

Apr 17th, 12:00 PM - 4:00 PM

Perceived Racial Discrimination and Sleep Patterns: The Moderating Role of Race and Health Habits

Camille Petrich
University of Northern Iowa

Let us know how access to this document benefits you

Copyright ©2020 Camille Petrich

Follow this and additional works at: <https://scholarworks.uni.edu/csbsresearchconf>



Part of the [Psychology Commons](#)

Recommended Citation

Petrich, Camille, "Perceived Racial Discrimination and Sleep Patterns: The Moderating Role of Race and Health Habits" (2020). *INSPIRE Student Research and Engagement Conference*. 74.

<https://scholarworks.uni.edu/csbsresearchconf/2020/all/74>

This Open Access Poster Presentation is brought to you for free and open access by the CSBS Conferences/Events at UNI ScholarWorks. It has been accepted for inclusion in INSPIRE Student Research and Engagement Conference by an authorized administrator of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

Offensive Materials Statement: Materials located in UNI ScholarWorks come from a broad range of sources and time periods. Some of these materials may contain offensive stereotypes, ideas, visuals, or language.



Perceived Racial Discrimination and Sleep Patterns: The Moderating Role of Race and Health Habits



Camille Petrich and Dilbur D. Arsiwalla, Ph.D.
University of Northern Iowa

Abstract

The purpose of this study was to examine the moderating role of both race and health habits (i.e., smoking illegal substances, vaping or smoking tobacco and nicotine, or drinking alcohol) in the links between perceived racial discrimination with sleep as well as anxiety. This current study used a sample of 173 participants from a midwestern university who were undergraduate students in the fall semester of 2019 and in the spring semester of 2020. All participants self-reported their own demographic background, sleep habits, anxiety levels, perceived racial discrimination experiences, and health habit experiences through an online questionnaire. While there was not a strong support for a race as a moderator of discrimination and sleep and discrimination and anxiety links, health habits played a moderating role in the links between discrimination and sleep. Consequently, we only present the latter findings. The findings demonstrate a significant moderating role of health habits links such as alcohol, tobacco, and marijuana use in the links between perceived racial discrimination and sleep disturbances.

Introduction

- Prior research has illustrated that the lifetime prevalence of generalized anxiety disorder (GAD) is lower in African Americans than Caucasians, though the self-reports show 11.2% Caucasians had developed GAD, in comparison to the 14.2% of African Americans. (Brenes, Knudson, McCall, Williamson, Miller & Stanley, 2007).
- A multi-ethnic study has shown that amongst older adults, black participants showed the least amount of sleep duration and most cases of excessive daytime sleepiness, while Caucasians reported the more cases of sleep apnea. Moreover, Hispanic participants reported more cases of insomnia than Caucasians, Black or Asian race groups (Chen et al., 2015).
- While studies have detected the disparities between racial/ethnic groups and Caucasians in regard to anxiety disorders and sleep disruption, nonetheless, there are gaps in research towards possible sociocultural causes for this particular population of young adults.
- Alcohol consumption is very prevalent among college students, with 54.9% of full-time students ages 18-22 who have reported drinking alcohol in the past month (NIH, 2020). Moreover, college students have reported that they have used or smoked marijuana, with 42.3% that have smoked in the past year (Schulenberg, Johnston, O'Malley, Bachman, Miech, & Patrick, 2019). According to the National Adult Tobacco Survey (NATS) from 2014, prevalence using e-cigarettes for ages 18-24 was 13.6%. Moreover, 2% reported using it daily. (U.S. Department of Health and Human Services, 2016).
- The goal of the current study is to examine the role of race and health habits as a moderating factors in the links between perceived racial discrimination and sleep habits and anxiety levels.
- Hypotheses:
 - The participant's race will moderate the relationship between health habits and a diagnosis of an anxiety disorder.
 - The participant's race will moderate the relationship between health habits and sleep.
 - Health habits will moderate the relationship between racial discrimination and a diagnosis of an anxiety disorder while accounting for the participant's race.
 - Health habits will moderate the relationship between racial discrimination and sleep.

