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Do you remember? Mock jurors' perceptions of elder maltreatment when the elder has
Alzheimer's disease

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Requirements for Departmental Honors in Psychology

Bridgewater State University

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Abstract

Elder maltreatment is a significant problem in the United States affecting about 10% of older Americans. According to the Stereotype Content Model, elders are seen as warm but lacking competence. This also influences the stereotype that all elders have some sort of cognitive deficit causing the assumptions that an elder may lack certain cognitive abilities and may not be credible enough to provide an accurate abuse claim. The purpose of this study was to examine jurors' perceptions of elder maltreatment when the elder has a cognitive impairment, specifically Alzheimer's disease. The approach that was used in this study was an experimental mock juror design. The participants read a fictional elder abuse criminal trial summary about a 76-year-old woman who claimed she was mistreated in her nursing home. They then completed questionnaires measuring their verdicts, as well as trial ratings, and attitudes towards elders. There was a main effect of cognitive ability and a main effect of harm type where participants were less likely to render a guilty verdict and had lower victim ratings in the Alzheimer's condition (vs. no cognitive deficit) and also the physical abuse condition (vs. neglect). Additionally, there was an interaction found with participants rating their anger towards the victim higher when she had no cognitive deficit and was physically abused. Lastly, there was a negative correlation between participants' ageism levels and pro-victim ratings. We discuss the findings with regard to legal implications, such as jury selection in an elder maltreatment case.

Do you remember? Mock jurors' perceptions of elder maltreatment when the elder has
Alzheimer's disease

Elder maltreatment is a significant problem within the United States, affecting about 1 in 10 Americans who are 60 years of age or older (Lachs & Pillemer, 2015). The true prevalence rates are unknown and most likely higher due to underreporting for a variety of reasons, such as fear of retaliation. Since people are living longer each year, the elder population is growing, which means that the prevalence rate for elder maltreatment may increase as well. There are many ideas on what the exact definition of elder maltreatment is (Nerenberg, 2008), however, the National Research Council defines it as:

(a) Intentional actions that cause harm or create serious risk for harm to a vulnerable elder by a caretaker or other person who stands in a trust relationship to the elder, or (b) failure by a caregiver to satisfy the elder's basic needs or to protect the elder from harm (Bonnie & Wallace, 2003).

Other definitions may leave out the word "vulnerable" because it may lead people to believe that harming an able-bodied elder would not be considered elder maltreatment (Nerenberg, 2008).

The definition of elder maltreatment can get even more detailed by describing what form of harm said maltreatment takes. These harm types include neglect, financial abuse, physical abuse, and sexual abuse. According to Wolf and Pillerman (1989), two of the most reported types of harm are physical abuse, often manifesting in the form of bruises, and neglect, often manifesting in the form of bed sores (Mosqueda, Sivers-Teixeira, & Hirst, 2017). One risk factor for elder maltreatment is dementia (e.g., Alzheimer's disease), which causes elders to be particularly vulnerable and very dependent on their caregiver (Mosqueda et al., 2006). The present research

aims to investigate the effect of an elder having Alzheimer's disease on mock jurors' perceptions of institutional elder maltreatment.

Elder maltreatment can happen both in domestic and institutional settings, such as nursing homes or assisted living facilities. According to a survey conducted by the Center for Disease Control (CDC) in 2014, there are over 15,000 nursing homes, which are home to around 1.4 million elders, and around 29,000 assisted living facilities, which are home to around 811,500 elders, in the U.S. In assisted living facilities, around 40% of the residents are diagnosed with Alzheimer's disease. One study found that about 24.3% of nursing home residents are physically abused by staff, however, this may not be an accurate percentage because abuse can go underreported (Schiamberg et al., 2012). Assisted living facilities, on the other hand, are not regulated by the state; therefore, the prevalence rates of maltreatment within assisted living facilities are very much unknown and go unreported (Hawes, 2003). Maltreatment can happen for a variety of reasons, some more apparent than others. When caretakers are under severe stress, exhausted, inexperienced, or reluctant to perform a caregiving role for any reason, it can result in the mistreatment of the elder in their care (Nerenberg, 2008). The dependency of the elder on the caretaker may also add an additional level of stress, which the caretaker may take out on the elder (Brogden & Nijhar, 2000). Other sorts of individual reasons someone may commit elder maltreatment can be specific for institutional settings. Nursing home and assisted living staff are typically undertrained (Payne, 2000) and overworked (Goergen, 2001), which can leave the workers unable to give the elders the proper quality of care. This can lead to intentional or unintentional maltreatment. Another possible reason nursing home staff may mistreat the elders is because some may only think of the job as physical labor and less as actually caring for

