

Online Mediation: The Best of Both Worlds?

Exploring Online Alternatives to Direct and Indirect Victim-Offender Mediation Using the Communication Orientation Model

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Abstract

In 40-60% of the cases offered to be treated in victim-offender mediation (VOM), victims decline the opportunity to meet the offender. One common reason is that victims are too fearful of the direct confrontation with the offender. Alternatively to face-to-face mediation, indirect forms to avoid the direct confrontation exist. However, these are often perceived as less satisfying. Online forms of VOM could present an additional alternative, combining the benefits of direct and indirect forms by giving the opportunity to still meet the offender without having to face them directly.

Therefore, the goal of this study was to explore the extent to which the communication orientation model (Swaab et al., 2012) is applicable in the context of online VOM. We assumed that more cooperative victims are more likely to participate in richer forms of online VOM (e.g. videoconferencing or video messages). Additionally, it was expected that richer communication channels intensify the victims' communication orientation.

A survey among 181 individuals was carried out, including a crime scenario in which the participant had to imagine being a victim receiving the opportunity to participate in VOM. Additionally, participants were presented with an online apology in the form of either a video, audio or written message. An overall positive shift in the imaginative victims' communication orientation was found after receiving an apology regardless of the used channel, but support for the previous expectation was lacking. Therefore, further research on the applicability of the communication orientation model in the context of online VOM is suggested.

Since the beginning of the COVID-19 pandemic, our usual ways of communication have been highly restricted in many aspects of our lives that normally rely on personal contact and rich communication (Alawamleh et al., 2020; Altheimer et al., 2020; DeFilippis et al., 2020). This is also the case for restorative justice (RJ) practices which are characterised by addressing the victim's needs and giving the offender the opportunity to take responsibility for the harm they have caused in order to rebuild justice (Zehr, 2002).

The most common practice of RJ is victim-offender mediation (VOM) which allows victims and offenders to meet in a safe setting in the presence of a trained mediator to discuss the offence they were involved in (Hansen & Umbreit, 2018). Mostly, VOM takes place face-to-face, which is currently not always feasible to ensure safety for all parties (Marder, 2020).

Additionally, face-to-face mediation is not always suitable or wished for by the victim, which reflects in the 40-60% in which the victim declines the offer to participate in VOM (Hansen & Umbreit, 2018; Umbreit et al., 2004). In some cases, the victims are too fearful of the offender, do not want to invest the time because they consider the offence to be too minor, or feel that too much time has passed since the crime (Hansen & Umbreit, 2018). According to Swaab et al. (2012), this attitude towards the offender can be labelled as a noncooperative communication orientation.

The communication orientation model argues that the outcome of an interaction depends on the communication orientation the involved parties have towards each other, which can also be influenced by the richness of communication channels (Swaab et al., 2012). The communication orientation can be cooperative, neutral, or noncooperative, while communication channels can differ in the number of cues (visual, vocal) and synchronicity (Swaab et al., 2012). Individuals with a noncooperative communication orientation towards their interaction partner can benefit more from less rich communication channels because rich communication channels intensify feelings that increase a noncooperative communication orientation (Swaab et al., 2012). Therefore, fearful and upset victims who still want to meet the offender are not always suitable for face-to-face mediation and are likely to experience more positive effects with less rich forms of mediation.

The closest alternative for face-to-face mediation would be forms of mediation involving online communication channels, such as videoconferencing, audioconferencing, online chats, and email exchanges that allow avoiding the direct confrontation with the offender but still benefit from the process of VOM. Considering the recent pandemic, online mediation would also serve as a safer alternative to minimise risks for the parties' health.

Yet, online mediation is not extensively researched nor practiced at the moment

which might be due to the fact that face-to-face mediation is the most widespread form of VOM already proving high satisfaction rates and a number of positive outcomes for those who seek direct confrontation with the other party (Hansen & Umbreit, 2018; Umbreit et al., 2004).

For example, victims can get the possibility for closure and are less upset and fearful to be re-victimised after mediation (Umbreit, 1999; Umbreit & Armour, 2011). In comparison to traditional justice, for offenders, it was found that they are more empathetic towards the victim, are being held accountable and want to correct their behaviour (Choi et al., 2010). Apart from that, their need for explaining the reason for the offence and for apologizing is met while the probability for reoffending decreases (Choi et al., 2010; Hansen & Umbreit, 2018). Still, in many cases, the face-to-face contact between victims and offenders is not established, so that online forms could serve as a solution in comparison to already practised alternatives with lower satisfaction rates. However, in order to see whether online forms of mediation can contribute to the positive outcomes of VOM and be an adequate alternative, further exploration is needed.

Some forms of online mediation were already found to be perceived as safer than face-to-face meetings in the context of intimate partner violence IPV/A (Holtzworth-Munroe et al., 2021). Nevertheless, since online mediation and whether victims' willingness could increase by offering this option was not examined to a large extent in the context of restorative justice, its efficacy is unknown.

Therefore, this research will investigate the following research questions to examine possible predictors for victim participation in and possible outcomes of online VOM: (1) To what extent does the communication orientation of (imaginative) victims predict their willingness to participate in online victim-offender mediation? (2) To what extent does the richness of communication channels during the online mediation process influence the (imaginative) victims' communication orientation?

Victim-offender mediation

Victim-offender mediation is a restorative justice practice that assists victims and offenders to voluntarily meet in a safe setting in the presence of a trained mediator. The mediator ensures that both parties are suitable for the process and serves as a facilitator to guide the participants during mediation (Hansen & Umbreit, 2018; Umbreit & Armour, 2011; Umbreit et al., 2004). In comparison to the traditional offender-driven justice approach, this process is characterised by its dialogue-driven nature which puts more emphasis on the

victim's needs and the offender's accountability (Hansen & Umbreit, 2018; Umbreit et al., 2004). In the form of a discussion about the offence, victims are enabled to ask questions and share their narrative while offenders have the opportunity to apologize, take responsibility for and repair the harm they brought upon the victim (Hansen & Umbreit, 2018; Umbreit & Armour, 2011; Umbreit et al., 2004). In this process, it is also common to develop a restitution plan for reparations together (Bradshaw et al., 2006; Hansen & Umbreit, 2018; Umbreit et al., 2004). In face-to-face mediation as well as indirect mediation, an apology is often one of the most common and essential parts of restitution for victims, sometimes even being perceived as the only acceptable form of symbolic reparation (Choi & Severson, 2009; Dhami, 2016).

Most of the time, VOM is utilised for juvenile and minor offences, such as vandalism, minor assault, theft, and burglary because more programs offer participation to juvenile than to adult offenders (Hansen & Umbreit, 2018). However, the number of serious cases offered to be treated in VOM increased over the past years since it was found that better outcomes can be produced in such cases (Joudo-Larsen, 2014; Stewart et al., 2018; Zebel et al., 2017).

Overall, research on VOM, mainly from the US, Australia, New Zealand and the UK, reports high satisfaction rates on the victim's as well as offender's side (Hansen & Umbreit, 2018; Shapland et al., 2007; Strang et al., 2013; Umbreit & Armour, 2011; Umbreit et al., 2000; Weatherburn & Macadam, 2013). Moreover, VOM has a wide range of benefits for victims and offenders that participated. While victims are less upset and fearful to be re-victimised after mediation and have the possibility for closure through the engagement in VOM, offenders are held accountable, can take responsibility and explain the offense to the victim, apologise, and offer restitution (Choi et al., 2010; Strang et al., 2013; Umbreit, 1999; Umbreit & Armour, 2011). Besides, VOM is associated with lower recidivism rates (Jonas-van Dijk et al., 2020; Umbreit et al., 2004).

Nevertheless, 40-60% of victims who get the opportunity to participate in VOM decline the option (Hansen & Umbreit, 2018). Notably, the reason for this seems to be that many victims are negatively orientated towards the offender based on feelings of fear and anger. However, many negatively oriented victims still decide to participate in VOM (Bolívar, 2013).

Victim's Reasons for and against Participation in VOM

Bolívar (2013) summarised several reasons for why victims decide to participate in VOM and indirect mediation versus why they decline participation. Generally, victims

participate in VOM to explain to the offender the impact the crime had on their lives and ask questions about the crime, receive a genuine apology and other forms of reparation, meet the offender out of curiosity, to see him take responsibility, and to help the offender (Bolívar, 2013; Choi et al., 2010). In that context, one aspect that victims participating in direct and indirect mediation had in common was that they wanted to hear from the offender why they perpetrated the offence (Bolívar, 2013). In contrast, the most common reasons why victims decline participation include negative feelings towards the offender, such as anger and fear or they perceive meeting the offender as unsafe (Hansen & Umbreit, 2018). Nevertheless, certain victims still decide to participate in mediation but chose indirect forms because they perceive those as safer (Hoyle, 2002).

