

Self- and Social Corrections on Instant Messaging Platforms

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The affordances of instant messaging platforms (IMPs) have made them ready conduits for misinformation, with their popularity aggravating the misinformation problem. At present, IMPs have limited systems in place to reduce misinformation, so the burden of correcting misinformation rests on users. This article examines reactions to misinformation and the factors influencing users' correction of misinformation, both as senders and receivers. Interviews with 35 Singaporean youths aged 21–25 years were conducted, as youths are deemed to have the greatest propensity to correct misinformation. By drawing on politeness theory and impression management theory to understand social-, cultural-, and individual-level factors, our findings reveal a proclivity for self-corrections but a disinclination to social corrections. Recommendations for motivating misinformation corrections are proposed.

Keywords: misinformation, instant messaging platforms, social correction, self-correction, politeness theory, impression management theory

Misinformation has received considerable academic and popular attention. Misinformation generally refers to factually inaccurate information that does not contain the element of ill intent, as opposed to disinformation (Wardle, 2017). The line between misinformation and disinformation can be difficult to determine because ill intent may not be discernible from the misinformation itself. However, our key concern in this study is the correction of false information, rather than the intention behind its creation or dissemination. Thus, we broadly use the term misinformation in this study and define it as false information that is "both deliberately promoted and accidentally shared" (Southwell, Thorson, & Sheble, 2018, p. 1). As misinformation gains traction, so does the need for strategies to correct misinformation, although the effectiveness of misinformation correction shows mixed results. While some studies have found that misinformation corrections are effective (Bode & Vraga, 2017), others have shown moderate effects (Walter & Murphy, 2018) or even backfiring effects (Nyhan & Reifler, 2010).

Despite a growing body of literature on misinformation corrections, these studies are largely quantitative and focus on social media platforms (Bode & Vraga, 2017; Margolin, Hannak, & Weber, 2017). Less is known about how misinformation corrections on instant messaging platforms (IMPs) can affect attitudes. Studying IMPs is important because, unlike social media platforms, communication on IMPs is usually limited to closed, private groups (Pasquetto, Jahani, Baranovsky, & Baum, 2020). Misinformation is exacerbated by end-

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to-end chat encryption that affords user privacy, but this simultaneously prevents platform intervention if falsehoods circulate (Rossini, Stromer-Galley, Baptista, & Veiga de Oliveira, 2020). The design of IMPs directly contributes to the ease of misinformation corrections. Since IMPs currently have limited systems in place to reduce misinformation, the burden of correcting misinformation rests on users. For example, while some recent research suggests that viral photos could be flagged for false content (Reis, Melo, Garimella, & Benevenuto, 2020), platforms have yet to develop appropriate interventions. Platforms currently rely on active participation from users to reduce misinformation. Therefore, there is a need to understand what motivates IMP users to confront misinformation. In this study, self-correction refers to correcting oneself after sending untrue information (Arif et al., 2017), and social corrections are defined as correcting others who have shared untrue information and with whom one has a social relationship (Bode & Vraga, 2017).

Although Pasquetto et al. (2020) establish that conducting social corrections on IMPs is an arduous task that many are unwilling to participate in, their brief discussion on the reservations expressed by IMP users leaves much to be studied. Research on the forces driving self-correction when users send misinformation is also lacking. To address the existing gap, interviews with 35 Singaporean youths aged 21–25 years were conducted to gauge their reactions to receiving and sending misinformation on IMPs and to understand the motivation(s) behind said reactions. Youths were chosen as they were deemed to have the greatest propensity to correct misinformation (Soon & Goh, 2020) and more likely to have experienced online misinformation corrections (Bode & Vraga, 2021). Youths were also considered more likely to believe in misinformation (Baum et al., 2020) and to have experience sending misinformation (Buchanan, 2020).

This article focuses on Singapore—an island nation with a generation of information-savvy youths who are confident in their information assessment abilities (Soon & Goh, 2020). Simultaneously, there is increasing emphasis on combating misinformation (Kim, Lee, Tandoc, & Zhang, 2021; Navarro, 2020). At the time of this study in December 2020, misinformation relating to the COVID-19 pandemic was rampant in Singapore (Lwin, Lee, Panchapakesan, & Tandoc, 2021). Some high-profile misinformation examples circulating early in the pandemic suggested that Singapore would enter a lockdown, that its public transport system would be disrupted (“COVID-19: Messages Online,” 2020), and that the prime minister had contracted COVID-19 (“SGH Memo Saying PM Lee has COVID-19,” 2020). In addition to understanding the social factors influencing misinformation correction in the Singapore context, we also apply politeness theory (Brown & Levinson, 1987) and draw on the concept of impression management (Leary & Kowalski, 1990) to understand cultural- and individual-level factors. This article elucidates the intricate misinformation arena on IMPs to inform media literacy programs, which are increasingly important with rapid advancements in communication technology.