someone. In such cases, workers may suppress their empathy and treat patients as objects (Brogden & Nijhar, 2000).

Ageism is another factor contributing to elder maltreatment that may not be as obvious. Ageism is the prejudice or discrimination toward a person because of their age. In America, there is a social norm is that aging is undesirable (Nelson, 2011). People are given cards and gag gifts about being another year older, or another year closer to death. There are also a multitude of ways to make people look younger and hide the aging process (e.g., Botox, hair dye, makeup). Another side of ageism is the assumption that elders have some sort of cognitive deficit or lack competence (Brogden & Nijhar, 2000). The Stereotype Content Model (SCM) is a framework that reports perceived levels of competence as well as warmth for various social groups, including the elderly (Fiske, Cuddy, Glick, & Xu, 2002). The SCM predicts the corresponding prejudice (e.g., paternalistic, envious) a specific group of people may be subject to bias on whether they are perceived as high or low on warmth and competence (Cuddy, Norton, & Fiske, 2005). For the elder populations, the SCM shows that people perceive these individuals as high in warmth but low on competence. This perceived notion elicits paternalistic prejudice, the belief that one knows what is best for a person (Fiske et al., 2002), in the form of pity. This pity, combined with the belief that elders lack competence, causes some people to devalue the lives of the elderly.

People seem to value all age groups differently. In a study by Goodwin and Landy (2014), participants were presented with a scenario, including life or death situations, where they had to decide the fate of individuals of varying age groups. Throughout these studies, participants had to decide whether to passively (indirectly) or actively (directly) harm someone of either an older or younger age. Across multiple studies, the researchers discovered that people

tend to value adult lives less than younger people's lives. More specifically, participants valued the older adults, described as either age 60 or 80, less than anyone else, even the younger adults (age 20 or 40). In a similar study, Callan, Dawtry, and Olson (2012) tested the effect of ageism on the devaluing of elders. According to this study, over many different situations, participants seemed to perceive the suffering of an older person, a devalued individual, as less unfair than the suffering of a younger person, a more valued individual. The participants rated harm against the younger victim as more unjust than when the victim was older. Moreover, participants punished the individual who harmed the elder victim by giving them less time in prison than the individual who harmed the younger victim. The most important finding in this study was that the participants who scored higher on an ageism scale were more likely to give the harm-doer a lesser punishment if the victim was elderly.

Over the years, elder maltreatment has been traditionally addressed by social service providers; however, within the past decade, the criminal justice system has become an increasingly important part of managing elder maltreatment (Kohn, 2013). Even though there is a great amount of information on general elder maltreatment prevalence, research on elder maltreatment in legal settings still has many unanswered questions, particularly regarding perceptions of elder maltreatment in a court context. Much of the existing research on legal perceptions of elder maltreatment used a mock juror methodology to examine juror biases and how multiple aspects of a trial, such as presence of witness testimony, may affect jurors' perceptions (Dunlap, Golding, Hodell, & Marsil, 2007). However, there is a need for additional research because there is no known or published research of juror bias in elder maltreatment cases that directly compares the impact harm type has on verdict. There is also some juror bias research that examines how participants' individual differences may affect the trial outcomes.

