Motivation of Community Pharmacies to Use Biometric Authentication

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Overview

The purpose of this study explored and analyzed the experiences and perspectives of the community pharmacists who were familiar with biometric authenticators in a pharmacy setting and those who were not, to answer the question, “Why do community pharmacists use traditional authentication systems rather than biometric systems?” Understanding the pharmacists’ thoughts, influences, decisions, and attitudes of using biometric systems identified possible themes that developed a framework.

Research Questions

• How did community pharmacists describe their experience using passwords and physical objects as authenticators within a pharmacy?
• How did community pharmacists describe their decision to implement an authenticator within a pharmacy?
• How did community pharmacists describe their experience using a biometric system authenticator within a pharmacy?
• How did a biometric system change these pharmacists’ lives?

Research Sites

Community pharmacies
• Chained pharmacies
• Independent pharmacies

Research Participants

Licensed community pharmacists
• Registered pharmacists who possesses either a Pharm.D. degree or bachelor degree

Pharmacy positions
• First year licensed residents
• Second year licensed residents
• Temporary employed
• Administering pharmacists (e.g. supervisor, manager, owner, chief of pharmacy)

Authenticators

• Biometric system
• Password system
• Physical object system (e.g., ID-card, smart card, USB drive, keys, so forth)

Interview and Survey Proposed Model

• Adopted TAM2 (Venkatesh & Davis, 2000, p. 197)
• Adopted UTAUT (Venkatesh, Morris, Davis G., & Davis F., 2003, p. 447)

Data and Analysis Survey

• 35 Community pharmacists participated
• 33 pharmacists used password systems in their pharmacy
• 6 pharmacists used biometric systems in their pharmacy
• 6 pharmacists used physical object systems in their pharmacy

Data and Analysis Survey

Question Response Comparison Themes

Password System Model (Unauthorized Access)

Password System Model (Unhygienic)

Password System Model (Misidentification)

Password System Model (Unknowledgeable)

Password System Correlation Matrix

FOR Biometric Themes

Access control
• Biometric system
  • Encryption
  • Biometric system
  • Encryption
  • Biometric system
  • Encryption
  • Biometric system
  • Encryption

Password
• Encryption
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Password System Correlation Matrix

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Data Collection Triangulation

Interview and Survey Proposed Model

• TAM2 (Venkatesh & Davis, 2000, p. 197)
• UTAUT (Venkatesh, Morris, Davis G., & Davis F., 2003, p. 447)