Literature Review

Instant Messaging Platforms and Misinformation

The popularity of IMPs is undeniable both globally and in Singapore. WhatsApp is the most popular IMP in Singapore, with 88% of Singaporeans on the platform (Newman et al., 2021). IMPs are frequently utilized to seek information on news and current affairs; 40% of Singapore’s population uses WhatsApp for news (Newman et al., 2021). Considering the rampant misinformation on IMPs (Neyazi, Kalogeropoulos, & Nielsen, 2021), Singaporeans’ growing reliance on them for news is a pressing issue.

Globally, misinformation on IMPs has been causing concern. In India, misinformation on WhatsApp has triggered violence and lynching (Banaji, Bhat, Agarwal, Passanha, & Pravin, 2019). In Brazil, WhatsApp was the key tool for spreading disinformation to boost political campaigns (Nemer, 2021). Less insidiously, misinformation sharing was also used to strengthen social cohesion (Duffy, Tandoc, & Ling, 2019). Misinformation on IMPs has become so prevalent that some platforms have introduced new features to limit their spread. For example, WhatsApp included a limit on message forwarding and a fact-checking reminder icon next to frequently forwarded messages (Singh, 2020). WhatsApp also launched a chatbot for users to cross-reference information against ratings by professional fact-checkers (Chakravarti, 2020). In Singapore, the government introduced the Protection from Online Falsehoods and Manipulation Act (POFMA) to combat misinformation online (Tham, 2019). While POFMA has been used occasionally since it was first passed (Goh, 2020), it has yet to be invoked against IMP users, although the Act covers conversations on IMPs (Lim, 2019). These examples highlight the escalating misinformation problem and the need for effective solutions.

The design of IMPs directly contributes to the prevalence of misinformation and the ease of misinformation corrections. Pervasive misinformation can be partially attributed to end-to-end encryption on the platform that hinders fact-checking (Rossini et al., 2020) and makes it difficult to gauge its spread (Neyazi et al., 2021). However, it might be possible to detect misinformation, even with chat encryption. Reis et al. (2020) suggested matching images with those that were fact-checked and flagging misinformed images to halt the dissemination of misinformed content. That said, the proposed intervention has limitations, such as being only useful for viral photos. Furthermore, platforms have yet to develop similar interventions, choosing to rely on active participation from users to reduce misinformation. Other current technological solutions, such as restricting message forwards, have a limited effect (Melo et al., 2019). Hence, the responsibility for curbing misinformation rests on users. As such, we need to understand the motivations that drive active correction among users.

Correcting Misinformation

Studies on correcting misinformation online are aplenty, particularly in the fields of politics (Margolin et al., 2017) and health (Bode & Vraga, 2017). Van der Meer and Yan (2020) established that in public health crises, government and news media sources are more successful in debunking misinformation than peers. Bode and Vraga (2017) also found that algorithmic corrections by social media platforms and corrections by peers are both significant in reducing health misperceptions. However, most of the existing literature is largely quantitative, with a focus on social media. The few qualitative studies investigating misinformation on IMPs include Banaji et al. (2019) and Pasquetto et al. (2020). Evidently, more studies are needed.

An analysis of corrections conducted on Twitter by Margolin et al. (2017) found that interpersonal relationships influenced the acceptance of misinformation correction. Tandoc, Lim, and Ling (2019) revealed that an interpersonal relationship with the user who posted the misinformation motivated social corrections on social media. Since conversations on IMPs are likely to happen between close networks (Gill & Rojas, 2020), extrapolating these social media studies to IMPs might lead to assumptions that IMP users would engage in more social corrections.

Even so, findings from social media studies should be applied to IMPs with caution. Rossini et al. (2020) found that "WhatsApp users are more likely than Facebook users to perform, experience, and witness

social corrections” (p. 17). They suggested that this might be attributed to the private nature of the IMP, which creates an image of a safe space. Malhotra’s (2020) call for a relationship-focused approach to studying misinformation on IMPs highlighted the involvement of relational history when correcting close networks. Xia, Do, and Xie (2013) also alluded to age-based hierarchies in Asian families. These findings suggest that correcting misinformation on IMPs may not be straightforward. Indeed, Pasquetto et al. (2020) found that sharing corrections on IMPs was an arduous activity in which few would partake. Other complexities include trust and respect for the misinformation sender that influences the receiver’s subsequent actions, such as not reporting the inaccuracy (Banaji et al., 2019). Taken together, social corrections on IMPs seem unlikely because of social-, cultural-, and individual-level impediments.