Some of the current juror bias research contains measures that assess participants' attitudes towards the elderly and observe whether or not these attitudes have an effect on juror decision making. For example, two juror decision-making studies measured participants' attitudes towards the elderly to examine if there was a relationship between these attitudes and decision making in an elder abuse or neglect trial (Dunlap et al., 2007; Wasarhaley & Golding, 2017). In both studies, participants with more negative attitudes towards the elderly had less favorable victim ratings than those with more favorable attitudes towards the elderly.

While participants' individual attitudes can affect decision making, other factors from the trial, such as the elder victim's cognitive health, can affect participants' ratings of the victim. In addition to measuring the participants' attitudes towards the elderly, Kinstle, Hodell, and Golding (2008) manipulated whether the victim in an elder abuse trial was described as healthy, frail, or confused. The researchers discovered that attitudes toward the elderly had no direct effect on conviction rates; however, as ageism increased, participants were more likely to rate the victim's memory as inaccurate. Another relevant finding in this study was that, overall, participants were less likely to believe the victim when she was described as confused than if she was described as frail or healthy.

Furthermore, other elder maltreatment studies in a legal context do not focus on the individual differences that influence the trial outcomes, such as participants' attitudes. Instead, these trial studies tend to focus more on the extra-legal factors in the trial, such as the effects of victim cognitive deficit on trial outcomes. For example, two jury decision-making studies presented participants with an elder maltreatment trial in which the elder victim was described as cognitively impaired (Golding, Allen, Yozwiak, Marsial & Kinstle, 2005; Golding, Hodell, Dunlap, Wasarhaley & Keller, 2013). In both studies, there were fewer guilty verdicts when the

elder victim was presented with a cognitive deficit than when the victim had a physical disability or was reported as healthy.

In summary, the prior research on juror bias in elder maltreatment cases has discovered that participants with high levels of ageism are less likely to render judgments in favor of the victim. Similarly, the prior research has discovered that when an elder victim has a cognitive deficit, participants are typically more likely to render fewer guilty verdicts than conditions in which the elder victim has no cognitive deficit. However, no one has examined whether giving the elderly victim a diagnosed cognitive deficit (e.g., Alzheimer's disease) has a similar effect on trial outcomes than just stating the victim has a cognitive deficit. Additionally, while research studies have examined elder maltreatment trials across multiple harm types, there is not one that directly compares perceptions of different types of harm. Therefore, the present study aimed to expand previous research and answer open questions by examining the effects of the cognitive ability of the elderly victim and whether the victim was physically abused or neglected on mock jurors' perceptions of the case. To accomplish this, participants were given a fictional criminal trial summary of elder maltreatment or neglect and were instructed to act as a juror in the trial. The summary described the elder victim as a 76-year-old female resident of an assisted living center and stated that she had a diagnosis of Alzheimer's disease or stated that she was cognitively healthy.

Based on prior research (Golding et al., 2005; Golding et al., 2013), We hypothesized that there would be a main effect of victim cognitive ability on guilty verdicts and trial ratings such that there would be fewer guilty verdicts and lower victim ratings when the elder victim was presented with Alzheimer's disease compared to no cognitive deficit. Second, we hypothesized that there would be a main effect of type of harm on guilty verdicts and lower

victim ratings such that there would be fewer guilty verdicts and lower victim ratings when the elder had been neglected than when she was physically abused. Even though there is no juror perception research that directly compares physical abuse and neglect, Goodwin and Landy (2014) found that participants rated active harm as more appalling than passive harm. Third, we hypothesized that there would be an interaction between victim cognitive ability and type of harm such that there would be fewer guilty verdicts and lower victim ratings when the victim was presented with Alzheimer's disease and was neglected compared to all other conditions. Lastly, we hypothesized that there would be a negative correlation between participants' ageism levels and victim ratings, as well as defendant guilt ratings such that higher ageism would predict lower victim ratings and lower defendant guilt ratings. Since the variables we tested have never been directly compared, the results from this study can help fill the gaps in elder maltreatment research, specifically in the context of a legal setting.

