Concept Paper

Research Writing

Submitted By:

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**Title:**

Biometrics: Fingerprint Authentication / Touch-Sensitive Display in Smartphones to people with Palmar Hyperhidrosis (Sweaty Palms) in Metro Manila

**Keywords:**

Palmar Hyperhidrosis, Fingerprint Authentication in Smartphones, Touch-Sensitive Display in Smartphones

**Short Title:**

The use of Smartphones to people with Sweaty Palms

**Rationale:**

The teams research will be about the user experience of a person with palmar hyperhidrosis when using a smartphone. The team found the topic interesting because a member of the team (who is self-diagnosed with palmar hyperhidrosis) experiences the everyday struggles of using a smartphone, specifically the smartphones’ touch sensitive display. Also, the existence of waterproof and water resistant smartphones in the market that doesn't function well when wet made the team curious.

The current trend in smartphones, fingerprint authentication dramatically increased the level of security that one phone has, but another current trend in smartphones namely water resistance somehow revealed the flaws of the fingerprint authentication. The team wanted to weigh the pros and cons of the fingerprint sensor failing to authenticate when the finger is wet and to inform future smartphone producers feedback from people with palmar hyperhidrosis in order to hone the future smartphones.

**Background of the Study:**

Smartphones has been attached to the hands of many, it has been a huge help in

**Research Questions:**

1. How would people with palmar hyperhidrosis utilize the functions of their smartphones namely the FINGERPRINT AUTHENTICATION and the TOUCH-SENSITIVE DISPLAY?

**Objectives:**

This research aims to \_\_\_\_ the user experience of people with palmar hyperhidrosis when using their smartphones. It is to inform the general public about the user experience of people with palmar hyperhidrosis and their smartphones, so that they may use it to increase and make considerations when interacting with people with palmar hyperhidrosis. Thus the objectives are:

1. to help people with palmar hyperhidrosis on how they would utilize the touch-sensitive display and fingerprint authentication features of their smartphones.
2. to help smartphone manufacturers to look for ways on how they would broaden their satisfied market

**Theoretical Framework:**

* **Palmar Hyperhidrosis –** a medical codition wherein the person affected experiences excessive and uncontrollable sweating in the hands.

**Electric Gradient Theory** Iontophoresis disturbed the normal movement of sweat along the sweat duct which flows due to ionic gradient.

**Plug Theory** sweating inhibited through mechanical bloackage of sweat at the level of the stratum corneum, the depth and severity of obstruction being dose related.

**CREB Protein Mutation is the cause of Hyperhidrosis** Dephosphorylation of CREB Accelerates at times of stress.

**Conceptual Framework:**

**Scope and Limitations:** The researchers are focused on observing the people with palmar hyperhidrosis that uses a smartphone. The study will be conducted within Metro Manila only.

**Definition of Terms:**

**Methodology  
- Research Design** This study is a Descriptive Research regarding the User Experience of people with sweaty hands when using their smartphones. Focusing on their user experience on the smartphones’ touch sensitive display and fingerprint authentication.  **- Respondents of the Study:**   
 The respondents of this study would be people with sweaty hands and smartphones that live in Metro Manila **- Research Instruments** Iodine-Starch test will be conducted to people with palmar hyperhidrosis, then they will answer a questionnnaire and some will be interviewed. The Iodine-Starch Test is to determine the areas of the palm affected with palmar hyperhidrosis. **- Procedure  
- Statistical Treatment**