



Law Enforcement Officers' High-Visibility Safety Apparel: The Effect of Their Attitudes on Wearing Behavior

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1. Introduction

High-Visibility Safety Apparel (HVSA) is classified as personal protective clothing that provides visual conspicuity to reduce the risk of fatality or injury from traffic road crashes (ANSI/ISEA 107-2010). Traffic increases every year, which leads to more congestion and to greater risks to law enforcement personnel. Conditions at dawn, dusk, night and during inclement weather further increase the risks. Wearing HVSA can reduce or prevent these risks (Norris & Myers, 2013). Research on personal protective clothing has mostly focused on mobility or physical comfort. Relatively few studies have examined wearers' attitudes and behavior toward protective clothing (e.g., Quistberg, Bennett, Quan, & Ebel, 2014). To fill this void, the current study examines how law enforcement officers' attitudes toward safety, appearance, and comfort affect their wearing behavior of HVSA. In addition, the study evaluates the environment factors such as organizational safety culture, regulation, and training in regards to wearing HVSA.

2. Conceptual Framework

The Safety Triad, the triangle of safety-related factors proposed by Geller (2000), is the conceptual framework of this study that explains the importance of person, environment, and behavior factors for improving organizational safety. Increased HVSA usage can influence person factors such as safety attitudes, intentions, and belief and behaviors, eventually reducing the risk of traffic accidents (Norris & Myers, 2013). As a human nature, it is often more comfortable and efficient not to wear protective clothing than complying with safety procedure. Thus, an effective strategy to increase HVSA usage must include the intervention of person factors such as attitudes and perceptions and the environment factors such as organizational culture and regulation for long-term behavior changes (Ali, Saeed, Ali, & Haidar, 2011).

3. Hypotheses development

This study aims to investigate how law enforcement officers' attitudes toward occupational attributes of safety, appearance, and comfort affect their wearing behavior of HVSA. The hypotheses proposed in the study are as follows:

- H1: When law enforcement officers have positive safety attitudes toward HVSA, they will wear it for a longer duration.
- H2: When law enforcement officers have positive attitudes toward their professional appearance in HVSA, they will wear it for a longer duration.
- H3: When law enforcement officers have positive attitudes toward comfort in wearing HVSA, they will wear it for a longer duration.

4. Methods and Results

We obtained a data set by conducting a survey with law enforcement officers in four cities of Yavapai County (i.e., Prescott, Prescott-Valley, Chino-Valley, Cottonwood) in Arizona over a three-month period between September 2012 and December 2012. The instrument was designed to measure attitudes toward safety, appearance, comfort, and duration of wearing HVSA, as the outcome of attitudes. Attitude items were measured on Visual Analogue Scale (VAS). Content analysis on validity of survey items was conducted and clarity and readability of survey items were reviewed and revised by six academic experts in safety and psychology. Finally, the reliability of the survey items was evaluated by Cronbach's alpha coefficients.

The results of bivariate regression indicated that those with more positive attitudes on safety toward HVSA would wear it for a longer duration ($B = .09$, 95% CI [.01, .17], $r = .23$, $t(92) = 2.27$, $p = .026$, two-tailed) (H1). Law enforcement officers with more positive self-perception on their appearance in HVSA would also wear it for a longer duration ($B = .07$, 95% CI [.004, .14], $r = .22$, $t(92) = 2.12$, $p = .037$, two-tailed) (H2). Thus, Hypotheses 1 and 2 were supported. Contrary to the proposed Hypothesis 3, the attitude toward comfort was not significantly influence HVSA wearing behavior ($B = .03$, 95% CI [-.05, .12], $r = .08$, $t(92) = .80$, $p = .429$, two-tailed) (H3). The descriptive analysis of environment factors was provided.

5. Conclusions and Further Research

This study contributes to the research on law enforcement officers by providing information about what factors influence HVSA wearing decisions. It informs safety training officers and law enforcement organizations of the need to develop successful training and practice programs. In educating and training, safety and appearance must be emphasized to increase voluntary compliance. The limitation of the current study is the lack of measuring target behaviors (i.e. use or non-use of HVSA) because participants' wearing action would occur randomly and individually outside of police offices. The self-reported wearing behavior surrounding the use of HVSA has limited reliability on responses. Finally, future studies can explore different dimensions of person factors such as personalities, motivation, knowledge, and psycho-social factors and how they influence wearing behavior of HVSA.

6. References

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