Pilot Study

After creating the trial summaries, a series of pilot tests were conducted to ensure that the harm type manipulation (i.e., neglect and physical abuse) was clear and participants rated the two harm types as equally serious. In pilot study one ($N = 91$), participants rated both trials as equally as serious and were able to accurately identify the type of harm at an acceptable rate. However, they believed the victim was cognitively impaired even though it was never stated that she was. After revising the trial summaries, pilot study two participants ($N = 102$) rated both trials as equally as serious, passed the harm type manipulation check at an acceptable rate, and most did not rate the cognitively healthy victim as cognitively impaired. Also in the second pilot study, we discovered that participants in the neglect condition rendered more guilty verdicts (about 70%)

than those in the physical abuse condition (about 40%)¹. For pilot study three ($N = 82$), we tested a version of the trial summaries containing closing arguments from the prosecution and defense. There was no change in the manipulation check responses, seriousness ratings, or verdicts, so the closing arguments were removed from the final study stimuli for sake of length.

Method

Participants

The participants for this study were recruited via Amazon's Mechanical Turk (MTurk). MTurk is an Amazon-run recruitment system that allows researchers to pay "workers" to participate in studies and different tasks and gives researchers the ability to recruit people with differing backgrounds and demographics (Paolacci & Chandler, 2014). There was a total number of 371 participants initially recruited. There were 38 participants excluded from the final results because they did not complete verdict or manipulation check questions or were not U.S. citizens. Since we were testing the effects of harm type and an elder's cognitive ability on trial outcomes, an additional 78 responses were excluded from the final data for incorrectly answering the manipulation check questions. More specifically, participants were excluded from the analyses for the following reasons: did not correctly remember the harm type that they had read about ($n = 37$), were unsure of or incorrectly recalled the victim's cognitive state ($n = 37$), and recalled the victim's age incorrectly, reporting the victim as a young adult rather than elderly individual ($n = 4$). The final sample contained 255 participants (154 females, 99 males, 2 other/prefer not to say). All the participants were of jury eligible age (18 or older) and the ages ranged between 18 and 70 ($M = 39.1$ $SD = 11.5$). All were U.S. citizens. Most participants (44.3%) reported having

¹ The aforementioned hypothesis that there would be a main effect of harm type such that the presence of neglect would significantly lower guilty verdicts was developed before conducting the pilot tests. We did not change this hypothesis after examining the pilot data.

at least a bachelor's degree, 18.4% had completed some college, 9% an associate's degree, 6.7% completed trade school or equivalent, 14.6% a master's degree or higher, and 7.1% a high school diploma or less. There were also 43.1% of participants who reported having cared for an elderly or disabled person.

Design

The experiment was a 2 (type of harm) \times 2 (victim's cognitive ability) design. The type of harm was either passive harm (neglect) or active harm (physical abuse). The victim's cognitive ability was categorized as either Alzheimer's or no cognitive deficit. Each participant was randomly assigned to one of the four conditions.

Materials

Criminal trial summaries. There were four fictional trial summaries adapted from other trial summaries from similar research for this study (Golding et al. 2005; Kinstle et al. 2008; Wasarhaley & Golding, 2017). In each trial summary all of the details were the same except for what was being manipulated. The trial summary described an elder maltreatment trial in which the defendant, a nurse's aide in an assisted living facility, either neglected or physically abused a resident and was being charged with assault and battery. Each summary presented a 76-year-old female resident of an assisted living facility who either had Alzheimer's disease or no cognitive deficit at all. This study used a female resident for the alleged victim because elder women are more likely to be targeted as victims of maltreatment than elder men (Wolf & Pillerman, 1989).

