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ABSTRACT

With the increasing use of social media, individuals are now exposed to risks stemming from the improper use of their data by their peers. This study replicates Ozdemir, Smith and Benamati's article, exploring the relationships among the constructs of privacy experiences, privacy awareness, trust, risk, and benefits and individuals' behaviors are impacted by these relationships. We collected 248 valid responses through in-person surveys conducted within a rural area in India. Similar to the original study, the hypotheses were tested using SmartPLS. Our preliminary results enrich existing knowledge by revealing distinct privacy concerns in rural India compared with Western settings. Our findings not only reaffirm but also extend the original study's implications, making it relevant to various contexts.

Keywords: Privacy Concerns; Peer Behavior; Behavioral Outcomes; Information Disclosure

INTRODUCTION

In today's digital world, the issue of privacy has assumed significant prominence, due to the process of collecting and processing personal information of the users by companies. The advent of the Internet, and the proliferation of social media platforms like Facebook and

Instagram have further increased the complexities of the matter. For instance, Facebook users are concerned about their privacy now more than ever, due to the instances where information is shared inappropriately to third parties by the company. There is a lot of information systems literature present in case of privacy-related threats from institutions. However, surprisingly, there hasn't been much research about privacy when it comes to friends and peers on social media. An exploratory study conducted by Ozdemir et al. (2017) is one of the first attempts to measure peer privacy concerns and their relationships with individuals' behaviors when it comes to information disclosure. In their study, they proposed the APCO (the antecedents–privacy concerns–outcomes) research model that was empirically tested with Facebook users in the USA over 18 years of age through an online survey approach. The findings suggest that both previous privacy experiences and privacy awareness are very important constructs in the peer privacy context, as are the individual values (Dhillon, 2022).

Replication studies have been acknowledged as a significant contribution within the IS discipline (Olbrich et al., 2017; Dennis & Valacich, 2014). When a replication study produces results that align with those of the original research, it can enhance the applicability of the original hypotheses to new settings or contexts. (Xiao et al., 2021). The primary objective of this research was to test the boundaries of the original model by implementing it in a rural setting, specifically among rural users in India. According to the most recent data, India has the largest Facebook user base globally with 369.9 million users. It is interesting to explore if rural Indian people have peer privacy concerns and how they behave related to information disclosure. Guided by this objective, we held the instrument constant while changing the context of data collection, from modern to rural area.

Thus, the goal of this research was a methodological replication (Dennis and Valacich, 2015) of the Ozdemir et al. (2017) study that utilized the same survey measures and statistical analysis procedures. In the following sections we explain the process for replicating the study by Ozdemir et al. (2017) in a rural Indian context and elucidate theoretical insights that advance our knowledge of the APCO framework in varied contextual settings.

