



Health literacy training for police recruits

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ABSTRACT

Police officers are uniquely positioned in that they are often the first on scene to respond following health-related calls for help. As a result, they often encounter victims and vulnerable community members at risk for adverse outcomes and low health literacy. In response, a large urban police department in the Southwestern United States, the Phoenix Police Department, implemented a 60-minute didactic Health Literacy Training for Public Safety Professionals presentation to educate recruits in the police academy about health literacy universal precautions and how to apply them specifically to police practice. To evaluate the training's impact, participating recruits completed pre- and post-training surveys assessing health literacy knowledge, self-efficacy, and planned use of health literacy universal precautions in victim encounters. Survey responses were then analysed using paired sample *t*-tests, and crosstabs analysis was performed to assess differences by participants' age, gender, and education level. In total, six trainings were delivered to 139 police recruits, and there were significant improvements in their knowledge of health literacy, self-efficacy, and intended frequency of use of communication techniques ($p < 0.001$). There was no significant association between recruits' age, gender, and education level on post-training survey responses. Following the health literacy training, the improved knowledge, self-efficacy, and planned behaviour across age, gender, and education history supports the benefit of health literacy training for all police recruits. Moreover, findings support the notion that evidence-based and standardized health literacy trainings should be widely incorporated into the education of public safety professionals.

Key Words Policing; health literacy; training.

INTRODUCTION

Police officers attend to individuals' health needs in the community, and they are often the first on scene following medical-related calls for help placed by those directly affected or from concerned bystanders (Lorey & Fegert, 2021). Besides medical emergencies, mental and behavioural health crises represent a growing number of calls to which police officers frequently respond (Abramson, 2021). As officers are often in a position of communicating resource information with health implications to crime victims or other vulnerable community members, health literacy communication skills have the potential to improve community member outcomes following a police encounter.

To improve health outcomes by promoting personal and organizational health literacy among those encountered in the community as well as within a large urban police

department in the Southwestern United States, the Phoenix Police Department (PD)'s police academy implemented a Health Literacy Training for Public Safety Professionals presentation. This 1-hour training educates recruits about health literacy universal precautions, a term referring to universal practices by frontline workers to communicate using techniques that are appropriate for individuals with lower literacy and health literacy skills. The training includes information about national and state data surrounding mental health statistics, emergency room visits, and leading causes of death; public safety professionals' roles as first responders and frontline workers to the healthcare system; the importance of prioritizing organizational health literacy to keep people safe and well; and guidance about how to apply health literacy universal precautions specifically to police practice.

Within the Phoenix PD, the course is held in the first 2 weeks of each new academy class (six times per year) to

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provide standardized and evidence-based health literacy training with the goal of improving future officers' health literacy skills and behaviours. Basic and advanced communication techniques are emphasized including using simple language, handing printed materials to victims, chunking information into small segments before checking for understanding, and using the teach-back technique to assess understanding. All content and recommendations are based on guidelines related to health literacy universal precautions outlined by the Agency for Healthcare Research and Quality (AHRQ), an arm of the U.S. Department of Health and Human Services (Brach, 2024). Along with implementing the training, we sought to evaluate effectiveness of the didactic presentation in impacting recruits' knowledge, attitudes, and planned behaviours. In other words, we aimed to examine the effects of the training on police recruits' knowledge about health literacy along with their self-efficacy and intended use of communication techniques taught in the course.

REVIEW OF LITERATURE

When implemented among healthcare professionals, standardized health literacy trainings help ensure that patients and families under their care receive, understand, and can use health information in meaningful and actionable ways (Gibson et al., 2022). By equipping professionals with knowledge and skills related to health literacy, the trainings may improve the statistic that only 12% of Americans have proficient health literacy skills, meaning they can adeptly find, understand, and use information to make health-related decisions and take subsequent actions (National Center for Education Statistics, 2019; National Institutes of Health, 2024). Improving the percentage of Americans possessing proficient health literacy skills is key as health literacy is related to health outcomes, for low health literacy has been tied to adverse outcomes including higher mortality and increased use of hospital care and emergency services (Berkman et al., 2011; Centers for Disease Control and Prevention, 2024). Moreover, low or inadequate health literacy in hospital patients predicts revisits to emergency departments (Shahid et al., 2022), while improved written and counselling communication can improve health knowledge and outcomes (DeWalt & Hink, 2009). In the healthcare space, research shows that following interactive presentations and courses focusing on evidence-based recommendations related to health literacy, medical staff reported greater knowledge about the topic, increased use of health literacy strategies in practice, and enhanced confidence on the subject matter (Bird et al., 2022; Gibson et al., 2022; Vaillancourt & Cameron, 2022).

