

**The Within-Person Effects of Shifting from a Field to Observer Vantage Point on the
Content of Aversive Memories and their Characteristics**

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Abstract

PTSD seems to be mainly a disorder of memory, and thus aspects of memory and memory processes can give insight into the disorder. One of these aspects is the vantage point, or the perspective that is taken when recalling personal memories. This is done from either the field (first person) or the observer (third person) perspective. It was previously found that adopting an observer perspective can lead to differences in the perception of aversive personal memories, for example decreased perceived emotionality. The current study aimed to expand such findings to a within-person context in order to investigate the observer perspective as a potential avoidance mechanism. Specifically, it was hypothesized that emotionality, vividness, narrative coherence, and affective reactions would decrease when the perspective is switched to an observer perspective, while emotional distance would increase. Additionally, the type of situation in the memory was examined as a possible moderator to these effects. To do so, 70 undergraduate psychology students were asked to either recall an aversive personal memory two times from a field perspective, or switch to an observer perspective the second time. It was found that emotionality, vividness, and affective reactions decreased when the memory was recalled in the observer perspective the second time. Narrative coherence and emotional distance did not differ statistically significantly. Regarding the situation type in the memory, no definitive conclusion could be made. The findings, combined with previous research, imply that adopting the observer perspective might function as an avoidance mechanism for negative emotions.

Keywords: PTSD, Vantage Point, Avoidance Mechanism, Moderation, Situation Type

The Within-Person Effects of Shifting from a Field to Observer Vantage Point on the Content of Aversive Memories and their Characteristics

Our past experiences, and our memories of them, shape our present behavior, thoughts and feelings. This is especially true for extremely positive and extremely negative memories, since these are exceptionally well remembered and easier to be retrieved, thus having a greater influence on peoples' present life's (Williams et al., 2022). While this is certainly a good thing in most instances, because it enables people to avoid previous mistakes or reinforces rewarding behavior, it can also lead to inability to enjoy life to the fullest, as can be seen in individuals suffering from posttraumatic stress disorder (PTSD). These people experienced a traumatic event and subsequently developed a range of symptoms (American Psychiatric Association [APA], 2022). A traumatic event is defined by the diagnostic and statistical manual of mental disorders (5th ed.; DSM-5; APA, 2013, p. 143) as "actual or threatened death, serious injury, or sexual violence". The symptoms include intrusions, avoidance of reminders to the traumatic event and alterations in social behavior, which can be a great hindrance to daily life.

PTSD seems to be mainly a disorder of memory (Brewin, 2018). Studying the aspects involved in the processing of aversive or traumatic events may therefore give insight into the emergence, maintenance, and possible treatment of the disorder. These insights would also be beneficial for finding protective variables against PTSD, which is especially important considering that about 70% of people will experience a traumatic event (Benjet et al., 2016). However, only a small number of people, about 6% of the U.S. population, will develop PTSD at some point in their lives (Schnurr, 2023). On the one hand, it is crucial to understand the involved memory aspects for all individuals; on the other hand, a distinction must be made between people who develop PTSD symptoms and people who don't. Consequently, both

clinical and non-clinical samples are studied to illuminate similarities and differences in aspects of memory. Similarities allow for inferences from healthy samples to the clinical population to be made, while differences may give the above mentioned insights into the workings of PTSD.

One of these aspects of memory to be explored is the perspective the memory is remembered in, also known as the vantage point, which describes how the rememberer recalls a specific event. This can be done from either the field perspective, characterized by seeing the event again through your own eyes, or from the observer perspective, characterized by seeing oneself in the memory image from the perspective of an outside observer (Eich et al., 2012; Nigro & Neisser, 1983). The adopted perspective has implications for the thoughts, feelings and goals of the individual (Sutin & Robins, 2008), which give additional insight into the processing of traumatic memories. These implications involve, amongst others, less perceived importance of the memory, greater detachment from the memory, and greater perceived self-change when the observer perspective is adopted. Moreover, the observer perspective, naturally occurring or when switched to from the field perspective, has been shown to be related to reduced sensory and emotional reliving (Berntsen & Rubin, 2006), a higher state dissociation (Cooper et al., 2002), more severe PTSD symptoms (Kenny et al., 2009), less negative mood (Mooren et al., 2019) and reduced emotionality (Robinson & Swanson, 1993; King et al., 2022; McIsaac & Eich, 2004). Also, students who fit the PTSD symptom profile recalled aversive memories more often from the observer perspective than students who did not fit the PTSD symptom profile (Berntsen et al., 2003). Since people may be naturally inclined to avoid distress associated with the memory of a traumatic event (Ehlers & Clark, 2000), adopting the observer perspective may serve as a safety mechanism against negative emotions. McIsaac and Eich (2002, 2004) argued that these effects may stem from increased psychological distance to the memory, which in turn limits the

processing of emotional reactions to the traumatic event. This may be troublesome as avoidance and the subsequent incomplete processing of the trauma are thought to play a central role in the maintenance of PTSD symptoms (Pineles et al., 2011).

Furthermore, the content of the recalled memory also seems to be influenced by the adopted perspective. Rememberers in the observer perspective recalled less information and details for emotions and thoughts about past personal events or experiences (King et al., 2022). Relatedly, memories in the field perspective were found to contain more information on physical sensations, psychological states and affective reactions, while memories in the observer perspective contained more information on physical appearances, the actions of others and the spatial layout of the event (McIsaac & Eich, 2002; McIsaac & Eich, 2004). Whereas the effect of the taken perspective on the recalled content was previously assessed, there is no research on the relationship between the type of situation in the aversive memory and the outcomes of recalling said memory. The diagnostic criterion A for PTSD in the DSM-5 refers to “actual or threatened death, serious injury, or sexual violence”. Clinical diagnostic instruments, like the PTSD checklist for the DSM-5 (PCL-5; Blevins et al., 2015), suggest a number of common types of situations within the PTSD criteria. However, studies investigating PTSD and its memory aspects do not differentiate between the types of situations experienced. Individuals with different kinds of trauma may have different experiences when the perspective is switched. This differentiation therefore could have important practical implications for the treatment of PTSD, if it involves perspective-based interventions. Also, this differentiation could have important theoretical implications for memory models of PTSD.

The general aim of this study was to expand previous findings to a within-person context. To do this, participants were asked to recall the same memory twice and actively switch the

perspective in the memory. Moreover, the type of experience in the memory was taken into account to build on the existing literature. This was done in an explorative manner, by grouping memories into situation type categories after data collection had ended. Specifically, there were two hypotheses in this investigation:

H1: Switching from a field to an observer perspective, compared to not switching, results in decreased a) emotionality, b) decreased vividness, c) decreased narrative coherence, d) less statements about affective reactions, and e) increased emotional distance.

H2: Content categories involving a somewhat gruesome scene (e.g. violent assault or war scenes) might result, contrary to the first hypothesis, in greater emotionality, vividness, narrative coherence as well as affective reactions, and decreased emotional distance.

Hypothesis one aimed to expand the literature of the effects of the vantage point to a within-person design in order to investigate the function of adopting an observer perspective. Consequently, the within-person effects of switching from a field perspective to an observer perspective when recalling an aversive autobiographical event were investigated. Since the focus lay on the adoption of the observer perspective as a potential avoidance mechanism, only the switch from field to observer perspective, and not the other way around, was examined. The investigated effects included memory characteristics (emotionality, vividness, narrative coherence, and emotional distance) as well as content (statements on affective reactions).

Finally, the type of situation experienced in the memory was taken into account in hypothesis two to add to the existing vantage point literature. The relationship between the vantage point and the memory characteristics might be moderated by the type of situation. Certain types of situations could possibly differ in the effects of the vantage point. One example

could be that particularly gruesome scenes (e.g. war) do not show decreased emotionality when recalled in the observer perspective because mentally recreating the scene as an observer, including seeing the self in the memory, might not be perceived as less emotional than their original experience from the field perspective. Therefore, the effect of the type of situation in the memory on the memory characteristics was explored. Since the specific memories of participants could not be predicted, content categories were created after data collection. This is why an explorative study of content categories as a possible moderator on the memory characteristics was carried out. Even though this part of the study was explorative, the direction of the moderation was hypothesized in hypothesis two.

Methods

Statement of transparency

This study, including the planned sample, a power calculation, the procedure, the tools and programs used, the first hypothesis, and their analysis plan, was pre-registered on the Open Science Framework (OSF). The results as well as an a priori power calculation will be made publicly available at https://osf.io/qvmnu/?view_only=57bb3d02d40a42719b3edcfa0a1524f8.

There were some changes made to the pre-registered protocol. Namely, a setting in Qualtrics determining the expiry time of the study link was changed from one hour to 24 hours since some of the first participants showed incomplete responses. Additionally, a sentence was added to the experimenter script after 134 screened participants as a reminder that high pre-screen scores might lead to exclusion. While this information could have already been known, since it was included in the recruitment advertisement, it was highlighted in the interview again to prevent participants from possibly responding higher during the screening due to perceived demand characteristics of the study.

Design and variables

The study was approved by the ethics committee of the university of Groningen. It followed an experimental between-person design, as participants were randomly assigned to either the experimental or the control condition. The independent variables used in this study consist of one within-person variable, namely the number of recall (first recall vs second recall), and one between-person variable, namely the condition (observer condition vs control condition). That is, all participants recalled the aversive memory twice, with half of the participants switching from a field to an observer perspective for the second recall while the other half recalled the memory again from the field perspective the second time. The dependent variables were emotionality, vividness, narrative coherence, affective reactions, and emotional distance. An a priori power analysis indicated that 130 participants were required to reach 0.8 power.

Participants

In total, 153 first-year psychology undergraduates, enrolled in either the English or Dutch track at the University of Groningen 2022/2023, completed the pre-screening. Participants were recruited through SONA as part of the course 'A Practical Introduction to Research Methods', and thus received SONA credits as compensation for their participation. To be included, participants had to be eligible for the study after a pre-screen and their memory had to be suitable. Withdrawal from the experiment as well as outliers, as defined as falling 1.5x interquartile range above the third or below the first quartile (Moore, McGabe, & Craig, 2009), were also exclusion criteria. Outliers were checked to prevent the effects of possible concentration problems due to external states, like intoxication or illness. No participants were excluded due to withdrawal, and no outliers were excluded due to suspected interfering external

states. After the application of the exclusion criteria, the total sample size was 70. For more details on the exclusion criteria refer to figure 1.

Materials

Questionnaires and assignment to a condition were done digitally using Qualtrics, while the general interaction with the participants was done in a structured interview using a script. Consequently, the original vantage point was assessed verbally (cf. Boyacioglu & Akfirat, 2015).

Trauma Screening Questionnaire

The Trauma Screening Questionnaire (TSQ; Brewin et al., 2002) was designed as a symptom screening tool for all types of traumatic stress and was used to assess the responses of participants to a traumatic event. It consists of 10 yes or no questions assessing negative consequences related to an experienced traumatic event. Half of these questions are related to re-experiencing the event (e.g. “Upsetting dreams about the event”), the other half to arousal associated with the event (e.g. “Difficulty concentrating”). An item should be endorsed if it was experienced at least twice in the past week.

