**Title:** The design and evaluation of a theory-based intervention to promote protective behaviors against sharenting

**Scope & Purpose:**

* First theory-based paper to design intervention that encourage parents to engage protective behaviors when sharenting children’s information, or prevent parents from sharenting.
* Extend EPPM to online privacy protection context and specifically sharenting context.

**Theory:** What is EPPM? What it maintains? How does it explain the fear reaction process? Two major messaging appraisal processes. Transition to four major constructs. The role of each construct in EPPM.

* **Fear Appeals & Sharenting**
* **Overview of EPPM**

This study uses EPPM as the theoretical basis to design interventions to test whether parents’ attitudes and behaviors would change after being exposed to fear appeal messages. Sharenting studies has demonstrated that parents would have worries or fear that their children’s information disclosed online and privacy will be violated. Write some sharenting literature to justify why Explain why use feal appeal intervention.

The extended parallel process model (EPPM) has been an exemplary model that explains how fear appeals can change attitudes and behaviors (Witte, 1992) and has been frequently used in health communication studies (Popova, 2012). The EPPM proposes that when presented with a message with both fear and efficacy components, people will engage in two message appraisal processes: threat appraisal and efficacy appraisal (Witte, 1992). If the degree of perceived threat is moderate to high, fear is then evoked. To reduce the fear emotion, people will engage in efficacy appraisal and evaluate the efficacy of recommended solutions to the threat. If the perceived threat is low, fear is not elicited and people will have no motivation to engage in the efficacy appraisal process (Witte, 1992). Specifically, if the perceived threat triggered a high degree of fear and the efficacy appraisal suggests people have the capability to avert the threat, people will be motivated to control the danger with recommended solutions, which is named as danger control process. If the perceived threat is high but the efficacy appraisal suggests people may not be able to effectively avert the threat, people will engage in maladaptive responses and try to control the fear by avoiding the fear appeal messages, which is also named as fear control process.

The point The critical point at which the danger control process becomes the fear control process depends on whether the perceived threat exceeds the perceived efficacy.

*Fear control & Sharenting*

Perceived threat and fear are key components in the fear control process. Witte (1994) conceptually differentiated the message threat component and perceived threat. Message threat component provides textual or visual information about the threat severity and susceptibilities of the target populations to the threat (Popova, 2012). Although message threat component is an external stimulus, it has a direct impact on perceived threat. Researchers need to manipulate the severity and susceptibility as features in a message to evoke participants' perceived threat. Perceived threat is a cognitive construct and refers to one’s subjective assessment of the message threat component. Similar to the message threat component, perceived threat consists of two dimensions: perceived severity and perceived susceptibility (Witte, 1996). Perceived severity is defined as one's beliefs about the gravity of the threat’s consequences and perceived sensitivity is a belief in the probability that one will personally experience the threat (Popova, 2012; Witte, 1998). In the sharenting context, the perceived severity refers to parents’ belief about the gravity of the consequences of disclosing children’s information and the perceived susceptibility refers to parents’ belief about the probability that their children will personally experience the potential harm caused by sharenting. Fear is a negatively-valenced emotional reaction, which is aroused when a personally relevant threat is perceived (Witte, 1992). In the sharenting context, fear is defined as the degree to which parents worry about how their children’s safety and privacy are threatened by their sharenting behaviors.

EPPM proposes that the message threat component causes perceived threat and perceived threat causes fear. Health communication literature also supports this proposition. For example, Security or privacy literature example. Based on EPPM and prior literature, this study proposes that high perceived threat will evoke high fear in parents whereas low perceived threat results in low level of fear. Hence,

*H1: Perceived threat is positively associated with fear.*

EPPM also proposes that fear is related to maladaptive responses (Witte, 1992; Witte et al., 1996). When fear is aroused by the perceived threat, the perceived efficacy determines whether the fear will increase or not. When people think the recommended solutions could not help deter the threat or they would not be able to carry out the solutions, aroused fear will increase further. When the perceived threat is high but the perceived efficacy is low, people will feel overwhelmed by the fear and start to engage in a defensive mechanism to reduce the fear instead of taking protective measures to avoid the threat (Popova, 2012). Maladaptive responses include avoidance, denial, reactance, wishful thinking, fatalism, hopelessness, withdrawal, and inaction (Chen, 2017; Rippetoe & Rogers, 1987; Popova, 2012).