Methods

SAMPLE

- 173 student participants from a Midwestern university
- 63.6% female; 58.3% white; age range 18-30 years old (mean age = 20, sd = 1.817).
- Data analysis: Moderated regression analysis using SPSS and Process 3.4V

MEASURES

- Sleep
 - Sleep Habits Survey: Sleepiness Scale (Wolfson & Carskadon 1998)
 - The Pittsburg Sleep Quality Index (Buysse, Reynolds Monk, Berman, & Kupfer.,1989)
 - Sleep-50 (Spoomaker, Verbeek, van den Bout, & Klip, 2005) (excluding section 4 and 5)
 - Basic Language Morningness (BALM) Scale (Brown, 1993)
 - Sleep Time Survey (created by authors)
- Anxiety Measures
 - Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown, & Steer,1988)
 - Generalized Anxiety Disorder 7-item scale (Spitzer, Kroenke, Williams, & Lowe, 2006)
- Perceived Racial Discrimination Measure
 - PEDQ (Brondolo et al., 2005)
- Health Habits Measures
 - Alcohol, Smoking and Substance Involvement Screening Test (ASSIST; WHO ASSIST Working Group, 2002)
 - Alcohol Use Disorders Identification Test (AUDIT; Babor, de la Fuente, Saunders, and Grant, 1992)

Moderation Models

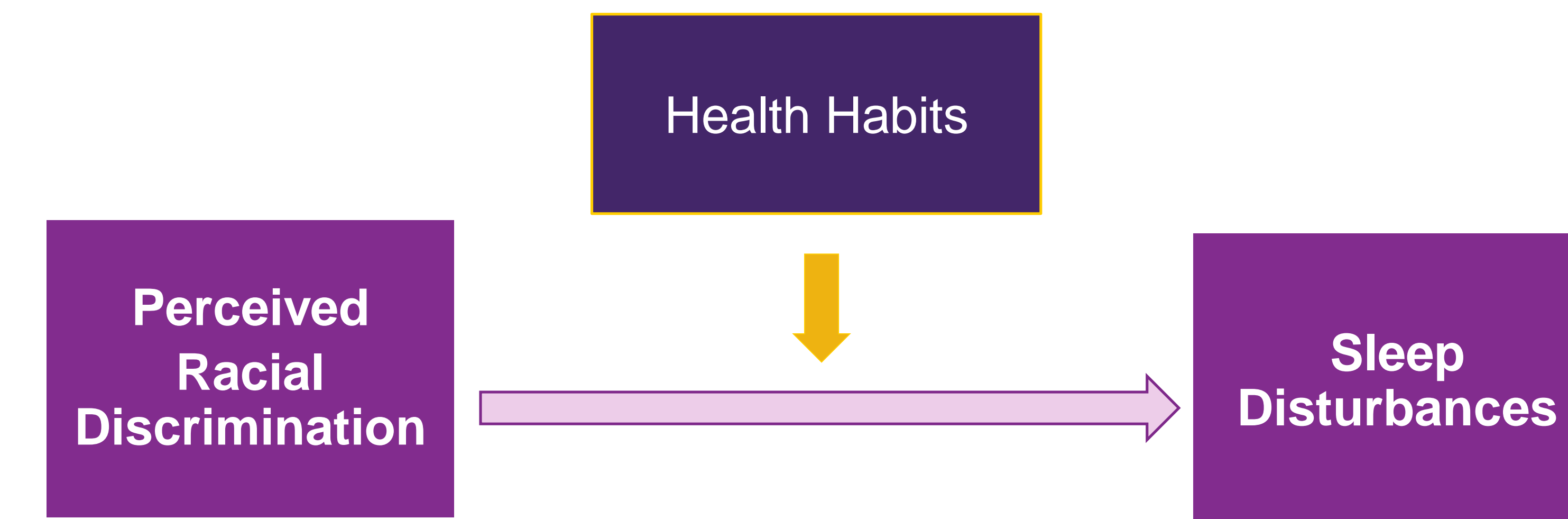


Figure 5. Pathway of Hypothesis 4: The Moderation of health habits → association between perceived racial discrimination and sleep disturbances.

Results

- In *Figure 1*, there is a statistically significant interaction between experiencing racial exclusion and alcohol use (AUDIT) in the prediction of having nightmares ($p=.0044$, LLCI=.4015, ULCI=2.1219). The model overall had an R-squared of .1286 ($p=.0014$) whereas the interaction of r-squared was .0651 ($p=.0044$).
- In *Figure 2*, there is a statistically significant interaction between racial stigmatization and tobacco use in the prediction of factors inducing sleep ($p=.0266$, LLCI= -.3463, ULCI= -.0217). The model overall had an R-squared of .1210 ($p=.0012$) whereas the interaction r-squared was .0360 ($p=.0266$).
- *Figure 3* illustrates there is a statistically significant interaction between racial stigmatization and alcohol use (ASSIST) in the prediction of factors inducing sleep ($p=.0386$, LLCI= -.4017, ULCI= -.0110). The model overall had an R-squared of .2001 ($p=.0000$) whereas the interaction of r-squared was .0284 ($p=.0386$).
- As seen in *Figure 4*, there is a statistically significant interaction between racial stigmatization and cannabis use in the prediction of factors inducing sleep ($p=.0178$, LLCI= -.4428, ULCI= -.0426). The model overall had an R-squared of .1094 ($p=.0025$) whereas the interaction of r-squared was .0417 ($p=.0178$).

