

**Exploring the Effects of (Multiple) Errors on the Willingness to Provide Information in
Suspect Interviews**

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Abstract

This study investigates the effect of multiple errors on the willingness to provide information in a suspect interview. Moreover, it aimed to find out if a threat to the ego mediates the relationship between making a judgment error and the willingness to provide information. Finally, the research aimed to find information about how an apology influences the suspect. We expected that more errors would increase the willingness to provide information. Earlier research has shown that making errors can influence the suspect interview in both ways, positively or negatively. To investigate this we used a mixed-method design. In total, 36 participants were asked to participate in a mock crime scenario in which they played a crime suspect and were interviewed by an interviewer. In the interview, either no errors, one or five errors were made. The analysis of the results showed no significant effects of errors on the willingness to provide information. Moreover, the ego threat did not seem to affect the willingness to provide information. Lastly, an apology seemed to positively influence the suspect's relationship towards the interviewer. However, it did not positively influence the willingness to provide information. This research is one of the first to study the influence of errors using a mock crime scenario and interview. It can be used for future research to improve the study and implement new methods for the mock crime interview. Next to this, the results can be used to understand and improve suspect interview strategies. Moreover, the results from the qualitative analysis can be used as a foundation for further research into the effect of apologies on the feelings and willingness to provide information.

Keywords: suspect interview, police, communication errors, willingness to provide information, apology

Introduction

Communication errors can affect different types of high-stakes communication. This study wants to focus on the effect of communication errors within the suspect interview. In air traffic communication, we know that these errors can have critical consequences. For example, the most common factor leading to high-severity consequences comes from communication errors between the pilot and the air traffic controller (Yang et al., 2023). These errors can lead to severe accidents with multiple harmed passengers and staff. When looking into the paramedic field, communication errors can affect the treatment of patients, sometimes causing severe harm to the patient (Zimmer et al., 2021). In suspect interviews, errors might also have such negative effects. These errors can affect the willingness to provide information to the interviewer or how trustful the interviewer is perceived (Oostinga et al., 2018a). This might lead to less effective criminal investigations. According to the College of Policing (n.d.), suspect interviewing is one of the most important methods and it is central to the success of police investigations. Without good investigative interviewing, other sources of information such as fingerprints, CCTV images or forensic material might have little value. Moreover, within investigative interviews, the highest standards must be kept. To be able to keep up the high standards and implement this important method for police investigations, researching how errors affect the suspect interview is crucial. So, what do we already know about errors and their effects?

Oostinga et al. (2018a) did a study on the effect of errors and error management on the suspect. In this study, students got to see a video in which a student was interviewed about a potential exam fraud which this student was suspected of. When one error was made it seemed to increase the amount of shared information (i.e., the suspect shared more information with the interviewer). This could mean that making an error in a suspect interview is not necessarily negative for the goal of this interview which is to gather information. However, making an error also seemed to negatively affect the trust or rapport towards the interviewer. This could therefore indicate that making an error negatively affects the goal of a suspect interview. Moreover, we know three different errors the interviewer can make, namely factual, judgmental and contextual (Oostinga et al., 2018b). These will be explained in more detail later. Since we know what effect one error can have, what is the aim of this study?

This study will provide knowledge on the effect of multiple errors in a suspect interview. It aims to research which effect one or multiple errors have on the willingness to

provide information. As we saw making an error can have negative and positive effects within the suspect interview. However, when multiple errors are made, it is not known which direction the effects will have. Therefore, it is necessary to investigate this topic. By assessing zero vs. one vs. multiple errors we replicate other studies and extend them by including multiple errors. To study this, we used an experiment where participants were allocated to role-played suspect interviews in which zero, one or five errors were made. In the following parts, we will explain the suspect interview and how this is performed. Moreover, we will provide the rationale for this research. Next to this, we will focus on explaining the willingness to share information regarding the suspect interview.

The Rapport-Based Suspect Interview

Since this study focuses on suspect interviews in the Netherlands, it is necessary to understand what forms of interviews are used and how this might differ from other countries. Nowadays, the Humanitarian Interview is most often used in Western countries like the Netherlands, Germany or the UK. This type of interview is a rapport-based method which is being used since there is empirical evidence arguing for the success of this method. The core premise of this method is to use rapport to enhance cooperation and to gather more correct information. This method focuses on encouraging the interviewer to be open-minded, neutral and unbiased when they interview the suspect (Milne & Bull, 1999). Moreover, studies found evidence that in modern interviews, rapport has an important role and can lead to more reliable information and evidence (Bull, 2014). This form of interview aims to get as much valuable and detailed information from the suspect or witness as possible (Weiher et al., 2023). To summarise, we see that the Humanitarian Interview is currently used for its success in gathering reliable information and evidence and for its open-minded and unbiased approach focusing on rapport (Bull, 2014; Milne & Bull, 1999). For this reason, we will also focus on using the rapport-based method in this study. Nonetheless, with all the positive features the humanitarian interview has, the interviewers themselves still can make mistakes which might affect the interview.

Types of Communication Errors

In the research performed by Oostinga et al. (2018b), they distinguish three types of communication errors, namely factual, judgment and contextual within a negotiation setting. We believe that these errors also apply to suspect interviews since factual and judgment errors come from a police-suspect exchange (Oostinga et al., 2018a). Moreover, both settings have the same goal of gaining information, which could be affected by making errors. Factual

errors are errors in which the message contains an error of fact (e.g., using the wrong name). Judgement error means that the interviewer fails to recognize the feelings and thoughts of the interviewee correctly (e.g., the interviewer claims to understand the situation of the suspect but is not able to do so). A contextual error is an error in which the interviewer does not work according to practices or rules (e.g., using jargon or words that the suspect cannot understand (Oostinga et al., 2018b)). All of these errors can have negative impacts on the suspect interview. We will focus on the two errors already used in research which are the judgment error and factual error. When the interviewer makes an error this might influence what or how much the suspect wants to say to the interviewer. This could influence the willingness to provide information.

