

The Interrelationship of Warning Variables in a Realistic Product Assembly Task

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This study examined the extent to which commonly reported perceptual measures predict compliance behavior in a lab-based scenario that effectively disguised the true purpose of the research. Forty-nine undergraduates were led to believe that the purpose of the study was to improve the instructions that accompany consumer products that require full or partial assembly and that they would be asked to perform carpentry tasks that required the use of several types of manual and power tools (e.g., a circular saw). The instructions for a fictitious product, the "Jaybird Birdhouse Kit," asked participants to cut pre-marked sections (e.g., walls, roof) from a larger piece of wood and then assemble the sections in a room equipped to resemble a small wood shop. The warning on the saw directed participants to wear safety glasses and a face mask and to keep their hands away from the blade during use. These and several other types of safety equipment were in plain view of the participants on a table with tools and other pieces of the birdhouse kit. Steps were taken to ensure participants' safety (electrical outlets were not "live") and to enhance the study's realism.

Results showed that perceived hazard predicts compliance, replicating earlier research in this area. A relatively high level of behavioral compliance was observed, even though there was nothing forcing participants to use the protective equipment other than the belief of danger and a warning telling them how to reduce that danger. Thirty-five participants (71.4%) donned at least one piece of safety equipment prior to using the saw. Of these, 34 (97.1%) used safety glasses, 17 used a mask (48.5%), four (11.4%) wore work gloves, and one (2.8%) wore an apron. Sixteen participants (45.7%) donned both the safety glasses and the mask as indicated on the warning. The results showed that level of experience (prior use of a circular saw) was positively related to compliance, $r = .3, p < .05$. This finding contrasts with the usual familiarity effects reported in warnings research.

The scenario used in this study produced a believable context that can be used by warnings researchers in future investigations of behavioral compliance. Future studies should expand the range of realistic, but controlled, laboratory contexts to investigate the effectiveness of various warning related factors across a broad range of potentially hazardous consumer products.