Conclusion

- **Results:** Findings demonstrate that perceived racial discrimination predicts more sleep disturbances such as nightmares at high levels of alcohol consumption (but not at low levels of alcohol consumption).
- Results also show that at high levels of substance use (e.g., alcohol, tobacco, and marijuana), sleep problems are high regardless of levels of racial discrimination. However, at low levels of substance use, low levels of racial stigmatization (but not high levels) are protective against sleep disturbances.
- **Implications:** Racial discrimination experiences are strongly associated with certain sleep disturbances. Additionally, substance use may play a role in these connections.
- **Limitations**
 - Smaller sample size
 - Need for a more diverse sample
 - All measures were self-reports
- **Future research:** Researchers should further examine possible sociocultural factors that could lead to specific mental health disorders and sleep disturbances across all race groups.

Figures

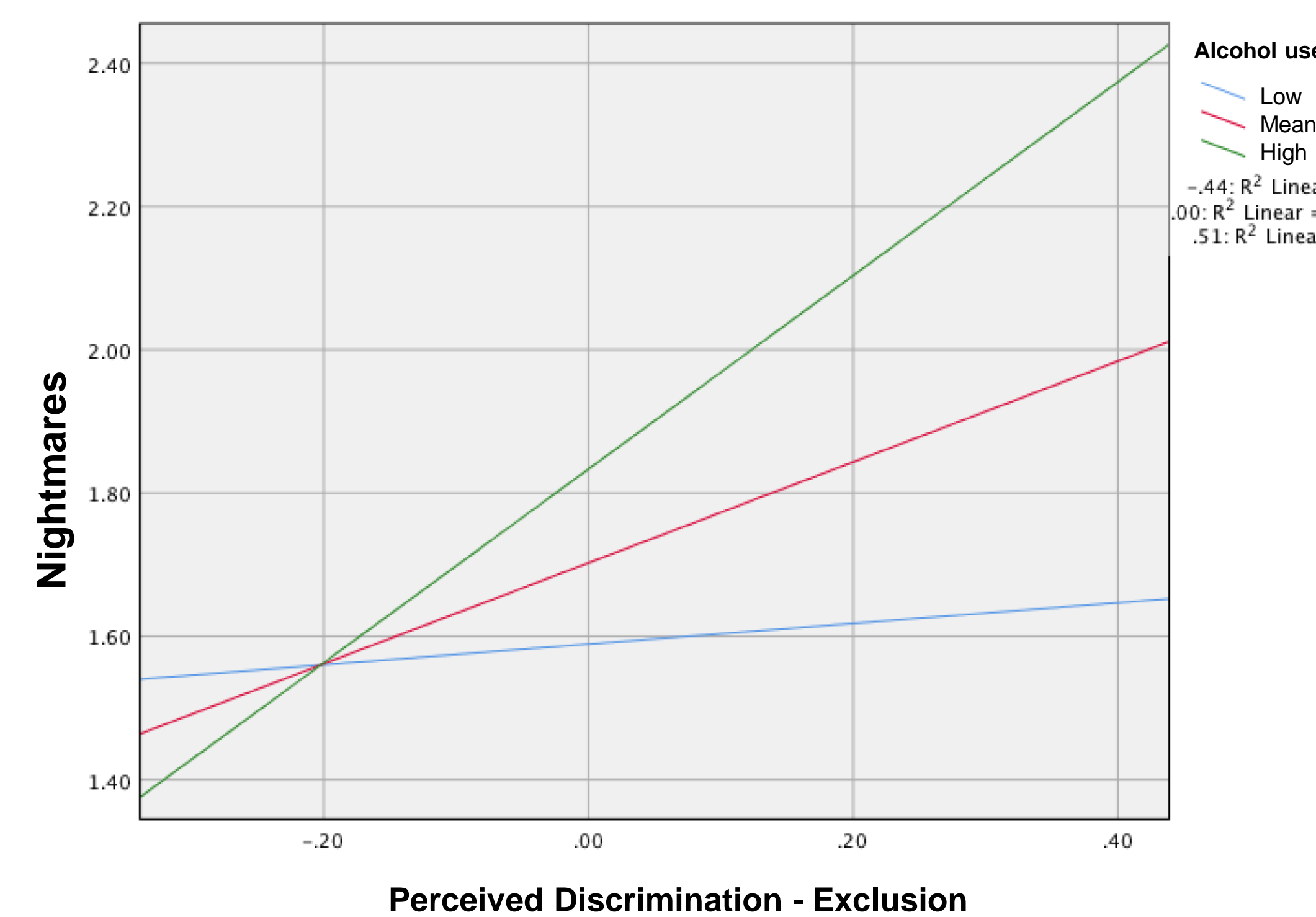


Figure 1. Moderation of health habits (alcohol use) in the links between perceived racial discrimination (i.e. excluding others) and sleep disturbances (i.e. Nightmares)