The prosecution's case included testimony by the victim's son, the emergency room doctor, and the Adult Protective Services (APS) worker. In the physical abuse condition, the son stated that during his monthly visit to the assisted living facility, he discovered his mother had a bruise on her arm and, while helping her out of bed, he noticed another bruise on her hip. He

stated that his mother told him the nurse's aide yanked her out of bed and she fell on her hip. The emergency room doctor stated that her injuries were consistent with the incident she described and that the bruise on her hip was from a fracture that she may have received from the fall. He stated that if it had gone unreported for much longer that it could have gotten infected or she could have died. In the neglect condition, the son described that he discovered his mom lying in her own feces with severely dry lips and, while helping her out of bed, discovered bedsores on her hips. He stated that his mother told him the nurse's aide refused to help her out of bed and would not bring her water or help her to the bathroom. The emergency room doctor stated that her injuries were consistent with her story and that she was severely dehydrated and had stage three bedsores. He stated that her skin was beyond repair and had nerve damage from the bedsores. The APS worker's testimony was the same for all conditions. She stated that the victim described what had happened at the assisted living facility and that she was very upset and distraught. Throughout the summaries, the victim was described as either being cognitively healthy or having Alzheimer's disease.

The defense's case included testimony by the defendant, her supervisor, and her coworker. In the physical abuse condition, the defendant stated that she had a very friendly relationship with the victim and that she asked the victim if she wanted assistance out of bed, but the victim refused and ended up falling. The defendant acknowledged that she knew about the bruises and they seemed to be getting better. The defendant's supervisor stated that residents will sometimes fall but that the staff is mindful and is quick to assist them. The supervisor also stated that she does not always monitor her staff when they assist a resident who has fallen. The defendant's coworker stated that she had worked with the defendant multiple times and has never seen her physically aggressive with a resident. In the neglect condition, the defendant stated that

she noticed the victim's inflamed skin but said the victim stated that they did not bother her. The defendant's supervisor stated that residents do occasionally soil themselves, but the staff is mindful to quickly clean them up. The defendant's coworker stated that she had worked with the defendant on multiple occasions but has never seen her refuse to assist a patient. In the defense's case, the summary described the defendant as working on the floor with the cognitively healthy residents or the Alzheimer's residents.

Trial questionnaire. The trial questionnaire first had participants render their verdicts in the case as either guilty or not guilty. In addition, they rated their verdict confidence (1= *not at all confident* and 7= *extremely confident*), provided their reason for choosing their verdicts, and rated the defendant's guilt (1= *completely not guilty* and 7= *completely guilty*). They were also asked how serious they believed the alleged incident was (1= *not at all* and 7 = *extremely*). There were also several other trial variables that participants rated on a 7-point scale and the label for each endpoint differed. The participants rated defendant and victim credibility, honesty and believability (1= *not at all* and 7= *completely*) as well as their perceived pity, sympathy, and anger towards the defendant and victim (1= *none at all* and 7= *a lot*). Participants also rated how much they blamed the defendant and victim for the victim's injuries and how responsible each party was (1= *not at all* and 7= *completely*). Finally, the trial questionnaire included three manipulation check questions that the participants had to answer in order to have their data included in the final results: "What was the defendant accused of," "Choose the sentence that best fits the alleged victim (Mrs. Richardson) as she was depicted during the trial," "How old was the alleged victim at the time of the incident? If you do not know the exact age, please estimate her age." Before analyzing data, sub-scales were calculated from some of the rating questions: victim credibility (credibility, honesty, and believability; $\alpha = 0.91$), victim blame

(blame and responsibility; $\alpha = 0.90$), victim memory (ability to recall in general and ability to recall current incident; $\alpha = 0.98$), defendant credibility (credibility honesty, and believability; $\alpha = 0.97$), and defendant blame (blame and responsibility; $\alpha = 0.97$).