Shuttle and Online Mediation

According to Umbreit and Armour (2011), VOM is the most widespread and researched form of RJ practices worldwide which speaks for its wide acceptance. VOM takes place mostly in face-to-face settings, although forms of indirect mediation such as letter exchange or shuttle mediation, where the mediator shuttles the message between the parties, exist (Hansen & Umbreit, 2018). However, it is important to note that when the messages are delivered verbally by the mediator between parties, they are restricted, filtered and interpreted by the mediator during the process (Rossi et al., 2017), which might alter the initial meaning of a statement. In that regard, it was found that participants experienced unsureness after indirect mediation about whether their message was conveyed correctly (Shapland et al., 2007).

Additionally, in shuttle mediation, the process is perceived as less satisfactory than face-to-face mediation. However, these satisfaction rates are still considered to be high (Shapland et al., 2007; Umbreit et al., 2004). Specifically, a study by Umbreit et al. (1996) demonstrated that 74% of victims participating in indirect mediation were satisfied with the process when 84% were satisfied with face-to-face mediation. Shapland et al. (2007) also indicated that victims seem to be more satisfied with direct mediation, while participants of indirect forms sometimes stated that they would have preferred face-to-face mediation. However, when the possibility of choosing between direct versus indirect mediation was given, the latter was more commonly chosen (Shapland et al., 2007).

A further form of mediation that is not common practice in a restorative justice context but may combine the positive effects of direct and indirect mediation while diminishing the negative aspects is online mediation since the risk of distorting a shuttled

message can be eliminated. For example, Rossi et al. (2017) reviewed literature about online mediation in the context of intimate partner violence and/or abuse (IPV/A) suggesting that coercive behaviours of the abuser, such as verbal manipulation and behavioural cues, can be tackled by physically separating the involved parties. This can be achieved to different degrees by engaging them in forms of online mediation, such as videoconferencing, audioconferencing, or delayed/instant text-based methods so that the victim feels less pressured by the coercive behaviours to come up with agreements involuntarily which do not meet the victim's needs adequately (Rossi et al., 2017).

Which communication channel might be most suitable depends on the severity of IPV/A. For example, in cases of repeated violence, videoconferencing is not suggested since manipulation through verbal and visual cues is still possible, unlike in cases where a conditioned fear response towards visual and verbal cues from the abuser could not be developed, yet (Beck & Raghavan, 2010; Rossi et al., 2017).

This is also in line with findings by Swaab et al. (2012) who suggest that people with a noncooperative communication orientation towards their communication partner, meaning that they might be afraid of them or distrust them, benefit from less rich communication channels that are asynchronous and limit verbal and visual cues to ensure more pleasant outcomes of the interaction. This positive impact of less rich communication channels is suggested because the chance of negatively interpreting the actions of the communication partner is limited with the restricted presence of any cues (Swaab et al., 2012).

In videoconferencing, the parties can see and hear each other on monitors while being spatially separated (Kuhl, 2008). In cases where phone conferencing is used, the parties can only hear each other, which is implemented when they do not want to view the other party (Rossi et al., 2017). These forms are referred to as audio-visual mediation in contrast to text-based mediation, including e-mails or instant messages (Rossi et al., 2017).

Unfortunately, as Rossi et al. (2017) state, research on online mediation is limited in any context. Mostly, phone mediation used in divorce cases and family mediation indicates that 75-85% came to agreements during the process but no comparisons are made with other settlement processes (Rossi et al., 2017). A recent study by Holtzworth-Munroe et al. (2021) investigated videoconferencing mediation in the context of IPV/A, comparing the process to shuttle mediation and traditional litigation without a mediator. The results show that shuttle mediation is completed slightly more often (96.9%) than videoconferencing mediation (91%). In comparison, traditional litigation was completed most often (98.5%) because the court makes the decisions in most cases (Holtzworth-Munroe et al., 2021). Additionally, no party

perceived one form of mediation as significantly more satisfying than the other. However, shuttle mediation was perceived as the appropriate approach in 90% of the cases, while videoconferencing was perceived as appropriate 78% of the time (Holtzworth-Munroe et al., 2021).

For text-based mediation, Rossi et al. (2017) discusses two studies of which one examined the settlement of divorce-related issues via e-mails (Gramatikov & Klaming, 2012) and another that used different scenarios where participants had to engage in a chat simulation mediation (Hammond, 2003). The study by Gramatikov and Klaming (2012) indicates that the online method was perceived as fair and suggests that specifically online divorce mediation can be an alternative to direct mediation or traditional forms of dispute resolution. Similarly, Hammond (2003) found that online resolution can be effective for many reasons in many cases, including that the parties behaviour online does not deviate from their behaviour in the real world too much, it allows time for reflection on one's response and eliminates nonverbal cues that might cause discriminatory or hostile behaviours. Neither of these studies used comparison groups though, therefore, the different forms of online mediation could not be compared yet (Rossi et al., 2017).

All these options of online mediation could be of interest in VOM to widen the opportunities for victims and offenders to choose from and meet each other safely to consequently increase participation rates. Therefore, it is important to compare the different available forms to investigate the effects of it. VOM does not necessarily suit everyone and a number of characteristics of both parties need to be considered, including the parties' willingness to participate and their orientation towards each other, namely, how fearful the victim or offender is or whether the parties would like to come to a resolution (Hansen & Umbreit, 2018).

Relevant here seems the work by Swaab et al. (2012) who propose their communication orientation model which discusses how the presence or absence of different communication channels can be an advantage or disadvantage to the communicating parties in a negotiation context, depending on their initial communication orientation towards each other. Additionally, Rossi et al. (2017) discussed in the context of IPV/A that different modes of communication in online mediation can have different impacts on the parties. This leads to the following two research questions: (1) To what extent does the communication orientation of (imaginative) victims predict their willingness to participate in online victim-offender mediation? (2) To what extent does the richness of communication channels during the mediation process influence the (imaginative) victims' communication orientation?

The Communication Orientation Model

The communication orientation model proposed by Swaab et al. (2012) assumes that sharing and integrating information is critical for an interaction to be effective since it increases the likelihood of comprehension and finding common ground. In this context, it is argued that the amount of present cues (vocal, visual, synchronous vs asynchronous) or the richness of communication channels has an impact on the outcomes of an interaction depending on the communication orientation of the involved parties towards each other (Lu et al., 2017; Swaab et al., 2012). Swaab et al. (2012) differentiate between a cooperative, neutral, and noncooperative orientation. People that are cooperatively oriented towards their communication partner tend to engage in “mutually beneficial behaviours” (Swaab et al., 2012, p. 30), which includes sharing information with the other party. On the other side, people who are noncooperatively oriented towards their interaction partner are more interested in maximising their own outcomes by withholding information that could potentially benefit the other party, also meaning that they are hesitant in accepting and trusting the information provided by their interaction partner (Swaab et al., 2012). Finally, communicators might also be unsure in their communication orientation towards their interaction partner because they lack information about them which is labelled as a neutral communication orientation (Swaab et al., 2012).

Now, also taking communication channels into account, rich communication channels have been shown to have a positive impact on people with a neutral orientation towards their interaction partner due to the fact that the display of more paraverbal and nonverbal cues, such as facial expressions and gestures help the communicator to determine whether they perceive the other party as trustworthy or not (Swaab et al., 2012). In such cases, rich communication channels serve as facilitators to establish rapport (Swaab et al., 2012; Van Zant & Kray, 2014).

For people with a cooperative communication orientation towards their interaction partner, it is assumed that the richness of communication channels does not have an impact on the outcome of the interaction because their orientation alone suffices in establishing the best possible outcome (Swaab et al., 2012). However, it is important to note that in cases where the interaction partner is not well known, less rich communication channels can cause difficulties in the communication and developing a shared logic (McGinn & Keros, 2002). This could potentially have a negative impact on the communication orientation.

Lastly, communicators with a noncooperative communication orientation towards each other are expected to have an increased noncooperative orientation towards their

interaction partner when a rich communication channel is used (Bollen & Euwema, 2013; Swaab et al., 2012). Generally, people that are noncooperatively oriented towards the other party tend to interpret their actions as attempts of exploitation which in turn leads to more competitive behaviours to defend or protect one's own interests (White et al., 2004) because richer forms of communication channels intensify feelings that strengthen the noncooperative orientation (Swaab et al., 2012). Therefore, the likelihood of trusting the other party and sharing truthful information about one's interests decreases.