Despite police officers being uniquely positioned as frequently the first on scene providing initial care to victims, ensuring scene safety, and requesting additional assistance as needed, education on health literacy is currently not widely incorporated as part of police training as public safety professionals. As first responders are often frontline workers to the healthcare system and provide guidance related to well-being and safety, ensuring officers are mindful of health literacy when out in the community helps coordinate partnerships between public safety and healthcare organizations (U.S. Department of Health and

Human Services, 2024). These partnerships are important to optimize health outcomes for individuals as well as entire communities and society. Additionally, by promoting health literacy from an organizational perspective by incorporating a standardized training course, the subject may become integrated into all aspects of the department's planning and operations. Equipping police officers with health literacy training is crucial for several reasons related to enhanced and improved communication, safety, and emergency responses (Office of Disease Prevention and Health Promotion, 2024).

By incorporating health literacy universal precautions into standard police practice, officers can more effectively communicate with individuals they encounter to promote short- and long-term comprehension of health-related warnings and instructions. In law enforcement officers, particularly focusing on increasing mental and behavioural health literacy has been shown to improve police practice (Lorey & Fegert, 2021). Moreover, safety of community members and the public at large is prioritized when public safety professionals have the knowledge and skills to assist in addressing people's physical, mental, and emotional health needs (Lorey & Fegert, 2022). Safety and communication are related in that clear communication and understanding are essential for individuals to follow instructions and adhere to safety guidelines and protocols, especially during emergency situations. Furthermore, integrating health literacy universal precautions into public safety professionals' responses to health-related calls may help reduce preventable emergency department visits by connecting individuals with additional supports and resources prior to them having to resort to hospitals (Coughlin et al., 2021).

METHODS

Design and Procedure

To examine the impact of the Health Literacy Training for Public Safety Professionals, police recruit course attendees completed questionnaires evaluating knowledge of health literacy, self-efficacy, and planned use of basic and advanced communication techniques. Each recruit was invited to complete the Health Literacy Brief Assessment Quiz, Generalized Self-Efficacy Scale (GSES), and American Medical Association (AMA) Communication Techniques Survey both prior to and following the training. By capturing pre- and post-training responses, the presentation's impact on participants' knowledge, attitudes, and planned behaviours could be assessed and analysed statistically. Recruits were asked to provide demographic information including gender, age, race/ethnicity, and highest level of education completed. This study involving implementation and evaluation of the health literacy training program received approval by the Arizona State University Institutional Review Board.

Health Literacy Brief Assessment Quiz

Police recruits' knowledge of health literacy was evaluated pre- and post-training using the AHRQ's Health Literacy Universal Precautions Toolkit Quiz. The eight-point quiz consists of eight multiple-choice questions assessing

respondents' overall understanding of health literacy and includes key facts about the topic (Brega et al., 2015). The content for each question was covered and reinforced throughout the didactic content of the Health Literacy Training for Public Safety Professionals presentation. The questions and answers are applicable to promoting key communication strategies among public safety professionals when interacting with the public. Important information gleaned from the quiz includes tactics to reduce complexities of healthcare, increase others' understanding of health information, and support people of all literacy levels (Brach, 2024).

Generalized Self-Efficacy Scale (GSES)

Police recruits' self-efficacy was assessed pre- and post-training using the GSES. The questionnaire is out of 40 points and consists of 10 questions each evaluated using a four-point Likert scale consisting of responses ranging from *not at all true* to *exactly true* (Schwarzer & Jerusalem, 1995). The tool assesses the strength of individuals' beliefs in their own abilities to respond to new or challenging situations while dealing with unexpected obstacles, setbacks, and circumstances. Psychometric testing reveals that the scale is a reliable instrument for measuring self-efficacy as evidenced by coefficient alphas ranging from 0.82 to 0.93, and the tool's concurrent validity has been established via positive correlations with additional measures of self-esteem, internal control beliefs, and optimism as well as negative correlations with other tools measuring general and performance anxiety, shyness, and pessimism (Schwarzer & Jerusalem, 1995).