Feelings thermometer. The Feelings Thermometer has been used widely across many domains (e.g., political, psychological) in order to assess peoples' attitudes toward a variety of different groups of people (Norton & Herek, 2013). The feelings thermometer is a ratings scale that helps determine how warm or cold participants' feel towards a certain group of people on a scale of 0 (very cold) to 100 (very warm). For the purpose of this study, the feelings thermometer had participants rate their feelings of warmth towards eleven different social groups, including the elderly. There were also ten other social groups included (e.g. parents, children, men) in order to distract the participants from the main goal of trying to measure their attitudes towards the elderly.

Fraboni Scale of Ageism (FSA; Fraboni, Saltstone, & Hughes, 1990; Rupp, Vodanovich, & Crede, 2005). The FSA is a 23-question scale that was created in order to reflect the construct of ageism and to do so under three levels of prejudice. The FSA includes three subscales: stereotypes (e.g., "Many old people just live in the past"), separation (e.g., "Old people should find friends their own age"), and affective attitude (e.g., "The company of most old people is quite enjoyable"). Participants rated each of these questions on 4-point Likert-like scale (1 = *strongly agree* and 4 = *strongly disagree*). Participants scores were totaled; possible scores ranged from 23 (strongly positive feelings towards elders) to 92 (strongly negative feelings towards elders). The FSA scale in the current study reported a Cronbach's alpha of .91.

Procedure

The study was posted in MTurk under the name “Court decision making: being a juror”. The description of the study on MTurk was kept vague in order to rule out self-selection bias. Once participants clicked on the link it directed them to the study on Qualtrics.com, and then participants were asked if they would like to participate in the study with a consent form. If any participant chose “no, I do not agree to participate” on the consent form, they were forwarded to the end of the study. Participants who consented then completed a brief demographics questionnaire in which they gave their MTurk ID, age, gender, if they were a citizen, and ethnicity. Since this is a mock juror trial, all participants had to be jury eligible, meaning a citizen of the United States and 18 years or older. Participants also had to be over 18 for ethical reasons. They were also asked if they have ever served on a jury before, their highest degree, a question about their income, and a question of whether or not they had provided care for an elder or disabled person. Participants then rated their warmth on the feelings thermometer. The feelings thermometer was presented before the participants read the trial summaries in order to assess their attitudes towards the elderly before they read about elder maltreatment. Each participant was then randomly assigned to read one of the four trial summaries, then completed the trial questionnaire and the FSA. The FSA was provided after the elder maltreatment summaries in order to get a more in-depth measure of participants’ attitudes towards the elderly. After completing the study, participants were directed to a thank you page in which they were given a code in order to receive compensation for completing the study.

Results

Overall, the conviction rates across all conditions was 47.1%. Table 1 displays all of the trial ratings and ageism scale means across all conditions. A logistic regression analysis was used to determine if the manipulations had a main effect on guilty verdicts. In step one of the logistic

regression, both cognitive ability and harm type were tested to determine if there was a significant main effect on guilty verdicts. In step two, the interaction term of cognitive ability and harm type was added to the model to test whether these variables had an interactive effect on guilty verdicts. There were also univariate ANOVAs performed on all of the victim and defendant trial ratings to check for the effect of the independent variables.

Our first hypothesis predicted that there would be a main effect of cognitive ability on guilty verdicts and victim ratings, lowering both guilty verdicts and victim ratings. The logistic regression analysis revealed that participants were over one and a half times more likely to choose a guilty verdict when the victim had no cognitive deficit than when she had Alzheimer's (OR = 1.66 $p = 0.048$), supporting the hypothesis. The univariate ANOVA determined that the victim ratings that significantly decreased when Alzheimer's was present were victim credibility ($F [1, 251] = 33.49, p < 0.01$), victim memory ($F [1, 251] = 130.6, p < 0.01$), and victim anger ($F [1, 251] = 5.01, p = 0.026$; see Figure 1). The other victim ratings (i.e., empathy, sympathy, pity, blame) were not significantly affected by Alzheimer's disease being present. Additionally, there were two defendant ratings that were significantly decreased by Alzheimer's being present: defendant blame ($F [1, 251] = 4.16, p = 0.042$) and defendant guilt ($F [1, 251] = 6.15, p = 0.014$). All the other defendant ratings were not significantly affected by the presence of Alzheimer's disease.