Victim Participation in Online Mediation based on the Communication Orientation Model

Victims with a cooperative communication orientation towards the offender are considered to be more likely to participate in online mediation because, from their perspective, participation can be viewed as a beneficial behaviour for both parties. Specifically, considering the findings of Choi et al. (2010) and Bolívar (2013) concerning the reasons for victim's participating in VOM which include sharing their standpoint as a victim with the offender, receiving a genuine apology, receiving answers to important questions about the offence, and helping the offender to improve their lives. Moreover, a study by McGinn and Keros (2002) shows that the absence of communication channels could have a negative impact on the cooperative orientation of a victim in the context of this research because the offender will be unknown to the imaginative victim.

We expect noncooperatively oriented victims, on the other hand, to be unlikely to participate in online VOM because, as Hansen and Umbreit (2018) state, victims who want the offender to receive a harsh punishment, which can be seen as a high outcome for the victim when they feel angry towards the offender, is one reason for why they decline the participation in VOM. Specifically, anger towards the offender and perceiving the offender as a generally bad person was also found to be a reason for declining participation, in general (Bolívar, 2013). Furthermore, declining the opportunity to participate alone can be perceived as withholding information that could benefit the offender when speaking in terms of Swaab et al. (2012). These benefits would include seeing the victim changing their attitude towards the offender and having the opportunity to correct their mistakes (Hansen & Umbreit, 2018). It is important to note that the likelihood of participating is not necessarily non-existing.

As Bolívar (2013) discussed in her study, victims who already came up with an explanation for why the offence occurred and saw the offender as a fixed cause in that context did not participate at all, suggesting that they are noncooperatively oriented towards

the offender. Nevertheless, the same applies to victims that participate in indirect forms of mediation, with the important difference that they still would like the offender to explain why the offense occurred (Bolívar, 2013). Such victims can be labelled as neutrally oriented towards the offender and therefore, it is expected that in such cases where victims still long for an explanation but do not feel safe meeting the offender in person (Bolívar, 2013), they would participate in online mediation which, just as indirect mediation, is perceived as safer (Holtzworth-Munroe et al., 2021; Hoyle, 2002). Based on the discussed literature, the first hypothesis was formulated:

H1: The more cooperative the imaginative victim's communication orientation towards the offender is, the higher their willingness to participate in richer forms of online VOM will be.

Communication Channels Impacting Victims' Communication Orientation

According to the communication orientation model, if a person has a neutral communication orientation, the presence of visual and vocal cues as well as high synchronicity supports them in determining if the other party is cooperative or not and has a positive influence on their own orientation towards their communication partner (Swaab et al., 2012). Hansen & Umbreit (2018) state that face-to-face mediation, which is rich in communication channels, is designed to deepen the connection between the victim and offender based on the assumption that people “share a common humanity” (Hansen & Umbreit, 2018, p.101) and while they might perceive themselves as part of different groups in the context of the offence, they can still identify with the same abstract group sharing a similar understanding of justice (Wenzel et al., 2008). This means that they could still want to achieve healing by telling each other their narratives while having them acknowledged by the other party (Hansen & Umbreit, 2018).

Satisfactory rates of 80% in the process of face-to-face mediation in comparison to 62-72% of victims being satisfied with shuttle mediation (Hansen & Umbreit, 2018) indicate that an increase in richness of communication channels has a positive impact on neutrally oriented victims, while the absence might decrease their orientation. Especially when they do not know the other party, less rich communication channels impede the development of trust, and their orientation is more likely to become noncooperative (Thompson & Nadler, 2002).

In the case of victims who are cooperatively oriented towards the offender, the number of present cues should not make a difference mainly because mediation is a voluntary process which already indicates that victims who have a positive attitude towards mediation are more likely to participate due to the effects of self-selection bias and be satisfied

afterwards regardless of the implemented mediation form (Bolívar, 2013; Latimer et al., 2005).

Lastly, for victims with a noncooperative orientation towards the offender, it is expected that rich communication channels intensify negative feelings towards the offender, and therefore, also their noncooperative orientation. Multiple studies found that victims sometimes felt pressured to accept an apology or agreement and that their expression of anger and pain were restrained in face-to-face mediation, which led them to be disappointed with the interaction afterwards (Choi & Gilbert, 2010; Choi et al., 2013; Choi et al., 2010). In that regard, Rossi et al. (2017) discussed how in cases of IPV/A, reducing the richness of communication channels can remove pressure from the victim and reduce the fear and distress caused by the offender. Moreover, in some cases of mediation processes, the parties do not want to see one another but still want to participate in mediation which leads to the removal of visual channels (Rossi et al., 2017). This can be perceived as another indicator that a noncooperative orientation seems to be positively affected by reducing the richness of communication channels. Daly (2006) showed that victims who experienced high to moderate levels of distress after the offence remained angrier and more fearful of the offender after a restorative conference, compared to victims who experienced weaker feelings of distress after the crime. Based on these findings, the second hypothesis was formulated:

H2: The richer the communication channel during online mediation is, the more intensified the imaginative victim's communication orientation will be after the mediation.

Aim of this Research

In order to test these hypotheses, a survey will be carried out in which participants will be presented with a crime scenario where they will be asked to imagine being the victim. Afterwards, their communication orientation towards the offender will be measured. Following this, the participants will be given the fictional opportunity to participate in different forms of victim-offender mediation to measure their willingness to participate based on their orientation towards the offender. The next step would be that participants are randomly allocated to one of three conditions: A video apology, an audio apology, and a written apology. Afterwards, the perceived richness of communication channels and their communication orientation towards the offender will be measured again to test the second hypothesis.

Method

Design

This study adopted an experimental design examining the independent variable ‘Communication channels’ (video vs audio vs written message) which was experimentally manipulated between subjects in predicting the dependent variable ‘Post-Communication Orientation’. In this case, the dependent variable refers to the communication orientation of the imaginative victim after receiving an imaginative apology in each group to which they were randomly allocated. Additionally, the continuous independent variable ‘Pre-communication orientation’ was measured in predicting the dependent variable ‘Willingness to participate’. The independent variable refers to the communication orientation of the imaginative victim towards the offender after the crime and before the opportunity to indicate their preferred form of mediation.

Further, the demographic variables ‘Age’, ‘Gender’, ‘Nationality’, ‘Occupation’, ‘Income’, ‘Religious commitment’, and ‘Religion’ and the manipulation check ‘Perceived richness of communication channels’ and ‘Perceived preparedness’ of the offender were included. Additional variables that are not essential for the pursuit of the hypothesis were ‘Perceived sincerity’, ‘Perceived emotional suffering’, ‘Perceived responsibility taking’, and ‘Perceived ambiguity of the apology’.

Participants

This study included 181 participants of which 23 participants were excluded.¹ Respectively, 158 participants in total were included in data analysis to test the first hypothesis. Due to missing data in two additional cases, one right before the treatment and one right after, 156 cases were included to test the second hypothesis. Of the 158 participants, 108 (68.4%) individuals were female, and 50 (31.6%) were male. The participants' age ranged from 18 to 50 ($M=24.35$, $SD=4.8$). In this sample, out of all participants, 107 (67.7%) were German, and 18 (11.4%) were Dutch. Further, the sample included four participants from Austria, four from Switzerland, four from the UK, three from Bulgaria, two from Peru and one from each of the following, Greece, Hungary, Kazakhstan, Liechtenstein, Norway, Portugal, Romania, Taiwan, Turkey, and the US.

Out of all participants, 69 indicated a bachelor's degree as their highest finished

¹ Participants were timed to estimate if they read the scenario. Participants who deviated strongly from fast to average readers (40-80sec) while reading the scenario were excluded (Brysbaert, 2019).

education (43.7%), followed by 62 participants who obtained a high school diploma (39.2%) and 22 participants who obtained a master's degree (13.9%). Additionally, 2 participants obtained a doctorate degree (1.3%), and one individual indicated that he did not finish any formal education (0.6%). Two additional participants indicated to have another educational background (1.3%).

Further, the sample included 132 students (83.5%), 14 participants who were employed for wages (8.9%), five individuals who were doing an internship (3.2%), four self-employed participants (2.5%), and one who was not employed but searching (0.6%), one who was unable to work (0.6%), and one who was in the military (0.6%). Additionally, 140 participants had an income of under 20,000€/year (88.6%), eight individuals earned between 20,001€-40,000€/year (5.1%), five participants made 40,001€-60,000€/year (3.2%), and three people had an income of 60,001€-80,000€/year (1.9%). One participant had an income of 80,001€-100,000€/year (0.6%), while another earned more than that (0.6%).