Quick Inventory of Depressive Symptomatology

The self-report version of the Quick Inventory of Depressive Symptomatology (QIDS-SR16; Rush et al., 2003) is a measure for depressive symptom severity and was used to estimate the likelihood and severity of depression of the participants. It consists of 16 questions correlating with the nine DSM-IV symptom criterion domains (Q1-4: sleep disturbances, Q5: sad mood, Q6-9: decrease/increase in appetite/weight, Q10: concentration, Q11: self-criticism, Q12: suicidal ideation, Q13: interest, Q14: energy/fatigue, Q15-16: psychomotor agitation/retardation). Each question has four answer options labeled zero to three. The highest score in each of the above nine domains was taken and summed up to obtain a total score. If a

domain was assessed by multiple questions, the highest score on any one of the questions was taken.

Memory Characteristics

Visual analogue scales (VAS) ranging from 0 to 100 were used to assess the memory characteristic variables: 1. emotionality (“While remembering the event now, my feelings are intense.”), 2. Vividness (“I can remember the event vividly, as though I were there.”), 3. narrative coherence (“As I remember the event, there are gaps and some things I cannot remember in the storyline.”), 4. emotional distance (“While writing about the event, I relate what happened rather than what I felt or thought.”). Additionally, ratings between 0 and 100 on consistency, strength, and effortlessness of maintaining the observer perspective were included as a manipulation check.

Memory Content

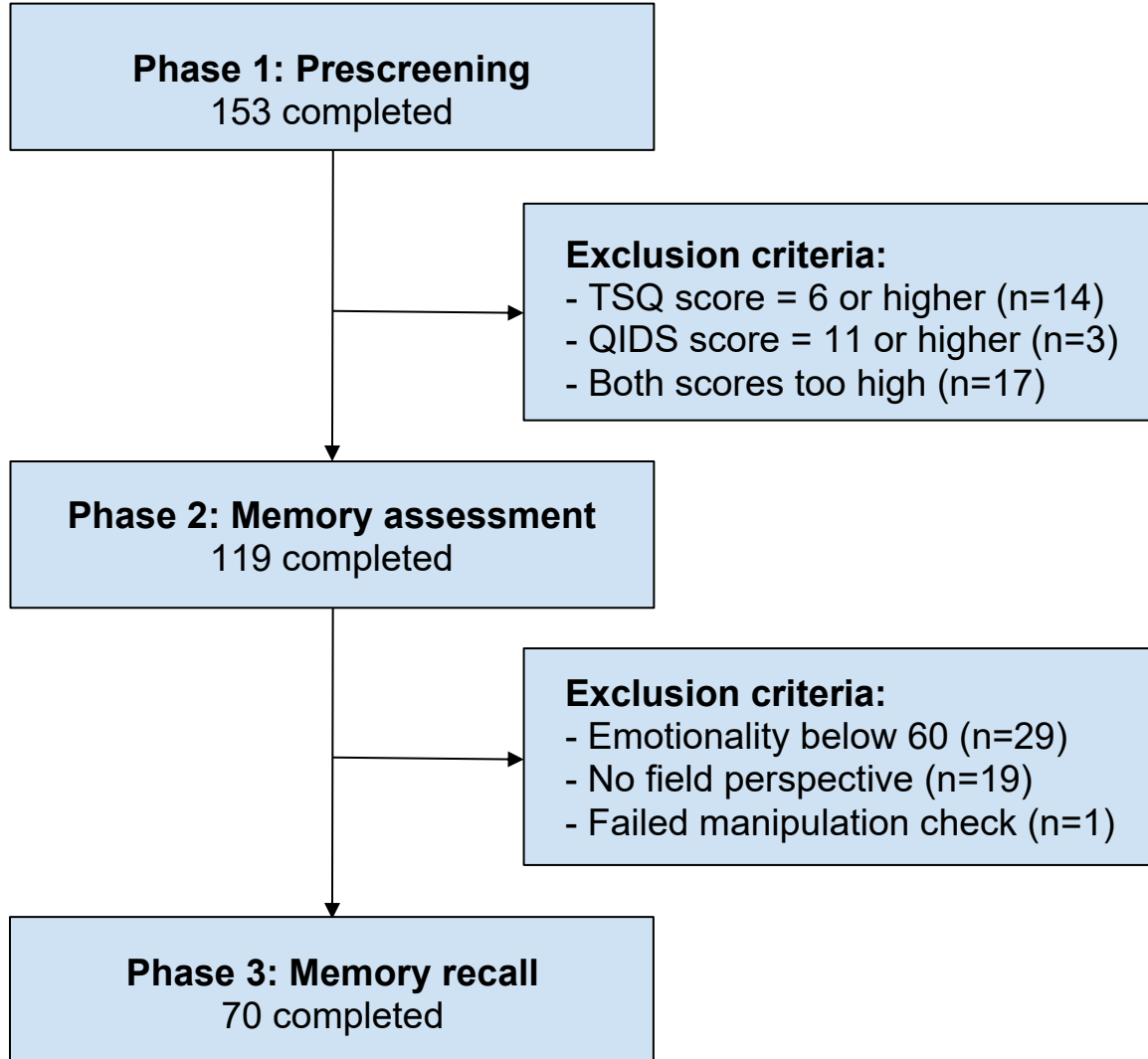
Regarding the content, the memories of participants were written down and coded by the experimenters using a manual adapted from McIsaac and Eich (2004). The number of statements in 8 different categories (affective reactions, physical sensations, psychological states, self-observations, physical actions, spatial relations, first-person accounts, peripheral details) were counted in each memory recall separately and a total content score, which consisted of the sum of statements across all categories, was obtained for each memory.

Procedure

First, participants signed up via the SONA system for all three phases of the experiment, which were scheduled in a row and expected to take about 75 minutes in total. An overview of the phases and their exclusion criteria can be seen in figure 1.

Figure 1

Flow Diagram of Experiment Structure



Note. Includes the number of participants that completed each phase, the exclusion criteria, and the number of participants excluded by each criterion.

At the beginning, participants were introduced to the structure of the experiment, asked to read an information letter about the study and provide informed consent. Next, participants completed the prescreening questionnaires TSQ and QIDS. If the scores were too high, they could not continue the study and were debriefed, handed an information sheet for possible

mental health help in Groningen, and thanked. This was done to take precautionary measures for these participants because of an increased likelihood of having a trauma or the possibility of falling in the moderate to severe depression range. In phase 2, the Cognitive Avoidance Questionnaire (CAQ; Sexton & Dugas, 2008; not of interest in this thesis) was filled out before the participants were asked to recall a negative personal memory. This memory was rated by the participants on the associated emotionality. If the memory was not emotional enough, participants were asked to recall another memory. Low emotionality ratings were excluded to ensure that highly aversive memories were explored and to adequately assess the effect of switching the vantage point on the associated emotionality. Also, a keyword describing each memory and an approximation of how long ago the event was were written down. One participant was excluded due to reporting the same keyword for their first and second memory, after their first memory was not emotional enough. This led to a suspicion that they did not truly think of a new memory, but rather that they re-adjusted the emotionality rating for the first memory, resulting in exclusion. In case the second memory was also not emotional enough, or participants could not think of another memory, they were debriefed. If the emotionality rating was 60 or higher, the experimenter introduced the field perspective and asked if that was how they recalled their memory. If the answer was yes (spontaneous field perspective), participants could move on to the next phase. If the answer was no, the experimenter introduced the observer perspective and again asked if that was how they recalled their memory. Regardless of their answer, participants were excluded if they did not adopt a spontaneous field perspective. Lastly, in phase 3 the participants were asked to write down the chosen memory in the field perspective in their preferred language (English, German, or Dutch). After the recall, the memory characteristics and manipulation checks were rated. A filler task, in this case Tetris (Holmes et

al., 2009), was provided for 10 minutes to neutralize any effects from the first recall. Afterwards, participants recalled the same memory either again from the field perspective (control condition) or the observer perspective (experimental condition). Memory characteristics as well as manipulation checks were rated again for the second recall. At the end of the experiment participants played Tetris again for 5 minutes and were debriefed afterwards.

Data analysis

Difference variables for emotionality, vividness, narrative coherence, emotional distance, and affective reactions were created and used as the dependent variables (DVs) in further analysis. These difference variables showed the difference between the first and second recall (calculated by subtracting the value of recall one from the value of recall two). Positive values therefore indicated an increase from recall one to recall two, while negative values indicated a decrease. Moreover, memories were grouped into four situation type categories: 1) Interpersonal conflict; 2) Death, attempted death or life-threatening injury; 3) Unwanted sexual experience; and 4) Non-life-threatening harm. While this was mainly data-driven, the proposed types of traumatic events in the PCL-5 were used for guidance in order for the situation type categories to reflect common PTSD scenarios.

The first hypothesis was tested using one-way analyses of variances (ANOVAs) for emotionality, vividness, narrative coherence, affective reactions, and emotional distance. Statistical assumptions were checked prior.

The second hypothesis was investigated through two-way 2 (condition: control vs experimental) x 3 (situation type categories: interpersonal conflict vs death, attempted death or life-threatening injury vs non-life-threatening harm) ANOVAs. The category 'Unwanted sexual experience' was purposefully left out of the ANOVA due to very low sample size, which led to

the results being uninformative. Instead, memories in this category were included in the ‘Non-life-threatening harm’ category. However, the category was included in the illustrations to gain some visual insights. Again, assumptions were checked beforehand. The results were followed up with post-hoc tests using the Bonferroni adjustment.

Results

First hypothesis

The first hypothesis was that a) emotionality, b) vividness, c) narrative coherence as well as d) affective reactions decrease, and e) emotional distance increases from recall one to recall two when the perspective was switched from field to observer. In other words, the main effect of condition (control vs experimental) was assessed. Descriptive statistics (means, std. deviations, medians, IQR) of the memory characteristics in each recall for participants in the control condition ($n = 34$) and the experimental condition ($n = 36$) can be seen in appendix A.