Politeness Theory

The politeness theory discusses how individuals act in social interactions to preserve their positive and negative faces, where the positive face describes how individuals wish to be esteemed and admired by others (Brown & Levinson, 1987). An act that threatens the positive face is when the speaker challenges statements made by the hearer. In misinformation, this may occur when the message receiver corrects the sender of misguided information (i.e., social corrections). A separate act that threatens the speaker’s positive face is when it is shown that the speaker is wrong via apologies or confessions. This might involve the sender admitting that they have sent misinformation and apologizing for it (i.e., self-corrections). Politeness theory has been applied to subtweeting on Twitter (Edwards & Harris, 2016) and the delivery of negative feedback from supervisors to employees (Westerman & Westerman, 2010). Brown and Levinson (1987) posit that rational individuals will use politeness strategies to save face. One strategy is bald on-record politeness involving straightforward utterances that are typically used in urgent situations; for example, when the speaker gives a command to withhold an action (Alcosero & Gomez, 2022). Another strategy is off-record politeness involving ambiguous utterances to allow open interpretation; for example, when the speaker uses rhetorical questions to hint at a certain action (Alcosero & Gomez, 2022). Following politeness strategies, bald on-record politeness is aligned with direct corrections of misinformation, whereas off-record politeness is aligned with indirect corrections. A third strategy is inaction—a complete avoidance of corrective actions to save face for themselves or their conversation partners. In this study, we adopted a metapragmatics approach, focusing on reflections of politeness by interviewees. Specifically, metadiscourse is observed at the interactional level, where laypeople discuss how people should behave (Kádár & Haugh, 2013). Using the metapragmatics approach, Spencer-Oatey (2011) examined politeness judgments in interviewees’ recounts of work experiences. Similarly, as later elaborated in the method section, to examine politeness judgments of misinformation corrections, interviewees in this study recounted their experiences with receiving and sending misinformation.

Impression Management Theory

Introduced by Goffman (1959), impression management refers to how individuals endeavor to control the impressions that others form of them. One motive for impression management, as presented by Leary and Kowalski (1990), is the need to enhance one’s self-esteem, which is ranked high on Maslow’s (1943) hierarchy of needs. Similarly, Tandoc et al. (2019) found self-presentation to be a factor influencing social corrections on social media, as correcting misinformation can inflate one’s self-esteem. However, culturally nuanced conceptualizations of impression management should also be considered. Western

conceptualizations emphasize autonomy and self-enhancement, while Asian conceptualizations place intergroup harmony and goals above the self (Kim & Nam, 1998). While such binary conceptualizations may hide nuances, they are relevant in understanding broader social transformations. Because individuals in collectivistic Asian cultures are concerned about acting according to the expectations of the group, they might not engage in social corrections for the sake of maintaining peace.

Others have also consistently pointed out the positive self-image individuals project on social media (Bazarova et al., 2012) and online dating applications (Tong, Corriero, Wibowo, Makki, & Slatcher, 2019). Since criticisms are esteem-deflating reactions, individuals might avoid pointing out their flaws to avoid negative feedback from others. Indeed, Hewitt et al. (2003) supported a nondisplay facet of perfectionistic self-presentation wherein individuals avoid situations that may expose their mistakes. Indeed, the tension between the costs and benefits of self-admission of mistakes may influence some to avoid self-corrections.

Based on the above theoretical discussion, this article poses two research questions:

RQ1: How do youths react on discovering they have (a) received misinformation and (b) sent misinformation on IMPs?

RQ2: What factors influence youths' application of (a) social corrections and (b) self-corrections when they encounter misinformation on IMPs?

Method

Participant Recruitment and Demographics

Semistructured interviews were conducted with 35 Singaporeans aged 21–25 years to understand their stance on misinformation corrections on IMPs. Participants were first recruited from the National University of Singapore's Faculty of Arts and Social Sciences (FASS) through public IMP channels. Participants then provided additional contacts outside the faculty to add diversity to the sample.¹ The final sample ($N = 35$) comprised youths aged between 21 and 25 ($M = 22.4$); 21 participants identified as female (60%), and 14 participants identified as male (40%; Appendix A). All participants were university educated or completing their university education and reported English as their native language.

Data Collection and Analysis

Semistructured interviews were conducted with each participant over four weeks in December 2020. The study received ethical approval from the National University of Singapore. The interviews occurred over the video-conferencing platform Zoom, with each lasting approximately 20 minutes on average. The

¹ While we expected that participants from FASS might engage more critically with misinformation because of the compulsory general education curriculum that focuses on critical thinking and reasoning (National University of Singapore Registrar's Office, 2021), we found no noteworthy differences after comparing their responses with those of participants outside FASS.

interview guide was informed by Bolderston's (2012) guide to conducting a research interview and underwent pretesting. Three pretest respondents who met the study requirements were interviewed with an initial draft of the interview guide. The respondents were asked to flag instances when questions were unclear or sections did not flow smoothly. After pretesting, the definition of IMP was introduced at the start of the interview guide, and participants were asked to provide their definitions of misinformation. The prevalent mentions of COVID-19 misinformation during pretesting also led to a deep dive into receiving COVID-19 misinformation in the final interview guide.