Willingness to Provide Information and Making Errors

It is important that the suspect is willing to provide the interviewer with information to have a successful interview. Willingness to provide information means that the suspect wants to share (truthful) information with the interviewer and tell them as much as they know. Well-conducted and thoughtful interviews provide us with good information for investigations. The amount of provided information can be seen as a direct indication of the cooperation of the suspect (Buckwalter, 2013). Moreover, this information is often crucial for the police to find new leads, progress in their investigations and to be able to make meaningful decisions (Weiher et al. 2023). Errors might have positive effects on the willingness to provide information. Making a judgment error increased how much information was shared in the research done by Oostinga et al. (2018a). This indicates that making one judgment error might also increase the willingness to provide information since the amount of shared information is increased. However, we cannot say much about the effects of multiple errors on the willingness to provide information. In their research, Thoroughood et al. (2013) found that when leaders make errors they are perceived more negatively by their employees (e.g., as incompetent). Employees who perceive their leader as incompetent exhibit more resistance towards this leader (Darioly & Mast, 2011). For our study, this could imply that when errors are made the suspect is more resistant towards the interviewer. Therefore, making multiple errors could lead to less willingness to provide information to the interviewer. To research which effect multiple errors might have on the suspect interview, this study aims to answer this research question:

RQ1: Is there a difference between the willingness of the suspect to provide information in a suspect interview when zero errors are made compared to when one or five errors are made?

When the interviewer makes a judgment error, the suspect might feel like they are judged for their actions or that their intentions are perceived wrongly. It is expected that the suspect then would want to explain themselves and their behaviour to not feel bad about themselves. This could result in more information provision which might be caused by a perceived ego threat (i.e., a threat to a person's self-esteem or positive self-image). This is done by providing feedback which questions a person's intelligence, competence, likeability or other socially desirable attributes. In this study, we will focus on the potential threat to social evaluation in the absence of explicit feedback. This explains that people are likely to experience a threat to their social image as being normal and reasonable members of society without receiving feedback beforehand. Rather, they think that they behaved poorly in front of others which poses a threat to their self-esteem and therefore, their ego (Leary et al., 2009). Suspect interviews mostly do not use direct feedback. However, situations might occur in which the interviewer states something which might be experienced as a potential threat to their social evaluation. Then the suspect might want to fix this threat to save their self-perception of being a good social person. In doing so, the willingness to provide information might increase leading to the suspect explaining themselves and providing more information. To conclude, a perceived ego threat might increase the willingness to provide information because the suspect wants to correct this threat to keep their self-esteem and positive self-image.

As we saw, when a judgment error is made we expect that the willingness to provide information will increase. Therefore, we hypothesise that:

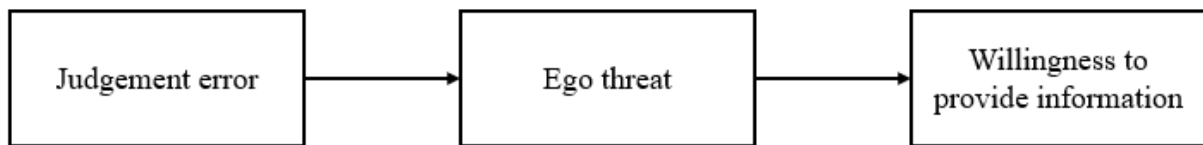
H1: Compared to a suspect interview in which no error is made, the willingness of the suspect to provide information will increase when one judgment error is made.

We expect that a judgment error will increase the willingness of the suspect to provide information. As Oostinga et al. (2018a) suggest, a reason for this might be that the suspect perceives the judgment error as an ego threat, leading to more information provision by the suspect. This could mean that the perceived ego threat is a mediating factor (see Figure 1 for a virtual representation of the expected mediation). Therefore, we hypothesise that:

H2: A perceived ego threat mediates the effect between making a judgment error and the increase in willingness to provide information. In comparison, in a suspect interview in which no judgment error is made, an interview in which a judgment error is made the suspect will experience a higher threat to their ego, leading to an increase in willingness to provide information.

Figure 1

Visualisation of the Mediation of the Ego Threat on the Effect of a Judgement Error on Willingness to Provide Information



Responding to Errors

As we see, in suspect interviews errors can happen. However, we can respond to these errors to prevent negative effects and work with them which might have positive effects on the interviewee. In their research, Oostinga et al. (2018b) found that police officers often use four different forms of responding to their errors. The first one is the “accept response” in which the interviewer agrees that the message is wrong (e.g., saying “You are right, this was my fault”). The second method would be the “apology response”. Here, the interviewer apologises for the error and explains why it happened (e.g., “I’m sorry, I think I did not understand you correctly, can you say that again please?”). Thirdly, the interviewer can use the “attribute response”. In this strategy, the interviewer attributes the error to a third party (e.g., saying “Then I got the wrong information from that department.”). Lastly, the interviewer can make use of the “contradicting response”. Then the interviewer denies the error and shifts it to the conversation partner (e.g., saying “I did not say that.”). However, this strategy was often only recommended to set restrictions or conditions (Oostinga et al., 2018b). To conclude, there are multiple response strategies which the interviewer can use to reduce the negative impacts of errors. However, these strategies might have even more value than only repairing an error made by the interviewer. Oostinga et al. (2018a), found that apologising for an error had a positive effect on the quality of information. The quality of information is how detailed and truthful the information provided by the suspect is. As we saw, good information is needed to find new sources of information or to progress further in the investigation (Otteman, 2022; Weiher et al. 2023). As stated, when the interviewer

responds to an error, this may lead to an increased quality of information and the willingness to provide information might also be increased. However, researching this in more detail and thoroughly would exceed the scope of this study. Hence, we will try to explore the effect of apologising to lay a foundation for future research. Therefore, this study aims to answer the following research question:

