

Effects of Barriers in Healthcare on Stress for African Americans with Autism Spectrum Disorder in Higher Education

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Introduction

Abstract

This research serves as an expansion of knowledge on the healthcare barriers that are disproportionately experienced by individuals with Autism Spectrum Disorder (ASD), as researched by Raymaker et al. (2017). This expansion focuses on viewing race as being a potential contributing factor in the type and how many barriers to healthcare African Americans with ASD face. African Americans have had an established and tumultuous history with racism, especially within the healthcare system, making the added disorder something that could exacerbate healthcare issues due to the racism that is engrained in the structure of the US healthcare system (Broder-Fingert, 2020). It is established that racism can make a lasting impact on the healthcare outcomes (Broder-Fingert,2020). of African Americans, but there has not been a distinction in the origins of where these poor healthcare outcomes come from. This makes it pertinent to identify exactly where these barriers to healthcare are occurring for proper remediation. This study will use two measures to examine if there are differences among African Americans with ASD when it comes to stress(Cohen et al., 1997) and healthcare barriers. Raymaker et al.'s (2017) Barriers to Healthcare Care checklist will be utilized to assess these healthcare barriers. Barriers chosen this study will be Patient-Provider Communication, Provider Attitudes, and Support. This study introduces the concepts and evidence that race could have an impact on healthcare barriers and could introduce increased stress. With data from this study, it suggests that African Americans with ASD do experience higher amounts of barriers to healthcare when compared to their racial counterparts at a mean of 7.92 in comparison to 5.65 by other racial groups.

Aims of the Research

The aim of this research is to investigate the impact of race on healthcare barriers and stress in individuals with (ASD) Autism Spectrum Disorder. Especially to examine potential differences in healthcare of African Americans with Autism Spectrum Disorder compared to other races.

Research Questions

This research study has two research questions. The research questions address three main concepts: stress, healthcare barriers. It is hypothesized that African American individuals with ASD have increased healthcare barriers, 2. increased healthcare barriers is associated higher stress. RQ1: Do African Americans experience increased levels of healthcare barriers when compared to other racial groups? RQ2: Do increased barriers to healthcare coincide with higher rates of stress?

Measurement Models

Provided scales will be utilized to measure each construct

**Barriers in Healthcare Scale:** To assess amount/types of barriers experiences

**Perceived Stress Scale:** To assess current stress levels

Method

Research Design

The study will use descriptive correlational design to examine the relationship between stress, barriers in healthcare, and race. The study will utilize answers from a given survey to identify any correlations and differences between groups. Participants were required to give to electronic consent through Qualtrics to complete the study.

Participants

To participate in this study, research participants had to be diagnosed with ASD and over the age of 18. Individuals were recruited through online community engagement, such as through public forums. Participants were offered potential compensation for their participation; they were entered into a lottery for \$100. Participants were required to give their electronic consent through Qualtrics to complete the study. Additionally, participants were given a copy of the consent form and information regarding research investigators' contact information. The sample size was a total of 29 participants. The demographics of this study were that there were 12 African American/Black, 16 White, and one other race.

Data Collection and Analysis

A T-test was performed for hypothesis one to assess if there were differences in healthcare barrier population means according to race. African Americans had a 7.92 mean compared other racial groups which was 5.65. A Pearson correlation was conducted for hypothesis two to assess the relationship between barriers to health and perceived stress.

Results

Table 1- Race and Barriers in Healthcare

| Group Statistics       |       |    |        |                |                 |
|------------------------|-------|----|--------|----------------|-----------------|
| Health Barriers Scores | Race  | N  | Mean   | Std. Deviation | Std. Error Mean |
|                        | Black | 12 | 7.9167 | 3.20393        | .92489          |
|                        | Other | 17 | 5.6471 | 2.39638        | .58121          |

Table 1.2- Race and Barriers in Healthcare T-Test

| Independent Samples Test                |                                                        |     |      |       |        |                              |             |                    |                          |                                                             |         |
|-----------------------------------------|--------------------------------------------------------|-----|------|-------|--------|------------------------------|-------------|--------------------|--------------------------|-------------------------------------------------------------|---------|
| Levene's Test for Equality of Variances |                                                        |     |      |       |        | t-test for Equality of Means |             |                    |                          |                                                             |         |
| Health Barriers Scores                  | Equal variances assumed<br>Equal variances not assumed | F   | Sig. | t     | df     | Significance<br>One-Sided p  | Two-Sided p | Mean<br>Difference | Std. Error<br>Difference | 95% Confidence Interval of the<br>Difference<br>Lower Upper |         |
|                                         |                                                        | 382 | .542 | 2.186 | 27     | .019                         | .038        | 2.26961            | 1.03840                  | -1.3698                                                     | 4.40023 |
|                                         |                                                        |     |      | 2.078 | 19.331 | .026                         | .051        | 2.26961            | 1.09235                  | -.01407                                                     | 4.55328 |