The final interview guide was split into three sections: background questions, receiving misinformation, and sending misinformation (Appendix B). In the first section, participants were asked about their typical usage of IMPs and their definitions of misinformation. Rather than introducing a specific definition, this was done to unpack participants' everyday experiences based on their existing understanding of misinformation. The second and third sections required participants to recall specific incidents in which they received and sent misinformation. Hypothetical scenarios were presented to participants if they could not recall a prior experience of receiving or sending misinformation.

The interviews were video-recorded, anonymized, and transcribed in full. All identifiable research data were coded at the earliest possible stage of the research to anonymize research participants, as part of the research terms of engagement. They were then qualitatively analyzed using a constant comparison approach. We adopted Corbin and Strauss's (1990) approach to coding. First, we conducted open coding by coding each line of the transcript and constantly comparing it to the previous line to determine whether it fell under an established code or constituted a new code. At the end of the 35 interviews, no new codes were obtained from the data, so we achieved data saturation. Next, we engaged in axial coding by combining related codes into related categories. Then, selective coding was applied to unify the categories and develop themes salient to the research questions, as presented in the next section.

Findings

Receiving Misinformation and Conducting Social Corrections

This section presents the participants' reactions to being recipients of misinformation and the actions taken to correct others. While participants avoided confronting the senders of misinformation to avoid straining relationships, they responded strategically to misinformation depending on its severity and context.

Inaction to Avoid Face-Threatening Acts and Destabilizing Power Structures

In line with politeness theory, the most salient reaction from interviewees was inaction to avoid threatening the misinformation sender's positive face. Sample utterances can be seen in Table 1. Interviewees did not wish to embarrass the sender, especially in a group chat with onlookers. According to participant 15, who received health misinformation unrelated to COVID-19 from his relatives, "If it is just me and the person, I can respectfully tell that person that you're wrong, while making sure that the person is not losing face in front of many other people."

Understanding that the messages received are typically a gesture of goodwill from the sender makes it particularly important to conduct face-saving acts for the other party. These well-intentioned

messages coincide with the social utility of misinformation in strengthening social cohesion (Duffy et al., 2019). Participant 35 explains why she laughs off wellness misinformation from her mother:

An example would be like, the phone or laptop radiation will affect your health or give you cancer...When she sends these things over it usually stems from concern. I think constantly telling her that these things are fake throws the concern back in her face and it can be offensive.

Table 1. Politeness Strategies in Response to Receiving Misinformation.

Politeness Strategies	Sample Utterances
Inaction	P13: I pretty much ignored it. P25: If they sent me stuff, I just won't reply.
Bald on-record	P11: I told her, "You know this thing is fake right?" P15: Then I was like, "this is false information," and he was like, "but it's from the Ministry of Health." I said, "you click the link, it doesn't exist."
Off-record	P26: Typically, I would respond by asking them if it has been fact-checked and where was the source coming from. P32: I'll tell my parents that they should fact-check their sources.

The lack of corrective action is also because of the power structures involved in interpersonal relationships. Offline power structures are reflected even in online conversations, as evidenced by interviewees' wish to avoid being "rude" or "disrespectful" to their elders. Participant 13 explains why she chooses not to correct her parents: "You try to correct them, you mean no harm, but they will be like 'You are very rude, who said you can answer me back?' But you are just trying to have a conversation with them." The matter is further complicated when online corrections can lead to offline confrontations since communication on IMPs tends to be between close networks that interact outside the boundaries of IMPs. Participant 31 refrains from correcting her mother to avoid offline repercussions: "I feel like there will be circumstances if I say something, she will come to my room and she will be like, 'Are you going against me?'" Hence, corrective actions are affected by the power balance in interpersonal relationships.

Direct Corrections Because of Severity of Situation and Optimism Bias

Direct corrections were also executed as a bald on-record politeness strategy, despite the threats to positive face. Sample utterances can be seen in Table 1. Bald on-record politeness is used to achieve maximum efficiency in urgent situations (Alcosero & Gomez, 2022). Since the COVID-19 pandemic was ongoing during the study, the interviewees believed that this issue had more potential to cause harm than other topics. Participant 26 mentioned a rumor about movement restrictions in Singapore and discussed why pandemic-related misinformation demands greater attention:

I think I felt more of this when COVID-19 happened, because it was more important for us to be aware of news because it really did affect us a lot. So, when you are in such a situation, any small thing that we weren't even sure is true, spreading such things would cause people to panic.

Respondents were also likely to correct misinformation directly because of optimism bias, “a psychological predisposition that causes people to believe that negative events are less likely to happen to them” (Metzger, Flanagin, & Nekmat, 2015, p. 511). Here, interviewees perceived others as more likely to succumb to falsehoods. Participant 33 described his experience with his father and manipulated visual content: “It becomes very difficult for people of the older generation to discern what’s real and what’s fake. ... it is very believable to them because they don’t have much experience and they’re not as informed as we are.” Their perception of being less susceptible to falsehoods stems from confidence in their information assessment skills, which might be because they grew up as digital natives (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2015). Such confidence, combined with the third-party perception that others lack this same knowledge, leads to active corrections.