RQ2: How does apologising when an error is made affect the suspect's willingness to provide information in a suspect interview?

Methods

Design and Participants

This study used convenience sampling as a sampling method. Psychology students from the University of Twente could participate via the SONA system of the University of Twente and were provided a reward in the form of course credits. The inclusion criteria are a proficient understanding of the English language. The study used a mixed methods design. Three conditions were made to research the effect when (multiple) errors are made in an interview (i.e., a zero error condition, a one error condition and a five error condition). We chose to use students for this study since students have been used successfully in studies with suspect interviews (Oostinga et al., 2018a). Moreover, a rule of thumb was used for the sample size in which 30 participants per category was enough (Oostinga et al., 2018a). However, we fell short of this goal. In this study, the sample consisted of 36 students of which 13 were in the zero error group, 12 in the one error group and 11 were in the five error group. 18 (50%) participants were male and 18 (50%) were female. Moreover, 18 (50%) participants were German, 8 (22,2%) participants were Dutch and 10 (27,8%) participants indicated another nationality. The mean age of the sample was 23 ($SD = 2.36$) and ranged from 19 to 28.

Materials and Measures

The study used a text-based scenario (see Appendix B) and a video from the first-person point of view to help the participants imagine the situation. To show the participants the text-based scenario and the video a laptop was used. This laptop was also used for informed consent and taking the survey. The survey was provided by using Qualtrics. The interviews were performed in rooms of the University of Twente. Moreover, for the interviews three different scripts were used, each for one of the three conditions (see Appendix C). The audio of the interview was recorded by a mobile phone. The statistical program R (version

2023.06.0 + 421) was used to analyse the quantitative data from the survey. The qualitative data was analysed by hand, using Word.

Willingness to Provide Information

To measure the participants' willingness to provide information a self-report measure was used by Beune et al. (2011). The scale consists of 3 items. An example of an item would be: "I would tell the interviewer everything". See Appendix A for an overview of the items. These questions were answered on a 5-point Likert scale with 1 = strongly disagree to 5 = strongly agree. The answers to these three items were averaged to create a scale for the willingness to provide information. Higher scores indicate a higher willingness to provide information to the interviewer.

Social Self-Esteem

The potential threat to social evaluation without explicit feedback should make the person feel like they behaved poorly in front of others (Leary et al., 2009). When the participants experience this threat, we expect that their social self-esteem will be negatively impacted, because they think poorly about their public image. Therefore, a lowered social self-esteem acts as a measure of an experienced ego threat. To measure the social self-esteem of participants the items measuring social self-esteem (SSE) from the State Self-Esteem Scale (SSES) were used (Heatherton & Polivy, 1991). The used subscale is highly related to social anxiety and the public self-consciousness. This indicates that it measures to what extent people feel foolish, self-conscious or embarrassed about their public image (Heatherton & Polivy, 1991). The scale consists of seven items. An example item would be: "During the interview, I was worried about whether I am regarded as a success or failure by the interviewer.". See Appendix A for a complete overview of all used items. The items are measured on a 5-point Likert scale with 1 = Not at all and 5 = Extremely. The items were reverse-scored when necessary and then averaged to create a score for the scale of social self-esteem. High scores then indicate higher social self-esteem.

Open questions

In addition to the above-named variables, we also posed two open questions at the end of the survey. Participants were asked to answer the following two questions: "How did you feel when the interviewer apologised to you for their mistake?" and "How might this apology have affected you to give the interviewer more or less information?". The answers to these open questions are analysed using a general inductive coding approach explained by Thomas

(2006). This was done by making two documents since two different open questions were asked. After reading the answers to the questions, the answers were assigned to different categories. Then these categories were refined by merging different categories to prevent overlapping or revising categories, aiming to create around three categories covering the answers.

Manipulation Check

To control if the manipulation (zero vs. one vs. five errors) worked a question was included in which the participants had to state how many errors they remembered from the interview. This was done using an open question where the participant could indicate this using numbers.

Procedure

This research was approved by the ethical committee of the University of Twente on 03.04.2024 (request number: 240514). At first, the researchers assigned the participant to one of the three conditions, by putting a number into the survey which coded for the condition the participant will be in. Then the participant was invited to the room and asked to provide informed consent via the online survey. Moreover, the participant got a cover story of the purpose of this study in the study information sheet. Therefore, the aim of this study was changed to researching the effects of different interviewing styles on suspect interviews. Using the same survey, the participant was provided with a text-based scenario in which they read about the situation in which they would commit a crime. The participant was asked to imagine that they were a student living on campus. They had almost no money anymore but wanted to buy a new shirt. When they went into a store, they stole a shirt since it was over their budget. Then they got a letter from the police department informing them that they were invited to an interview with the police. The whole scenario can be found in Appendix B.