American Medical Association (AMA) Communication Techniques Survey

Police recruits' intended use of communication techniques was appraised pre- and post-training using the AMA Communication Techniques Survey. The questionnaire is out of 44 points comprising 11 questions each gauged according to a four-point Likert scale consisting of responses ranging from *never* to *always* (Howe et al., 2017). This survey has been used and adapted to assess communication skills of various healthcare professionals including physicians, nurses, pharmacists, dentists, and dental hygienists. Psychometric testing of the instrument by diabetes educators showed high reliability in terms of a coefficient alpha of 0.829 for assessing how often communication techniques were used (Howe et al., 2017). For this project, the survey was modified to be specific to evaluation of recruits' intended frequency of use of basic and advanced communication techniques within their professions as future police officers.

Statistical Analyses

Data were analysed using two-tailed paired samples *t*-tests to compare responses to participants' pre- and post-training surveys in terms of their overall knowledge about health literacy, general self-efficacy, and intended frequency of use of basic and advanced communication techniques prior to and following the didactic course. A pre-test and post-test experimental design enabled collection of survey data from the participants of each training at two time points. Two-tailed paired samples *t*-tests were chosen to determine if there were significant changes in police recruits'

knowledge, attitudes, and planned behaviours following participation in Health Literacy Training for Public Safety Professionals.

In addition, crosstabs analysis was performed to assess differences by age, gender, and education level.

RESULTS

Demographics

Of the study's 139 police recruits, the mean age was 27.3 ± 6.1 years. For participants' gender, 117 (84%) identified as male and 21 (15%) as female. In terms of recruits' race/ethnicity, 73 (53%) identified as White or Caucasian, 47 (34%) as Hispanic or Latino, 8 (6%) as White or Caucasian and Hispanic or Latino, 3 (2%) as Black or African American and Hispanic or Latino, 2 (1%) as Asian, 2 (1%) as White or Caucasian and Black or African American, and 0 (0%) as Native American. Regarding participants' highest level of education completed, 32 (23%) obtained a high-school diploma, home school diploma, or General Education Development (GED) equivalency, 47 (34%) completed some college but did not obtain a degree, 20 (14%) obtained an associate's degree, 30 (22%) finished a bachelor's degree, and 9 (4%) completed a master's degree or higher. Of note, one participant (1%) did not provide demographic information.

Pre- and Post-training Responses

Beginning in April 2024 through February 2025, there were six Health Literacy Training for Public Safety Professionals training presentations conducted during police academy courses within the Phoenix PD. Regarding participants attending these courses, 136 police recruits completed the pre- and post-training Health Literacy Brief Assessment Quizzes, 137 police recruits completed pre- and post-training GSES, and 139 police recruits completed pre- and post-training AMA Communication Techniques Surveys. Upon comparison of participants' pre- and post-training responses, the two-tailed paired sample *t*-tests demonstrated statistically significant improvements in police recruits' overall knowledge about health literacy, general self-efficacy, and intended frequency of use of basic and advanced communication techniques ($p < 0.001$ for all measures). Scores from the Health Literacy Brief Assessment Quiz increased from 5.04 pre-training to 6.52 post-training. Results from the GSES improved from 34.18 pre-training to 35.48 post-training. Marks on the AMA Communication Techniques Survey increased from 29.27 pre-training to 37.95 post-training.

Crosstabulations Between Demographics and Post-training Responses

To determine whether there was a significant difference in post-training survey responses by participants' age group, gender, and highest level of education completed, crosstabulations along with interpretation of outputs from chi-square tests for independence were utilized. Regarding the Health Literacy Brief Assessment Quiz, a chi-square test for independence indicated no significant association between gender and post-training responses, $\chi^2(6, n = 136) = 5.12, p = 0.52$. Using participants' mean age of 27.3 as a cut-off, there was no significant association between age and post-training

responses, $\chi^2 (6, n = 135) = 7.21, p = 0.30$. When examining education, there was no significant association between recruits' highest level of education completed and post-training responses, $\chi^2 (24, n = 136) = 28.16, p = 0.25$.