Lastly, participants were asked about their religious commitment and identity. In that regard, 131 participants indicated that they were not committed to their religion (82.9%), 18 participants stated that they were committed (11.4%), and nine individuals preferred not to make a statement (5.7%). Most participants were Christian (51.9%), while 53 participants indicated to be atheists (33.5%). Further, 17 individuals indicated that they were committed to a religion that was not listed (10.8%), five identified as Muslim (3.2%), and one individual stated to be Hindu (0.6%).

Participants were also asked if they had any experience of being a victim or offender. In that regard, 117 people indicated that they had not been victims (74.1%), while 33 individuals had that experience (20.9%). Additional, eight participants decided not to answer (5.1%). Also, 152 participants were never offenders (96.2%), while two indicated they had committed an offence (1.3%). Four participants did not answer (2.6%).

When it comes to whether the participants knew someone in their direct social network who has been a victim, 88 individuals indicated that they did not (55.7%), while 65 participants knew someone who has been a victim before (41.1%). Finally, 134 participants also did not know anyone in their social network who has been an offender (84.8%), and 16 participants knew an offender (10.1%).² Participants for this study were gained through random sampling, and the process took four weeks.

² A chi-square test of independence was performed to examine the relation between the control variables as well as gender and the conditions. There was no significant association between gender

Independent and Dependent Measures

For the ‘pre-communication orientation’, an exploratory factor analysis with Oblimin rotation was conducted on data collected from 158 participants. For the remaining scales, the same method was applied to data collected from 156 participants. The ‘willingness to participate’ scales were single-items, and therefore no factor analysis was performed. The constructs perceived sincerity, perceived responsibility-taking, perceived preparedness, perceived emotional suffering, and ambiguity of the apology are not essential for hypothesis testing but were included as additional measures.

Pre-communication orientation

In order to assess the ‘Pre-communication orientation scale’, which measured the participants' communication orientation towards the imagined offender, nine statements were presented, which were answered on a seven-point Likert scale, ranging from strongly disagree (1) to strongly agree (7). The KMO= .88 and Bartlett's sphericity test $p < .00$ indicated that the gathered data is suited for factor analysis. Kaiser's criterion of eigenvalues greater than one and the principal component analysis suggested a two-factor solution, explaining 67.49% of the variance. Negatively formulated items such as “I do not trust the offender” loaded strongly on factor 1 with factor loadings of at least .65. In contrast, positively formulated items such as “I believe that the offender is an honest person” had factor loadings of at least .44 on the second factor. Cronbach's alpha ($\alpha=.88$) and Lambda2 ($\lambda=.68$) indicated good reliability. Based on these findings, the negatively formulated items 1 to 4 and positively formulated items 5 to 9 were separated into two scales. For the positive pre-communication orientation items, Cronbach's alpha and an increase in Lambda2 indicated good reliability ($\alpha=.87$; $\lambda=.88$) while the same applies for the negative pre-communication orientation items ($\alpha=.79$; $\lambda=.81$).

and conditions, $\chi^2 (2, N=156) = 1.57, p=.46$. The same applies for participants ability to fill in the questionnaire and conditions, $\chi^2 (8, N=156) = 7.16, p=.52$, and their difficulty to imagine being the victim $\chi^2 (12, N=156) = 12.84, p=.38$. Further, the proportion of participants that reported being a victim before ($\chi^2 (4, N=156) = 1.7, p=.79$) and participants who reported being an offender before ($\chi^2 (4, N=156) = 2, p=.74$) did not differ significantly per condition. Lastly, there was no significant association between participants that have a victim ($\chi^2 (4, N=156) = 3.36, p=.5$) or offender ($\chi^2 (4, N=156) = 6.45, p=.17$) in their direct social network and the conditions.

Additionally a ANOVA was performed to test whether age differed significantly between condition which was also not the case, $F(2,154) = 0.34, p=.72$.

Willingness to participate in online mediation

This variable consisted of seven items that were separately measured on a seven-point Likert scale ranging from ‘Not at all willing’ (1), ‘Unlikely willing’ (2), ‘Somewhat unwilling’ (3) and ‘Neutral’ (4), to ‘Somewhat willing’ (5), ‘Likely willing’ (6) and ‘Very much willing’ (7). Participants had to indicate the extent to which they would be willing to participate in each of the following forms of mediation: face-to-face mediation, videoconferencing, mediation via video messages, phone mediation, mediation via audio messages, mediation via chat and mediation via email.

Manipulation check for IV communication channel: Perceived richness of communication channels

This variable was manipulated by varying the richness of an online apology delivered by the offender. The manipulation check variable ‘Perceived richness of communication channels’ measured if each of the conditions was perceived by the participants as intended by six items such as ‘I was able to hear/see the offender’ on a seven-point Likert scale ranging from ‘Strongly disagree’ (1) to ‘Strongly agree’ (7). The KMO= .77 and Bartlett’s sphericity test $p < .00$ indicated adequate sampling. According to Kaiser’s criterion of eigenvalues greater than one, a one-factor solution is best suited, which is confirmed by the factor analysis, explaining 43.42% of the variance. All six items have factor loadings of at least .50. Cronbach’s alpha and Lambda2 indicate good reliability ($\alpha = .72$; $\lambda = .73$).

Perceived sincerity

This variable measured the extent to which participants perceived the offender as sincere on the same seven-point Likert scale as before. Factor analysis with all six items measuring perceived sincerity of the offender’s apology was suited based on the KMO= .83 and a significant Bartlett’s sphericity test, $p < .00$. Initial eigenvalues and the principal component analysis suggested a two-factor solution, explaining 75.89% of the variance. The item “I think that the offender was well prepared” had the lowest loading on factor one while loading strongly on factor two (.98). Therefore, it was removed from the scale and treated as a separate control item. The item “I think the offender is authentic” had the highest loading of 0.89 on factor 1. Cronbach’s alpha and Lambda2 indicated moderate to good reliability before ($\alpha = .56$; $\lambda = .75$) and after removing the additional item ($\alpha = .51$; $\lambda = .77$).

Perceived responsibility-taking

This variable measured the participants' perception of the extent the offender seems

to take responsibility for the offence with five items, such as “I think that the offender acknowledged the harm she caused me” on a seven-point Likert scale ranging from ‘Strongly disagree’ (1) to ‘Strongly agree’ (7). The KMO= .88 and Bartlett’s test $p < .00$ indicated that the data is suited for factor analysis. Kaiser’s criterion of eigenvalues suggested a one-factor solution. This was confirmed by the factor analysis, explaining 76.55% of the variance. All items have factor loadings of at least .8 on factor 1. Cronbach’s alpha and Lambda2 indicated good reliability ($\alpha = .92$; $\lambda = .92$).

Perceived emotional suffering

This scale consisted of two items that were measured on the same seven-point Likert scale and were moderately correlated (.50, $p < .01$). They measured whether participants perceived the offender as emotionally unaffected or suffering because of the harmful consequences of the robbery for the victim.

Perceived ambiguity of the apology

For this construct, two items were used that measured on a seven-point Likert scale (‘Strongly disagree’ (1) to ‘Strongly agree’ (7)) how difficult it was for participants to determine the offender’s intentions and whether the offender’s apology was sincere. These items correlated strongly (.77, $p < .01$).

Post-communication orientation

This variable was measured on a seven-point Likert scale ranging from ‘Strongly disagree’ (1) to ‘Strongly agree’ (7) to investigate the impact of the differing richness of communication channels in each condition. The KMO= .88 and Bartlett’s sphericity test $p < .00$ indicate that the data is suited for factor analysis. Kaiser’s criterion of eigenvalues greater than one suggested two factors, and the factor analysis indicated the same solution, explaining 68.74% of the variance. Just as in the case of the ‘Pre-communication orientation’ measure, the pattern matrix indicates that negatively formulated items load strongly on factor 1 with loadings of at least .78, while positively formulated items have strong loadings of at least .53 on factor 2. Cronbach’s alpha and Lambda2 indicated good reliability ($\alpha = .89$; $\lambda = .90$). According to the extraction of two factors, the negatively and positively formulated items were separated.

Additionally, Cronbach’s alpha and Lambda2 indicated good reliability for the positive post-communication orientation scale ($\alpha = .85$; $\lambda = .86$) as well as for the negative post-communication orientation scale ($\alpha = .87$; $\lambda = .87$).

Procedure

Before starting this study, the Ethics Committee BMS (department for Behavioural, Management and Social Sciences) of the University of Twente granted their approval for carrying out this research under the request number 210456.