Hypothesis two stated that there would be a main effect of harm type on guilty verdicts such that there would be significantly less guilty verdicts and lower victim ratings when neglect was presented than when physical abuse was presented. The logistic regression analysis revealed that, contrary to the hypothesis, participants were almost two times more likely to provide a guilty verdict when neglect was presented than when physical abuse was presented (OR = 1.82, p

= 0.019). The ANOVA tested for the effect of harm type on victim ratings. Aligning with the results for the guilty verdicts, victim ratings were lower when physical abuse was presented than neglect. The two victim ratings that were significantly affected by harm type were victim credibility ($F [1, 251] = 10.15, p < 0.01$), which participants rated lower, and victim blame ($F [1, 251] = 22.45, p < 0.01$), which participants rated higher, when presented with physical abuse compared to neglect (see Figure 2). There were multiple victim ratings (i.e., memory, sympathy, pity, empathy, anger) that were not significantly affected by the presence of physical abuse. Additionally, there were two defendant ratings that were significantly decreased by the presence of physical abuse: defendant guilt ($F [1, 251] = 7.00, p < 0.01$) and defendant blame ($F [1, 251] = 4.65, p = 0.032$). All the other defendant ratings were not significantly affected by the presence of physical abuse. Overall, harm type had a significant effect on verdicts and victim ratings, however, in the opposite direction than hypothesized, physical abuse was the harm type that lowered victim ratings and guilty verdicts.

The third hypothesis predicted an interaction between cognitive deficit and harm type causing lower guilty verdicts and lower victim ratings when the victim had a cognitive deficit and was neglected than in any other condition. The logistic regression analysis indicated that the interaction term was not a significant predictor of verdict ($OR = 1.11, p = 0.841$). However, there was one victim rating that was significantly affected by the interaction between harm type and cognitive ability: anger towards the victim ($F [1, 251] = 6.45, p = 0.012$). The interaction caused participants' anger towards the victim to be significantly higher in the condition with no cognitive deficit and physical abuse than all of the other conditions. There were no other victim or defendant ratings affected by the interaction.

Our final hypothesis predicted that there would be negative correlations between participants' ageism levels and victim ratings, as well as defendant guilt ratings such that higher ageism would predict lower victim ratings and lower defendant guilt ratings. For this hypothesis a correlation was conducted between the FSA, feelings thermometer, victim ratings, and defendant ratings. As seen in Table 2, the FSA had a moderate negative correlation with sympathy and empathy for the victim and a small negative correlation with victim memory ability, victim credibility, and pity for the victim. The FSA also had a moderate positive correlation with victim blame and anger towards the victim. This supports the hypothesis because as participants' ageism increased, they tended to have lower victim ratings. Another noteworthy correlation was a small negative correlation between the FSA and seriousness of the trial. According to this correlation, as participants' ageism levels increased, they rated the situation as less serious. There was also a small positive correlation with the FSA and defendant credibility, sympathy, and pity. As for defendant guilt, there was no statistically significant correlation between guilt and the FSA. Lastly, the FSA and the feelings thermometer, which measured how warm participants felt towards elders, were moderately negatively correlated with each other. This was to be expected as higher FSA scores imply more negative attitudes towards elders and higher feelings thermometer imply more positive attitudes towards elders.