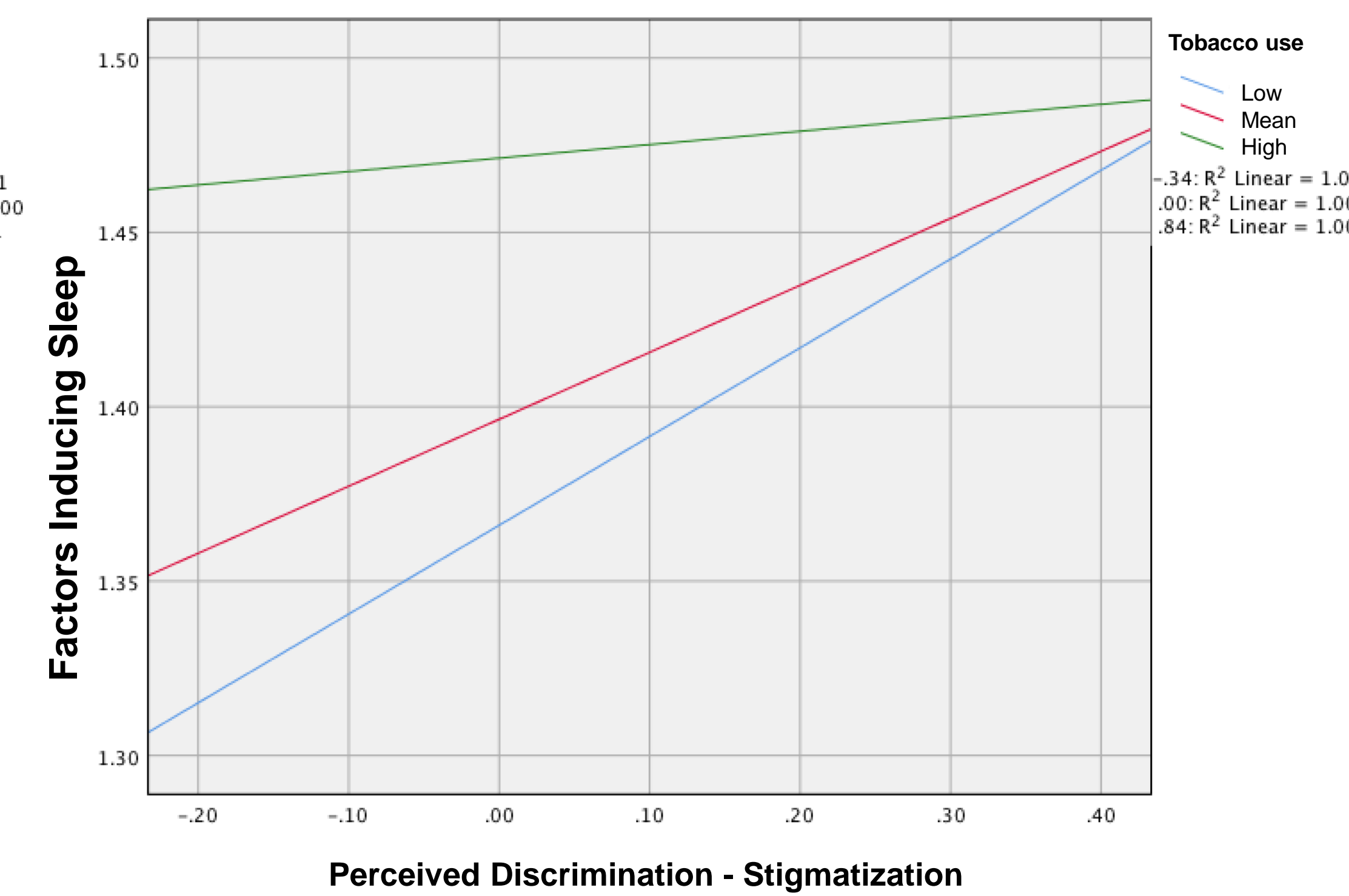


Figure 2. Moderation of health habits (tobacco use) in the links between perceived racial discrimination (i.e. stigmatization) and sleep disturbances (i.e. Factors Inducing Sleep)