The online survey started with an informed consent that reassured anonymity and voluntariness of the participation, explicitly stating that withdrawal from the study is possible at any moment. When the participant decided to give their consent, they were asked to answer demographic questions about their age as a single number, gender indicated as female, male, and non-binary/ prefer not to say, nationality, occupation, income per year, religious commitment, and religion.

Afterwards, participants had to read a crime scenario in which they had to imagine being the victim of a robbery at their home while lying in bed at night. Additionally, they were asked to imagine that money and a watch that was gifted to them by their grandparents were stolen. Furthermore, the participant was asked to imagine his/her lawyer calling and presenting them the opportunity to participate in mediation. It was explained that the process is voluntary and allows the victim to receive an apology from the offender. Also, it was indicated that the offender has already agreed to participate. This was followed by questions measuring their communication orientation towards the offender after the crime. Then, they got an explanation about VOM and were then asked to indicate the extent to which they would be willing to participate in the following forms of mediation: face-to-face, videoconferencing, video messages, phone mediation, audio messages, chat, and email. In the next step, participants were randomly allocated to one of the three conditions in which they either have to watch a video apology, listen to an audio apology, or read a written apology. In order to measure if these conditions were perceived as intended, the participants' perception of the richness of each communication channel was measured, along with questions about the perceived sincerity of the offender, perceived responsibility-taking, perceived emotional suffering, perceived preparedness, and perceived ambiguity of the apology. Afterwards, questions about their communication orientation towards the offender after the allocated condition were asked.

Finally, participants were asked whether they have been a victim or offender of a crime before, as well as whether they know someone in their social environment who has been a victim or offender. Lastly, the participants were debriefed after the survey to understand the study's aim and allow them to still withdraw from this research if this is

desired. It took around 15 minutes to finish the study. The questionnaire is attached in the appendix.

Conditions

In each of the three conditions, an apology was presented that was formulated based on findings of a full apology by Dhimi (2016). Before each of the apologies, the offender's name (Lisa G.), age (20 years old) and photo (see figure 1) were presented. In the video condition, participants could hear and see the offender from the shoulders up. As depicted in Figure 1, she had messy hair, wore a dark casual sweatshirt and did not look well-groomed. In the audio condition, the audio was taken directly from the video so that participants could only hear the offender. In the written message condition, participants could only read the text that the offender spoke in the video and audio condition. The common letter phrase "Sincerely" was also added to fit the format. Participants were randomly allocated to one of those conditions.



Figure 1. Image of the imaginative offender

Manipulation Check

A one-way ANOVA was used to analyse whether the conditions were perceived differently in their richness. The positive and negative pre-communication orientation (PosPreCO and NPreCO), as well as 'Condition', were the independent variable while 'Perceived richness of communication channels' was the dependent variable. The interaction

terms PosPreCO*condition, and NPreCO*condition were also added. The 'PosPreCO', $F(1,145) = 1.32, p = .25$, and the 'NPreCO', $F(1,145) = 0.18, p = .67$ had no significant effect on the 'perceived richness of communication channels'. This was also the case for the interaction effects condition*NPreCO, $F(2,145) = 0.2, p = .98$, and condition*PosPreCO, $F(2,145) = 0.51, p = .60$.

The means are significantly different between all conditions, $F(2,145) = 21.91, p < .00$, which means that the manipulation worked as intended. A Bonferroni test showed that participants perceived the communication channels significantly different between conditions ($p < .05$). As expected, the video message was perceived as the richest ($M = 5.28$), followed by the audio ($M = 4.5$) and written ($M = 3.95$) message. Thus, the analysis shows that the manipulation in each condition was successful.

Results

Descriptives

Table 1

Mean, SDs and correlations between the positive pre-communication orientation (PosPreCO), negative pre-communication orientation (NPreCO), positive post-communication orientation (PosPostCO), negative post-communication orientation (NPostCO), perceived richness, perceived sincerity, perceived responsibility-taking, perceived emotional suffering, perceived ambiguity, perceived preparedness, ability to fill in the survey based on the scenario, ability to imagine being the victim, and age

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1. PosPreCO	2.95	1.28	-	-.60	.58	-.34	.07	.17	.21	.17	.14	.02	.02	-.12	-.17
2. NPreCO	5.75	.90		-	-.40	.50	-.07	-.12	-.18	-.10	-.17	-.07	.05	.09	.18
3. PosPostCO	4.04	1.15			-	-.61	.78	.54	.60	.43	.35	.16	.05	-.00	-.20
4. NPostCO	4.21	1.19				-	-.26	-.39	-.50	-.42	-.49	-.06	-.08	-.03	.07
5. Perceived Richness	4.55	1.13					-	.54	.50	.37	.24	.29	.09	-.04	-.09
6. Perceived Sincerity	4.34	.82						-	.80	.54	.28	.31	.12	-.02	-.16
7. Perceived Responsibility Taking	4.68	1.24							-	.60	.34	.28	.15	.02	-.21
8. Perceived Emotional suffering	3.94	1.24								-	.26	.11	.00	-.09	-.12
9. Perceived Ambiguity	3.27	1.45									-	.02	.19	.10	.06
10. Perceived Preparedness	4.85	1.24										-	-.01	.05	-.05
11. Ability to fill in the survey	6.28	0.92											-	.46	-.12
12. Ability to imagine being the victim	5.81	1.34												-	.05
13. Age	24.35	4.8													-

Note. Answers ranging from 1= strongly disagree to 7= strongly agree.

The mean and standard deviation of the positive pre-communication orientation scale ($M=2.95$, $SD=1.28$) show that most participants answered negatively, which means that their communication orientation towards the imaginative offender is rather negative after reading the scenario of the crime. Accordingly, the answers to the negative pre-communication orientation were answered more positively ($M=5.75$; $SD=0.9$), which demonstrates further that the pre-communication orientation of the participants is negative. This relation is also underlined by the significant negative correlation between these scales ($r= -.60$).

As shown in table 2, the positive post-communication orientation indicates that participants agreed stronger with the positive statements ($M=4.04$) while agreeing less on the negative post-communication orientation scale ($M=4.21$). The positive post-measure is positively moderately correlated with both the positive pre-measure ($r=.58$), which means that participants agreed more with the items on the positive post-communication orientation scale when they indicated to have a stronger positive communication orientation on the pre-measure. In contrast, the correlation between the positive post-measure and the negative pre-measure is significantly negative ($r=-.60$), which indicates that participants that agreed more with the items on the negative pre-measure agreed less on the positive post-measure. The negative post-communication orientation measure is negatively correlated with the positive pre-communication orientation scale ($r=-.34$) indicating that the stronger they agreed on the negative post-measure, the lower their agreement was on the positive pre-measure. In contrast, the correlation between the negative post- and pre-measure is moderately positive ($M=.50$), which shows that stronger agreement on the pre-measure is related to the stronger agreement on the post-measure.

Moving on, participants answered the perceived richness of communication channels slightly positive ($M=4.55$, $SD=1.13$) and agreed more with the items when they also indicated their positive post-communication orientation to be higher ($r=.78$). A weak correlation between the perceived richness and negative post-communication orientation scale ($r=-.26$) shows that the richer participants perceived the communication channels, the less negative they were towards the offender on the negative post-communication orientation scale. In contrast, this correlation was not observed for the pre-measures. Further, perceived richness is weakly to moderately correlated with perceived sincerity ($r=.54$), perceived responsibility-taking ($r=.50$), perceived emotional suffering ($r=.37$), perceived ambiguity ($r=.24$), perceived preparedness ($r=.29$) which means that participants that agreed stronger with the perceived richness scale, also answered the latter scales more positive.

Moreover, participants somewhat agreed with the perceived sincerity scale ($M=4.34$,

$SD=.89$). Also, this scale correlates positively with both positive communication orientation scales ($r=.17$; $r=.54$) and perceived responsibility-taking ($r=.80$), perceived emotional suffering ($r=.54$), perceived ambiguity ($r=.28$) and perceived preparedness ($r=.31$). However, perceived sincerity also correlated negatively with the negative post-communication orientation scale, meaning that more agreement on the sincerity scale is associated with less agreement on the negative post measure.

Perceived responsibility-taking was agreed to by participants ($M=4.68$, $SD=1.24$) and is significantly correlated with multiple scales. While it correlates positively with both positive communication orientation scales ($r=.21$, $.60$), the correlation is negative with both negative communication orientation skills ($r=-.18$, $-.50$). This means that people who agreed with the positive scales also agreed more on the offender taking responsibility but disagreed on that when they agreed more on the negative scales.

