

Immigrant Families' Health-Related Information Behavior on Instant Messaging Platforms

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Each of the authors comes from an immigrant family, and we became fascinated with the challenge of how our multi-generational families managed conflicting information as it came in during the early days of the COVID-19 pandemic. While the flood of information has abated somewhat, there still remain some intergenerational differences and cross-cultural challenges when it comes to discussing and maintaining a family dialog about COVID-19 and handling it. We provide a brief outline of our personal positions on this matter, then outline a small pilot study where we conducted interviews with members of immigrant families to understand the matter. Our findings from that study suggest that individual's motivations to discuss, share or verify information are complex, nuanced and most certainly influenced by the family's culture.

1 PERSONAL STATEMENTS ON MISINFORMATION FROM THE AUTHORS

Lev Poretski. Our family is widely distributed worldwide, with family members living in the Middle East, Korea, Russia, the US, and Canada. All of us are keeping in touch with each other through a family group in WhatsApp. COVID had introduced a great deal of anxiety and confusion to our online communication. The understanding, management, and enforcement of the COVID pandemic response vary wildly across the world, which affected the opinions and perceptions of our geographically distributed family. As the crisis unfolded, some of my family members became quite vocal in their distrust in the official COVID-related information from official sources. They kept sharing the links to various articles professing the ineffectiveness of facial masks to curb the infection, overall distrust in the seriousness of the COVID pandemic, and a wide range of COVID-related conspiracy theories. Those family members opposed to this stream of social networks-originated information in our WhatsApp group did not really try to confront this information directly. I personally felt that arguing with my family members will only result in an unnecessary quarrel and conflict and ultimately damage our relationships. Instead of arguing, I started to share my own links to the articles that stressed the importance of social distancing and mandatory mask-wearing. Sadly, we did not achieve a common ground, and for a while, our family WhatsApp thread became a place of people loudly talking to themselves rather than to each other.

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One important lesson that can be learned from the ongoing health crisis is that our management of scientific health-related information online calls for an improvement. On a personal level, I have experienced how familial communication online had been tested by COVID. Sadly, we did not quite pass this test. What exactly had happened and why? As a family unit, why did we fail to form a cohesive and united position and stick to it? What can be learned, and how can we act? It is common knowledge that we humans are shaped to some extent by our tools. Perhaps our current online communication tools require thorough research and re-design to be better shaped to converse with each other pleasantly and productively?

Taamannae Taabassum. As an immigrant with parents who don't speak English very well & had difficulty adjusting to a more western lifestyle, COVID misinformation was particularly interesting to me. Growing up, I was the translator and go-to person for anything new and foreign. Sometimes they would believe in ideas or people who didn't have their best interest at heart. It was definitely a fear of mine that they'd make a mistake or be led astray. As I grew older, they relied on me more than ever and since moving out, that has stopped. But now I worry about what information they are getting and from where. I can't be there all the time to help guide them or make sure they are okay. As a person straddling both western and south Asian lifestyles, seeing how a minority population adopts, values, or learns about concepts in a different environment is important to me, especially because of globalization.

Anthony Tang. The discussion about misinformation hit home in an interesting way for my family on WhatsApp. I belong to a WhatsApp group for my family (parents, wife, brother, sister-in-law), a separate one with my wife's family (wife, in-laws), as well as my Dad's family (aunts, uncles, cousins). When COVID-19 hit, it was unless streams of information coming from a wide variety of sources—some of which were official, and often they conflicted with one another. Trying to navigate this was challenging, because not only did I need to figure out “What do /I/ think here,” we needed to navigate familial tensions and the fact that as Chinese people, we (culturally) need to respect our elders and their opinions. What made it challenging was that it wasn't clear what was misinformation or not. For instance, the official Canadian messaging for a long time was that masks weren't worth wearing. So, we took that as gospel, until it wasn't any more. Then we reluctantly agreed with my mom, who had been adamantly pushing the use of masks on us since January of 2020 (she gets her news from Hong Kong). This project, for me, was borne out of that experience, and reflecting on how my own methods for dealing with these tensions was different from how my brothers-in-laws thought about these tensions (they were much more willing to shout my father-in-law down). While some forms of misinformation are clearly deliberate. In the COVID-19 situation, it was far, far more grey.

