

# A confirmatory factor analysis of specific phobia domains in African American and Caucasian American young adults

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## Abstract

The current study investigated factors related to specific phobia domains and differences in patterns among African American and Caucasian American adults. Subjects were 100 African Americans and 121 Caucasian Americans who completed the Fear Survey Schedule—Second Edition (FSS-II). Fears related to specific phobia domains were first examined, with frequencies differing between African American and Caucasian American samples on three of the six specific phobia domains. A confirmatory factor analysis was conducted to determine the patterns of specific phobias among the African American sample. The trimmed model for the African American sample included natural environment, animal and social anxiety specific phobia factors as latent, exogenous variables. Data from the Caucasian American sample provided a poor fit to this model. Instead, the trimmed model for the Caucasian American sample included the situational, animal and social anxiety factors. The natural environment-type specific phobia factor did not have adequate fit for the Caucasian American sample as in the African American sample. Results indicated that different factor loading patterns of fear-related stimuli may exist among African American and Caucasian American young adults. Potential explanations and future directions are discussed.

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## 1. Introduction

Anxiety disorders are among the most common mental disorders in the United States with an estimated 12-month prevalence rate of 18.1% (Kessler, Chiu, Demler, & Walters, 2005). Although the negative impact of anxiety disorders as a class has been clearly established (Greenburg et al., 1999), specific phobias have received limited attention in empirical literature. Presumably this

is because they are often secondary diagnoses to more salient and debilitating anxiety disorders. Further, specific phobia stimuli may be easily avoided such that individuals do not present for treatment as often as for other anxiety disorders. The literature is particularly sparse with regard to specific phobias in ethnic minority samples. The current study addresses these issues by conducting a confirmatory factor analysis of specific phobia items in a sample of Caucasian American and African American young adults.

The 1-year prevalence for specific phobias in community samples has been estimated at 8.7%, the highest of all DSM-IV psychological disorders (Kessler, Chiu, et al., 2005) with lifetime prevalence rates estimated at 12.5% in the general population (Kessler,

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Beflund, Demler, Jin, & Walters, 2005). These estimates comprise predominantly Caucasian American samples with little information about the prevalence of specific phobias in ethnic minority samples. Although the DSM-IV (American Psychiatric Association, 1994) has delineated four distinct subtypes of phobias, there is evidence that the classification of phobias may be more complex (Fyer, 1998). Some researchers have found that the natural environment phobia category has clustered with situational phobias based on demographic characteristics (Fredrikson, Annas, Fischer, & Wik, 1996; Fyer, 1998) while others have found differences related to age of onset (Barlow & Liebowitz, 1995; Fyer, 1998). As such, few studies have examined phobia groupings in the general population and even fewer studies have examined racial differences in this area. Whether African Americans and Caucasian Americans have similar patterns related to specific phobia domains is yet to be determined.

### 1.1. Phobic disorders in African American adults

There is a limited amount of research pertaining to anxiety disorders in African American adults (Heurtin-Roberts, Snowden, & Miller, 1997; Horwath, Johnson, & Hornig, 1994; Lewis-Hall, 1994; Neal & Brown, 1994; Neal & Turner, 1991; Smith, Friedman, & Nevid, 1999). Existing literature indicates that African American adults may be more likely to endorse certain anxiety disorders than others (Heurtin-Roberts et al., 1997; Neal & Turner, 1991). For instance, African Americans have been found to endorse more agoraphobia-related fears than Caucasian Americans (Neal & Turner, 1991) and endorse specific phobia three times more than Caucasian American adults (Last & Perrin, 1993; Neal & Turner, 1991). African Americans also report more animal-related fears than their Caucasian American counterparts (Nalven, 1970), but more empirical work is needed to determine if certain fears load on similar factors regardless of race.

There are few data pertaining to African Americans and social phobia. Brown and Eaton (1986) found that the prevalence for social phobia was higher in African Americans (5.6%) than Caucasian Americans (2.6%) residing in Baltimore. The social fears endorsed by African Americans in the Brown and Eaton (1986) study surrounded interacting with groups and eating in public. Aside from these findings, Neal and Turner (1991) point out that treatment studies with social phobic individuals typically contain very few African Americans. A substantial amount of work is needed to determine the nature of social phobia in African American adults.

In summary, existing literature suggests that African Americans are more likely than Caucasian Americans to endorse specific phobias although further work is needed in this area to draw conclusions. Similarly, there is also heterogeneity among phobic disorders and the grouping of phobias is difficult to ascertain. Although there are four established subgroups of phobias in the DSM-IV (American Psychiatric Association, 1994), there still remains ambiguity about the factor loadings of phobias. Few studies have examined specific phobia domains and even fewer studies have examined whether fear-endorsed items have similar patterns (e.g., load on the same factors) in African American and Caucasian American adults. Thus, the current study tested a model to determine if phobias group together similarly for African American and Caucasian American young adults. It was hypothesized that African Americans would endorse more fears overall compared to Caucasian Americans, and that African Americans would also report more animal-related fears than Caucasian Americans. Based on the existing literature, it was further hypothesized that African Americans in the current sample would have more factor loadings in the animal domain than Caucasian Americans. Due to the dearth in the literature pertaining to factor loadings of specific phobia domains in ethnic minority samples, no additional specific hypotheses were made.

## 2. Methods

### 2.1. Participants

Participants were 221 undergraduate students from a large public Midwestern university. Students were recruited from two sources: an introductory psychology class ( $N=130$ ) and introductory level Pan African Study classes ( $N=91$ ). Participants were given class credit for participating in the study. The sample included 71 males and 150 females with a mean age of 20 years. Fifty-five percent of the sample was Caucasian American while the remaining 45% was African American. Participants completed the Fear Survey Schedule—Second Edition (FSS-II; Geer, 1965) in a group setting as a part of a larger study measuring ethnic differences in anxiety. Table 1 presents demographics for the sample.

### 2.2. Model indicators

Responses from the FSS-II served as model indicators in the confirmatory factor analyses. Latent

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