The two items measuring emotional suffering were answered rather neutrally ($M=3.94$, $SD=1.24$) and is weakly correlated with perceived ambiguity ($r=.26$) which was answered somewhat negatively to neutral ($M=3.27$, $SD=1.45$). This scale also has a weak positive correlation with whether participants were able to fill in the survey based on the scenario ($r=.19$). Additionally, participants perceived the offender as somewhat prepared ($M=4.85$, $SD=1.24$).

Moreover, participants were mostly able to fill in the survey based on the scenario ($M=6.28$, $SD=.92$) and agreed slightly less on whether they were able to imagine being the victim ($M=5.81$, $SD=1.34$). These scales also moderately correlated, which means that higher agreement on one scale is associated with higher agreement on the other.

Lastly, the average participant is 24.35 years old ($SD=4.8$). Age is also positively correlated with the negative pre-communication orientation scale ($r=.18$), indicating that older participants agreed more on this scale. In contrast, age is negatively correlated with both positive communication orientation measures ($r=-.17$, $r=-.20$) as well as with perceived sincerity ($r=-.16$) and perceived responsibility-taking ($r=-.21$), which means that the older participants are, the more they do not think that the offender is sincere or taking responsibility.

Additionally, paired t -tests for the pre- and post-measures were conducted. There was a significant average difference between the positive pre- and post-measure, $t_{155}=12.32$, $p<.00$ and on average, the score was 1.10 points higher on the positive post-measure than the pre-measure. Also, for the negative pre- and post-communication orientation scale, a significant average difference was found, $t_{155}=-17.88$, $p<.00$. On average, the score on the

negative post-communication orientation scale was lower by 1.53 points than on the pre-measure.

Testing Hypothesis 1: Participants Willingness to take part in online forms of VOM

Table 2

Means, SDs, and correlations between the IVs and DVs

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
IV											
Positive pre-communication orientation (PosPreCO)	2.95	1.30	-	-.60	.43	.38	.48	.34	.32	.28	.27
2. Negative pre-communication orientation (NPreCO)	5.80	.90		-	-.27	-.20	-.30	-.21	-.17	-.18	-.13
DV											
3. Face-to-face mediation	4.90	1.92			-	.54	.36	.26	.22	.12	.10
4. Videoconferencing	4.00	1.96				-	.60	.58	.47	.39	.28
5. Video messages							-	.67	.64	.55	.50
6. Phone mediation	3.13	1.88						-	.73	.58	.53
7. Audio messages	2.93	1.83							-	.66	.64
8. Mediation via chat	3.40	1.92								-	.78
9. Mediation via email	3.10	1.90									-

In order to investigate H1 ‘*The more cooperative the imaginative victim’s communication orientation towards the offender is, the higher their willingness to participate*

in richer forms of online VOM will be', correlations were computed between the independent variables 'Positive pre-communication orientation' (PosPreCO) and 'Negative pre-communication orientation' (NPreCO), and the dependent variables 'face-to-face mediation', 'videoconferencing', 'mediation via video messages', 'phone mediation', 'mediation via audio messages', 'mediation via chat', and 'mediation via email'. As presented in Table 2, PosPreCO has significant weak to moderate positive correlations with each mediation form. The strongest correlation can be observed between the PosPreCO of the participants and mediation via video messages (.48) followed by face-to-face mediation (.43), videoconferencing (.38), phone mediation (.34), mediation via audio messages (.32), mediation via chat (.28), and lastly mediation via email (.27).

In contrast, the NPreCO of participants has significant weak negative correlations with each mediation form apart from mediation via email, which is not significantly correlated with NPreCO. The strongest correlations are between NPreCO and video messages (-.30) and face-to-face mediation (-.27) followed by phone mediation (-.21), videoconferencing (-.20), mediation via chat (-.18), audio messages (-.17), and mediation via email (-.13).

Additionally, the communication channels were divided into two groups; based on how rich they are and correlated with the positive and negative pre-communication orientation measure to determine whether the richness of communication channels correlates significantly with the pre-communication orientation of the participants. The rich forms of mediation (face-to-face, videoconferencing, video messages and phone mediation) were significantly weakly to moderately correlated with the positive and negative pre-communication orientation scale, which indicates that people with a more positive pre-communication orientation also agreed more with participating in the rich forms of mediation (.51) while participants who agreed with the negative pre-measure more, tended to disagree more with the participation in rich forms (-.31). The less rich forms of mediation (audio messages, email exchange, and chat) were significantly weakly correlated with the pre-measures, which means that participants that indicated a more positive communication orientation on the positive pre-measure also indicated a higher preference for less rich communication channels (.32). Also, the stronger participants agreed on having a negative orientation towards the offender on the pre-scale, the lower their preference is for less rich forms of mediation (-.18).

Lastly, a repeated-measures ANOVA was conducted to test the hypothesis. The within-subject variable 'Willingness' was added with the two levels, 'rich communication

channels' and 'poor communication channels'. The 'Condition' variable served as the between-subject measure, and the 'PosPreCO' and 'NPreCO' were included as covariates. The dependent variables were 'Rich communication channels' and 'Poor communication channels'.

The 'PosPreCO' is a significant predictor for both dependent variables, while its impact is stronger on 'Rich communication channels', $b=.44, p<.00$, than on 'Poor communication channels', $b=.36, p<.05$. However, 'NPreCO' was not a significant predictor for 'Rich communication channels', $b=.07, p=.64$, or 'Poor communication channels', $b=.17, p=.33$.

Further, the effect of the 'Willingness' variable on the dependent variable was significant, $F(1,120)=21.41, p<.00$. However, regardless of the significant effect of 'PosPreCO' on rich and poor communication channels, there is no significant interaction effect between 'PosPreCO' and 'Willingness', $F(1,120)=.66, p=.42$. The same was found for the interaction between 'NPreCO' and 'Willingness', $F(1,120)=1.85, p=.18$, and the interaction effect between 'Condition' and 'Willingness', $F(2,120)=1.34, p=.27$. Primarily based on the fact that no interaction effect was found between the 'PosPreCO' and 'Willingness', H1 was rejected.

Testing Hypothesis 2: The impact of communication channels on imaginative victims' communication orientation

The second hypothesis "*The richer the communication channel during online mediation is, the more intensified the imaginative victim's communication orientation will be after the mediation*" was tested using a multivariate GLM. The independent variables in this model were 'PosPreCO', 'NPreCO', and 'Condition' while the dependent variables were 'positive post-communication orientation' and 'negative post-communication orientation'. There was a statistically significant difference in the dependent variable based on PosPreCO, $F(2,146)=37.61, p<.00$; Wilk's $\lambda=.66$, as well as based on NPreCO, $F(2,146)=16.84, p<.00$; Wilk's $\lambda=.81$. However, the difference in the dependent variables based on the 'Condition' variable was not significant, $F(4,292)=0.31, p=.87$, Wilk's $\lambda=.99$. Based on the two interaction effects, the difference in the dependent variables was not significant as well, $F(4,292)=1.08, p=.37$; Wilk's $\lambda=.97$, $F(4,292)=0.97, p=.43$; Wilk's $\lambda=.97$.

Further, the main effect of PosPreCO on both dependent variables is significant, $F(1)=75.73, p<.00$, $F(1)=24.33, p<.00$ indicating a significant difference in the dependent variables. The same applies for the effect of NPreCO of participants on the NPostCO, $F(1)=$

27.53, $p < .00$. However, its effect on PosPostCO was not significant $F(1)=0.67$, $p=.41$. The main effect of the condition variable is not significant, $F(2)=0.50$, $p=.61$, $F(2)=0.1$, $p=.91$. Additionally, all interaction effects are non-significant, $F(2)=0.35$, $p=.70$, $F(2)=2.16$, $p=.13$, $F(2)=1.41$, $p=.25$, $F(2)=0.53$, $p=.59$. Therefore, especially based on the non-significant interaction effects, H2 is rejected.

Discussion

The goal of this study was to explore whether the communication orientation model can be utilised to better predict for whom different forms of online VOM might be suitable to find out whether they can be perceived as alternatives to face-to-face mediation. The results show that no support was found for the expectation that imaginative victims' communication orientation can predict their preference for different forms of online mediation. Further, no support was found for a combined impact of communication orientation and the richness of online communication channels on the communication orientation after receiving a video, audio or written apology.