After they were presented with this scenario, the participant was shown a mock crime video from the first-person point of view (i.e. from the perspective of the suspect) in which the shoplifting was conducted. In this video, it is seen how a person walks into a store and looks at a couple of shirts. They see something they like and check for the price of it. Then they look around in the store and no one is paying attention to them. They put the shirt in their bag and walk away. This type of video was used since it had proven successful in other studies (Riesthuis et al., 2022). A scenario was used since scenarios provide standardisation between participants and it is shown that scenarios increase realism (Alexander & Becker, 1978). Moreover, this scenario was used since it is expected to be close to the students' perceptions to ensure psychological realism (Evans et al., 2010).

When the participants had finished this preparation, they were interviewed by the interviewer using a mock crime strategy. We decided to use role-play for this interview to increase the scenario's reality. The participant was sitting in the room and the interviewer entered the room. Then using one of the three interview scripts the participant was asked about their visit to the store and the crime they were suspected of. For all scripts open and closed questions were used. In all scripts, 12 questions were asked to the participant (see Appendix C for an overview of all scripts).

To make the distinctions between the scripts, the number of errors and types of errors were manipulated. For the one error condition, a judgment error was used in which the reason for stealing the shirt was changed. Factual and judgment errors were used in the five error condition. Here the stolen item, store and living situation were manipulated. Moreover, the reasons for stealing the shirt were changed (see Table 1 for an overview of the errors). When the interview was finished, the participant was asked to answer questions regarding their willingness to provide information and their social self-esteem which were provided in the online survey. When the participants had finished the questions, they were debriefed about the real purpose of the study. After this, the participant was asked if they still consented to the use of their data. Moreover, the participant was granted their credits when they had signed up via SONA.

Table 1

Overview of the Used Errors for the One Error and Five Error Conditions

Condition	Type of Error	Error	Error in the Interview
1 error	Judgment	Wrong reason for stealing.	“So you stole it because you were bored? ”
5 errors	Factual	Wrong store	“We were informed by the Appel en Ei of your presence during the last days.”
5 errors	Factual	Wrong item	“On that day, we received intel about stolen jeans. ”

5 errors	Judgment	Wrong reason for stealing.	“So you stole it because you were bored. ”
5 errors	Judgment	Wrong reason for not asking money from others.	“Nonetheless, why did you not ask others for money? Were you too lazy to do so? ”
5 errors	Factual	Wrong living situation	“We have looked into your living situation. Seems like you live with your parents? ”

Note. The exact error in the sentence is made bold.

Results

In Table 2 an overview of the data, including the mean, standard deviation, Cronbach’s Alpha and correlations between the variables' willingness to provide information and social self-esteem, can be found. The reliability of the scale's willingness to provide information was acceptable, and for social self-esteem (SSE), the reliability was very good. The willingness to provide information seems to be slightly negatively correlated with social self-esteem. However, the correlation was not significant and almost zero.

Table 2

Overview of the Means, Standard Deviations, Cronbach’s Alpha and Correlations Among Variables

Variables	<i>M</i>	<i>SD</i>	Cronbach’s Alpha	1. Willingness to provide information	2. Social self-esteem
1. Willingness to provide information	2.32	0.86	.58	-	-
2. Social self-esteem	3.20	0.69	.85	-.01	-

Manipulation Check

To check if the manipulation of the three conditions worked we used a Kruskal-Wallis including post hoc testing. This indicated a significant difference in the number of noticed errors across the 3 groups of the error condition, $\chi^2(2, N = 36) = 14,99, p < .001$. The median number of noticed errors was 0.5 (IQR 0-2) for the zero error condition, 1 (IQR 0-1) for the one error condition and 3 (IQR 2-3) for the five error condition. In Table 3 the frequency per condition of the number of perceived errors can be found.

Post-hoc comparisons using the Dunn test indicated that the median noticed errors of the five error condition was significantly higher than that of the zero error condition, $p < .001$. The test also indicated that the median noticed errors of the five error condition was significantly higher than that of the one error condition, $p < .001$. However, there was no significant difference between the median noticed errors of the zero error condition and the one error condition, $p = .57$. Nonetheless, it can still be interesting to research the effect of the judgment error to see if some sort of effect can be found. This might still provide insight for further research into this topic.

Table 3

Frequency of Perceived Number of Errors per Condition

	Error Condition		
	No Error	One Error	Five Errors
	<i>N</i> = 13	<i>N</i> = 12	<i>N</i> = 11
Noticed Errors	<i>N</i>	<i>N</i>	<i>N</i>
0	6	5	0
1	2	5	1
2	4	2	3
3	0	0	7
4	1	0	0
5	0	0	0

Willingness to Provide Information

To test for hypothesis 1 “Compared to a suspect interview in which no error is made, the willingness of the suspect to provide information will increase when one judgment error is made” and the research question “Is there a difference between the willingness of the suspect to provide information in a suspect interview when zero errors are made compared to when one or five errors are made?” we performed an ANOVA with post hoc comparisons. The dependent variable for the ANOVA was the mean willingness to provide information and the independent variable was condition (i.e., condition: no error vs. one error vs. five errors). The ANOVA found no significant effect of the condition on the willingness to provide information, $F(2, 33) = 0.05$, $p = .95$, $\omega^2 \approx 0$. A post hoc comparison using the Tukey HSD test indicated that the willingness zero errors did not differ significantly from the willingness one error, $p = .95$. Willingness zero errors did also not significantly differ from the willingness five errors, $p = 1$. Lastly, willingness one error did also not significantly differ from the willingness five errors, $p = .97$. See Table 4 for an overview of the means and standard deviations per condition.