Table 2 Race and Barriers in Healthcare

| Group Statistics               |       |    |        |                |                 |
|--------------------------------|-------|----|--------|----------------|-----------------|
| Patient-Provider Communication | Race  | N  | Mean   | Std. Deviation | Std. Error Mean |
|                                | Black | 12 | 3.0833 | 1.16450        | .33616          |
|                                | Other | 17 | 1.7647 | 1.20049        | .29116          |
| Provider Attitudes             | Black | 12 | 3.8333 | 1.52753        | .44096          |
|                                | Other | 17 | 3.2353 | 1.03256        | .25043          |
| Support                        | Black | 12 | 1.7500 | 1.05529        | .30464          |
|                                | Other | 17 | 1.8235 | 1.13111        | .27433          |

Table 2.2 Race and Barriers in Healthcare T-Test

| Independent Samples Test                |                             |       |      |       |                              |              |             |                 |                       |                                           |         |
|-----------------------------------------|-----------------------------|-------|------|-------|------------------------------|--------------|-------------|-----------------|-----------------------|-------------------------------------------|---------|
| Levene's Test for Equality of Variances |                             |       |      |       | t-test for Equality of Means |              |             |                 |                       |                                           |         |
|                                         |                             | F     | Sig. | t     | df                           | Significance |             | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |         |
|                                         |                             |       |      |       |                              | One-Sided p  | Two-Sided p |                 |                       | Lower                                     | Upper   |
| Patient-Provider Communication          | Equal variances assumed     | .339  | .565 | 2.949 | 27                           | .003         | .007        | 1.31863         | .44715                | .40115                                    | 2.23610 |
|                                         | Equal variances not assumed |       |      | 2.965 | 24.295                       | .003         | .007        | 1.31863         | .44472                | .40135                                    | 2.23591 |
| Provider Attitudes                      | Equal variances assumed     | 4.622 | .041 | 1.261 | 27                           | .109         | .218        | .59804          | .47429                | -.37513                                   | 1.57121 |
|                                         | Equal variances not assumed |       |      | 1.179 | 17.956                       | .127         | .254        | .59804          | .50711                | -.46755                                   | 1.66363 |
| Support                                 | Equal variances assumed     | .203  | .656 | -.177 | 27                           | .430         | .861        | -.07353         | .41508                | -.92517                                   | .77811  |
|                                         | Equal variances not assumed |       |      | -.179 | 24.843                       | .430         | .859        | -.07353         | .40995                | -.91812                                   | .77106  |

Table 3 - Healthcare Barriers and Stress Correlation

| Correlations           |                     |                        |        |
|------------------------|---------------------|------------------------|--------|
|                        |                     | Health Barriers Scores | Stress |
| Health Barriers Scores | Pearson Correlation | 1                      | -.206  |
|                        | Sig. (2-tailed)     |                        | .283   |
|                        | N                   | 29                     | 29     |
| Stress                 | Pearson Correlation | -.206                  | 1      |
|                        | Sig. (2-tailed)     | .283                   |        |
|                        | N                   | 29                     | 29     |

A independent samples T-test was conducted related to barriers to healthcare and Race. The first statistical test showed that Black/African Americans (M = 7.92, SD = 3.20) were found to have a statistically significant lower population mean t(27) = 2.186,p = .542) when compared to other racial groups (M = 5.65 , SD = 2.4) therefore hypothesis one can be accepted. For the first hypothesis a secondary independent samples T-test was performed which assessed each of the three barriers selected, which suggested that African Americans are more likely to have increased barrier scores significantly t(27) = 2.949,p = .565) in patient-provider communication. It was found to be significant at a P-value of .025 The second hypothesis found that there was not a statistically significant correlation between healthcare barrier scores and stress therefore, hypothesis two is rejected.

Conclusion

The study provides evidence that African Americans with Autism experience Barriers to Healthcare at a higher rate than other racial groups. This distinction is most stark in patient-provider communication. This study addressed three areas out of the nine in the barriers to healthcare checklist (Raymaker et al., 2017), which could mean that there could be statistically significant differences amongst other areas when race is selected as a contributing factor. Barriers that were selected were provider attitudes, patient-provider communication, and support. Overall, these results indicate that race can likely play a part in the number and type of barriers to healthcare experienced by individuals with ASD.

Discussion

The implications of this data highlight the difference between barriers to health care experienced by African Americans and other racial groups. Predicated research illustrates that individuals with ASD already experience higher rates of barriers to healthcare, and adding race as a contributing factor only exacerbates those barriers. These increased barriers can correlate with worse healthcare outcomes as the individual is likely more prone to getting inaccurate care. The evidence of this research suggests that African American/Black individuals primarily feel like they cannot communicate effectively with their provider, which is a core part of appropriate care within the healthcare system. Individuals cannot be adequately helped if they are not understood by the provider who is meant to be aiding them. Future research should consider taking a comprehensive approach to Raymaker’s (2017) measure to identify if there are more racial differences amongst barriers to healthcare. A more comprehensive perspective would be to use the entire instrument and incorporate all barrier areas, allowing for increased validity within the measurement analysis. Qualitative interviews are also an essential next step to understanding the depth of barriers to healthcare experienced by African Americans.



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