Computers, anxiety, and gender: an analysis of reactions to the Y2K computer problem

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Abstract

The current study investigated computer attitudes, anxiety, behavior, and gender in the context of a computer-related uncertain event with potentially far-reaching implications, the Y2K computer problem. Internet-based data collection resulted in a sample of 1500 participants who completed questionnaires on a research website. Path analyses showed that Y2K anxiety and preparations were significantly predicted by a number of variables, including computer anxiety and negative attitudes toward computers, trait anxiety, and gender. Trait anxiety significantly predicted computer anxiety and negative attitudes toward computers. Gender significantly predicted Y2K anxiety, trait anxiety, and computer anxiety, but indirect effects of gender on Y2K anxiety as mediated by the other variables were not significant, suggesting that women’s higher levels of trait and computer anxiety did not explain their greater Y2K anxiety. The path model with the best overall fit included computer anxiety predicting negative attitudes toward computers rather than vice versa. Implications for interventions aimed at reducing situation-specific computer anxiety are discussed, including the importance of targeting anxiety directly, not just negative thoughts about computers.

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1. Introduction

Since the advent of computers, society has become increasingly reliant on computers in the workplace, in school, and at home. Yet despite their widespread use and availability, fears about living in a computerized society are also quite common
As the most well-publicized and far-reaching problems of the new computer age, the year 2000 (Y2K) computer problem provided an opportunity to study these fears and the factors that influence them.

At the core, Y2K was a concern about the potential widespread malfunctioning of computerized technology, due to computer design and programming that relied on two digits to represent the year. The Y2K computer problem, however, involved more than just computer applications dependent on the date or embedded microchips found in many modern products. Potential problems ranged from minor inconveniences such as incapacitated elevators and flashing stoplights, to more severe disruptions such as widespread electrical blackouts and problems with shipping and orders (de Jaeger, 1999). Doomsayers even predicted massive economic failure or accidental nuclear holocaust (de Jaeger, 1999). In response to people’s concerns, preparations for Y2K were undertaken by national, state, and local governments, as well as by corporations, businesses, grass-roots action groups, and private citizens.

As a computer-related uncertain event with a wide range of potentially significant negative effects, Y2K was a source of anxiety for many people (Rabasca, 1999). Several surveys found that at least half of respondents had some worries about Y2K-related problems (Lacayo, 1999; Schottenbauer, Rodriguez, Glass, & Arnkoff, 2000). There was great variation, however, in the severity of Y2K anxiety experienced and the steps people planned to take to prepare for the problem (Schottenbauer et al., 2000). While some individuals took the situation lightly or made minor preparations, others moved to rural areas, acquired enough food and water to last several months, and stockpiled weapons and ammunition (Lacayo, 1999).

When considering the wide variation in people’s reactions to Y2K, several factors emerge as possible influences on and motivations for people’s Y2K-related anxiety and activities: computer anxiety, negative attitudes toward computers, trait anxiety, and gender. Most intuitive among these are dispositional computer attitudes and anxieties. Computer anxiety and negative attitudes toward computers are related but separate constructs (Harrison & Rainer, 1992; Whitley, 1997). The former involves a person’s affective response when faced with computers and technology; the latter refers to a person’s beliefs, both positive and negative, about computers, technology, and their possible effects on society. Studies have found computer attitudes to be related to level of comfort using computers and frequency of use, computer science course grades, and self-efficacy for performance with computer technology (for a review, see LaLomia & Sidowski, 1991). Computer anxiety has been linked to debilitating thoughts and decreased performance during computer tasks involving computer malfunction (Glass & Knight, 1988; Heinsen, Glass, & Knight, 1987), as well as the avoidance of computer use in general (Brosnan, 1998a). Since Y2K was essentially a problem with computers and the potential malfunctioning of computerized technology, people’s general attitudes about computers and their role in society, as well as their anxiety about using computers, could play a role in influencing their reactions to the Y2K problem.

In addition to specific anxiety about computers, an individual’s more general tendency to become anxious and concerned over events may also have impacted concerns
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