Willingness to Provide Information and Social Self-Esteem

The ANOVA to answer the first hypothesis and research question showed that the number of errors had no significant effect on the willingness to provide information. Therefore, no mediation analysis is needed to answer the second hypothesis, “A perceived ego threat mediates the effect between making a judgment error and the increase in willingness to provide information” since the number of errors does not seem to affect the willingness to provide information, we expect no mediation of an ego threat on the effect of a judgment error on the willingness to provide information. Therefore, there is no mediation analysis for social self-esteem. The paths for the mediation were analysed and can be found in Appendix D.

Table 4

Means and Standard Deviations for all Variables per Condition

Variable	Error Condition					
	Zero Errors		One Error		Five Errors	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Willingness	2.28	0.44	2.39	0.58	2.30	0.46
Social Self-Esteem	3.16	0.44	3.29	0.35	3.16	0.40

Note. The scale of Social Self-Esteem was not further analysed since it was already shown that errors did not affect the willingness to provide information. Therefore, no mediation is performed in which SSE would have been used.

Apologising After an Error

To answer the research question “How does apologising when an error is made affect the suspects’ willingness to provide information in a suspect interview?” the qualitative data was analysed using an inductive approach. The responses were collected in two documents, the first document focussing on the effect of apologising on the feelings of the participants and the other document on the question if the apology affected how much information they would share. This division was made since two questions were asked. In total, there were eight complete responses. However, four participants indicated that the interviewer did not apologise to them. Firstly, the data was prepared for coding by putting them into separate documents (i.e. one document per question). Then we closely read the text to be able to understand what is being said. When this was done categories were made for the answers. Then overlap and redundancy were reduced among the categories by revising and refining the categories. Finally, a model is created with three to eight categories which capture the key aspects of the answers to the questions (Thomas, 2006) We will now state the different findings.

Initiating Confidence

The apology initiated confidence in the participants to stick to their story and not to tell more information or tell the truth, especially naming that the officer already had made mistakes. The apology led the participant to doubt what the police officer knows and maybe is lying about what they know. This happened because the police officer already made mistakes and the apology was experienced as a win or reason to doubt what the police officer knows. This was described by a participant:

Since the first mistake when the interviewer said that a jeans got stolen, I felt like this case isn't about me, but maybe someone else stole a jeans. So I denied my theft but provided truthful information for everything else, because I felt like I am not the real suspected anyway, so I have nothing to hide.

Feelings Regarding the Police Officer

The apology improved the relationship between the interviewer and the suspect. The apology affected the connection with the police officer. It initiated feelings of trust, understanding and care in the participant. A participant described this as follows:

I felt understood. I felt that I can trust the interviewer more, because he is honest.

Information Provision

The apology was often seen as not so special or directed at the action of the theft as that it would lead the participant to provide more information about the crime. However, some participants stated that it would have caused them to provide more information. Nonetheless, the apology was not seen as effective as to lead the participants to provide more information. A participant described this as the following:

The apology itself is not related to my action or personality or the assumption that I stole a shirt from the shop, instead, it is about where I live. So it did not make me feel like I should just say the truth or give more information to fulfil the small guiltiness from the action of apology.

Additional Analyses

Since some participants reported to have experienced errors in the zero error condition an ANOVA was performed where the responses with more than zero errors in the zero error condition were removed. This was done to see if there was a difference in the willingness to provide information between the error conditions when zero errors were reported. The ANOVA showed no significant effect of the conditions on the willingness to provide information, $F(2,26) = 0.75, p = .93, \omega^2 \approx 0$. See Table 5 for the new mean and SD for the zero error condition.

Table 5

Means and SD for the error conditions in the ANOVA for the controlled zero error condition.

Variable	Error Condition					
	Zero Errors		One Error		Five Errors	
	<i>n</i> = 4		<i>n</i> = 8		<i>n</i> = 7	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Willingness	2.27	0.21	2.17	0.69	2.33	0.44

Moreover, we also analysed how the perceived errors affected the willingness to provide information. We wanted to look at this since the reported perceived errors were different from the conditions. This was done using a one-way ANOVA where the dependent variable was the willingness to provide information and the independent variable was recognised errors. See Table 6 for an overview of the means and SD of the variables. The recognised errors variable was made using the same classification as for the condition variable, meaning recognising zero errors, recognising one error and recognising more than one error. This was analysed to see what effect the actual perceived number of errors had on the willingness to provide information. The ANOVA showed no significant effect of the perceived number of errors on the willingness to provide information, $F(2,33) = 0.60, p = .56, \omega^2 \approx 0$. Moreover, a planned comparison showed no significant difference between the zero and one error conditions, $t(36) = 0.14, p = .99, d = 0.06, 95\% \text{ CI } [-0.86 - 0.97]$.

Table 6

Means and SD for the Willingness to Provide Information based on Perceived Errors

Variable	Perceived Errors					
	Zero Errors		One Error		More than one error	
	<i>n</i> = 11		<i>n</i> = 8		<i>n</i> = 17	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Willingness to provide information	2.15	0.52	2.20	1.27	2.49	0.83

Discussion

This study aimed to investigate the effect of multiple errors on the willingness to provide information in suspect interviews. Moreover, it aimed to find if making a judgment error increases the willingness to provide information and whether an ego threat mediates this effect. Finally, it aimed to investigate which effect apologising has on the suspect. The main results showed that making errors did not influence the willingness to provide information. This also indicates that the ego threat does not mediate the willingness to provide information when a judgment error is made which is different from what was expected. This can be explained by the manipulation which seemed to have only worked for the five error condition. Moreover, participants perceived a different amount of errors than the conditions had. Therefore, the manipulation probably did not have the intended effect.