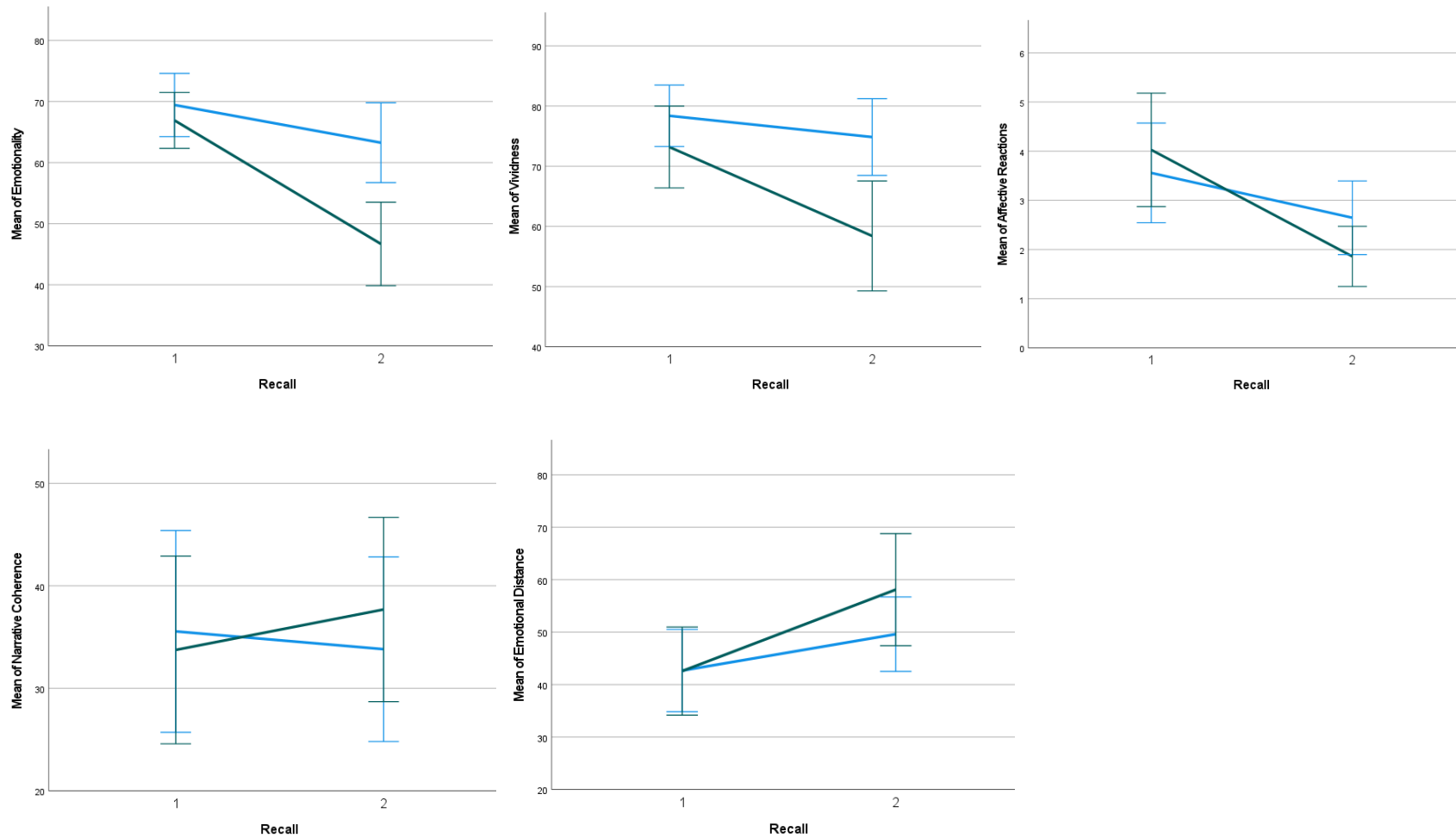
Regarding the assumptions, outliers and normality of each DV, namely the difference scores of the memory characteristics, were examined at every level of the IV, that is the control and experimental condition. Outliers were defined as falling 1.5x interquartile range above the third or below the first quartile, and were examined with boxplots. There were a number of outliers found, at least one at every level. However, no cases were excluded from analyses because they represented changes in memory characteristics between the recalls, which are subjective to the participant, and no reason to doubt the credibility of these scores existed. Normality was initially examined using Q-Q plots. A number of plots showed some systematic deviations, but a definitive conclusion could not be made due to small sample sizes. The Q-Q plots of the DVs in each condition can be seen in appendix B. The Shapiro-Wilk test of normality showed that some levels differed statistically significantly from a normal distribution,

namely the control condition of emotionality ($W = .928, p = .027$), the experimental condition of vividness ($W = .867, p < .001$), control and experimental conditions of narrative coherence ($W = .866, p < .001$ and $W = .903, p = .004$ respectively), the control condition of emotional distance ($W = .931, p = .033$), and the control condition of affective reactions ($W = .930, p = .03$).

Welch tests were used to bypass the assumption of homogeneity of variances. It was found that the decrease in emotionality from recall one to recall was greater for the experimental condition compared to the control condition (Welch's $F(1, 67.087) = 7.843, p = .007, \epsilon^2 = .089$). Similar findings were made for vividness (Welch's $F(1, 56.698) = 6.626, p = .013, \epsilon^2 = .073$), and the amount of affective reactions (Welch's $F(1, 66.959) = 4.046, p = .048, \epsilon^2 = .042$). The decrease in narrative coherence did not statistically significantly differ between the conditions (Welch's $F(1, 67.006) = 1.514, p = .223, \epsilon^2 = .007$). Likewise, the increase in emotional distance did not statistically significantly differ between the conditions (Welch's $F(1, 55.958) = 1.125, p = .293, \epsilon^2 = .001$). These results are illustrated in figure 2. In other words, recalling an aversive personal memory from an observer perspective after recalling it from a field perspective led to statistically significantly decreased emotionality and vividness, as well as a lower number of statements containing affective reactions compared to recalling it two times from a field perspective.

Figure 2

Line Plots of Emotionality, Vividness, Affective Reactions, Narrative Coherence and Emotional Distance in each Recall and Condition



Note. Blue line = control condition, green line = experimental condition; 95% confidence intervals are indicated by error bars.

Second hypothesis

The second hypothesis was that the relationship between the memory characteristics (the DVs) and the condition (control vs experimental) is moderated by the type of situation. The situation type categories were ‘Interpersonal conflict’ (n = 31); ‘Death, attempted death or life-threatening injury’ (n = 25); ‘Unwanted sexual experience’ (n = 2); and ‘Non-life-threatening harm’ (n = 12). Descriptive information (means, std. deviations, medians, IQR) for each situation type in recall one and recall two can be found in appendix C. Additionally it was explored whether memories could classify for PTSD criteria, and thus be called traumatic, based on the kind of experience described in the memory. To do this, the event in each memory was compared to the proposed scenarios in the PCL-5, and they should fit the criterion A for PTSD. This assessment was only superficial and does not imply a PTSD diagnosis. Overall, 19 memories (27.1%) could potentially be classified as traumatic based on the recalled event. Considering the situation types, two out of two (100%) unwanted sexual experiences, and 14 out of 25 (56%) memories concerning death, attempted death, or life-threatening injuries could be traumatic. On the other hand, only 3 out of 12 (25%) of memories concerning non-life-threatening harm and no (0%) interpersonal conflicts could be considered traumatic.

A cautionary statement: due to low sample sizes in the individual categories the results of the ANOVAs might not be very informative about the true relationships, and normality could not necessarily be expected. While figures and post-hoc tests include the ‘Unwanted sexual experience’ category, the ANOVAs were run without this category due to this concern. Since this part of the study was explorative, figures as well as post-hoc tests were used to point out possible associations worth following up.

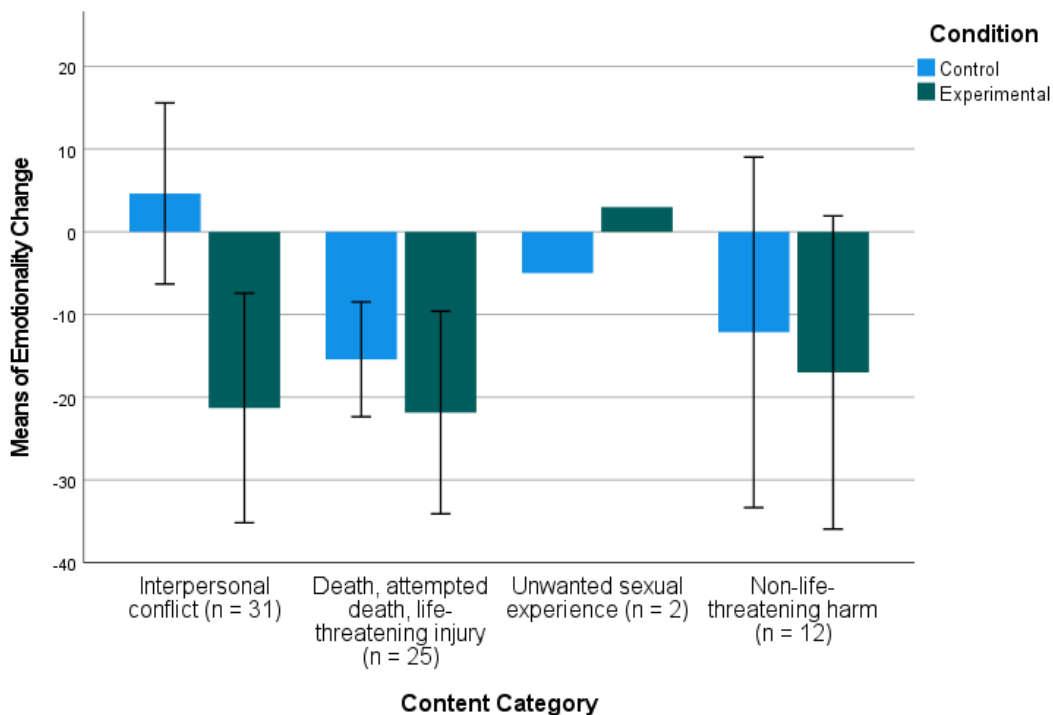
The presence of outliers and the assumptions of normality as well as homogeneity of variances were checked. To do this, the residuals of each combination (2 x 4 = 8 possible combinations) were calculated and subsequently used to obtain Q-Q plots and boxplots for each DV. There were outliers present in each variable, but no cases were excluded based on the same reasoning as in hypothesis one. Regarding normality, visual examination of the Q-Q plots revealed some systematic deviations from normality, thus the Shapiro-Wilk test was conducted again. The Q-Q plots of the residuals of the DVs can be seen in appendix D. The test showed a statistically significant deviation of all distributions from a normal distribution, with 1) emotionality $W = .963, p = .036$; 2) vividness $W = .918, p < .001$; 3) narrative coherence $W = .958, p = .02$; 4) emotional distance $W = .939, p = .002$; and 5) affective reactions $W = .936, p = .001$. Concerning homogeneity of variances, Levene's test based on the mean was used. It revealed that vividness violated the assumption ($F(5, 62) = 2.951, p = .019$), while emotionality ($F(5, 62) = .715, p = .615$), narrative coherence ($F(5, 62) = 1.434, p = .225$), emotional distance ($F(5, 62) = 1.313, p = .27$), and affective reactions ($F(5, 62) = .303, p = .909$) did not violate the assumption.

Concerning emotionality, the 2 x 3 ANOVA showed a statistically significant main effect of condition ($F(1, 64) = 4.921, p = .03, \eta_p^2 = .071$), similar to hypothesis 1a. The main effect of content category ($F(2, 64) = 1.734, p = .185, \eta_p^2 = .051$) and the interaction effect ($F(2, 64) = 2.262, p = .112, \eta_p^2 = .066$) were statistically non-significant. The bar chart in figure 3 shows the changes in emotionality between the two recalls for each content category and split by condition. It can be seen by the error bars that, when examining the content categories separately, only 'Interpersonal conflict' seemed to show a statistically significant difference between the conditions. Only participants in that particular category who recalled the event two times from a

field perspective had statistically significantly less decrease, or even an increase, in their emotionality rating compared to participants who switched to an observer perspective. This suggested that the effect of the condition on emotionality found in hypothesis 1a was mainly driven by individuals in the ‘Interpersonal conflict’ category. Post-hoc tests comparing each content category with the other categories individually in each condition were examined. It was found that, in the control condition, emotionality decreased statistically significantly more for participants who recalled a memory involving death, attempted death, or serious injury compared to participants who recalled a memory involving interpersonal conflict (Mean difference = 20.06, $SE = 8.085$, $p = .047$).

