

USER INFORMATION SATISFACTION AMONG FEMALE REFUGEES AND IMMIGRANTS AS ASSESSED BY THE LEVEL OF INFORMATION LITERACY ON SOCIAL MEDIA

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Abstract Female refugees and immigrants face various challenges in accessing, using, and sharing information during their integration process. In the context of COVID-19, this study aims to identify the user information satisfaction of female refugees and immigrants living in Finland and Sweden. Using a dataset comprising 232 respondents, the research model was examined through structural equation modelling. The results show that information overload in social media streams has an impact on information fatigue and consequently on the information avoidance behaviour of the target group. The results also show that information literacy helps to avoid social media information overload, in addition to its direct effect on user information satisfaction. Being familiar with the perceived COVID-19 challenges also positively impacts user information satisfaction. In view of the fact that European countries are receiving an ever-increasing number of refugees and immigrants, the findings of this study provide both theoretical and practical contributions.

Keywords:

COVID-19, information avoidance, information fatigue, information literacy, information satisfaction, integration, female refugees, social media

1 Introduction

When entering a new country, refugees and immigrants face various integration challenges such as socio-cultural barriers, lack of language skills, health and psychological problems, employment problems, and family issues (Bronstein, 2019). They also face multiple information challenges in accessing, sharing, and using the information, in addition to challenges such as information overload (hereinafter IO), lack of information, misinformation, culturally nuanced information due to the language barrier, lack of literacy skills, lack of social networks, socio-cultural differences, and personal preferences, which are essential for managing everyday information needs in a host country (Lloyd et al., 2013). As such, it can be argued that information is vital for successful integration. Some authors, such as Swar et al. (2017), have stated that social media IO occurs when seekers have more information than can be assimilated, or in other words, the ability of information seekers to process and handle the information is insufficient to successfully cope with the amount of information they receive. The increasing use of social media platforms (e.g. Facebook, Instagram, Twitter) has fed people with excessive information content in the form of messages, tweets, wall posts, and constant status updates on a daily basis (Bright et al., 2015). This is resulting in people quitting or reducing the use of social media to avoid excessive information, which is known as social media information fatigue (hereinafter IF) (Cao & Sun, 2018). Moreover, social media fatigue, caused by IO, can be linked to the inherent problems associated with information avoidance (hereinafter IA) by social media users. It can be difficult for people to check each message on social media; they may skim or skip irrelevant information or even avoid some information (Guo et al., 2020). Mostly, people are seeking information that is in line with their interests, needs, or existing attitudes, and they avoid the information if these are not in accordance with their point of view – whether this is done consciously or unconsciously (Narayan et al., 2011). Moreover, a less-studied concept in the context of refugees and immigrants is information literacy (hereinafter IL), which has been proven to influence user satisfaction. Some authors, such as Aljanabi and Hadban (2018), have asserted that mastering certain skills and acquiring a robust IL level give individuals a sense of pleasure and confidence which, in turn, can foster their satisfaction. In the context of the COVID-19 pandemic, this paper aims to focus on information seeking in female refugees and immigrants to (i) investigate how such individuals react to information challenges, and (ii) examine their level of information satisfaction. Khan and Eskola (2020) highlighted female refugees and immigrants in particular face unique information challenges during the integration process and need special

attention to fully understand their information practices and the inherent problems, along with the strategies they use to overcome these challenges. In earlier literature (e.g. Liebig & Tronstad, 2018), female refugees and immigrants are often overlooked or studied in combination with their male counterparts. Thus, this study takes the liberty of explicitly focusing on female refugees and immigrants, in order to analyse their user information satisfaction. More importantly, in light of the pandemic brought about by the spread of COVID-19, this study aims to investigate how the current situation impacts the user information satisfaction of this target group. The COVID-19–related challenges in this paper refer to, for example, searching for information to manage stress from day to day when quarantined at home. The question guiding this study is, “*What factors influence the user information satisfaction of female refugees and immigrants, and what roles do information literacy and the perception of COVID-19–related challenges play in this context?*”

2 Literature Review and Hypotheses Developments

The research extends the (C–A–C) framework (Hilgard, 1980), which includes three components of the mind or consciousness: cognition–affect–conation. According to Huitt (1999), cognition refers to the process of knowing and understanding, and affect refers to the emotional interpretation of perception, information, or knowledge. The effect can be used to address questions such as, “How do I feel about this knowledge or information?”. With conation, questions such as “Why is this information important?” can be asked, and it refers to the intentional and personal motivation of behaviour. In the following sections, we discuss this in more detail.