The study conducted by Oostinga et al. (2018a) found that a judgment error positively influenced the amount of shared information. We expected that when a judgment error is made the willingness to provide information would also increase since the participants in this study shared more information when an error was made. However, this is not the case in our study. This might be because a judgment error decreases the reported trust and rapport towards the interviewer (Oostinga et al, 2018a). When the suspect experiences less trust or rapport they might be less willing to share information with the interviewer. Another reason could be that there is a difference between intentions of behaviour and behaviour itself. In this study, willingness would be an intention and the provided information would be the behaviour. Therefore, we would suggest that the intention of behaviour is needed before a behaviour is shown (i.e. willingness to provide information is needed for more information provision). However, behaviour can change without the person being conscious of this change. This is explained by the automatic model (Bargh, 1990). This model explains that goals an individual has can be activated automatically. This happens when a particular goal is often activated in a certain social situation with specific situational features. These situational features would then automatically activate the goal and goal-related behaviours without the need for intention or conscious change of the individual's behaviour. Therefore, in our study, it might be the case that the goal of being perceived as a good social individual might be activated by the judgment error (i.e. situational feature) leading to automatic goal-related behaviours (i.e. more actual provided information). This would indicate that errors do not affect the willingness to provide information, however, the actual information provision might be still affected.

On the other hand, the willingness is low for all conditions. There could be two reasons for this. Firstly, in the provided scenario, we prompted the participants to deny their crime until they felt that is it not possible anymore. This might have led to an experimenter effect, causing the participants not to tell information since they might have thought that this was the goal of the research. Moreover, the interviewing script made use of more closed questions than open questions. In the research performed by Baker-Eck and Bull (2022), they found that the proportion of open and closed questions and provided empathy of the interviewer were positively associated with providing more relevant information by real-life suspects. This means that when more open than closed questions are used and empathy is provided it is expected that a suspect provides more information. Although empathy is also important in this case, we can assume that the use of closed questions in the interview might have negatively affected the willingness to provide information.

Next to the effect of errors, we expected that a judgment error would lead to an ego threat mediating the effect of this error on the willingness to provide information. We expected that a potential threat to social evaluation in the absence of explicit feedback might occur in the suspect interview. This threat would be without direct feedback and would make the individual feel like their socially acceptable attributes are questioned (Leary et al. 2009). We are inclined to fix this to prevent feeling bad about ourselves. It is suggested that the suspect would perceive the judgment error as an ego threat and share more information (Oostinga et al., 2018a). However, we did not find a significant mediation of the perceived ego threat on the willingness to provide information. This can be explained since errors in general did not significantly affect the willingness to provide information. Moreover, an explanation could be again the automotive model, indicating that the judgment error increases the amount of shared information without consciously affecting the social self-esteem of the participant. Another explanation could be that the results are true and that the participants did not experience any threat to their ego. Leary et al. (2009), state that in the chosen ego threat for this study, participants would feel like they behaved poorly in front of others which is provoked by embarrassment, failures or other events presenting the person. The scenario we used stated that there were no cameras and that the suspect was alone when they stole the shirt. Therefore, this action might not have been embarrassing or a failure for the participant. Moreover, it was not clear that the police officer would know that the suspect stole the shirt. Again, this also would not be a situation which would lead to embarrassment or failure for the participant. Therefore, the participants might not have perceived the judgment errors as an ego threat since they would not have felt like they had embarrassed themselves or experienced a failure. Next to this, the judgment error might have been the reason for not finding an effect of the error on the perceived ego threat. We indicated a judgment by stating that the participant stole the shirt because they were bored. The participants might not have experienced such a statement as a threat to their ego. Ego threats in research are often induced by threatening participants to damage their image in the eyes of the researcher or other participants or by lowering personal control over a situation (Leary et al., 2009). Since the statement we used (being bored) does not have such a feature, it might be that it was not threatening enough to the ego of the participants to affect their willingness to provide information.

Lastly, the open questions gave some insight into how an apology can affect the willingness to provide information. It seemed to negatively influence the willingness to provide information. However, repairing the error did seem to positively influence the relationship and feelings of the suspect towards the interviewer. The participants stated that

the apology seemed to increase their confidence to stick to their story and not tell more (truthful) information. However, some said that it also might have increased their willingness. We expected that an apology would positively influence the willingness to provide information. The reason for this was that the quality of information increased after an apology (Oostinga et al., 2018a). The results can be interpreted in a way that the errors and apology could influence how much and what the participants told the interviewer. The errors seemed to positively influence the confidence of the suspects that they were able to not be caught for the committed crime. However, another explanation might be that the apology was rather late in the interview. Therefore, the apology might have had less effect than expected because there was almost no possibility of providing information after the apology for the subject. Next to this, the apology seemed to improve the feelings of the suspect towards the interviewer. This could be explained by the recovery paradox which proves that when a customer experiences a negative situation which gets recovered by the service personnel, the customer becomes a more loyal and satisfied client (Krishna et al., 2014). This often has a direct effect on the trust of the customer since the firm shows integrity and honesty to revise their error fairly which is often associated with helpfulness or honesty (Kelley & Davis, 1994; Larzeler & Huston, 1980). Trust could positively impact the relationship and cooperation between the interviewer and the suspect. Thus, by apologising for their mistake the suspect might perceive the interviewer as more helpful or honest leading to trusting the interviewer more. Nonetheless, it is necessary to mention that again the sample for this analysis is small with eight complete responses. Therefore, it is hard to interpret the data and the findings are likely to be affected by the small sample size.