Because of the loss of face caused by direct corrections, interviewees devised strategies to save face for corrections without sacrificing the clarity of their corrections. One such strategy was to correct the sender in private via a one-on-one message so that the senders could conduct their own corrections on the group chat. Participant 10 described her course of action when a friend relays misinformation in a group chat: “I would privately message her that it’s fake and ask her to take it out of the group chat.” Participant 4 likened private one-on-one corrections to a show of respect for conversation partners: “I want to show respect to them... if I do tell them, I’ll do it privately.” Furthermore, private messages afford “control over whoever is seeing the message” and prevent misinterpretation (Participant 14), thereby avoiding any unnecessary conflict with onlookers. Hence, the preference for one-on-one chats for correcting misinformation is both to save face for the sender and to avoid trouble for the corrector.

Indirect Corrections to Minimize Face-Threatening Acts

Still, others consider adopting indirect corrective actions, such as providing senders with advice on tackling misinformation. Sample utterances can be seen in Table 1. These indirect actions are in line with off-record politeness strategies in which interviewees attempt to avoid offending others while correcting them. Off-record politeness allows the corrected to formulate their interpretation and reduces imposition (Alcosero & Gomez, 2022). This, however, risks misinterpretation by the recipient. Still, Participant 26 rationalizes that misinformation senders might be more receptive to indirect corrections: “Hopefully then they will be more perceptive to change their opinion on something because when we challenge people openly, they do tend to get a bit more defensive.” Rather than directly calling out the senders, interviewees probed them to fact-check their sources and allowed the senders to arrive at their conclusions.

Sending Misinformation and Conducting Self-Corrections

This section addresses the actions taken by participants to correct themselves after sending misinformation. While participants avoided self-corrections to hide their shortcomings, the impending greater loss of face should someone point out their mistake, and the perception of misinformation as a serious societal problem prompted them to correct themselves after sending misinformation.

Inaction Because of Impression Management

Expectedly, managing the impressions others had of them impeded self-correction and saw some participants choosing inaction after sending misinformation. Sample utterances can be seen in Table 2.

Interestingly, this concern was highlighted only by female participants. Participant 19 shared her concern about being negatively evaluated and having her shortcomings exposed if she was misinformed on serious topics such as politics: "If I'm in a heated debate or political debate with somebody and I accidentally say some misinformation, if I correct myself, then I will look like I'm not educated enough to speak about a topic."

Table 2. Politeness Strategies Used in Response to Sending Misinformation.

Politeness Strategies	Sample Utterances
Inaction	P20: If it's something trivial, and the conversation has moved on, I will just let it be. P21: I didn't really correct myself unless people like raise it up again.
Bald on-record	P9: Subsequently, when the real information came out, I had to say that "Oh, sorry, this is not real. Just ignore it." P33: I'll go back and find every single person that I shared it with and tell them "Oh, okay. This is, you know, not true. Guys, please, don't follow this information."

Several others associated self-corrections with the negative, self-conscious feeling of embarrassment. Participant 16 felt embarrassed even for nonserious, tabloid-type misinformation: "I'll be a bit embarrassed, everybody talked about it then I say it's fake." Since interviewees believe that what they say on IMPs affects how conversation partners evaluate them, they are less willing to self-correct for fear of appearing as if they are backpedaling on their views. That said, inaction was rare. Direct corrections were the most salient response, as elaborated in the next section.

Direct Corrections to Manage Impressions

Direct corrections were the most salient reaction to sending misinformation. Sample utterances can be seen in Table 2. The same desire for impression management is simultaneously a motivating factor to self-correct. Participants maintained that they would not be able to get away with spreading falsehoods. Regarding misinformation on movement restrictions in Singapore at the height of the pandemic, Participant 4 called misinformation a "time bomb" that "someone will find out eventually that it is fake." Hence, it might be better for their reputation to self-correct than risk more criticism: "If whoever you sent it to realizes that it is a mistake, then it will make it worse, right? Since now not only are you incorrect, but you are also stubborn in not admitting your mistakes" (Participant 35). This also explains why apologies frequently accompanied self-corrections. Although apologizing threatens one's positive face in the short term, it helps maintain face in the long run. Interviewees would rather step forward to self-correct than await the potential backlash when others inescapably discover the misinformation. Considering how direct self-corrections, rather than inaction, was the dominant reaction; managing impressions might be more supportive, than obstructive, of self-corrections.

Direct Corrections Because of Perception of Misinformation as a Societal Ill

Apart from impression management concerns, the interviewees also engaged in direct corrections because they recognized the severity of the misinformation. Sample utterances can be seen in Table 2. For

serious issues like fabricated government announcements on COVID-19, Participant 22 saw a need to self-correct before the misinformation spread further:

If I were to send a message like that out, I'm pretty sure my friends who received that message would potentially share it with their own group of friends. In a situation like this, it's even more important for us once we know the correct information to say, "hey, that is not true."