2.1 Social Media Information Overload

In the literature, with the specific focus of understanding the experiences of refugees and immigrants, there is little research related to the information challenges faced by this group. It is important to understand the challenges refugees and immigrants face in accessing, using, and sharing the information to provide them with better integration services and facilities when faced with living in a new country (Quike, 2011). Among the many challenges – such as socio-cultural and linguistic barriers to information, lack of information, and misinformation – information overload is one of the main challenges faced by this group and has the potential to affect their settlement experiences in a new country. Some researchers use IO to indicate the

possibility of being bombarded with a large amount of unwanted information, some of which may be relevant (Zhang et al., 2016). The IO situation can lead to undesirable consequences such as stress and anxiety (Guo et al. 2020), may weaken the decision quality (Eppler & Mengid, 2004), and may cause the individual concerned to withdraw from the tasks at hand (Cao & Yu, 2019). Social media is one of the main sources of IO. People seek, use, and share different types of information on social media every day. Information overload is defined as the tendency of people to withdraw from social media use when they become overwhelmed with too much content, too many sites, too many friends and contacts, and too much time spent keeping up with these connections (Yu et al., 2018). People cut down on their use of social media for a variety of reasons, such as lack of interest, energy, time, and knowledge, privacy concerns, anxiety, personal reasons, and fear of academic failure (Turan, 2013), but IO remains one of the main reasons for quitting or withdrawing from social media (Cao & Yu, 2019). Moreover, Dai et al. (2020) showed that IO leads to social media fatigue; hence:

H1: *Social media IO has a significant effect on the social media IF experienced by female refugees and immigrants*

2.2 Social Media Information Fatigue

Researchers have found that social media fatigue is an important driver of individuals' decisions to quit social networking platforms (Ravindran et al., 2014). When people tire of spending too much time and energy on social media, they may practise IA behaviours to escape from the negative emotions and fatigue. Dia et al. (2020) found positive relationship between social media fatigue and IA; hence:

H2: *Social media IF has a significant effect on the social media IO of female refugees and immigrants*

2.3 Social Media Information Avoidance

Information avoidance refers to human behaviour in which users ignore some information intentionally in order to save their time and energy or reduce stress (Dia et al., 2020). Information overload is linked to IA in different aspects such as when people actively ignore information because of external pressures of fears and uncertainty. Savolainen (2007) defined IA as when people avoid unnecessary or

negative information by filtering it and withdrawing from it in their everyday life. Similarly, Fisher et al. (2005) asserted that certain coping behaviours – i.e. monitoring (actively seeking solutions to one’s problems) and blunting (avoidance of threatening information) – are essential aspects of information behaviour. It makes sense that when people feel less stressed, they feel more satisfied with the information. As such, it can be argued that an individual’s ability to avoid irrelevant and unwanted information is directly linked to their user information satisfaction; hence:

H3: *Social media LA has a significant effect on the user information satisfaction of female refugees and immigrants*

2.4 Information Literacy

Information literacy is a required skill for evaluating the information retrieved and shared via social media (Pinto et al., 2020). It is a useful way of ensuring the effective use of information accessible through social media, considering the excessive amount of information available and the potential risks that it carries on the internet. Information literacy is linked to IA. For example, McCloud et al. (2013) identified that if an individual is having difficulties in finding information or comprehending information, he/she is more likely to avoid information. In another study (Karim et al., 2019), it was revealed that higher education and higher IL self-efficacy can reduce the propensity for IA. However, IL is crucial for understanding the user information satisfaction among refugees and immigrants in a social media context. IL skills relating to the use of digital and social media resources help refugees and immigrants to overcome the inherent obstacles in order to satisfy their everyday information needs and to better integrate into the host society (Martzoukou & Burnett, 2018). The need for social media IL during the current pandemic is even more crucial – so as to avoid fake news, myths, and rumours about COVID-19, to make sense of the right information, to identify the most relevant information, and to use the information in the right way (Fujii et al., 2020). Previous studies lack an understanding of the variations in IL that exist among refugees and immigrants within a social media context and how IL impacts IA; hence, we propose:

H4: *Information literacy has a significant effect on social media LA, such that the higher the level of literacy in a female refugee or immigrant is, the higher the likelihood she will be able to deal with unwanted and irrelevant information*

H5: *Information literacy has a significant effect on the user information satisfaction, such that the more literate a female refugee or immigrant is, the more likely she will be satisfied with the use of information*

2.5 Perceived COVID-19 Challenges

The literature on COVID-19–related factors – and how this affects people's level of user information satisfaction – is scarce. This is even more evident in the context of refugees and immigrants. Alea et al. (2020) explored the impact of perceived COVID-19 challenges in the higher education context and examined how an awareness of the challenges improves the learning experience. In this study, we aim to investigate how the challenges associated with the COVID-19 pandemic situation impact the level of user information satisfaction among female refugees and immigrants. We argue that the more familiar this target group is with the challenges of the situation, the more they will be able to control the information they receive from different sources and consequently the more satisfied they will be with the information obtained. Hence, we propose the following:

H6: *Perceived COVID-19 challenges have a significant effect on the level of user information satisfaction among female refugees and immigrants*

2.6 User Information Satisfaction

From a refugee and immigrant perspective, social media and ICT have normally been at the forefront of improvements in key factors concerning well-being, such as reducing isolation and stress, increasing social networking, improving feelings of agency, and establishing oneself in a new country (Udwan et al., 2020). However, refugees and immigrants are also exposed to some negative impacts of social media use, such as risky sexual behaviour, cyberbullying, and feelings of envy about others' lives (Anderson et al., 2020). In one study of Syrian refugees in the Netherlands (Udwan et al., 2020), the two sides of social media are presented – where it provides connectivity with family and friends on the one hand, and yet has an emotionally draining effect on the other (Udwan et al., 2020). The authors found that the use of social media impacts people differently and that individuals with a refugee and immigrant background hold different views on social media use and level of user satisfaction. Few studies have shown that users of social media adopt the IA strategy to deal with information overload (e.g. Lee et al., 2017; Sasaki et al., 2016). Lee et al.

(2017) suggested that when individuals are highly overloaded with news information from social media, they are likely to access only certain selective news sources. Further, Sasaki et al. (2016) found that when Twitter users face the challenge of IO, they avoid viewing all received tweets rather than reduce their number of friends to reduce the total number of received tweets. User information satisfaction decreases if people are overloaded with unwanted information or less relevant information, but the ability to cope with IF – and consequently to have an appropriate IA strategy in place to cope with IO – may lead to enhanced satisfaction because people then limit their information to only matter that is relevant and wanted. In summary, we argue that user information satisfaction among those with a refugee or immigrant background is not only impacted by traditional social media factors but also by individual-level (information literacy) and contextual (COVID-19) related factors which equally impact their level of information satisfaction (see Figure 1).

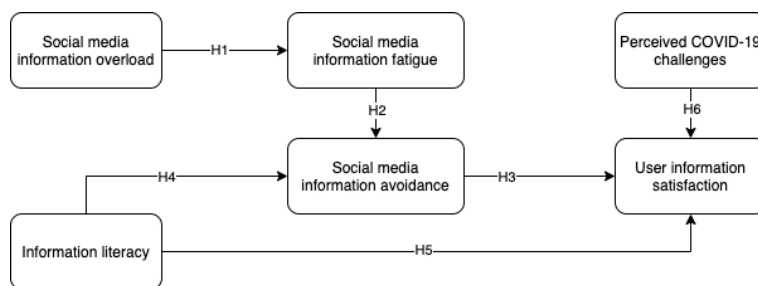


Figure 1: Proposed Conceptual Model

3 Research Methodology

3.1 Instrument and Data Collection

The items used to measure the constructs were all derived from previously validated measures, and if needed, were modified slightly to fit the study context. Alea et al.’s (2020, p. 134-136) items were used to measure COVID-19 challenges (3 items). Information overload (12 items), IF (8 items), and IA (7 items) were derived from Whelan et al. (2020), Bright et al. (2015), Dai et al. (2020), and Shin and Lin (2016), respectively. Items for information literacy (6 items) and user information satisfaction (5 items) were derived from Pinto et al. (2020) and Roberts (1999). We used an English language online survey to collect data between February and March,

2021. We sent more than 200 personal invitations, in addition to posting the survey link using different channels, such as authors' personal networks and social media platforms. We received 336 complete responses in total. As the main focus was on females with either a refugee or immigrant background living in Finland or Sweden, the final dataset consisted of 232 respondents who matched this criterion.