Limitations and further research

Within this research, there were limitations which need to be mentioned to understand the results and outcome of the study. Moreover, these limitations can lead to ideas for further research within this area.

The first limitation is in the interview. The interview was rather short and had multiple closed questions. By making the interview more elaborate, building rapport and going into more detail it would have been more realistic. However, we chose to perform the interview this way to make sure that the effects measured were due to the errors. When the interviews would have been longer this might have influenced the results negatively. Moreover, the interview was kept short since the duration of the study including filling out the survey was already high. Therefore, we chose this method to interview the participants. This limitation

can be solved in future research, by changing the interview script. Further research should make a more elaborate interview script, maybe even working with professionals who perform suspect interviews. By solving this limitation we expect that the interview will be of a higher quality and that suspects are more likely to provide information. This could be done by using an information-gathering style i.e., building rapport, and using open-ended exploratory questions (Vrij et al., 2014). Suspects often respond better to this kind of interviewing style. Moreover, good rapport seems to influence how well the interviewee shares their account of a story (i.e. more complete and accurate accounts).

Next to this, the sample itself might also be a limitation of the study. The target population of this research are persons who are interviewed by the police since they are suspects of a crime. However, the sample we used consisted of students, since convenience sampling was used. This method provides a non-random sample which has limitations. The target population often cannot be identified and the results are not generalisable. This could be the case in this study since the characteristics of the sample (i.e. students) are likely expected to be different from the target population characteristics. Therefore, the external validity of this study can be harmed. We chose to use convenience sampling since the results can still be valid for the sample itself and provide valuable insight for future studies with a random generalisable sample. Moreover, the time for collecting data was limited and convenience sampling seemed to provide the chance to gather as much data as possible in this time.

A third limitation is the sample size of the study. We aimed for 30 participants per condition, i.e., 90 participants in total. We did so to have enough statistical power for the analyses. Unfortunately, we were not able to meet this goal. This means that there probably was not enough data to find a statistically significant result. When a sample is too small, the results might not be interpretable and cannot be deduced. Moreover, using a smaller sample increases the chance of assuming a false result as true when it is not (Faber & Fonseca, 2014). This could mean that the assumption that willingness is influenced by making errors is true, however, now the sample gives a false premise. Since the sample is too small, this cannot be proven wrong or right.

Lastly, we did not consider the interviewer's personality. We did not account for this in our study since this would have been outside the scope and abilities we had in the timeframe of the study. According to the research performed by Akca and Eastwood (2021), the interviewer's personality can affect different aspects of the interview. Interviewers who are extraverted and open are often rated more positively. Moreover, these personality dimensions

might influence how successful a suspect interview will be. According to Bull (2018), some important skills for an interviewer are being an active listener, empathetic or non-judgmental. These skills are important in the investigative interview and can influence the success of it. Therefore, we can expect that these personality traits might have influenced the willingness to provide information. By controlling for the personality of the interviewer it would be possible to eliminate eventual differences between how the interviewer is viewed by the participants. Moreover, this might decrease the chance that the interviews are conducted differently. Therefore, in further research, we would suggest controlling for the interviewers' personalities by using one interviewer for the interviews and analysing the personality of the interviewer.

Conclusion

As stated, the main findings were that the number of errors did not affect the willingness to provide information. Moreover, apologising seemed to improve the relationship, however, making an error and apologising did not seem to affect the willingness to provide information positively. Still, this research can be useful for further research or the field of investigative interviewing. It is one of the first studies to investigate the effect of errors using a mock crime scenario. This research can be used as a foundation for researching apologies and the effect of multiple errors. Based on the results of the qualitative research new quantitative research could be performed to research the effects of apologising more accurately. Moreover, it can be used for further research where roleplays are used or other research on the effect of errors in suspect interviews. It could help in designing and playing new roleplays. The results can provide insights into how the methods and interviews can be improved to enhance the study set-up and thus the results of studies. Next to this, it might also be grounding for the improvement of suspect interviews itself. Moreover, the results can be used for further improvement and ideas for improvement of the approach taken in a suspect interview.

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Appendix

Appendix A

Overview of the Used Items to Measure Willingness to Provide Information and Social Self-Esteem

Items used for measuring Willingness to Provide Information:

1. I would tell the interviewer everything.
2. I would provide a lot of information to the interviewer.
3. I would give truthful information to the interviewer.

Items used for measuring Social Self-Esteem

1. During the interview, I was worried about whether I am regarded as a success or failure by the interviewer.
2. During the interview, I felt self-conscious.
3. During the interview, I felt displeased with myself.
4. During the interview, I was worried about what the interviewer thinks of me
5. During the interview, I felt inferior to the interviewer.
6. During the interview, I felt concerned about the impression I am making on the interviewer.
7. During the interview, I was worried about looking foolish.

Appendix B

Text-Based Scenario

You are a student and live in a student house on campus. To be able to pay your rent, food, clothes and go out you found work in a restaurant in Enschede. However, the restaurant had to close down because of financial issues after the COVID pandemic so one month ago you were fired. This month you already had to pay your rent and had to buy groceries and other things for the household. Unfortunately, you now are very low on your budget and you cannot spend a lot of money anymore or you will not be able to pay your rent this month.