Figure 3

Bar Chart of Emotionality Change on Condition in each Content Category

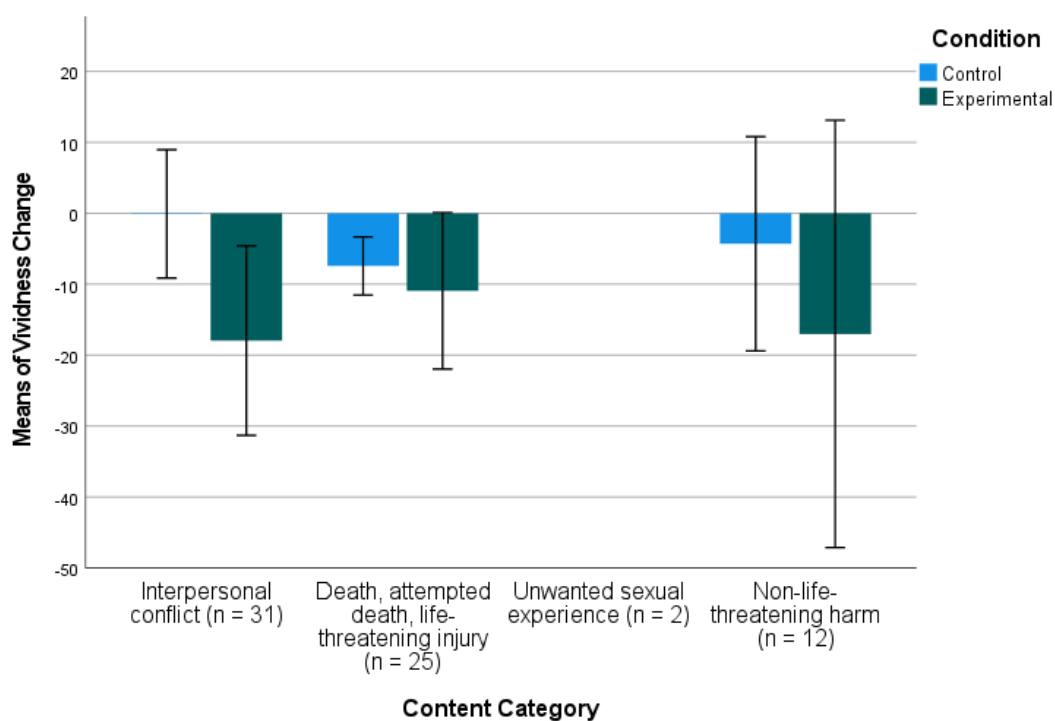


Note. 95% confidence intervals are indicated by error bars, no error bars for the ‘Unwanted sexual experience’ category due to low sample size.

Concerning vividness, the 2 x 3 ANOVA again found a statistically significant main effect of condition ($F(1, 64) = 4.905, p = .03, \eta_p^2 = .071$). The main effect of content category ($F(2, 64) = .001, p = .999, \eta_p^2 = .0$) and the interaction effect ($F(2, 64) = 1.007, p = .371, \eta_p^2 = .031$) were statistically non-significant. Figure 4 shows the bar chart of vividness, indicating no statistically significant differences when examining the content categories individually. Post-hoc tests did not yield any statistically significant results.

Figure 4

Bar Chart of Vividness Change on Condition in each Content Category

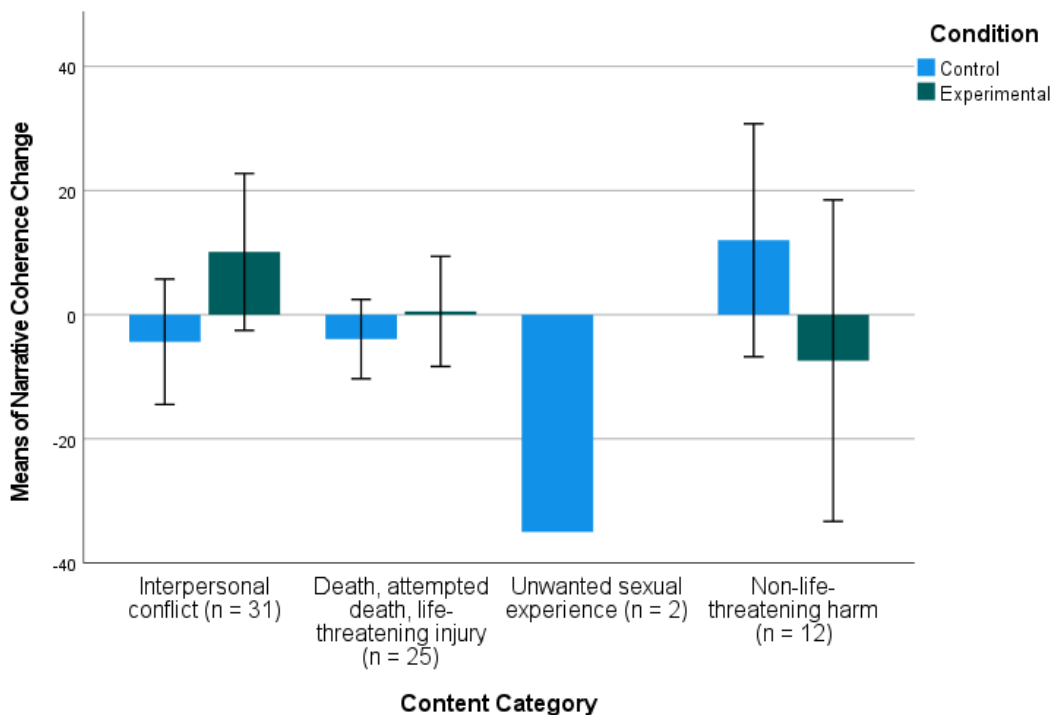


Note. 95% confidence intervals are indicated by error bars, no error bars for the ‘Unwanted sexual experience’ category due to low sample size.

Concerning narrative coherence, the 2 x 3 ANOVA did not result in statistically significant effects. The interaction effect ($F(2, 64) = 2.326, p = .106, \eta_p^2 = .068$) was statistically non-significant, as were the main effects of condition and content category, with $F(1, 64) = .206, p = .652, \eta_p^2 = .003$ and $F(2, 64) = .402, p = .671, \eta_p^2 = .012$ respectively. The bar chart of narrative coherence in figure 5 also showed no statistically significant differences in the individual categories. However, the ‘Unwanted sexual experience’ category stood out, with a much larger decrease in the control condition compared to its experimental condition as well as the other categories. Following up this finding with post-hoc tests revealed all individual comparisons of the categories to be statistically non-significant.

Figure 5

Bar Chart of Narrative Coherence Change on Condition in each Content Category

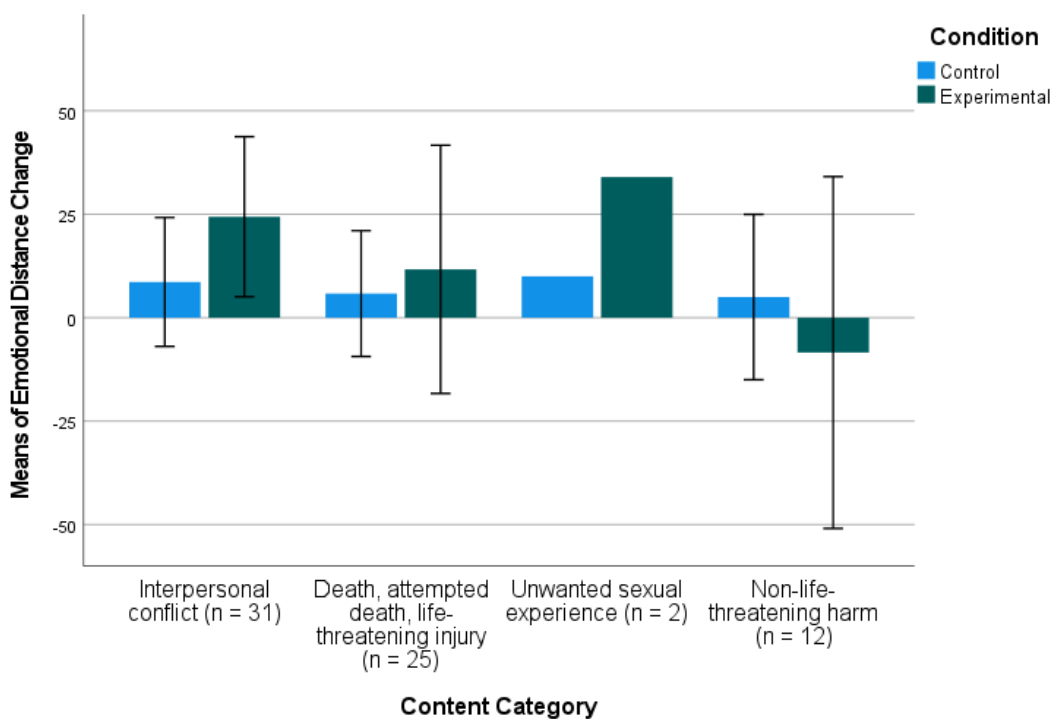


Note. 95% confidence intervals are indicated by error bars, no error bars for the ‘Unwanted sexual experience’ category due to low sample size.

Concerning emotional distance, the main effect of condition ($F(1, 64) = .307, p = .581, \eta_p^2 = .005$), the main effect of content category ($F(2, 64) = .888, p = .416, \eta_p^2 = .027$), and the interaction effect ($F(2, 64) = .523, p = .595, \eta_p^2 = .016$) were found to be statistically non-significant in the 2 x 3 ANOVA. The bar chart in figure 6 shows no statistically significant differences in any individual group, and post-hoc tests comparing the groups yielded no statistically significant results.

Figure 6

Bar Chart of Emotional Distance Change on Condition in each Content Category

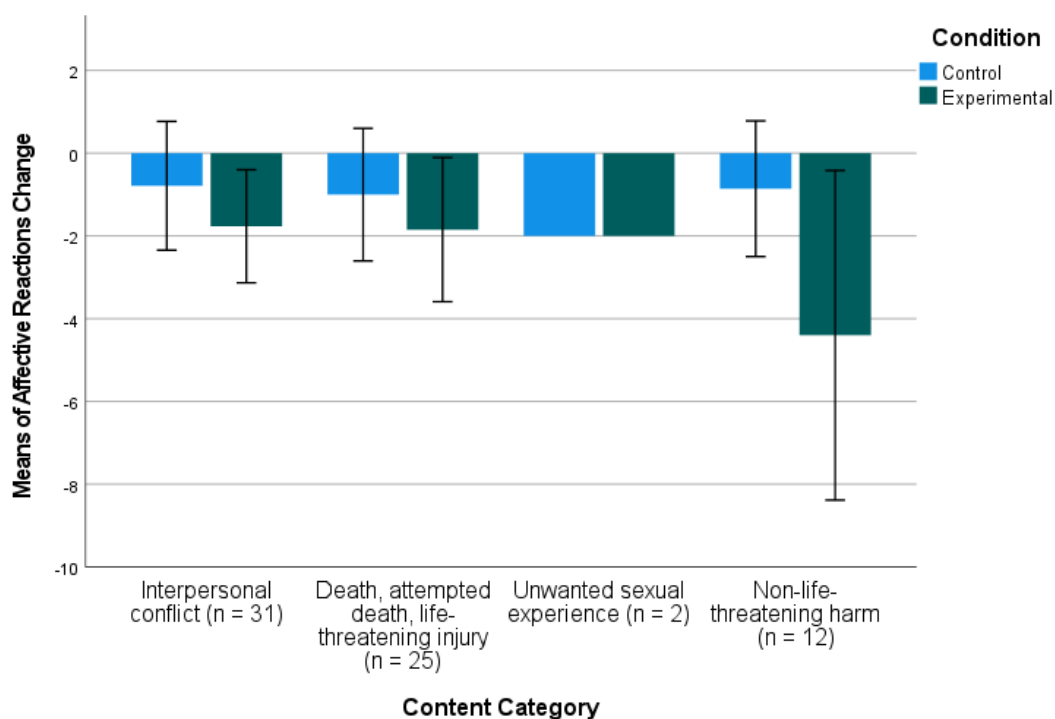


Note. 95% confidence intervals are indicated by error bars, no error bars for the ‘Unwanted sexual experience’ category due to low sample size.