The recognition of misinformation as a societal ill prompted many to see self-corrections as a personal responsibility.

The motivation of optimism bias persists even in self-corrections. Here, even when youths fell prey to misinformation and mistakenly sent it, they still perceived others as more susceptible to misinformation than themselves. They believed that if they were duped by misinformation, so would others—likely to an even greater degree. Participant 7 reasoned that even misinformation that he deemed inconsequential—such as uninformed life-hacks—could have unintended consequences: "Whatever piece of interesting news might not affect me so much, but to whoever I shared, maybe it will affect him or her much more." Thus, self-correction is motivated by the enduring belief that youths are less affected by misinformation, even when they fall for it, combined with the perception that others are more susceptible to misinformation and its detrimental consequences.

Discussion

The findings of this article revealed that youths leaned toward ignoring misinformation received to avoid face-threatening acts to their conversation partners and destabilizing power structures in interpersonal relationships. Still, social corrections were motivated by an understanding of the severity of misinformation's repercussions and optimism bias. Youths had a greater propensity for conducting self-corrections to manage impressions and because they recognized misinformation as a serious societal ill. However, the desire to manage impressions simultaneously hindered self-corrections. This section seeks to understand and explain the findings, as well as provide some practical and policy suggestions.

As per politeness theory, avoiding face-threatening acts toward others was an important consideration for social corrections. Youths felt that maintaining intergroup harmony was more important than correcting misinformation—as expected from members of a collectivistic Asian culture. An existing strategy to mitigate face loss while conducting social corrections is to privately correct the sender of misinformation so that the sender can conduct self-corrections thereafter. The unique nature of IMPs renders this less of an affront than directly criticizing someone in a group conversation, despite the direct and on-record one-on-one correction. This strategy simultaneously avoids potential misinterpretations caused by indirect, off-record corrections. Thus, it will help correct misinformation circulating in larger groups during high-stakes situations, such as elections (Nemer, 2021). As posited by Malhotra (2020), relational history and power structures in interpersonal relationships complicate misinformation correction on IMPs. In Singapore's hierarchical society, youths exhibit some reluctance in confronting their elders who send misinformation for fear of appearing disrespectful. Although corrections on IMPs satisfy the factor of

interpersonal relationships put forward by Tandoc et al. (2019), there are further complexities. Merely having an existing relationship with the misinformation sender is insufficient to correct misinformation; the sender and receiver must also have equal power. The study of a hierarchical culture draws attention to the wider applicability of the findings in the Asian context. Distinct from the numerous studies in the Western context, this study attends to the “relational and cultural specificities” (Malhotra, 2020, p. 3) that are similar to other Asian countries that exhibit hierarchical social relations. That said, the findings might differ if the interviews were conducted with adults instead of youths. Social corrections might be easier in the absence of parent-child power dynamics because IMP users would be unbothered about threatening their elders’ positive faces.

The duality of optimism bias lies in how it can be both helpful and harmful for misinformation correction. The presence of optimism bias in both self- and social corrections indicates that youths are highly confident in their abilities to discern misinformation since they perceive themselves as less likely to fall for misinformation. It would be beneficial to capitalize on this confidence to further drive corrections. Being “informationally savvy,” (Soon & Goh, 2020), youths are least susceptible to misinformation. Leveraging youths’ information assessment abilities is important since people are more receptive to corrections from those with whom they have an existing relationship (Margolin et al., 2017). Their position in the IMP network, coupled with their savviness, ensures that youths are best positioned to address misinformation. However, optimism bias can increase youths’ susceptibility to misinformation. A 2018 survey found that younger Singaporeans reported greater instances of succumbing to misinformation (Ipsos, 2018). The concern that misplaced confidence in their own “informational savviness” may lull youths into taking inadequate measures to safeguard themselves against misinformation seems justified.

Drawing on the literature on impression management, we expected that youths might be unwilling to apply self-corrections. Indeed, female youths had some hesitation in correcting themselves because of their pride and not wanting to appear as if they were flip-flopping on their views. This conforms to the wider pattern of online female self-presentation. Studies have discussed females’ emphasis on putting forward a positive self-image (Haferkamp, Eimler, Papadakis, & Kruck, 2012), even frequently modifying images for self-presentation reasons (Mascheroni, Vincent, & Jimenez, 2015). Hence, it is possible that females face greater pressure to maintain a picture-perfect façade that allows no room for mistakes. It is worth investigating whether there is any basis for this concern of being negatively evaluated. In their study on self-presentation on online dating profiles, Tong et al. (2019) found dissonance between how receivers evaluated the sender and the sender’s self-evaluation. In this case too, how participants assume they might be evaluated after self-correcting may be incongruent with conversation partners’ evaluation of them. If so, the concern of being negatively evaluated is unwarranted, and young females can be at ease with engaging in self-corrections.