What are fear maladaptive responses to privacy violations?

*H2: Fear is positively associated with defensive avoidance (a) and message minimizing (b).*

*Danger control & Sharenting*

Danger control aims to cope directly with the danger and perceived efficacy plays an important role in his process (de Hoog et al. 2007; Leventhal 1970). In EPPM, perceived efficacy consists of two dimensions: perceived response efficacy and perceived self-efficacy. Perceived response efficacy refers to one’s belief in the effectiveness of the recommended solutions in avoiding the threat, and perceived self-efficacy refers to one’s belief in his or her ability to carry out the recommended solutions (Witte, 1994). In the sharenting context, the perceived response efficacy refers to parents’ belief in the effectiveness of the recommended solutions to protect their children’s privacy and prevent the potential threat, and the perceived self-efficacy refers to parents’ belief in their ability to carry out the recommended privacy protection measures. EPPM proposes suggests that when one’s perceived efficacy is high, he or she will engage in adaptive responses to lessen the impact of the threat, which is also called danger control responses. Danger control responses encompass and are operationalized as message acceptance (McMahan et al., 1998), and attitudes, intentions, and behaviors that align with recommended solutions (Popova, 2012). As the intention is a strong predictor of behavior (citation). The danger control responses in this study will be measured as parents’ acceptance of fear-appeal messages, attitudes toward sharenting, and children’s privacy protection intentions.

Recent privacy studies have proved that perceived efficacy plays an important role in increasing danger control responses. For example, Chen (2017) found that people with higher security self-efficacy and security response efficacy are more likely to demonstrate security coping behavior. Similarly, Baskaran et al. (2020) also found that increasing the effectiveness of health-data privacy protection measures can motivate wearable device users to engage in adaptive coping responses. Drawing on EPPM and prior privacy literature, this study proposes that:

*H3: Perceived efficacy is positively associated with message acceptance (a) and privacy-protection intentions (b).*

*H4: Perceived efficacy is negatively associated with sharenting attitudes (a).*

*The Critical Point*

*H5: When efficacy is perceived as low, fear is negatively associated with privacy-protective actions (a), but positively associated with defensive avoidance (b) and message minimizing (c).*

*H6: When efficacy is perceived as high, high perceived threat is positively associated with more privacy-protective actions and message acceptance than low perceived threat.*

**Hypothesis:**

**Method:**

**Instrument**

Severity of Privacy Disclosure (Chang, Wong & Lee, 2022)

1. I think it is a serious matter if I share my child’s private information online and thus allow my child’s information to be disclosed.
2. I think it is a serious matter if I share my child’s private information on a specific social media platform and affect my child’s “reputation.”
3. I think it is a serious matter if I share my child’s private information on a specific social media platform and affect my child’s emotions.

Severity of Informal Sanction (Chang, Wong & Lee, 2022)

1. I consider it to be a serious matter If I didn’t set up privacy protection measures on a specific social media platform and thus caused problems in my friends’ life.
2. I consider it to be a serious matter if I didn’t set up privacy protection measures on a specific social media platform and thus caused my friends to lose trust in me.
3. I consider it a serious matter if I share my friend’s private information on social media and cause my friends to lose trust in me.

Severity of Online Flaming (Chang, Wong & Lee, 2022)

1. I think it is a serious matter if I did’ not set up privacy protection measures on a specific social media platform and thus get cyberbullied.
2. I think it is a serious matter if I didn’t set privacy protection measures on a specific social media platform and my friends are cyberbullied.
3. Overall, I feel that it is a serious matter if I let anyone get cyberbullied on a specific social media platform due to not using privacy protection measures.

Privacy self-efficacy ()

1. I feel confident in my ability to protect my children’s information because I know how to use the online platform’s privacy settings.
2. I feel in control of who can view my children’s information online.
3. Privacy settings on online platforms allow me to have control over the information about me and my children that I provide online.
4. I feel confident that the information I post online about my children can only seen by those who I have chosen to share it with.
5. I am confident that I know what online information about my children can be seen by people outside of the online platforms.

Response Efficacy ()