However, overall, a positive shift in the imaginative victims' communication orientation was observed, which could be due to receiving a full apology (Dhami, 2016) regardless of the communication channel they were presented with. Previous research has shown that receiving an apology reduces victims' aggression towards the offender while improving the impression of the offender (Ohbuchi et al., 1989). A meta-analysis by Fehr et al. (2010) found throughout the literature that receiving an apology was directly and positively associated with forgiveness towards the offender. This was further demonstrated in a recent study by Witvliet et al. (2020), who found that imaginative victims of burglary are more forgiving and empathetic towards the offender after receiving a genuine apology which is also in line with the outcomes of this paper.

The most distinct difference between this study and the ones mentioned above is that we attempted to use factors based on the communication orientation model (Swaab et al., 2012), which allowed a systematic approach to the exploration of how online forms of mediation influence and are received by imaginative victims, even though our expectations were not supported.

Regarding the first hypothesis, the results of this study are not in line with the suggested findings by Bolívar (2013), Holtzworth-Munroe et al. (2021) and Hansen and Umbreit (2018). Bolívar (2013) described how negatively oriented victims still would participate in VOM if they wanted the offender to explain why they committed the crime,

which was supported by Holtzworth-Munroe et al. (2021), who found that indirect forms are perceived as safer by victims of IPV/A, suggesting that such victims would prefer less rich forms of online VOM. On the opposite site of the spectrum, Hansen and Umbreit (2018) summarised several reasons for why victims participate in face-to-face mediation that implied a cooperative communication orientation, suggesting that it could be demonstrated that a more cooperative communication orientation also leads to a higher willingness to participate in richer forms of online VOM. Therefore, it can be rather assumed that this research accommodates a number of limitations that might explain why the expected associations were not observed.

It could be the case that the presentation of the choices of different forms of online VOM to the participants were not adequate. Rather than asking the participant to choose one form of mediation, they were asked to indicate their willingness to participate in each of seven forms of (online) mediation which means that the distinction of participants' preferences was less clear since they could indicate similar answers on different forms of mediation. It can be assumed that if participants would have been asked to either make a distinct choice of one out of the seven possibilities or rank the different forms of traditional and online mediation from most to least likely to participate in, the preferences would have been clearer and would have produced different results that may have supported the assumption that more cooperatively oriented victims also prefer richer forms of online VOM.

Further, the categorisation of rich and poor communication orientation could be flawed. For example, video messages and instant chats are similar in the quantity of presented cues, namely, video messages contain verbal, nonverbal and visual cues while being asynchronous and instant chats are synchronous and contain visual and verbal cues while lacking nonverbal aspects. In this case video messages were categorised as rich and instant chats as poor communication channels because more importance was attributed to nonverbal cues than to synchronicity to determine the richness of those channels. However, synchronicity can be perceived as having a large impact on the richness of a communication channel, so that instant chats could also be perceived as a rich communication channel. This might have changed the results insofar that if positively oriented victims indicated high willingness to participate in mediation via chat, this would no longer be associated with a higher willingness to participate in poor, but in rich forms of mediation.

Moving on to hypothesis 2, the possibility of communication channels playing a role cannot be entirely excluded because a number of additional factors that are limiting this research could be contributing to the missing effect of the different conditions. First, the

approach was hypothetical instead of autobiographical, so it could be the case that the scenario was not realistic enough and, therefore, participants lacked engagement. The offender might have not produced an emotional state close enough to how victims might feel in reality. To tackle this, one possibility could be to use VR simulation instead of a written scenario to help participants to immerse themselves in the experience or involve real cases that are offered to be treated in mediation.

Apart from this, the scenario was based on a property crime not taking into account personal offences, which can be perceived differently by the victim depending on whether physical harm was inflicted and to which degree, for example. The second hypothesis was based on research in intimate partner violence which involved physical and/or emotional abuse, unlike the scenario that was presented in this research. This indicates that different types of crimes can also influence the victim's communication orientation differently.

Zebel et al. (2017) found that the perceived harmfulness of an offence was related to more willingness to participate in VOM. Additionally, how serious the crime was perceived was associated with the time elapsed before victims decided to participate (Zebel et al., 2017). This demonstrates that the severity of crimes can have an impact on the process of VOM, implying that the results of this study could also vary across different dimensions of crimes.

Besides, due to limited resources, this research did not test the impact of synchronicity which is a component of the communication orientation model. Synchronicity plays an important role in facilitating communication by allowing direct feedback and decreasing misunderstandings between parties (Swaab et al., 2012). Therefore, the exclusion of this variable increases the probability that the apology was misinterpreted or that the participant felt misunderstood.

Finally, a general limitation of this study is that it focused exclusively on the victim's perspective, although in reality, the mediation process and communication orientation include the perspective of the offender as well. Therefore, it is also of interest to investigate how their communication orientation towards the victim influences the mediation process. In general, offenders participate to reduce the risk for harsh punishment, move on from the incident, restore approval from their social environment, explain the offense to the victim and apologise (Choi et al., 2010; Karp et al., 2004). Offenders that do indicate the last two reasons for participation can be characterised as being cooperatively oriented towards the victim and would probably be more likely to participate in rich forms of online mediation. On the other hand, offenders who prioritise restoring their social image and therefore participate more out of self-interest are more likely to deny their responsibility for the offence or play

down the harmful consequences of their behaviour (Karp et al., 2004). Such offenders can be perceived as negatively oriented towards the victim and could prefer less rich communication channels.

In accordance with the communication orientation model, a cooperative victim who does not believe that the offender is a bad person and wants to communicate with the offender and a cooperatively oriented offender would benefit most from a rich online form of mediation such as videoconferencing. This way, a high outcome of the mediation process in terms of satisfaction can be expected (Swaab et al., 2012). However, after mediation, the offender is likely to be less cooperatively and rather neutrally oriented towards the victim than before the mediation process, especially after apologising and offering restitution. One indication for this development is the finding by Karp et al. (2004) that the number of offenders that felt sorry before and after mediation decreased from 56% to 47%. The reason for this could be that after the mediation process, they are able to move on from the offence, which is also a common reason for participating (Choi et al., 2010).

Future research

Based on the limitations of this study, two suggestions for future research can be made. First, the design of this study has to be improved by ensuring that the participants are either actual participants of the mediation process or by making the scenario more realistic by using VR. Additionally, the whole communication orientation model should be tested, meaning that synchronicity has to be included. This could be done by including role-playing in which participants take part in simulated mediation sessions via videoconferences, online calls or instant chats in which they have to imagine being a victim. In the context of conducting research with real mediation cases, the participation in any of these forms needs to remain voluntary, which can make it more challenging to collect participants for each form since participants cannot be allocated to the mediation forms without taking their preference into account. Therefore, cases that are planned to be treated in mediation could be presented with the possibility to try a new form in the context of a study to collect participants.

Second, to account for both parties in the mediation process, which would also create a more complete representation of the communication orientation model, the offender's perspective should be examined. For example, a condition could be added in which a part of the participants has to imagine being the offender rather than the victim to test similar expectations as presented in this study for the victims' perspective.

Overall, further research on the applicability of the communication orientation model by Swaab et al. (2012) is encouraged to confidently conclude the role it can potentially play

in the context of VOM and in the further exploration of online alternatives. So far, this study has demonstrated that imaginative victims become more cooperatively oriented towards the offender after receiving an apology regardless of the medium that the offender used to apologise. Since apologies are often perceived as the most crucial outcome of mediation (Choi & Severson, 2009; Dhami, 2016), it can be assumed that receiving an apology from the offender is powerful enough to lead to such a shift in the communication orientation of the imaginative victim.

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Appendix

Survey design

Welcome! Thank you for your interest to participate in this study. I am interested in investigating your experience when you would imagine being a victim of a crime. Therefore, in this study, I would like you to carefully read a crime scenario and imagine being the victim in the described situation. Afterwards, you will be asked to answer some questions about your experience.

The whole questionnaire takes around 10 to 15 minutes.

Disclaimer

If you were a crime victim or an offender and do not feel comfortable in continuing this survey, you can withdraw at any point in the process.

Informed consent

The participation in this study is voluntary and you can withdraw from participating at any given moment without having to state a reason for your withdrawal. Additionally, participating in this study is not associated with any risks for the participant. Every answer of you will be confidential. The data will only be available for the researcher and the supervisor and will only be used for research purposes.

If you still have any questions left, feel free to contact me.

Jana Schmidt j.schmidt-4@student.utwente.nl

Please answer the following question:

I read and understood the above-mentioned conditions and agree to participate in this study. Moreover, I participate out of my free will and I am aware of the fact that I can withdraw from this study at any time without providing a reason.

Yes No

First, I would like to ask you some general questions.