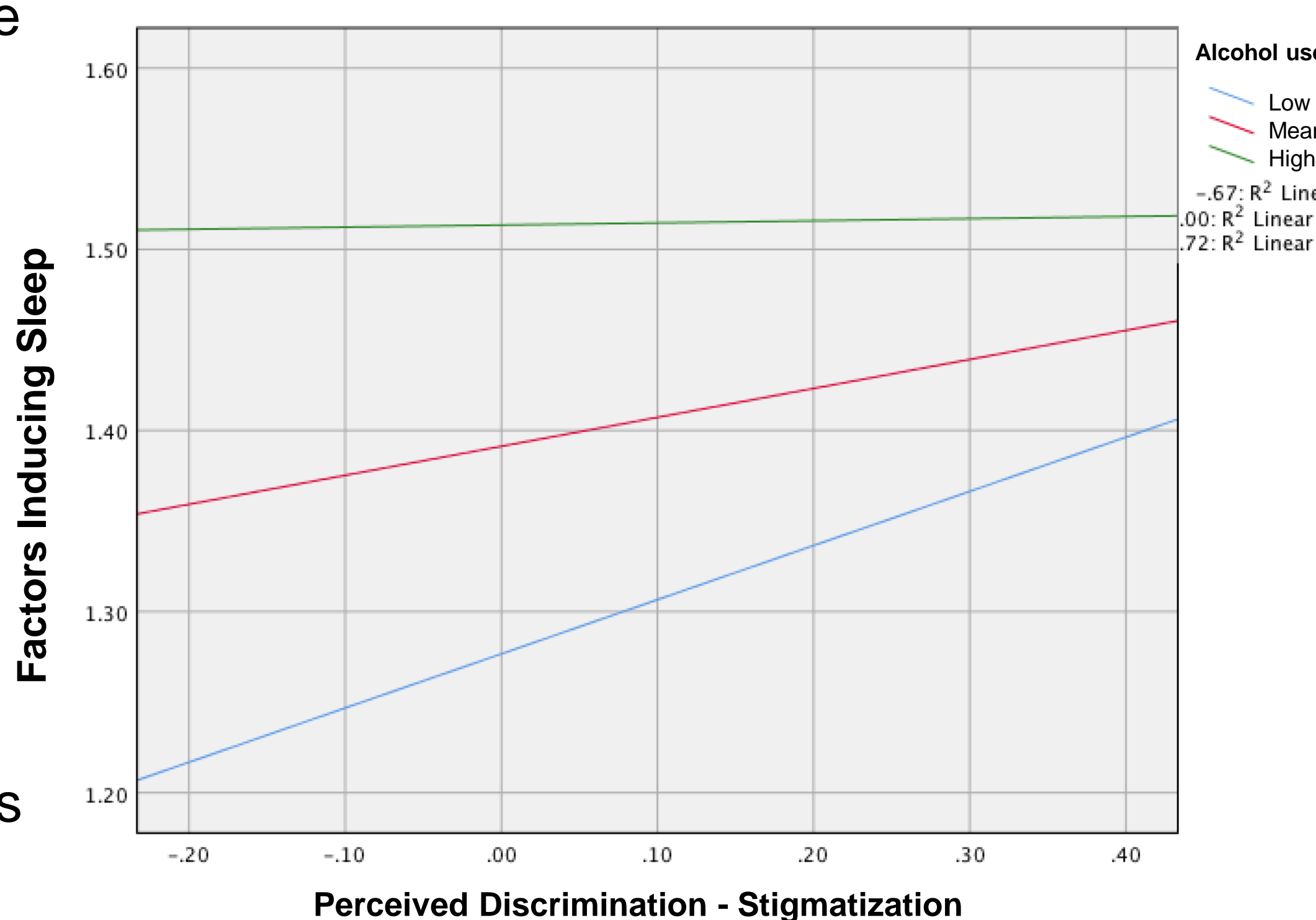


Figure 3. Moderation of health habits (alcohol use) in the links between perceived racial discrimination (i.e. stigmatization) and sleep disturbances (i.e. Factors Inducing Sleep)