2 EXPLORING INFORMATION BEHAVIOURS IN A PANDEMIC WITHIN IMMIGRANT FAMILIES

The ongoing COVID crisis has accelerated the circulation and dissemination of health-related information online. We define health-related information as official public health directives, news, op-eds, recommendations, and reviews around health-related issues and topics.

Health-related information online can have variable quality, with verifiable information often mixing with less credible sources [3]. Yet, due to the often lower trust in the local authorities, insufficient language proficiency, or reduced social assimilation, immigrant families disconnected physically from their communities leverage online sources as one of the primary ways to access information and knowledge [9]. Thus, in this context, understanding how people consume, share, and discuss health-related information online - the behaviors that can be conceptualized as health-related *information behaviors* [2] – can help us understand how to design more effective technologies to assist families in making better decisions. This requires us to understand how information is shared

and disseminated within family circles, as the information obtained from family members is often perceived as inherently trustworthy [5] and influential.

The computer-mediated information practices and needs of immigrant families are unique and distinct from those of general families (cf. [6]), and these needs are exacerbated in the COVID crisis. Such families often have family members with different levels of assimilation within the countries of residence, have varying comfort with the language in the residence country, and have diverse socio-cultural and economic backgrounds. Information circulating within such families come from different sources, in different languages, and from various cultural perspectives. Moreover, different levels of assimilation in the receiving country can limit the users' access to information technology and information literacy [7]. Since informational literacy mediates information behaviors [4], this may further contribute to the complexity of information-related behaviors within such family units.

Many immigrant families use Instant Messaging (IM) platforms, such as WhatsApp, WeChat, or Facebook Messenger, specifically for their group-based communication capabilities [1] to maintain contact with their home countries. IM groups represent an intimate and trusting circle of individuals, where communication carries not only constructive intent but also serves as a source of emotional support and assistance [10]. This makes IM groups a common platform for sharing and discussing *health-related* information with the family members (e.g. [8]). However, as IM group members tend to inherently trust the information disseminated by the others in the group, such platforms may have an increased potential to be a hotbed for misinformation, as the users are less inclined to verify the credibility of the message [3]. This aspect makes it critical to understand how users relate to the information shared with them in their family's IM group.

Pilot Study. As an initial foray into this space, we conducted an interview study with 6 participants from immigrant families to Canada to understand and uncover health-related information behaviors of families with immigration background enacted on group-based IM platforms. We aimed to understand what kinds of health-related information families share, how the information is curated, and how it is discussed. We also wanted to uncover what tensions emerge in such discussions and how these are addressed within the family.

Findings. We found that immigrant families' discourse on IM platforms is characterized by their desire to care for and support each other. The families' information behaviors were characterized by using both local and international sources of information, surface-level engagement with information and its verification, and sometimes sharing contradictory information in the family groups. Simultaneously, family members strive to avoid tensions within their groups, and mostly did not engage in discussing the conflicting information.

Our findings advance our understanding of how immigrant families engage with diverse information sources and describe information behaviors that characterize health-related discourse in immigrant IM family groups. We also hope to aid practitioners by discussing the critical points that need to be considered when designing communication tools to support family communication online.

3 DISCUSSION

Unique information behavior patterns of immigrant families. Our findings shed light on the difference in information behaviors of immigrant families compared to non-immigrant families. Previous research had demonstrated that the information received from small, close-knit groups on IM platforms might be perceived as inherently trustable (Shen et al. 2018). We show that the information is not always perceived as trustable or credible in immigrant families given diverse cultural backgrounds and values. Instead, credibility is weighed against

pre-existing knowledge and is more likely to be perceived untrustworthy if misaligned. Perhaps immigrant expect multiple streams of potentially contradictory information in their family communication threads.

On the one hand, such information-sharing behaviors of immigrant families could be conceived as a resiliency strategy: if ideas are open for debate, the possibility of the whole family aligning with the less credible statements is lower than in non-immigrant families. On the other hand, the ability to rapidly disseminate credible information within the family circle may be lower in immigrant families. After all, such information will not be readily accepted by family members whose prior knowledge dictates that the message is untrustworthy.