Concerning affective reactions, the 2 x 3 ANOVA revealed the main effect of condition ($F(1, 64) = 5.776, p = .019, \eta_p^2 = .083$) to be statistically significant. The main effect of content category ($F(2, 64) = 1.088, p = .343, \eta_p^2 = .033$), and the interaction effect ($F(2, 64) = .864, p = .426, \eta_p^2 = .026$) were statistically non-significant. The bar chart of affective reactions can be seen in figure 7, showing no statistically significant difference in any individual group, although it seemed that the experimental condition of ‘Non-life-threatening harm’ showed somewhat more decrease in affective reactions compared to the other categories. Post-hoc tests showed no statistically significant differences between any two groups.

Figure 7

Bar Chart of Affective Reactions Change on Condition in each Content Category



Note. 95% confidence intervals are indicated by error bars, no error bars for the ‘Unwanted sexual experience’ category due to low sample size.

Discussion

Main findings

The aim of this study was to investigate the effects of switching from a field perspective to an observer perspective when recalling an aversive personal memory. Specifically, these effects were the emotionality, vividness, narrative coherence, the number of affective reactions, and emotional distance. In line with hypothesis 1a, b, and d it was found that emotionality, vividness and the number of affective reactions statistically significantly decreased when the perspective was switched for the second recall. This means that participants perceived their memory to be less emotional and less vivid when they recalled it the second time from the observer perspective compared to recalling it twice from the field perspective. Also, they used less affective reactions, which are statements containing emotional information, when describing their memory. In contrast to hypothesis 1c and e, narrative coherence and emotional distance did not statistically significantly differ between the conditions. The finding of reduced emotionality in the observer perspective is consistent with previous literature (Robinson & Swanson, 1993; King et al., 2022; McIsaac & Eich, 2004). However, McIsaac and Eich (2002, 2004) argued that this effect may result from increased psychological distance, which could not be supported in this study.

Additionally, this study investigated the potential interaction between the effects of switching perspective and the type of situation that is described in the memory. Individual memories were grouped in four categories (Interpersonal conflict; Death, attempted death, life-threatening injury; Non-life-threatening harm; Unwanted sexual experiences), but unwanted sexual experiences were included in the 'Non-life-threatening harm' category for the ANOVA analyses. This part of the study was explorative and aimed to illuminate potential differences between different kinds of experienced aversive situations. The results indicated that the

situation type does not statistically significantly influence the effects of switching perspective in almost all cases. That generally means that no definitive statement can be made about the relationship between the above mentioned effects of switching perspective and the different kinds of situations. Even though, general directions for worthwhile follow-up studies can be seen. One example is the ‘Unwanted sexual experience’ category, especially with regard to narrative coherence. The only exception is that participants in the experimental condition who recalled a memory involving an interpersonal conflict showed a greater decrease in emotionality than participants in the control condition who recalled this type of memory. A possible explanation for this finding might be that interpersonal problems do not objectively look bad from the outside, but rather invoke emotionality through mental processes, like thoughts and feelings about the relationship. These mental processes may not be as salient when taking the perspective of an outside observer, consequently lowering the associated emotionality.

Implications

The findings in hypothesis one partially successfully expand previous literature on the vantage point to a within-person context. Not only the comparison of naturally occurring field with naturally occurring observer perspectives, but also the active switch from the field to an observer perspective shows a difference between the two perspectives. The focus lay on the adoption of the observer perspective as a possible avoidance mechanism. The possibility of actively switching the perspective in order to perceive the memory as less emotional and less vivid might imply that this avoidance mechanism does exist. It remains unclear whether the naturally occurring observer perspective also functions as a subconscious avoidance mechanism, or if other variables play a role in the adopted perspective. Nevertheless, the vantage point seems

to be one aspect of memory that is of importance when investigating aversive, or even traumatic memories.

This implication fits with the avoidant function attributed to another aspect of memory, namely overgeneral memory. This describes the relative inability to recollect specific past events and hence a greater reliance on a more general representation of the past. Overgeneral memory was found to be associated with more symptoms of effortful avoidance (Hauer et al., 2006). Combined with previous literature stating that individuals with higher avoidance tendencies adopt the observer perspective more often (Kenny & Bryant, 2007), and the results of our first hypothesis (decreased emotionality and vividness in the observer perspective), this implies again that adopting an observer perspective might function as an avoidance mechanism for negative emotions. This idea is strengthened by King et al. (2022) who found memory recalls in the observer perspective to contain less episodic information. Moreover, overgeneral memory was found to be associated with trauma-related distress (De Decker et al., 2003). Similarly, PTSD was found to be related to declarative memory deficits (Samuelson, 2011). Declarative memory involves, besides other things, the recollection of specific past events, again pointing to the role of overgeneral memory.

Adoption of the observer perspective as well as overgeneral memory have been linked to worse outcomes with regard to trauma-related distress and PTSD. This might imply that not these memory aspects themselves, but rather their function as an avoidance mechanism is related to these outcomes. While avoiding the aversive experience might be adaptively beneficial in the short-term (McCarroll, 2017), long-term processing of the trauma may be incomplete when avoidance strategies are used, which contributes to the maintenance of PTSD symptoms (Pineles et al., 2011). This is underpinned by Barry et al. (2022), who found that overgeneral memory

contributed to the risk and maintenance of psychiatric disorders, like PTSD. In other words, avoiding the associated emotionality of the trauma may ultimately hinder the healing process. Successfully overcoming a traumatic event might require actively dealing with the experience and its associated emotionality.

Regarding the situation type categories, no definitive conclusions can be made. Rather, the explorative nature of this part of this study allows for speculation and might give insight into what can be explored in future studies. A true null effect as well as a difference between certain types of situations might have implications for theoretical models of PTSD as a memory disorder. Some types of experiences might benefit more from the observer perspective as an avoidance mechanism, while other types of experiences do not allow for this avoidance mechanism to take place at all. While this study does not allow for conclusions to be made about this, the topic remains of interest for the vantage point literature.

Limitations

There were several limitations which restrict the conclusions that can be drawn from this study. First and foremost, the sample size used in the analyses was small. Consequently, the power of this study was limited, which not only leads to a reduced chance of finding true effects, but also reduces the chance that statistically significant findings actually reflect the true effect in the population (Button et al., 2013). The effects that can be found with low power have to be quite big, while smaller true effects are often undetected in low-power studies. The small sample size was especially problematic for the moderation analysis, since grouping the data points into the categories led to small sample sizes in each group. The situation type involving ‘unwanted sexual experiences’ was particularly small, making it highly unlikely to find any differences. It was nevertheless included due to its unique status in the human experience and in PTSD

diagnostic criteria. Additionally, low power weakened the finding that, when the content categories were examined individually, the 'Interpersonal conflict' category was the only category that statistically significantly differed between the conditions, and only for emotionality.

Moreover, the situation type categories were designed based on the sample and diagnostic criteria of PTSD assessment tools, but were not empirically tested. Therefore, it is possible that these categories are not the most informative. Also, there were problems in the categorization of memories: 1) some memories seemed to fit into multiple categories at once, 2) some memories ultimately shared a category even though they subjectively seemed very different. These problems might have led the results to be more unclear.

Finally, some participants indicated that they experience a mixed or neither perspective. Rice and Rubin (2009) reported a similar finding, in which people might experience more than one perspective when recalling events. This study did not accommodate these participants, but rather asked participants to give a clear 'yes or no' indication of whether they adopt the field perspective. Depending on their answer they were either included as naturally adopting the field perspective or excluded. It is possible that participants with a somewhat mixed perspective show different results in these kinds of experiments, and subsequently tainted the results if they were included.

Recommendations

This study was conducted on a healthy sample of undergraduate students. Therefore, all effects and their implications found in this study can only be assumed to also apply to a clinical sample of PTSD patients. Future research should confirm if the effects also hold in clinical samples in order to make meaningful conclusions about the clinical population. Alternatively, it

might be shown that traumatic memories function differently from aversive, but non-traumatic memories. While a superficial differentiation between potentially traumatic and non-traumatic memories was used in this study purely for descriptive purposes, future research might investigate whether this differentiation has any association to the vantage point.

Lastly, this study found a significant difference in the emotionality ratings of participants with memories relating to interpersonal conflicts, but non-significant differences in all other categories. Since this study's results are limited due to small sample size, it is recommended to follow up these findings in a larger study with more power. Such a follow-up study could clarify whether the non-significant findings were due to low power or whether situation type truly does not influence the effects on memory characteristics. Likewise, such a follow-up study would clarify whether the significant difference found in this study is actually present and meaningful. In any case, the exploratory work on the type of situation should be used for follow-up studies.

Conclusion

In conclusion, the results of this study confirmed the hypothesis that switching from a field to an observer perspective when recalling an aversive personal memory leads to reduced emotionality, vividness, and less affective reactions. Therefore, adaptation of the observer perspective may function as an avoidance mechanism for negative emotional responses to the aversive event. Moderation analysis including the type of situation revealed no statistically significant effects and is therefore inconclusive. However, the findings might function as a basis for further investigations into the topic.

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Appendices

Appendix A

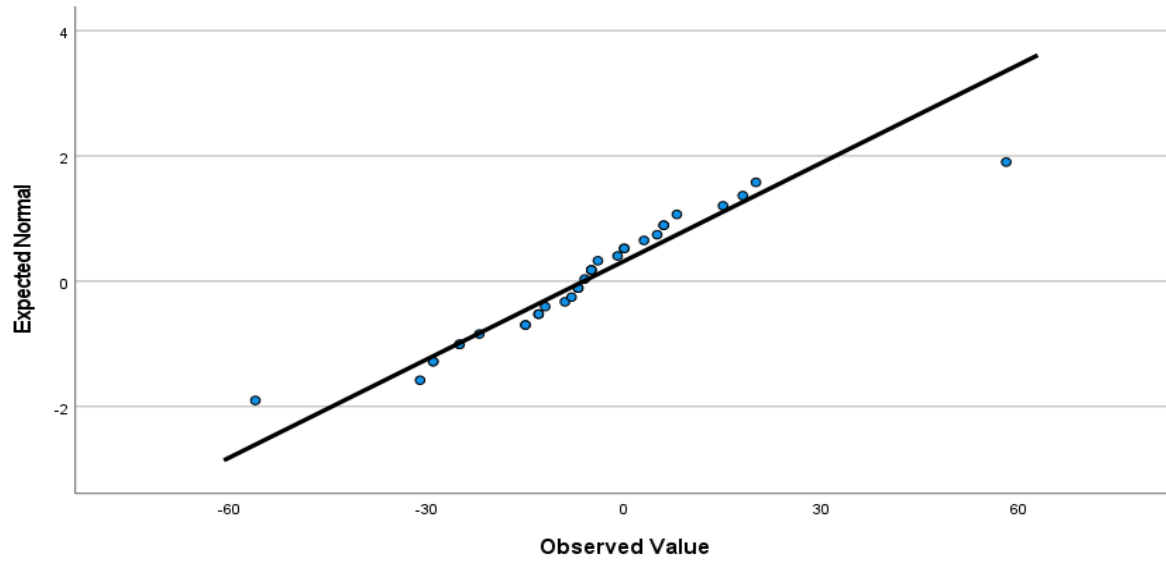
Descriptive Statistics of the Emotionality, Vividness, Narrative Coherence, Emotional Distance, and Affective Reactions for each recall in the Control and Experimental Condition.