4 Results

4.1 Descriptive Results

The respondents' ages fell within the ranges of 18–25 years (10%), 26–35 years (56%), 36–45 years (30%), and 46–55 years (4%). The sample, as mentioned, consisted of 232 female respondents, who lived either in Finland ($n = 73$) or in Sweden ($n = 159$). Of the 232 respondents, 151 (65%) were immigrants and 81 (35%) were refugees. With regard to the current occupational status of the respondents, most were students ($n = 124$), followed by 48 respondents who indicated they were employed. Additionally, 42 respondents were non-employed, and 14 were self-employed. When we asked the respondents to indicate the social networking sites (SNSs) they used to access information, we found interesting results. The use of Facebook was mentioned by 210 respondents, and Instagram by 203 respondents. The least-used SNSs were Twitter ($n = 58$), TikTok ($n = 57$), Telegram ($n = 16$), and Snapchat ($n = 62$). We also asked the respondents to indicate how long they spend per day searching for and sharing information on SNSs. The findings were as follows: less than 30 minutes = 10 respondents; between 30 minutes and one hour = 72 respondents; between one and two hours = 89 respondents; and more than two hours = 61 respondents.

Table 1: Descriptive Statistics

Construct	Item	Loadings	(α)	CR	AVE
Perception of COVID- 19 challenges	COV_CH1	0.89	0.79	0.86	0.69
	COV_CH2	0.84			
	COV_CH3	0.76			
	Info-Fat2	0.79			
	Info-Fat3	0.73			
Social media information fatigue	Info-Fat4	0.81	0.92	0.94	0.68
	Info-Fat5	0.82			
	Info-Fat6	0.89			

	Info-Fat7	0.88			
	Info-Fat8	0.85			
	IL1	0.81			
	IL2	0.87			
Information literacy	IL3	0.81	0.92	0.94	0.71
	IL4	0.83			
	IL5	0.89			
	IL6	0.82			
	Inf_AV2	0.79			
Social media information avoidance	Inf_AV3	0.83	0.89	0.92	0.65
	Inf_AV4	0.83			
	Inf_AV5	0.84			
	Inf_AV6	0.83			
	Inf_AV7	0.73			
	Inf_OV10	0.83			
	Inf_OV12	0.77			
	Inf_OV2	0.81			
	Inf_OV3	0.76			
	Inf_OV4	0.79			
Social media information overload	Inf_OV5	0.82	0.94	0.95	0.64
	Inf_OV6	0.71			
	Inf_OV7	0.81			
	Inf_OV8	0.84			
	Inf_OV9	0.87			
User information satisfaction	Info-SAT1	0.77	0.82	0.87	0.58
	Info-SAT2	0.81			
	Info-SAT3	0.81			
	Info-SAT4	0.71			
	Info-SAT5	0.71			

The results showed that all factor loadings (except for 5 items) were above the threshold value of 0.70. In total, we used 41 items to measure the six constructs and retained 37 items for further analysis. All internal reliability and validity assessments, i.e. Cronbach's alpha (α), and composite reliability (CR), for all constructs were in the range of the recommended values of 0.70 and 0.70, respectively (Hair et al., 2019). The highest and the lowest CR values were for social media IO (0.95) and for perceived COVID-19 challenges (0.86). Also, the highest Cronbach's alpha (α) value was for social media IO (0.94), and the lowest value was for perceived COVID-19

challenges (0.79) (see Table 1). To examine whether all measures within each construct were theoretically related to one another as predicted, the convergent validity was assessed using the average variance extracted (AVE) values. As shown in Table 2, all the AVE values were above the recommended threshold of 0.50. Regarding the AVE values, the highest was for IL (0.71) and the lowest was for user information satisfaction (0.58). To establish the discriminant validity, the Fornell–Larcker criterion was used. We examined the AVE scores, and all AVE values were found to be lower than the shared variance for all model constructs; in this way, the discriminant validity was established (Fornell & Larcker, 1981).

