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Personality traits and computer anxiety as predictors of Y2K anxiety

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Abstract

In an investigation of predictors of Y2K anxiety, 127 adults completed a questionnaire that assessed computer anxiety as well as several personality traits. It was hypothesized that Y2K anxiety would be associated with higher levels of trait anxiety, desire for control, intolerance of ambiguity, and computer anxiety. Religiosity, computer use, age, and gender were included as exploratory variables. Multiple regression analysis indicated that the best predictors of Y2K anxiety were trait anxiety, religiosity, low desire for control, and a desire for control by trait anxiety interaction term. Computer use and age were not significant predictors of Y2K anxiety. One way ANOVAs indicated that level of Y2K anxiety did not vary with gender.

Keywords: Personality traits; Computer anxiety; Y2K anxiety; Risk perception

> We don't know what's going to happen when the clock strikes midnight on December 31, 1999; nobody else does either (Yourdon & Yourdon, 1998, p. xxiv).

1. Introduction

As most people throughout technologically developed regions of the world are aware, considerable speculation and concern surrounded the functioning of computer systems during the approach of the new millennium. As the year 2000 (Y2K) drew near, questions regarding the ability of computer systems to accurately recognize the

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two digit coding of the year (00) resulted in predictions of outcomes ranging from business as usual to disaster scenarios in which the stock market crashes, supermarket shelves are empty, utilities shut down, transportation is at a standstill, bank records are obliterated, and nuclear weaponry is accidentally launched. Clinical psychologists indicated a great deal of anxiety surrounding what has come to be known as the "Year 2000 Computer Problem" or "Y2K" (Rabasca, 1999). Yet surveys (e.g. USA Today/Gallup, 1998) indicated that a significant number of people were unconcerned about Y2K-related prognostications. From a psychological perspective, the widespread public knowledge and anticipation of the Y2K computer problem can be viewed as a unique opportunity to better understand how individual differences may impact attitudes about technology and technological risk of an ambiguous nature.

According Schütz, Wiedemann, and Gray (2000), previous research on risk perception has focused primarily on characteristics of the hazard itself. The predominant model, developed by Slovic, Fischhoff, and Lichtenstein (1980, 1985), has been particularly influential in shaping research and has been replicated in a large number of cross-cultural studies. This factor analytic model explains risk perception as a function of the severity and controllability of the hazard (the "dread risk factor") and the degree to which the hazard is familiar and observable (the "unknown risk factor"). Other investigators (e.g. Harding & Eiser, 1984; Pilisuk & Acredolo, 1988; Vaughan & Nordenstam, 1991) have focused on demographic predictors of risk perceptions, including gender, race, education level, and religion. Pilisuk and Acredolo (1988), for example, report lower levels of concern about technological hazards among white, higher income, more highly educated men, and explain these findings in terms of this demographic group's greater access to the benefits of technology.

A small number of studies have addressed the role of cognitive processes, such as the availability heuristic and framing, in risk perception (see, for example, Greening, Dollinger, & Pitz, 1996). Still other research, stemming from the field of risk communication, has focused on the nature and source of information disseminated about hazardous situations. Bord and O'Connor (1992), for example, propose that the trustworthiness of the source of risk-related information is the most critical factor in determining risk perception.

While researchers have targeted characteristics of the hazard, demographics, cognitive processes, and communication variables in investigations of risk perception, little attention has been afforded to the role of individual differences in response to technological risks. In one of the few studies on this topic (discussed in greater detail below), Myers, Henderson-King, and Henderson-King (1997) identified desire for control and ambiguity intolerance as important individual difference variables in predicting risk perception.

A more complete understanding of the factors involved in the perception of technological risks is critical for those involved in risk communication efforts (such as the media professionals, emergency response workers, and medical personnel) as well as for individuals engaged in interventions to reduce maladaptive perceptions of technological hazards (such as mental health professionals and individuals involved in conducting technology training programs). With the goal of contributing to an