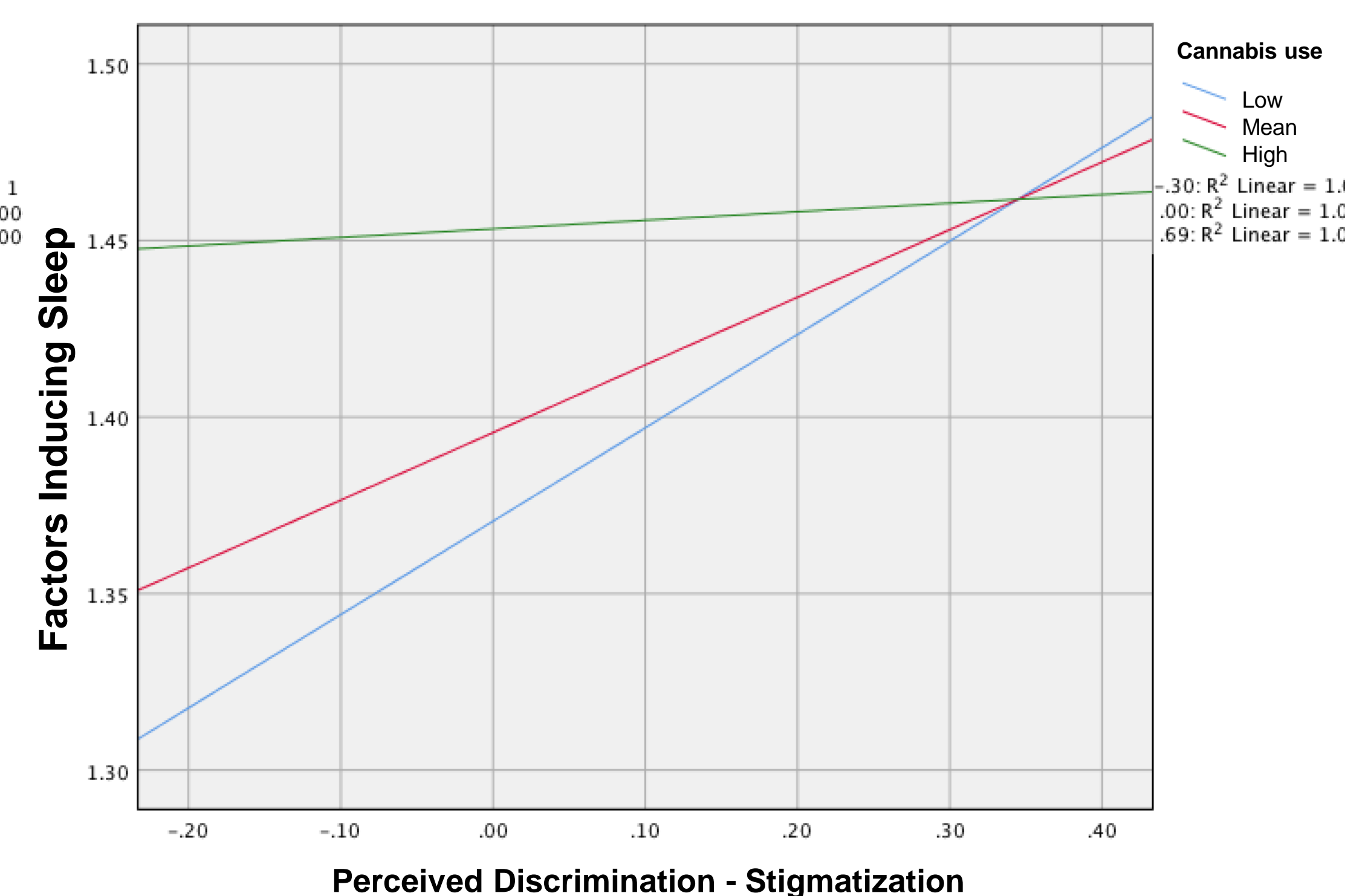


Figure 4. Moderation of health habits (marijuana use) in the links between perceived racial discrimination (i.e. stigmatization) and sleep disturbances (i.e. Factors Inducing Sleep)