Potential for the misinformation spread in immigrant families' IM groups. We found that the users did not engage in a thorough analysis of the shared information and avoided contesting contradictory messages out of fear of offending others. Avoidance orientation was previously found to be a characteristic of the IM health-related discourse (Gu and Hong 2019). We shed light onto the origins of such behavior and highlight its proliferation in immigrant family IM groups. Overall, our work demonstrates how specific information behaviors and practices in IM family groups lead to the potential spread of misinformation and fake news.

In addition to the social composition and dynamics of small family groups, which encourage only surface-level engagement with shared information, such behaviors can be at least partially prompted by the information presentation affordances of the IM medium itself. Most IM message platforms present shared links in the form of an "information snippet" – the information card containing the heading of the article, the image associated with the item, and the brief summarization of the article. Thus, the platform may encourage viewing the snippet as a self-sufficient informational message, a sort of "mini-article" that the user can process at a glance. Speculatively, it makes it less likely for the user to engage in the article's body and check the facts and sources within the article for their credibility.

Future Work. Future work will significantly extend both the scope of the inquiry and the research focus. Building on the findings reported in this work, we plan to interview ten additional participants. In addition to interviewing the participants, we will obtain the participants' actual IM family group communication content where health-related knowledge is discussed. Our intention is to discuss with various family members (both young and old) their reactions to different snippets of prior interaction.

4 AUTHOR BIOS

Lev Poretski is a post-doc fellow in the Faculty of Information at the University of Toronto. His interests include novel modalities and ways of interaction with digital and digitally augmented systems. His past research has explored human perceptions and communication in augmented reality environments, video game streaming, video game modding, and online search behaviors.

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ACKNOWLEDGMENTS

This work was generously supported by the University of Toronto's Excellence Award.

REFERENCES

- [1] Evirta Apriliani and Irwansyah Irwansyah. 2017. Family Communication Pattern on Kinkeeper: Study of Netnography and Network Analysis on Extended Family's WhatsApp Group. 2017. Retrieved from <http://proceeding.indo-igcc.id/index.php/IndoIGCC/article/view/5>
- [2] Nadia Caidi, Danielle Allard, and Lisa Quirke. 2010. Information practices of immigrants. *Annual review of information science and technology* 44, 1: 491–531.
- [3] Guy Davies. 2020. Coronavirus misinformation on WhatsApp is going viral, despite steps to combat its spread. *ABC News*. Retrieved January 3, 2021 from <https://abcnews.go.com/Health/coronavirus-misinformation-whatsapp-viral-steps-combat-spread/story?id=69688321>
- [4] Maria Haigh, Thomas Haigh, and Tetiana Matychak. 2019. Information Literacy vs. Fake News: The Case of Ukraine. *Open Information Science* 3, 1: 154–165.
- [5] Rahila Iftikhar and Bahaa Abaalkhail. 2017. Health-Seeking Influence Reflected by Online Health-Related Messages Received on Social Media: Cross-Sectional Survey. *Journal of medical Internet research* 19, 11: e382.
- [6] Mora Matassi and Pablo J. Boczkowski. 2019. Domesticating WhatsApp: Family, friends, work, and study in everyday communication. *New Media & Society*. Retrieved from https://journals.sagepub.com/doi/abs/10.1177/1461444819841890?casa_token=8T-JM1D5Qj8AAAAA:7XhOJMBsKVvXrW0g86DazSS2TH31BzfGgOymAx6im0etEMhd4gZ8zQg8TQWG-HGbVeQ0Bnzo_sO62w
- [7] Silvia Nogueroń-Liu. 2013. Access to Technology in Transnational Social Fields: Simultaneity and Digital Literacy Socialization of Adult Immigrants. *International Multilingual Research Journal* 7, 1: 33–48.
- [8] B. Palanisamy, Vijay Gopichandran, and K. Kosalram. 2018. Social capital, trust in health information, and acceptance of Measles-Rubella vaccination campaign in Tamil Nadu: A case-control study. *Journal of postgraduate medicine* 64, 4: 212–219.
- [9] Ramesh Srinivasan and Ajit Pyati. 2007. Diasporic information environments: Reframing immigrant-focused information research. *Journal of the American Society for Information Science and Technology* 58, 12: 1734–1744.
- [10] Sakari Taipale and Manuela Farinosi. 2018. The Big Meaning of Small Messages: The Use of WhatsApp in Intergenerational Family Communication. In *Human Aspects of IT for the Aged Population. Acceptance, Communication and Participation*, 532–546.