For the GSES, there was no significant association between gender and post-training responses, $\chi^2 (14, n = 137) = 14.99, p = 0.38$. Using participants' mean age of 27.3 as a cut-off, there was no significant association between age and post-training responses, $\chi^2 (14, n = 136) = 4.29, p = 0.99$. When examining education, there was no significant association between recruits' highest level of education completed and post-training responses, $\chi^2 (56, n = 137) = 50.22, p = 0.69$. Concerning the AMA Communication Techniques Survey, there was no significant association between gender and post-training responses, $\chi^2 (20, n = 138) = 22.33, p = 0.32$. Using participants' mean age of 27.3 as a cut-off, there was no significant association between age and post-training responses, $\chi^2 (20, n = 137) = 26.87, p = 0.14$. When examining education, there was no significant association between recruits' highest level of education completed and post-training responses, $\chi^2 (80, n = 138) = 84.38, p = 0.35$.

DISCUSSION

The didactic health literacy training implemented by the Phoenix PD's police academy significantly improved knowledge, attitudes, and planned behaviours for health literacy communication among participating recruits. The Health Literacy Training for Public Safety Professionals is sustainable for the organization in that the 60-minute course has now become a routine part of the training protocol for recruits progressing through the police academy. Other public safety agencies can similarly integrate such a presentation into their own training protocols to educate those within their organizations on the importance of personal and organizational health literacy as well as application of health literacy universal precautions to real-world situations encountered when serving the community. The training is cost-effective in that equipping recruits with knowledge, skills, and tools to respond to health-related crises may help improve victims' health outcomes while simultaneously decreasing rising societal costs associated with repeat calls for first responder service, increased emergency department utilizations, and resultant hospital admissions.

Results support the notion that standardized health literacy trainings containing evidence-based content and curricula should be widely incorporated into the education of public safety professionals including police officers. Health literacy communication training is important not only for improving personal health literacy among individuals encountered in the community, but also to enhance organizational health literacy of departments and agencies tasked with promoting the health, wellness, and safety of the public. Furthermore, adoption of communication techniques adhering to principles of health literacy universal precautions can be applied to a variety of health-related calls and urgent situations police officers respond to including mental and behavioural health crises, injuries, suicides and homicides, drug overdoses, elder abuse, and domestic violence. Public safety professionals can significantly impact victims' short- and long-term health outcomes by ensuring they understand medical information and guidance being presented on scene in addition to follow-ups

and next steps to navigate through action plans that keep themselves and others out of harm's way.

The consistency of improved knowledge, self-efficacy, and planned behaviour across age, gender, and education history for police recruits supports the universal benefit of health literacy communication training for all police recruits regardless of background. The consistency of findings across groups further supports the potential utility of health literacy communication training for more experienced police officers and public safety professionals who may have higher levels of education or more advanced age than recruit groups.

Limitations

Our findings are limited by a sample consisting of recruits from one police academy in a single metropolitan area in the Southwestern United States. Future work is needed to validate these findings with additional recruits from police academies in other regions of the United States.

The group sizes for crosstabs analysis were relatively small, resulting in small effect sizes. Larger subgroups may reveal differences between groups.

Another limitation is that this project's post-training surveys do not assess the program's long-term impact or translation of material learned in the didactic course to actual police practice and field policing.

Future Work

Future research is planned to include developing a rubric to evaluate translation of health literacy behaviours taught in the didactic course to actual implementation of these behaviours in simulations as part of recruits' training in the police academy and in body-worn camera footage in real-world policing practice. In addition, we are exploring opportunities to implement health literacy training for police recruits and officers in a variety of urban and rural jurisdictions in the United States and worldwide.

In addition to police recruits, ideas for training expansion and subsequent evaluation of knowledge, attitudes, and planned behaviours related to health literacy include targeting public safety professionals in firefighter recruit training academies and non-police crisis responder training programs.

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CONFLICT OF INTEREST DISCLOSURE

The authors have no conflicts of interest to declare.

ETHICS APPROVAL AND INFORMED CONSENT

The Arizona State University Institutional Review Board provided ethics oversight for this work.

DETAILS OF POSSIBLE PREVIOUS OR DUPLICATE PUBLICATION

A previous version of this work was presented at LEPH 2025 in Ottawa, ON, Canada.

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