		Mean (SD)		Median		IQR	
		Con	Exp	Con	Exp	Con	Exp
Recall 1	Emotionality	69.44 (14.83)	66.92 (13.52)	70	65	14	21
	Vividness	78.38 (14.61)	73.19 (20.1)	78.5	76	18	22
	Narrative Coherence	35.56 (28.21)	33.75 (27.08)	30	25	47	32
	Emotional Distance	42.68 (22.52)	42.58 (24.84)	44	42.5	27	42
	Affective Reactions	3.56 (2.9)	4.03 (3.41)	3	3	3	5
Recall 2	Emotionality	63.26 (18.74)	46.69 (20.2)	65.5	46.5	29	25
	Vividness	74.85 (18.27)	58.42 (26.99)	76.5	62.5	25	42
	Narrative Coherence	33.82 (25.82)	37.69 (26.57)	30	35	43	43
	Emotional Distance	49.62 (20.36)	58.11 (31.6)	50	65.5	28	54
	Affective Reactions	2.65 (2.15)	1.86 (1.81)	2	1.5	3	3

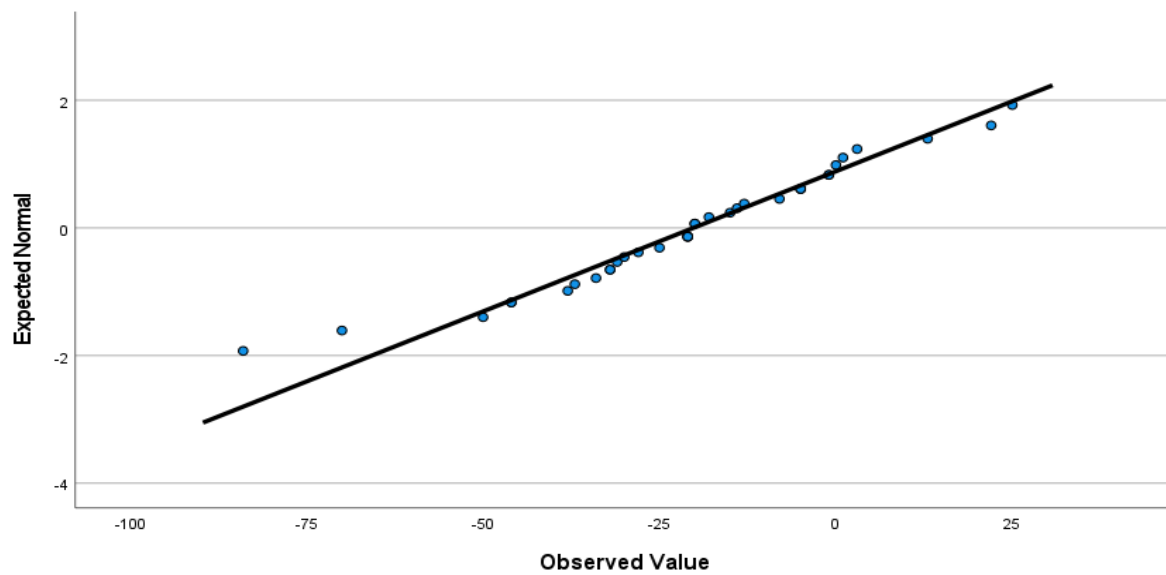
Note. Con = control condition, Exp = experimental condition; SD = standard deviation; IQR = interquartile range

Appendix B

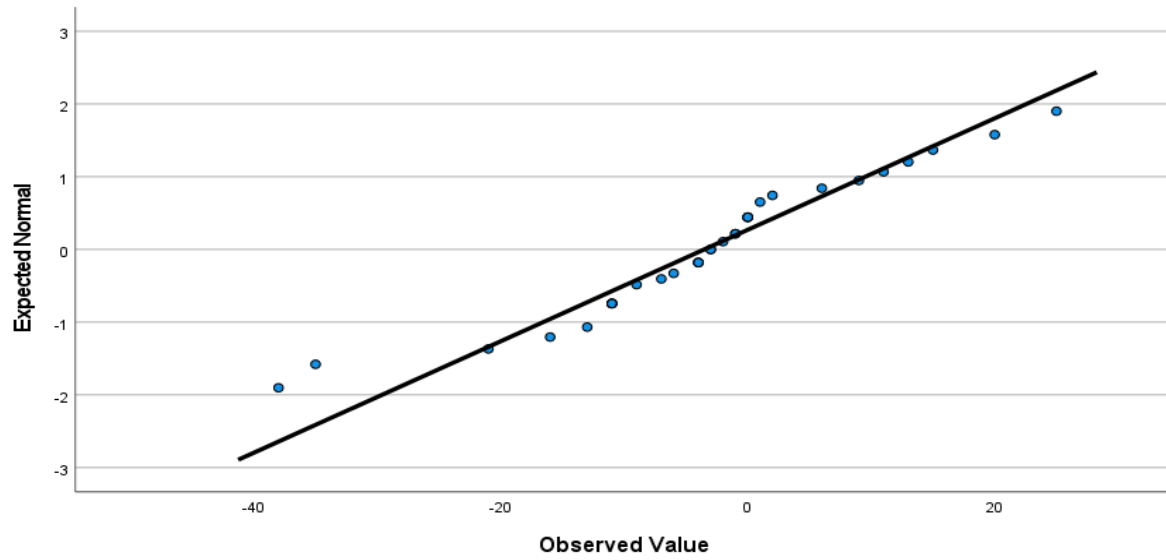
Q-Q Plot of Emotionality in the Control Condition



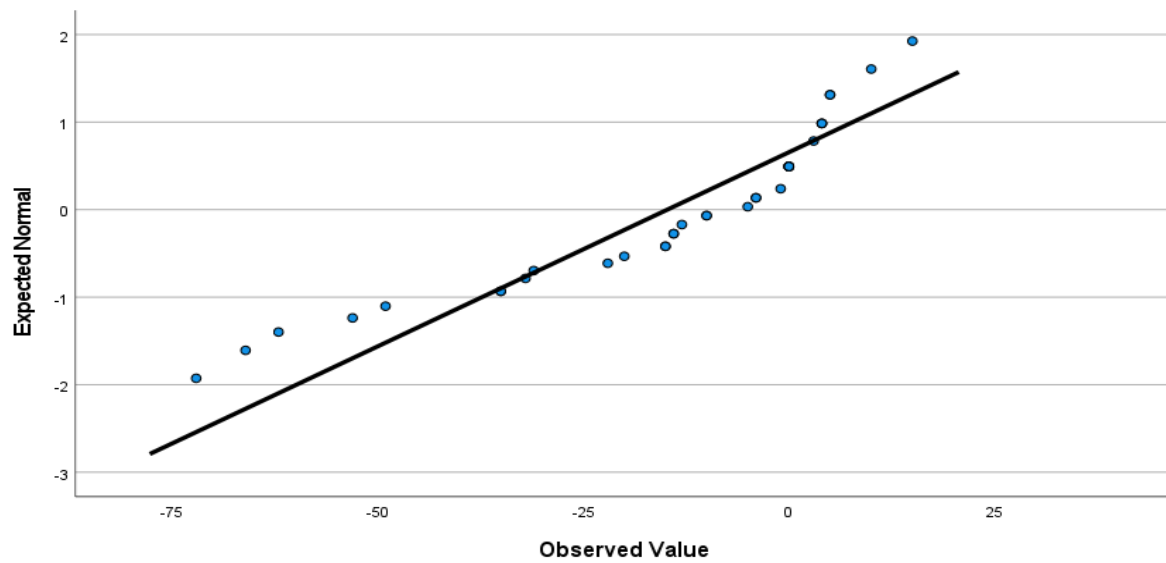
Q-Q Plot of Emotionality in the Experimental Condition



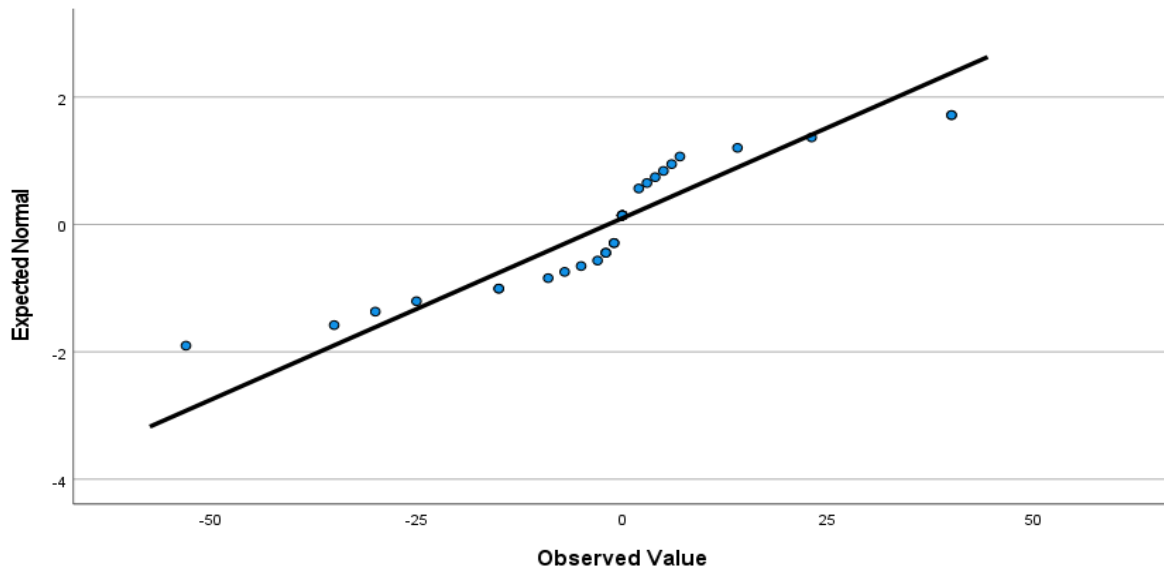
Q-Q Plot of Vividness in the Control Condition



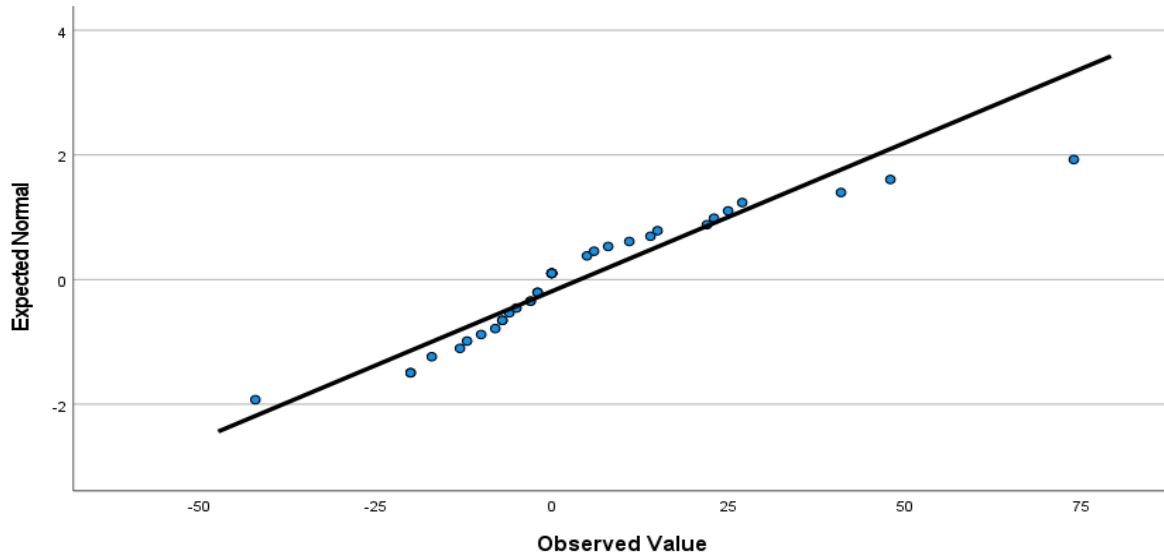
Q-Q Plot of Vividness in the Experimental Condition



