I often try to find out what others think who face similar problems as I face.

9. I always like to know what others in a similar situation would do.
10. If I want to learn more about something, I try to find out what others would think.
11. I never consider my situation in life relative to that of other people.

Section II

Survey (DASS21)

Social comparison) Please read each statement and select a number of 0, 1, 2, or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend much time on any statement.

1. I found it hard to wind down.
2. I was aware of the dryness of my mouth.
3. I couldn't seem to experience any positive feeling at all.
4. I experienced breathing difficulties (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion).
5. I found it difficult to work up the initiative to do things.
6. I tended to over-react to situations.
7. I experienced trembling (e.g. in the hands or legs).
8. I felt that I was using a lot of nervous energy.
9. I was worried about situations in which I might panic and make a fool of myself.
10. I felt that I had nothing to look forward to.
11. I found myself getting agitated.
12. I found it difficult to relax.
13. I felt downhearted and blue.
14. I was intolerant of anything that kept me from getting on with what I was doing.

15. I felt I was close to panic.
16. I was unable to become enthusiastic about anything.
17. I felt I wasn't worth much as a person.
18. I felt that I was rather touchy.
19. I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase).
20. I felt scared without any good reason.
21. I felt that life was meaningless.

Section III

Demographic Questionnaire

Please place a circle next to the box that best describes you.

What is your gender?	<ul style="list-style-type: none">● Female● Male● Other
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<p>What is your race/ethnicity?</p>	<ul style="list-style-type: none">• White• Hispanic or Latino• Black or African American• Native American or American Indian• Asian/Pacific Islander• Other
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<p>What is your class standing?</p>	<ul style="list-style-type: none">• Freshman• Sophomore• Junior• Senior
<p>What is your religious affiliation?</p>	<ul style="list-style-type: none">• Christian• Jewish• Muslim• Buddhist• Hindu• Unaffiliated• Agnostic

	<ul style="list-style-type: none">• Atheist• Other
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Thank you for completing this questionnaire!

Questionnaire Scoring Key

Section 1 (Social Comparison Survey)

Lowest score = 11

Highest score = 55

Section II (DASS-21)

Lowest score = 0

Highest score = 63

Section II (Demographic Design)

For gender:

1 = Female

2 = Male

3 = Other

For race/ethnicity:

1 = White

2 = Black or African American

3 = Hispanic or Latino

4 = Native American or American Indian

5 = Asian or Pacific Islander

6 = Other

For class standing:

1 = Freshman

2 = Sophomore

3 = Junior

4 = Senior

For religious affiliation:

1 = Christian

2 = Jewish

3 = Muslim

4 = Buddhist

5 = Hindu

6 = Unaffiliated

7 = Agnostic

8 = Atheist

9 = Other