THEORETICAL FRAMEWORK AND HYPOTHESES

The APCO framework was first introduced by Smith et al. (2011). It serves as a foundational structure for nearly all empirical studies related to information privacy. Ozdemir et al. (2017) adopted the APCO framework and incorporated it into their research model, which encompasses several key elements within a peer context by which we mean peers' access to and use of information about others on asynchronous commercial social media platforms. The APCO elements include privacy experiences, privacy awareness, privacy concerns, risk perception, trust, benefits, and information disclosure. Regarding privacy experiences, Smith et al. (1996) discovered that individuals who encountered or been the victim of personal information misuses tend to worry more about their information privacy. Privacy awareness indicates how well an individual is informed about an organization's privacy policies and practices (Malhotra et al. 2004; Phelps et al. 2000). The concept of privacy risk pertains to an individual's assessment of the potential for significant when they share their personal information with a firm. (Featherman and Pavlou 2003; Malhotra et al. 2004, Kaur and Dhillon, 2022; Dhillon and Nunes, 2020). Following the notion of privacy calculus, "*individuals are assumed to behave in ways that they believe will result in the most favorable net level of outcomes* (Stone and Stone 1990, p. 363)." Various studies have also investigated how demographic differences affect the degree of stated
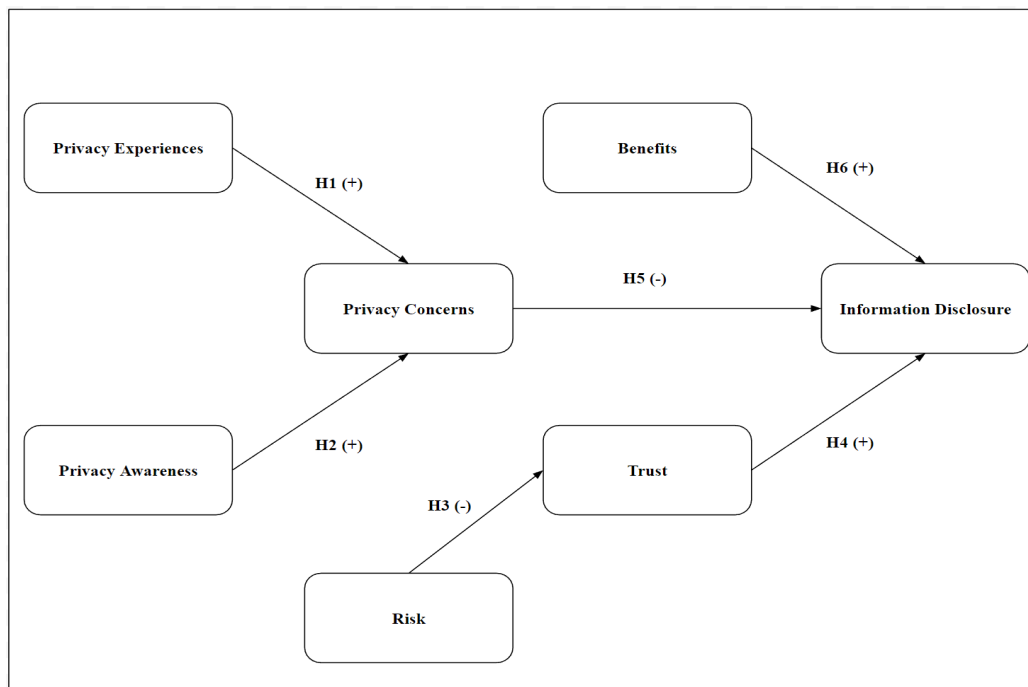
privacy concerns (Ozdemir et al. 2017). Figure 1 provides a visual representation of this research model and presents the corresponding hypotheses.

Hypothesis

Hypothesis 1: Stronger perceptions of negative privacy experiences will be associated with higher concern for information privacy in the peer context.

Hypothesis 2: Higher levels of privacy awareness will be associated with higher concern for information privacy in the peer context.

Hypothesis 3: Higher perceptions of risk will be associated with lower perceptions of trust in the peer context.

Figure 1. Proposed Research Model (Ozdemir et al. 2017)

Hypothesis 4: A higher level of trust toward peers is related to a higher level of information disclosure in the peer context.

Hypothesis 5: Individuals with a higher concern for information privacy are less likely to disclose personal information in the peer context.

Hypothesis 6: Individuals who perceive more benefit from interacting with peers on a social network are more likely to disclose personal information to their peers on that site.

METHODOLOGY

In this study we used the same partial least squares-based structural equation modeling method (PLS-SEM) with SmartPLS as Ozdemir et al. (2017), updated to version 4.0.8.3. The use of PLS-SEM provides R^2 values to indicate the significance of relationships among constructs and includes the ability to handle numerous independent variables simultaneously to analyze the cause-effect relations between latent constructs (Hair et al., 2010). Additionally, SmartPLS is extensively used in the field of information systems research, particularly with complex models that include a number of constructs and/or relationship types to be measured (e.g. Dhillon et al. 2020; Ozdemir et al. 2017; Smith, 2023).