You met someone at a house party which was organised by a few friends. You liked them a lot and you got along with them very well that evening. You asked this person out for a date. Since you've been single for a while you want this to work out. Therefore, you decide that you need new clothes for this date to give a good impression. However, you do not have the money to buy something nice. You have already borrowed some money from your friends at the last parties and you do not want to ask them again because you are too ashamed of your situation. Nonetheless, you still go to the Zizay in Enschede first thing in the morning to see if they maybe have something which you could buy with the money you have left.

As you walk through the store you notice that the cashier is not focusing on you. Moreover, almost nobody is in the store since you went there shortly after the store had opened. You see a nice shirt that you like and want to wear for this date. Unfortunately, the price is more than you can afford but you remember that the cashier was not attentive to what was happening in the store. You take another look and see that they are still not giving attention to you. You also do not see any cameras which could film you. Quickly, you take the shirt and put it in your bag. Then you leave the store and cycle back to campus.

However, a few days later you get a letter from the local police station. They want to interview you about a shoplifting crime in which you are the suspect. You decide to go there, but you want to convince the police interviewer that you did not do this crime. However, you also decide that you might have to admit what you have done when there is no sense in denying it anymore.

Appendix C**Scripts for the interviews****Zero errors script:**

Interviewer: Hello, what is your name?

S: ...

Interviewer. Welcome * (correct) name, do you know why you're here?

S: ...

I: Yes, yes. We are just here to clarify a few details. We were informed by the store Zizay of your presence during the last days. Can you tell me what you were doing in the store?

S: ...

I: Did you have any interaction with the employees there?

S: ...

I: Did you hold any conversations with other customers in the shop?

S: ...

I: On that day, we received intel about a stolen shirt. We got informed by the shop about your presence on the day a shirt got stolen, could you tell/explain what happened?

S: ...

I: So, you stole it because you did not have enough money?

S:...

I: Nonetheless, why did you not ask others for money? Were you too ashamed to do so?

S: ...

I: Did you notice anything strange that day?

S: ...

I: Were you aware of the cameras around the store?

S:...

I: We have looked into your living situation. Seems like you live on campus?

S:...

I: Okay, I have written it down. [pretends to write down things]

S:....

I: How did you get home?

S:....

I: That would be enough for now. We'll be in touch regarding any further steps in the investigation. If you need to talk to a counsellor, the front desk can arrange a meeting for you. Thank you for your time.

One error script:

Interviewer: Hello, what is your name?

S: ...

Interviewer. Welcome *(correct) name, do you know why you're here?

S: ...

I: Yes, yes. We are just here to clarify a few details. We were informed by the store Zizay of your presence during the last days. Can you tell me what you were doing in the store?

S: ...

I: Did you have any interaction with the employees there?

S:...

I: Did you hold any conversations with other customers in the shop?

S:...

I: On that day, we received intel about a stolen shirt. We got informed by the shop about your presence on the day the shirt got stolen, could you tell/explain what happened?

S: ...

I: Did you notice anything strange that day?

S:...

I: So, you stole it because you were bored? (*Judgment*)

S:...

I: Nonetheless, why did you not ask others for money? Were you too ashamed to do so?

S: ...

I: Were you aware of the cameras around the store?

S: ...

I: We have looked into your living situation. Seems like you live on campus?

S: ...

I: Ok, I have written it down. [pretends to write down things]

S:...

I: How did you get home?

S:....

I: That would be enough for now. We'll be in touch regarding any further steps in the investigation. If you need to talk to a counselor, the front desk can arrange a meeting for you. Thank you for your time.

Five error script:

Interviewer: Hello, what is your name?

S: ...

Interviewer. Welcome *(correct name), do you know why you're here?

S: ...

I: Yes. We are just here to clarify a few details. We were informed by the Appel en Ei of your presence during the last days. Can you tell me what you were doing? (*factual - wrong store*)

S: ...

I: Did you have any interaction with the employees there?

S: ...

I: Did you hold any conversations with other customers in the shop?

S: ...

I: On that day, we received intel about stolen jeans. We got informed by the shop about your presence on the day the jeans got stolen, could you tell/explain what happened? (*factual - wrong item*)

S: ...

I: Did you notice anything strange that day?

S: ...

I: So you stole it because you were bored. (*Judgment*)

S: ...

I: Nonetheless, why did you not ask others for money? Were you too lazy to do so? (*Judgment*)

S: ...

I: Were you aware of the cameras around the store?

S: ...

I: We have looked into your living situation. Seems like you live with your parents? (*factual - living situation*)

S: ...

I: Oh, I am sorry that I got that wrong

S: ...

I: How did you get home?

S: ...

I: That would be enough for now, thank you for your time *right name. We'll be in touch regarding any further steps in the investigation. If you need to talk to a counsellor, the front desk can arrange a meeting for you. Thank you for your time.

Appendix D

Results of Analysis of the Paths for Mediation of an Ego Threat on the Effect of a Judgment Error on Willingness to Provide Information

Using linear regression analysis Path A and Path B-C were analysed. Path A had as an independent variable willingness zero errors and a dependent variable willingness one error. This showed no significant effect of willingness zero errors on willingness one error, $t(36) = 0, p = 1$. Path B-C had as an independent variable willingness zero errors, as a dependent variable willingness 1 error and as mediator SSE one error. This showed no significant effect of SSE one error on the willingness one error, $t(36) = 0, p = 1$.