There is a curious juxtaposition present in the desire for impression management—self-presentation simultaneously motivates and demotivates youths from self-corrections. Although Tandoc et al. (2019) argued that social corrections can inflate self-esteem on social media, impression management was not observed as a source of motivation in our study of social corrections on IMPs. Arif et al. (2017) found that social media users were conscious of their audiences and adjusted their behavior

accordingly. Hence, the difference in the imagined audience on social media vis-à-vis IMPs may explain the divergence from Tandoc et al. (2019). However, we uncover that impression management drives self-correction. While we earlier described how youths felt that correcting themselves was embarrassing, it was still better than the greater loss of face they would incur if someone else pointed out their mistake. It was more important for youths not to be negatively evaluated for not admitting a mistake than to hide the fact that they unwittingly sent misinformation. This was especially true since they strongly believed that they could not get away with sending misinformation. Still, unlike Tandoc et al.'s, (2019) assertions, corrections motivated by impression management desires were not done to inflate self-esteem. Rather, they were done to minimize any negative evaluation by others. Hence, findings for social media studies cannot be easily extended to IMPs; neither can findings on motivations for social corrections be replicated for self-corrections. However, it is important to note that IMPs and social media platforms are heterogeneous; public channels on IMPs are similar to public postings on social media, while private chat options are also available on social media platforms. Hence, the findings from this study might not be replicated on public channels on IMPs, but similar observations might be uncovered from private chats on social media.

Youths recognized misinformation as a serious problem in society and were generally motivated to engage in direct self-corrections, although direct social corrections were considered depending on the severity of the misinformation. The private nature of IMP conversations means that the network must play a part in ensuring the accuracy of all information disseminated on the IMP. However, the general disinclination toward social corrections suggests that youths are still not sufficiently motivated to correct others. A plausible explanation may be that youths are less willing to adopt responsibility for social corrections, as their self-image is not threatened, or that correcting others—especially those who are their seniors—is seen as an exceedingly daunting task. It appears that even though misinformation is a societal problem, youths still often conceive of it as an individual-centric issue. However, since the design of IMPs places the responsibility of misinformation corrections on users, individual ownership of this problem must be encouraged.

Our first policy recommendation, therefore, is for media literacy programs to incorporate tailored elements to remind youths of their susceptibility to misinformation. A study by Cho, Lee, and Chung (2010) found a strong sense of optimism bias in risk judgments of online privacy and recommended that interventions include “self-relevant information so that people can see that they are personally at risk” (p. 994). Similarly, the addition of elements that resonate with youths might help reduce the optimism bias present in misinformation. Second, to bridge the gap in social corrections caused by face-saving considerations and uneven power balance in relationships, media literacy programs can focus more on the soft skills required to correct others. Currently, programs are focused on identifying misinformation and the consequences of believing misinformation (Media Literacy Council, n.d.). There is a need to equip users with the skills to conduct corrections with tact. Youths may be more willing to correct others if they can avoid the repercussions of face-threatening acts. Third, individuals need to be reminded that ownership of the problem is an important element in tackling misinformation on IMPs. This calls for public education campaigns that emphasize the situated nature of misinformation on IMPs—specifically, private conversations that spread easily while prohibiting external intervention. Because of the prevalent notions of saving face for others, campaigns encouraging people

to correct misinformation can also address and acknowledge the potential loss of face while reiterating that misinformation has the potential to cause more tangible societal harm than individuals' temporary feelings of embarrassment.

Limitations and Future Research

While this research has revealed important reactions to and motivations for correcting misinformation on IMPs and has indicated potential ways to encourage misinformation correction, it has certain limitations.

First, this qualitative study is based on a limited sample of 35 interviewees. The small sample size comprising youths aged 21–25 years might not be generalizable to the wider population. While youths were the subject of our study, another important demographic was the older age group. Interviewees felt that their elders were the main senders of misinformation on IMPs; this can be analyzed in future studies.

Second, the interviews relied on the participants' ability to recall and explain their responses and their decision-making processes regarding receiving and sending misinformation on IMPs. Not everyone, however, can equally articulate their behavior and its relevant reasons; an attitude-behavior gap might also exist whereby actual behavior differs from stated intentions (Caruana, Carrington, & Chatzidakis, 2015). To mitigate this, experimental studies can help discover hidden motivations that are unarticulated and draw direct links between action and motivation.

Third, participants might have overemphasized their engagement in misinformation corrections to present a favorable impression of themselves to the interviewer. Specifically, the dominant reaction of direct self-corrections suggests an overemphasis on self-corrections. This impression management concern was mitigated by having an interviewer who belonged to the same demographic group as the participants. Because the interviewer was also a young Singaporean, participants might have felt more comfortable and more honest sharing their thoughts and actions.

