

Openness to Experience and Nightmare Frequency

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Instructor's Introduction:

Personality dimensions such as extraversion and conscientiousness have been shown to be associated with well-being. This study examined the potential relationship between one important personality dimension, openness to new experiences, with one aspect of well-being, sleep quality. Previous research suggested that individuals who are open to new experiences might be more likely to experience nightmares than individuals who prefer predictable situations and are uncomfortable with change. However, such studies necessarily used self-report techniques in which participants were explicitly asked about their dream content. The correlation between openness and nightmare frequency could be the result of an imaginative, curious, or creative mind that seeks out new stimulation, which then produces a rich, varied dream experience that is sometimes frightening. Alternatively, open personalities might be more easily influenced than other individuals by the simple question about the incidence of their nightmares. In other words, they might report having more nightmares because they are more suggestible to instruction. The research tested these hypotheses by randomly assigning participants to receive one of three types of instructions when asked about their nightmare frequency. One condition suggested they might have more nightmares than other people, another condition suggested they might have fewer, and a third condition used neutral language. The results confirmed that open personalities report having more nightmares than closed personalities, but type of instruction had no effect on any of the participant reports. Therefore, the findings support the idea that open personalities are not more suggestible but do experience richer and more frightening dreams. Knowing their tendency, individuals with open personalities may use these findings to make adjustments to their lives to improve well being.

- Susan Beers, Lecturer in Psychology, October 2024.

Undergraduate researchers were involved in experiment led by Dr. Susan Beers with a purpose of measuring the frequency of nightmares a participant has based on their personality type (open or closed). Ninety-two participants (57 women, 30 men, and 5 non-binaries; Mage = 23.71, SDage = 5.832) were asked to fill out two surveys, one measuring personality and the other measuring nightmare frequency. The HEXACO-60 was used to measure whether a participant had an open or closed personality (Michael et al., 2008). A four-statement questionnaire determined how often the participant experienced nightmares (Belicki, 1992). Three different instructions were embedded after the HEXACO-60 was completed that randomly assigned to each participant. Each instruction had a different level of suggestibility towards how many nightmares those with open personality may experience. The results concluded there was only

one main effect of personality on nightmare frequency, with no significant effect of instruction level or interaction, $F(1, 86) = 8.083, p = .006, \eta^2 = .086$.

Keywords: *personality, HEXACO, open personality, closed personality, nightmare frequency, instruction*

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Introduction

Are some personalities more likely to experience nightmares? Recent research has found that people who are open to experience report having more nightmares (Brekke et al., 2023). Perhaps this is because openness is positively correlated with imagination; specifically, experiential simulation and conscious imagination (Sassenberg et al., 2023). Alternatively, they may have more nightmares because they have better semantic long-term memory (Sassenberg et al., 2023) and their memories are more accessible than people who are resistant to new experiences.

On the other hand, people with open personalities may be more easily influenced by suggestions than others. Are individuals who are open to new experiences also more suggestible and therefore report more nightmares when asked?

Our research study tested whether open personalities report experiencing more nightmares because of their personality and/or because they are simply more susceptible to leading instructions. We hypothesized that open personalities would report experiencing a higher number of nightmares because they are imaginative and have better long-term memory. We also hypothesized that open personalities would be more susceptible to experimental instructions; their heightened suggestibility would cause them to report nightmare frequency based on the instructions they received.

Figure 2. Reported Nightmare Frequency as a Function of Type of Instruction and Openness to Experience

Instruction Type	Open Personality (Mean)	Closed Personality (Mean)
High Reporting	~7.5	~5.5
Low Reporting	~7.5	~3.5
Control	~6.5	~4.5

Results

A nightmare score was computed based on participants reports of frequency and intensity. The scores were then submitted to a 2 X 3 [Personality Type (open, closed) X Instruction (high suggestion, low suggestion, and no instruction)] between-subject analysis of variance (ANOVA). Individuals who had an open personality type ($M = 37.89, SD = 4.33$) reported more nightmares than closed individuals ($M = 24.85, SD = 3.70$), $F(1, 86) = 8.08, p = .006, \eta^2 = .086$. No main effect of instruction type on nightmare score was observed, $F(2, 86) = .47, p = .63, \eta^2 = .011$. There was no interaction between personality type and instruction type, $F(2, 86) = .611, p = .545, \eta^2 = .014$. Figure 2 displays the cell means for the six conditions of the experiment.

Method

Participants

Ninety-two undergraduate students from California State University Channel Islands participated in this study (57 women, 30 men, and 5 non-binaries; ($M_{age} = 23.71, SD_{age} = 5.832$). Participants were recruited through an online participation pool of psychology students and were compensated with extra credit.

Materials and Procedure

Participants were asked to complete two online questionnaires: the HEXACO personality survey (Lee & Ashton, 2009) and the nightmare frequency scale (Belicki, 1992). The HEXACO personality questionnaire measured participant's openness to experience among other variables. Only those items addressing openness to experience were of concern and were scored for this study. For example, one statement was "I'm usually quite flexible in my opinions when people don't agree with me." Responses were gathered using a 5-point Likert scale assessing agreement. The nightmare frequency scale consisted of 4 statements. For example, one statement was "For no reason, I awaken suddenly, startled and feeling afraid". Responses were gathered using a 5-point Likert scale.

Before reporting their frequency and intensity of nightmares, they were randomly assigned to one of three instructions. Figure 1 shows the three types of instruction in which participants were told they were likely to have (1) a lot of nightmares, (2) or very few nightmares, or (3) were not given specific instructions about nightmares.

Figure 1. Randomly Assigned Instruction Types

- ◆ Individuals who are open to new experiences are likely to report having **a lot of nightmares**. Their nightmares may also be very intense. These may be people who enjoy new experiences and are open to new ideas. Perhaps you are one of those individuals who are open to new experiences.
- ◆ Individuals who are open to new experiences are likely to report having **very few nightmares**. If they have nightmares, they tend to be very mild. These may be people who enjoy new experiences and are open to new ideas. Perhaps you are one of those individuals who are open to new experiences.
- ◆ Please answer the following questions regarding your experience with nightmares.

Discussion

Hypotheses Consistency

- ◆ Consistent with hypothesis: open personality is associated with greater nightmare frequency. **Openness to experience may result in more nightmares because of increased imagination and better long-term memory.**
- ◆ Inconsistent with hypothesis: instruction had no effect on reported nightmare frequency. **These findings suggest that individuals who are open to new experiences are not more suggestible. Therefore, the reported increase in nightmares is due solely to personality.**

Previous Research

- ◆ These findings are consistent with a study showing nightmare frequency and openness to experience were positively associated (Brekke et al., 2023).
- ◆ An inconsistent finding: demand characteristics, specifically implicit terminology, ascertain a certain response out of subjects (Cornelle & Lush, 2023; Cornelle & Hütter, 2020).

Real-World Applications

- ◆ Knowing there is a connection between open personalities and nightmare frequency may allow those with open personalities to better understand their experiences.
- ◆ Suggests that someone with open personality who experiences frequent nightmares might explore interventions that target habits of closed personalities.

Limitations

- ◆ Location of study (college campus, psychology students)
- ◆ Age of participants
- ◆ Participant could have been neglectful of instruction (demand characteristic), which would compromise external validity.

Future Research

- ◆ Do more nightmares change openness to experience? An individual could have so many frequent nightmares that they become more closed off to trying new things and less susceptible to instruction.
- ◆ Is there a positive association between open personalities, or any personality type, and manipulation through demand characteristics?