Table 2: Discriminant validity (Fornell and Larcker criterion)

Constructs	PCCH	SMIA	IL	SMIO	UIS	SMF
Perception of COVID-19 challenges	0.83					
Social media information avoidance	0.15	0.81				
Information literacy	0.12	0.43	0.84			
Social media information overload	0.42	0.29	0.21	0.81		
User information satisfaction	0.23	0.36	0.47	0.48	0.76	
Social media information fatigue	0.28	0.51	0.21	0.69	0.38	0.82

PLS-SEM (partial least squares structural equation modelling) was used to evaluate and examine the path relationships in the model. The structural results showed that the independent variable, i.e. information use satisfaction has been explained by variance of 35%. The predictor variables, i.e. social media IF and social media IA, have been explained by variance of 47% and 37%, respectively. The SEM results showed that, as we predicted, social media IO had a positive and significant effect ($\beta = .69; t = 14.697; p = .001$) on social media IF, thus providing theoretical support to accept H1. Similarly, social media IF ($\beta = .44; t = 7.491; p = .001$) positively affected social media IA; thus, H2 was supported. Social media IA significantly affected ($\beta = .18; t = 2.977; p = .005$) user information satisfaction, hence supporting H3 in the model. The analysis revealed interesting results when the path relationships from IL to IA and user information satisfaction were assessed. The path from IL to IA was positive ($\beta = .69; t = 14.697; p = .001$), hence supporting H4 in the model.

The direct path between IL to user information satisfaction was also significant ($\beta = .38$; $t = 6.001$; $p = .001$), indicating that the level of IL of the respondents plays a major role in their information satisfaction. Therefore, H5 was supported by the model. Finally, as we proposed and predicted, the respondent’s perception towards COVID-19 challenges had a direct and positive effect ($\beta = .15$; $t = 2.759$; $p = .005$) on user information satisfaction, hence supporting H6 in the model.

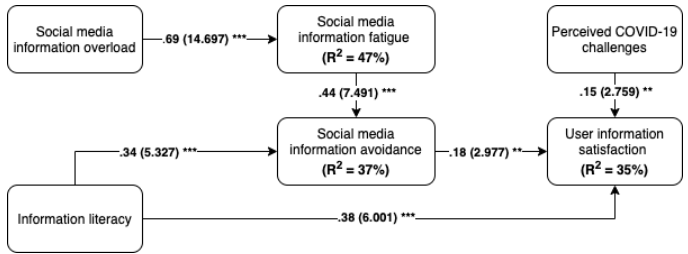


Figure 2: Structural model results. Notes: * $p < .01$. ** $p < .005$. *** $p < .001$

5 Discussions and Conclusion

The research model proposed in this research extends the (C–A–C) framework (Hilgard, 1980). The novelty of our proposed research model lies in the integration of the additional contextual construct, i.e. the perceived COVID-19 challenges, and the individual-level construct, i.e. literacy skills. To the best of our knowledge, these two variables have never been used to assess the user information satisfaction of females with a refugee or immigrant background. The results confirmed the effect of traditional constructs associated with social media use, such as IO to IF (Kim & Park, 2015) and IF to IA (Lee et al., 2017), and consequently IO to user information satisfaction (Dai et al., 2020). More importantly, the situational and contextual factors such as the perception of challenges associated with COVID-19 and the IL skills of the respondents were found to impact the level of user information satisfaction. As such, we contribute to the literature by showing that females with a refugee or immigrant background living in Finland and Sweden, while using different social media platforms and networking sites excessively to obtain and share information, nevertheless use information avoidance as a possible strategy for coping with information overload during the COVID-19 pandemic. This paper provides some practical implications too. For example, all respondents who participated in this research were female, living in Finland or Sweden, and with either

a refugee or immigrant background. As such, the findings might be applicable to policymakers to assist them in developing strategies for information management and information access in society. In addition, we showed that IF will likely result in IO behaviour among individuals (more specifically, females with the social status of being refugees or immigrants) who experience negative or unpleasant emotions when interacting with a huge amount of information. It is important that the providers of information in the social media platforms implement measures that could prevent users from experiencing negative satisfaction. However, this paper has some limitations. For example, we cannot claim that the results can be generalised, and our findings are applicable only to the context of this research. Moreover, we cannot solidly confirm the residency of the participants, as the responses were collected via an online and self-reported survey. Moreover, we cannot confirm if respondents clearly understood that their reported time on the internet was solely linked to reporting information retrieval activities.

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