Finally, the distinctive nature of IMPs in housing conversations between close networks who can and do have frequent offline interactions suggests interesting areas for further research. One such area worth probing is the impact that online conversations on IMP have on relationships that are also offline—to what extent do the cues used for online self-presentation influence impression formation when these observers are also receiving cues from offline interactions? From our findings, third-party perceptions of others as more vulnerable to falsehoods were strong motivations for direct self- and social corrections. Future research should consider third-party perceptions as the central theoretical framework. These unique aspects are only available for examination because of the distinctive nature of IMPs—of housing conversations between close networks—the findings of which will advance knowledge of misinformation corrections.

The current study provides important insights to understand the factors affecting misinformation corrections and possible interventions. Even with a growing body of literature, misinformation on IMPs remains a salient societal issue with unraveled complexities. Although this study emphasized the

responsibility of IMP users, it is important to note that IMPs themselves have a direct role in preventing misinformation. It is crucial for IMP businesses—which shoulder the bulk of the responsibility of correcting misinformation—to invest in preventive measures against misinformation on their platforms. Nipping misinformation in the bud before it spreads is of the essence—treating the cause rather than addressing the symptoms might be more efficacious in eradicating the scourge of misinformation.

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Appendix A

Table 3. Overview of Participant Characteristics.

ID	Experienced Misinformation on IMP	Age	Gender	Education	From FASS
1	Yes	23	Female	Bachelors	Yes
2	Yes	22	Female	A Levels	No
3	Yes	24	Male	Diploma	No
4	Yes	24	Male	A Levels	Yes
5	Yes	21	Female	A Levels	No
6	Yes*	22	Female	A Levels	No
7	Yes	22	Male	A Levels	No
8	Yes	22	Male	A Levels	No
9	Yes	22	Male	A Levels	No
10	Yes	23	Female	Bachelors	Yes
11	Yes	23	Male	A Levels	No
12	Yes	22	Female	A Levels	Yes
13	Yes	22	Female	Diploma	Yes
14	Yes	23	Female	A Levels	Yes
15	Yes	22	Male	A Levels	No
16	Yes	21	Female	A Levels	Yes
17	Yes	24	Male	A Levels	Yes
18	Yes	22	Female	A Levels	No
19	Yes	22	Female	Diploma	Yes
20	Yes	21	Female	Diploma	No
21	No	22	Female	A Levels	Yes
22	Yes*	22	Female	A Levels	No
23	Yes	24	Male	A Levels	No
24	Yes	21	Female	A Levels	No
25	Yes	22	Female	A Levels	Yes
26	Yes	22	Female	Bachelors	No
27	Yes	22	Female	A Levels	Yes
28	Yes	24	Male	Diploma	No
29	Yes*	23	Male	A Levels	No
30	Yes	22	Male	A Levels	No
31	Yes*	24	Female	Diploma	Yes
32	Yes	21	Male	Diploma	No
33	Yes	23	Male	A Levels	Yes
34	Yes	22	Female	A Levels	No
35	Yes	24	Female	Diploma	Yes

*Participants first indicated no prior experience with misinformation on IMPs.

Appendix B

Participant Demographics

The recruitment process achieved a varied sample of 15 interviewees with relation to FASS and 20 interviewees with no relation, and a 2:3 gender ratio of 14 males and 21 females (Appendix A). Five participants indicated no prior experience with misinformation on IMP. However, four of these five participants could recall prior experiences after receiving examples from the interviewer. The last participant who did not recall a prior experience with misinformation on IMP provided similar responses in agreement with the other respondents and hence was included in the data set.

Data Collection Procedure

The interviews occurred over the video-conferencing platform Zoom. Zoom had an in-built function to record the interviews. Participants were reminded to take the interview in a quiet environment with a stable Internet connection. Video-conferencing interviews and the accompanying technological requirements might limit participant access. Thankfully, this concern was not applicable to this study. In addition to their digital savviness, interviewees were also familiar with Zoom, since this study was conducted during the COVID-19 pandemic when online classes over Zoom were an integral part of their education.

Interview Guide

The first section began with the interviewer defining IMPs and understanding the participants' typical usage of and sharing habits on IMPs. The interviewer asked the participants for their definition of misinformation and navigated the conversation based on their definition.

The interview then proceeded to the next section on receiving misinformation. Participants were asked to recall a recent incident in which they received misinformation on any topic, their reactions, and the reason for said reactions. Following this, participants were asked to recall a specific piece of COVID-19 misinformation that they had received before describing and explaining their reactions on realizing that the information was false. Depending on their responses, participants were probed for the reasons surrounding their different reactions toward general misinformation and COVID-19 misinformation.

The last section on sending misinformation requested participants to recall a time when they had unintentionally sent misinformation, how they realized the information was false, their reactions thereafter, and the reasons for said reactions. The same questions were posed regarding previous experience in intentional misinformation sharing. Hypothetical scenarios were presented in all interview sections if they could not recall a prior experience in receiving or sending misinformation.