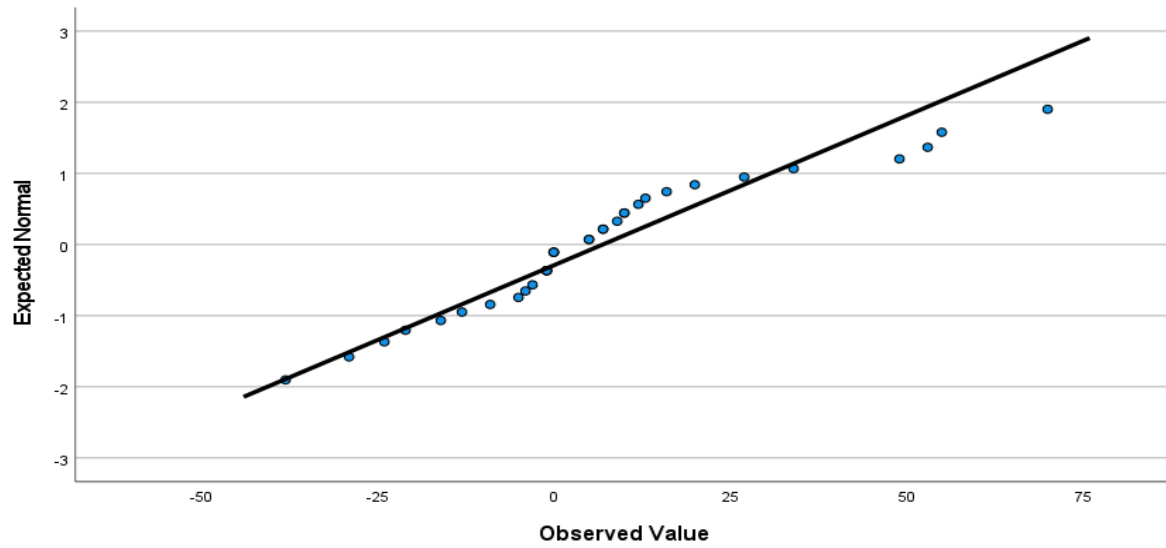
Q-Q Plot of Narrative Coherence in the Control Condition



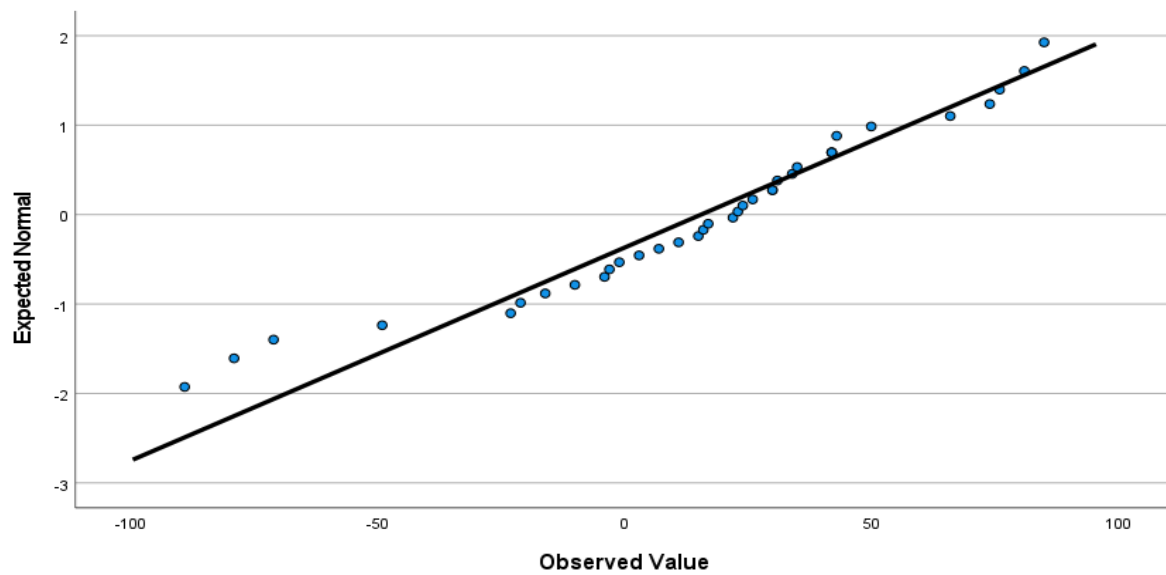
Q-Q Plot of Narrative Coherence in the Experimental Condition



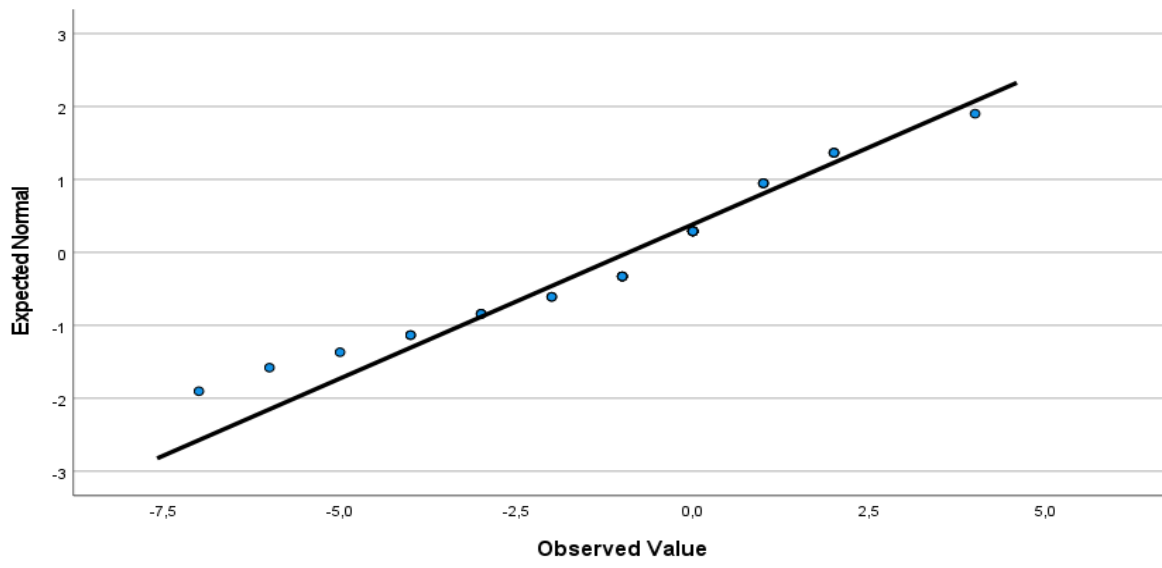
Q-Q Plot of Emotional Distance in the Control Condition



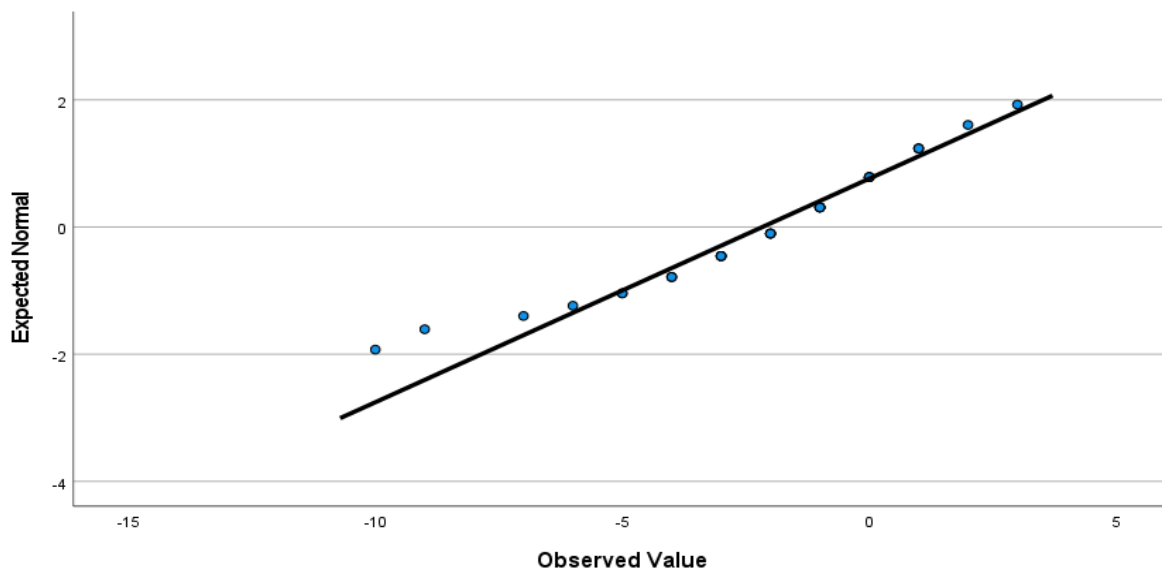
Q-Q Plot of Emotional Distance in the Experimental Condition



Q-Q Plot of Affective Reactions in the Control Condition



Q-Q Plot of Affective Reactions in the Experimental Condition



Appendix C

Descriptive Statistics of the Emotionality, Vividness, Narrative Coherence, Emotional Distance, and Affective Reactions for Interpersonal Conflict

		Mean	Std. Deviation	Median	IQR
Recall 1	Emotionality	66.35	14.42	68	17
	Vividness	77.58	16.81	80	20
	Narrative Coherence	30.71	25.3	27	30
	Emotional Distance	39.74	19.36	40	21
	Affective Reactions	4.13	3.45	3	4
Recall 2	Emotionality	56.77	22.46	57	40
	Vividness	67.71	23.28	72	32
	Narrative Coherence	34.29	24.83	35	38
	Emotional Distance	57.03	22.57	60	39
	Affective Reactions	2.81	2.3	2	4

Note. IQR = interquartile range

Descriptive Statistics of the Emotionality, Vividness, Narrative Coherence, Emotional Distance, and Affective Reactions for Death, Attempted Death, Life-threatening Injury

		Mean	Std. Deviation	Median	IQR
Recall 1	Emotionality	70.48	13.88	70	16
	Vividness	75.96	17.96	76	18
	Narrative Coherence	38.24	29	37	50
	Emotional Distance	49.40	25.99	55	36
	Affective Reactions	3.12	3.13	2	5
Recall 2	Emotionality	51.72	19.56	52	26
	Vividness	66.72	23.41	73	32
	Narrative Coherence	36.64	28.62	30	54
	Emotional Distance	58.28	29.85	66	39
	Affective Reactions	1.68	1.65	1	3

Note. IQR = interquartile range

Descriptive Statistics of the Emotionality, Vividness, Narrative Coherence, Emotional Distance, and Affective Reactions for Non-life-threatening Harm