Data collection & Sample

In the original study by Ozdemir et al. (2017) the survey was deployed to social media users of Facebook over the age of 18 using Qualtrics.com located in the United States of America, with a total of 314 survey responses captured. In this replication study, we changed to a rural setting in India where social media is likewise prevalent and our understanding of privacy concerns in the peer-context is underdeveloped. However, this change necessitated two changes

to the administration procedure of the questionnaire. First, Qualtrics.com was unable to ensure a sufficient number of participants from a rural setting in India and therefore the questionnaire was administered locally in-person. The selected location to administer the survey was a small village, Mandvi, Punjab,India, which is typical of a village in rural India. The last census by the Indian government reported a literacy rate of Mandvi village at 63.02% compared to 75.84% of Punjab, India. The male literacy rate stands at 69.43% while female literacy rate is 56.03%. This is typical of rural India. The Smartphone penetration, and hence a surrogate for Internet access, is at nearly 75% (e.g. see Pandey, 2023). Second, the original survey items are written in English and while many individuals in India are multilingual (including English) in an urban setting, it is less so in rural areas. Thus, the survey was translated to Punjabi, which is a regional and the official language. We used the standard practice of translating the questions into Punjabi and then retranslating to English to ensure that the meaning of the questions was not changed.

We followed a similar procedure as Ozdemir et al. (2017) to validate the measurement items and ensure the translation from English to Punjabi was accurate by conducting two pilot studies (90 and 201 respondents respectively) in the local area. After each pilot study, which included participant feedback on the questionnaire, the responses were assessed for reliability and validity with any changes necessary being made to the translations of the instrumentation. Finally, with sufficient evidence that the translations maintained the integrity of the original survey instrument, we conducted a final data collection of 248 individuals. The study sample demographics for the original and replication study can be found in Table 1 below.

Table 1. Original and Replication Study Sample Demographic Summary Statistics

	Original (n=314)		Rural India Study (n=248)	
Demographic Features	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Gender				
Male	134	42.68	116	46.77
Female	180	57.32	132	53.23
Age				
18 - 25	42	13.38	43	17.34
26 - 35	65	20.70	66	26.61
36 - 45	73	23.24	65	26.21
46 - 55	65	20.70	54	21.77
55 and above	65	20.70	20	8.06

PRELIMINARY DISCUSSION

Upon meticulously examining the model, we unearthed intriguing disparities in comparison to the original theory. Firstly, we noted that H5, which investigates the relationship between user privacy concerns and information disclosure, lacked significance in our study. This is in stark contrast to the original APCO model (Ozdemir et al. 2017), where H5 was proposed and identified as having a positive and substantial relationship, based on a sample of 314 online respondents in the USA. In the original model, both *Privacy Awareness* and *Privacy Experiences* served as significant precursors to *Privacy Concerns*, exhibiting robust statistical values (R^2=0.25 and path coefficients of 0.20 and 0.039, respectively).

In our study, conducted within the unique context of rural India, we observed similar outcomes in terms of R^2, path coefficients, and significance for Privacy Awareness and Privacy Experiences. However, H5 displayed a high level of insignificance in our study. One plausible explanation for this inconsistency is that respondents in this new context possess a profound

understanding and awareness of the relevance of their privacy experiences, which significantly influences their concerns. Nevertheless, these concerns might be outweighed or overshadowed by other facets of the model, ultimately not influencing their decision to disclose information. This intricate interplay underscores the complexity of privacy dynamics in varying cultural and geographic settings.

FUTURE DIRECTIONS

We are currently in the process of analyzing our data and intend to finalize this analysis for comparison with the original study. This will enable us to provide insights into the nature, scope, and relevance of our replication study. Furthermore, we aspire to witness theories developed in one context successfully elucidate situations in the other context in future research endeavors.

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