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Rates of isolated sleep paralysis in outpatients with anxiety disorders

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Abstract

Initial research suggests that rates of isolated sleep paralysis (ISP) are elevated in individuals with panic disorder and particularly low in individuals with other anxiety disorders. To further evaluate these findings, we examined rates of ISP in a sample outpatients with primary diagnoses of panic disorder ($n = 24$), social anxiety disorder ($n = 18$), or generalized anxiety disorder ($n = 18$). We obtained an overall rate of ISP of 19.7%; rates for patients with panic disorder (20.8%) fell between those with generalized anxiety disorder (15.8%) and social phobia (22.2%). Analysis of comorbidities failed to provide evidence of link between depressive disorders and ISP, but did indicate a significant association between anxiety comorbidity and higher rates of ISP. Results are discussed relative to other variables predicting variability in the occurrence of ISP.

Keywords: Isolated sleep paralysis; Anxiety disorder; REM

Isolated sleep paralysis (ISP) results from persistence of REM activity, including typical paralysis associated with REM, after an individual begins to awaken and become aware or as they are falling asleep (Hishikawa, 1976; Hishikawa & Shimizu, 1995; Hobson, 1995). During these episodes, individuals are aware of their surroundings, but are unable to move.

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Hallucinations, such as sensing presence of others, feeling external pressure on the chest, and hearing footsteps or odd sounds commonly accompany the paralysis (Cheyne, Newby-Clark, & Fueffer, 1999). These experiences may cause fear and be interpreted as a supernatural experience in a culturally-distinct manner (Hinton, Hufford, & Kirmayer, 2005), including ''Kanashibari'' in Japan (Fukuda, Miyasita, Inugami, & Ishibara, 1987), ''Old Hag'' in Newfoundland (Hufford, 1982), ''Kokma'' in the West Indies (Ness, 1978), and ''being ridden by the witch'' among some African Americans in the United States (Hall, 1993).

Estimates of prevalence of ISP vary depending on the sample under study. A very large-scale ($N = 8085$) survey in Germany and Italy suggested an overall rate of 6.2% in the general population (Ohayon, Zulley, Guilleminault, & Smirne, 1999). An almost identical prevalence estimate (6.7%) was provided by a smaller ($N = 110$) population-based survey in Nigeria (Ohaeri, Awadalla, Makanjoula, & Ohaeri, 2004). A study of 254 households in Pennsylvania (Hufford, 2005) found that 17% of individuals reported episodes of ISP.

In contrast to population studies, studies of college student samples suggest a higher rate of ISP. For example, a large study ($N = 870$) of college undergraduates in the United States (Cheyne et al., 1999) obtained a prevalence rate of 29% for at least one episode of ISP, with 75% of these individuals reporting at least one associated hallucination. Very similar rates for college-student samples were documented in a cross-cultural study of Sudanese (29.9% of 762), Kuwaiti (28.8% of 527), and American (24.5% of 649) students (Awadalla et al., 2004).

There have been findings suggesting a link between rates of ISP and panic disorder and racial/cultural group. Alfonso Suarez (1991) reported a near doubling in rates of ISP in a Spanish sample of patients with panic disorder relative to a healthy control sample. Furthermore, Paradis, Friedman, and Hatch (1997) found very high rates of ISP in a sample of African Americans with panic disorder (59.6%) relative to African Americans with other anxiety disorders (11.1%) or no disorder (23%). These rates were elevated relative to a Caucasian sample with panic disorder (7.5%), other anxiety disorders (0%), or no disorder (6%). The particularly low rates of ISP among individuals with ''other'' anxiety disorders in the Paradis et al. (1997) study raises questions whether ISP is specifically elevated in panic disorder relative to other anxiety disorders. Evaluation of rates of ISP among anxiety patients is further complicated by findings from a population-based survey of an approximate five-fold increase in ISP among individuals taking anxiolytic mediation (Ohayon et al., 1999), but in this study it was not clear whether anxiolytic use was simply a proxy variable for anxiety disorders. Our purpose in the present study was to further examine rates of ISP in outpatients with panic disorder relative to other anxiety groups, with particular attention to differences in rates among the anxiety disorders and the potential relationship of anxiolytic use to these rates.