1. What is your gender?

Male

Female

Non-binary / third gender

Prefer not to say

2. Please indicate your age. ____

3. What is your nationality?

German

Dutch

Other, _____

4. What is your highest completed education?

No formal education

High school diploma

Vocational training

Bachelor's degree

Master's degree

Doctorate degree

Professional degree

Other

5. What is your main activity/ employment status?

A student

Employed for wages

Internship

Not employed but looking for work

Not employed and currently not looking for work

Self-employed

A homemaker

Military

Retired

Unable to work

6. What is your income (a year)?

Under 20,000€

20,001€-40,000€

40,001€-60,000€

60,001€-80,000€

80,001€-100,000€

100,001€ or over

7. Do you consider yourself to be committed to your religion?

Yes

No

Prefer not to say

8. What religion do you identify with?

Christian

Muslim

Hindu

Other

Atheist

On the next page, you can find a crime scenario. Please, read it carefully and try imagining to be the victim.

Scenario

Please take your time to carefully read the following scenario and imagine yourself in this situation.

You are laying in your bed at night when suddenly you hear the front door squeak. You do not think much of it, at first, but you are still alerted and listen carefully for a couple of seconds just to be sure. No additional sounds appear so you decide to close your eyes again and try to fall asleep. About a minute later, you hear your keys that lay on the cupboard beside the front door slightly jingling. You feel your heart beating faster and your arms and legs freeze as you try not to move. You can hear now softly that someone has entered your home and is opening your cupboard doors in the hallway right beside the entrance. You do not dare to open your eyes out of fear that the intruder might come into your bedroom. It is silent for a couple of moments, but you can still hear your heart beating intensively. All you can think is “Please leave now” and “Don’t come into my room”. Now, you can hear steps coming towards your bedroom and stopping right before the door which you left slightly open before going to bed. Your heart rate increases, and you try not to move to look as if you are asleep. The intruder seems to take a look into your room but does not enter. You can hear how s/he turns around and his/her steps seem to quickly move towards the front door. Again, you hear your door softly squeaking and now you are certain that s/he left. You finally have the courage to open your eyes, but you still cannot move and just lay in your bed shocked and sweaty out of fear about what has happened. After a minute you decide to take your phone and call the police, but you do not leave the bed until you hear them arrive.

After looking around carefully with the police you can conclude that the intruder has

stolen 200€ from you and an expensive watch that your grandparents have passed on to you. You are devastated about the loss and hope that the police can find the person who has stolen your belongings.

Even weeks after the robbery, you still struggle with falling asleep and repeated nightmares about the robbery haunt you. When you do manage to fall asleep it is less tight than before, and you tend to wake up multiple times at night. Throughout the day, you are more anxious and alert at all times which stresses you out since your concentration suffers from it.

Pre-Communication orientation

Now, I would like to know more about your view on the offender. Please imagine that **two weeks** have passed after the robbery and indicate to what extent you agree with the following statements.

I believe that
the offender
is an honest
person.

☐ ☐ ☐ ☐ ☐ ☐ ☐

I want to
help the
offender if
possible.

☐ ☐ ☐ ☐ ☐ ☐ ☐

Scenario continued

After a couple of days of investigation, the police have found the person that has broken into your home. Luckily, your neighbour has a surveillance camera at their front door which coincidentally caught the intruder on her way out of your home. The case is supposed to be treated in court, so you get into contact with a public attorney. In the process of discussing the case, he informs you about a programme called victim-offender mediation. He explains the following to you:

In victim-offender mediation (VOM) victims and offenders are given the opportunity to have a constructive conversation in a safe setting, in the presence of a trained mediator. This can be face-to-face or through other forms, such as videoconferencing, phone calls, or messages that are sent back and forth. It gives you and the offender the opportunity to ask questions and explain how the crime affected your life. You can receive an apology from the offender, and you can eventually come to an agreement about how s/he can repair the harm s/he caused you. This agreement will be communicated back to the criminal prosecutor and s/he will take this agreement into consideration when deciding which punishment to impose on the intruder if one is necessary after completing victim-offender mediation. Participation is completely voluntary, for both you and the offender. The offender already indicated that she is willing to participate in such a programme.

Preferred communication channel

Next, I am interested in to what extent you would be willing to participate in the following options of VOM if you were the victim in this situation.

	Not at all willing	Unlikely willing	Somewhat unwilling	Neutral	Somewhat willing	Likely willing	Very much willing
face-to-face mediation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
videoconferencing (e.g. Skype, Zoom)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
phone mediation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
mediation via emails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
mediation via video messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
mediation via chat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
mediation via audio messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Next, you will receive a message from the offender. For the purpose of this study, the form in which the message is delivered is independent of your willingness to participate in each of the suggested options.

Conditions**Video message**

Here, you can see a picture of the offender. Her name is Lisa G. and she is 20 years old.



The offender has recorded a video for you apologizing for her actions. Please watch the video carefully.

Audio message

Here, you can see a picture of the offender. Her name is Lisa G. and she is 20 years old.



The offender has recorded an audio message for you apologizing for her actions. Please listen to the audio carefully.

Written message

Here, you can see a picture of the offender. Her name is Lisa G. and she is 20 years old.



The offender has written a message for you apologizing for her actions. Please read the message carefully.

Hello,

First of all, I wanted to thank you for listening to me. I am sorry for the distress that I have caused you by breaking into your home and stealing your money and jewellery. Now, I know that it was wrong to invade your privacy like that, and I feel ashamed of doing so.

The public attorney has told me about the sleeping problems that you had after I broke into your home and he told me how important the watch I took is to you. This made me realise how unacceptable my behaviour was and I will never break into someone's home again to not repeat the trauma I have put you through. I was egoistical when I decided to steal from you to try and fix some of my own financial issues, I should have dealt with them without doing something so wrong. I hope that you can recover from this experience to the fullest and I would like to contribute to that as much as possible by repairing the harm that I have caused you. Again, I am really sorry, and I hope we can come to a solution that will help you to find closure.

Sincerely,

Lisa G.

Perceived Richness of Communication Channels (PerRichCC), Perceived sincerity (PerSin), perceived responsibility taking (RT), perceived emotional suffering (EmSuff), perceived preparedness (Prep), perceived ambiguity (PerAm)

Please indicate the extent to which you agree with the following statements after receiving the offender's apology.

I feel like the
apology was
complete.

(PerSin)



I feel like the
offender tried
to look me in
the eyes.

(PerRichCC)



I feel like the
offender is
taking
responsibility
for the
distress she
caused me.
(RT)

☐☐☐☐☐☐☐

I believe that
the offender
wants to
repair the
harm she
caused me.
(RT)

☐☐☐☐☐☐☐

I think that
the offender is
suffering
emotionally
when thinking
about the
harm she
caused me.
(EmSuff)

☐☐☐☐☐☐☐

I think that
the offender is
emotionally
unaffected
when thinking
about the
harmful
consequences
of the robbery
for me.
(EmSuff)



I found it
difficult to
determine
whether
the
apology
was
sincere.
(PerAm)

☐☐☐☐☐☐☐

I found it
difficult to
assess the
intentions
of the
offender.
(PerAm)

☐☐☐☐☐☐☐

Post-Communication Orientation

Now, I would like to know more about your view on the offender after receiving the message.

Please indicate to what extent you agree with the following statements.

Control questions

Finally, I would like to know if you had any experience with crime before.

	Yes	No	No answer
I was a VICTIM of a crime before.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was the OFFENDER of a crime before.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have someone in my direct social network who was a VICTIM of a crime before.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have someone in my direct social network who was the OFFENDER of a crime before.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Debriefing

Thank you for your participation!

First, I would like to thank you for participating in this study. In the beginning, I stated that I am interested in measuring your experience in being the victim of a crime without specifying any details. I am investigating the extent to which imaginative victims' communication orientation towards the offender predicts their willingness to participate in different forms of victim-offender mediation. Additionally, I would like to find out how the channel that is used to deliver an apology (video, audio, written) can impact the communication orientation of the victim. Since I could not ask real victims of crimes to participate in this study, I created the crime scenario you read in the beginning, so that you could imagine being a victim while

answering the questions of the study.

The reason why I am conducting this study is to investigate the effects of alternative online forms of victim-offender mediation since there is not much information about online mediation in the context of victim-offender mediation. Since you gave consent to participate in this study based on different information than now, I would like to inform you that you can still withdraw from this study if you decide that you do not want me to use your data anymore. In that instance, your answers will be deleted from the data set.

If you have further questions, feel free to contact me:

Jana Schmidt: j.schmidt-4@student.utwente.nl

Consent I still agree to participate in this study.

☐ Yes

☐ No