		Mean	Std. Deviation	Median	IQR
Recall 1	Emotionality	65.67	14.18	63.5	15
	Vividness	67.17	18.23	75.5	23
	Narrative Coherence	38.00	29.87	33	56
	Emotional Distance	42.25	24.5	44	47
	Affective Reactions	4.33	2.64	4	4
Recall 2	Emotionality	51.50	20.32	57	40
	Vividness	57.58	28.85	65.5	61
	Narrative Coherence	41.92	25	42	33
	Emotional Distance	41.67	28.79	48	54
	Affective Reactions	2	1.71	2	2

Note. IQR = interquartile range

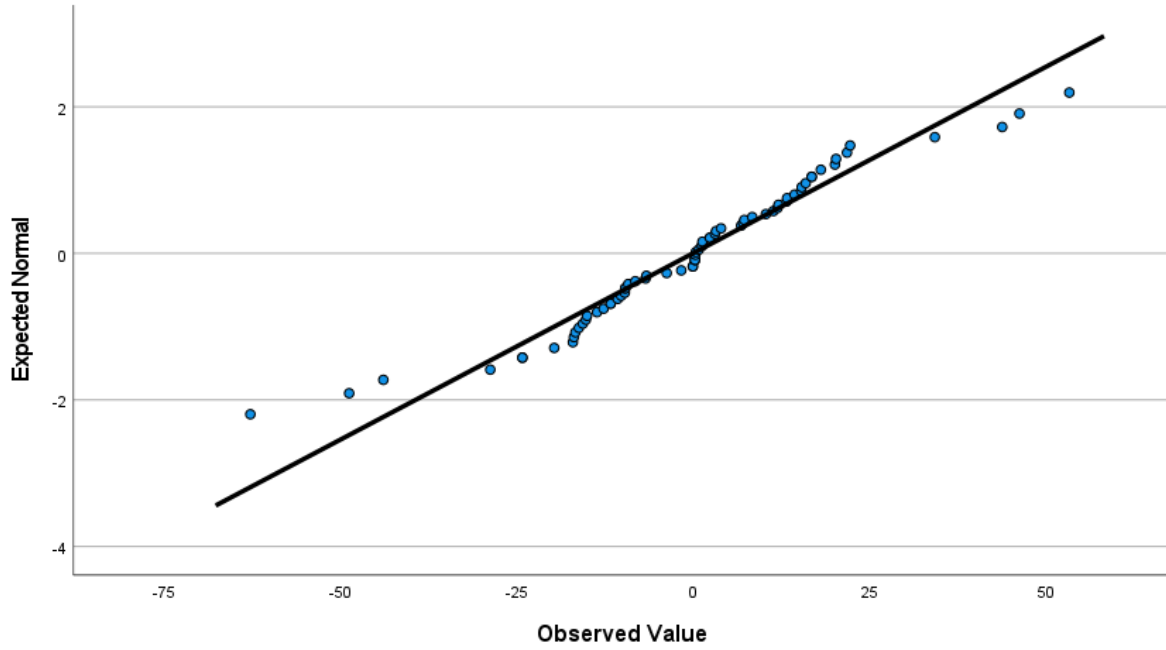
Descriptive Statistics of the Emotionality, Vividness, Narrative Coherence, Emotional Distance, and Affective Reactions for Unwanted Sexual Experience

		Mean	Std. Deviation	Median	IQR
Recall 1	Emotionality	81.5	4.95	81.5	/
	Vividness	95	7.07	95	/
	Narrative Coherence	30	42.43	30	/
	Emotional Distance	5	7.07	5	/
	Affective Reactions	4	1.41	4	/
Recall 2	Emotionality	80.5	.71	80.5	/
	Vividness	95	7.07	95	/
	Narrative Coherence	12.5	17.68	12.5	/
	Emotional Distance	27	9.9	27	/
	Affective Reactions	2	1.41	2	/

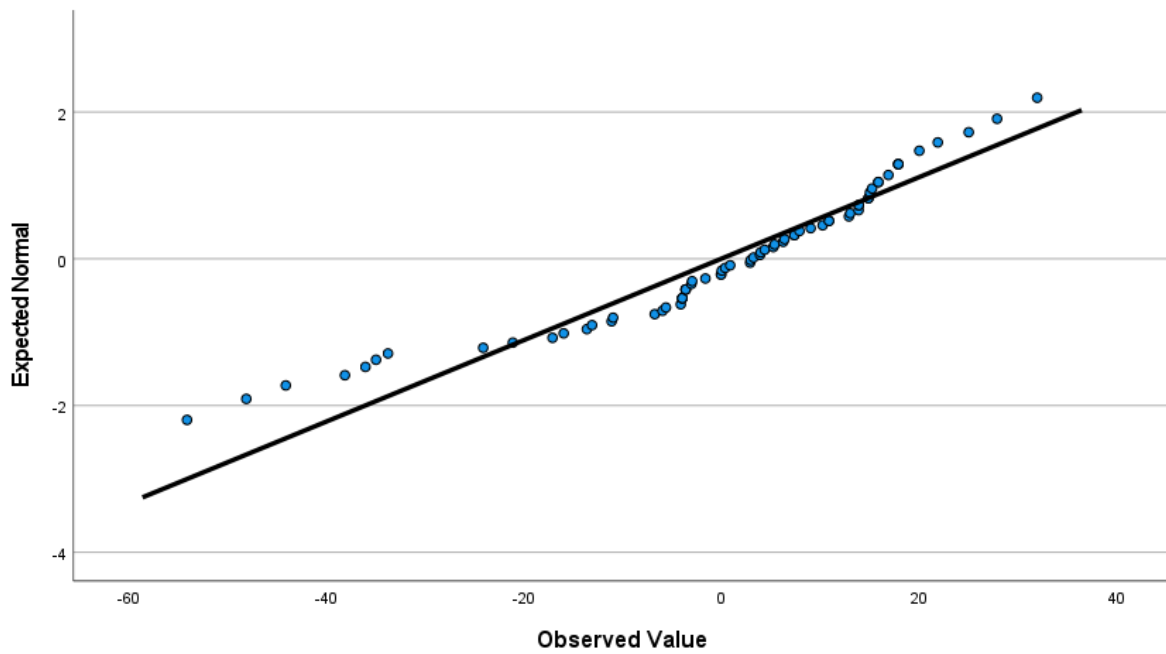
Note. IQR = interquartile range, IQR could not be calculated due to low sample size.

Appendix D

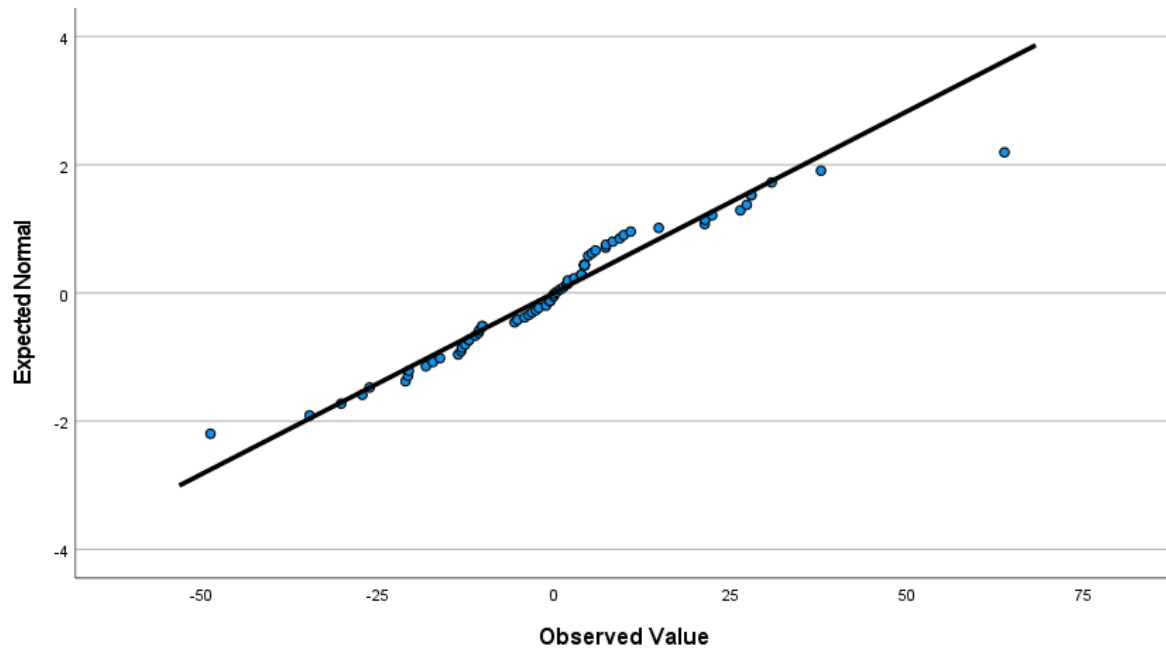
Q-Q Plot of the Residual of Emotionality



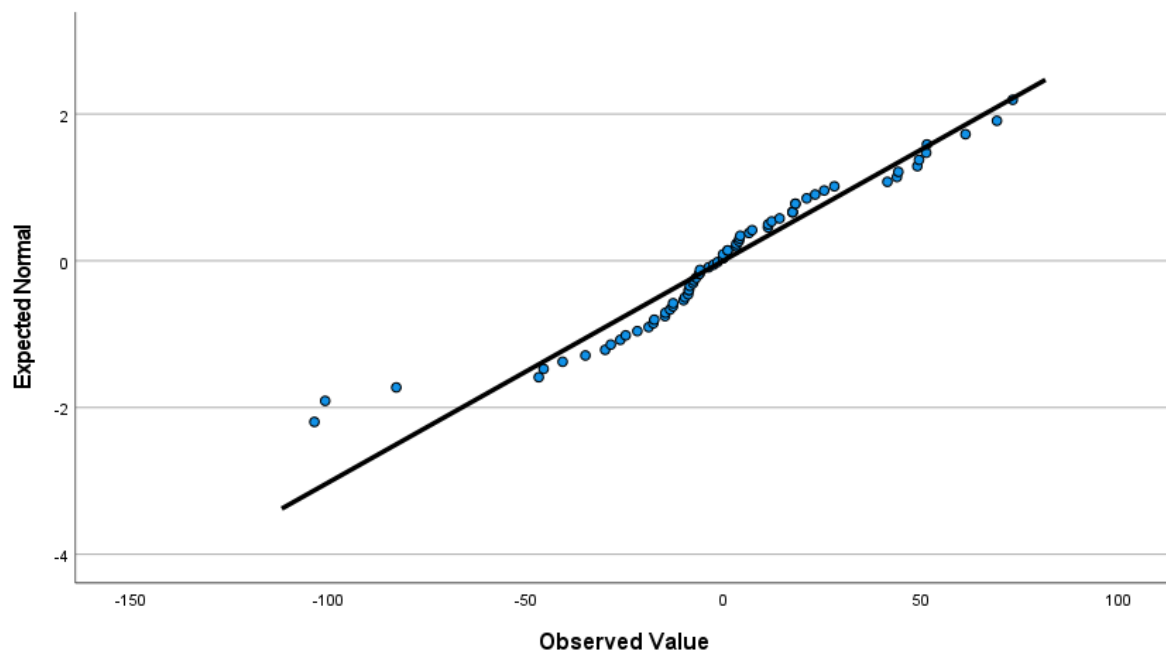
Q-Q Plot of the Residual of Vividness



Q-Q Plot of the Residual of Narrative Coherence



Q-Q Plot of the Residual of Emotional Distance



Q-Q Plot of the Residual of Affective Reactions