Discussion

Overall, the current research supports findings in previous research, expands on that research, and creates a new pathway for future research. As with previous research regarding cognitive ability (Golding et al., 2005; Golding et al., 2013), we predicted that the victim's cognitive ability, specifically when the victim was presented with Alzheimer's disease, would have an effect on guilty verdicts and victim ratings by significantly lowering them. This

hypothesis was supported; participants were significantly more likely to choose guilty when the victim did not have Alzheimer's disease. The presence of Alzheimer's also significantly lowered how participants perceived the victim. Specifically, credibility, victim's memory capability, and anger towards the victim were all significantly decreased by the presence of Alzheimer's. The participants may have assumed the victim was not as credible because of her diagnosis of Alzheimer's and that she could have been misremembering what had happened. This is supported by the significantly lowered memory ratings by those participants in the Alzheimer's condition. The lower memory rating also relates to the real-world problem of the perception of Alzheimer's since it is a disease that makes remembering things very difficult. However, this is not always the case and should not be a reason someone may dismiss a maltreatment claim.

With the two different harm types presented, we predicted that there would be a main effect of harm type on guilty verdicts and victim ratings, making them significantly lower in the neglect condition than in the physical abuse condition. This hypothesis was partially supported in that there was a main effect of harm type on guilty verdicts and victim ratings, but the harm type that lowered the ratings was physical abuse and not neglect. We expected that neglect would have significantly less guilty verdicts because, according to Goodwin and Landy (2014), participants rated active harm (i.e., physical abuse) as being more appalling than passive harm (i.e., neglect). It is possible that the reason there were more guilty verdicts in the neglect condition than in the physical abuse condition was because participants perceived physical abuse as so appalling that it could not be possible that it happened. Since this is the first elder abuse jury bias study that directly compared physical abuse and neglect in an institutional setting and under criminal charges, further research should be conducted to see if these results are supported in different maltreatment and court settings, such as a domestic setting or by presenting it as a

civil case. For instance, it could be that in a civil case, participants would be more likely to rule in favor of the victim because the penalties, such as a payment for damages, may be perceived as less severe than jail time in a criminal case.

The third hypothesis stated that the interaction of harm type and cognitive ability would result in a significant decrease in guilty verdicts and victim ratings in the condition where the victim had Alzheimer's disease and was neglected compared to all other conditions. We assumed that participants would have significantly less guilty verdicts in the neglect condition with a victim who was presented with Alzheimer's disease because neglect may be harder to prove, and people may be less likely to believe someone with Alzheimer's. This hypothesis was not supported although there was an interaction between cognitive ability and physical abuse, affecting participants' anger towards the victim. When participants were presented with a physical abuse trial with a victim who had no cognitive deficit there was a significant increase in how much anger they had for the victim. It is possible that participants were angrier with the victim when she had no cognitive ability and was physically abuse because they perceived physical abuse to be so unlikely to happen that they were angry that someone would make a false accusation about it happening. It may also be the case that participants were angry with the victim because the victim did not report it sooner or do anything to stop it. One way to find this out is further analysis of the open-ended question the participants completed. If it is true that participants were angry for either reason stated above, then it is possible that this would be supported by their written responses.

Lastly, we expected that participants with higher levels of ageism would have less favorable attitudes towards the victim and lower guilt ratings for the defendant. Overall, this hypothesis was supported. It was found that as participants' ageism scores increased, how

favorable they were towards the victim decreased. This relationship has been seen in many previous studies and highlights the theory that higher ageism levels can lead to the devaluing of elders (Callan et al., 2012; Dunlap et. al, 2007; Wasarhaley & Golding, 2017).

Limitations and Further Research

For this study, we used an online study for many reasons. An online study allowed me to recruit a more diverse subject pool and collect a large sample, but this format makes it hard to allow participants to deliberate, like in a typical jury. The process of deliberation can have an effect on verdicts in a case because most deliberating jurors rely on the evidence in the trial as well as the support of other jurors helping clarify aspects of the trial and may help correct individual biases (Bornstein & Greene, 2011). Without the deliberation in the present study, we risk having participants who may not understand aspects of the trial or risk participants' individual differences, such as ageism, influencing their decision. One possible way to examine if the lack of deliberation affected outcomes is by testing the same exact trial except have the participants complete it in groups, giving them time for group deliberation, and compare the verdicts to the online sample.

Another limitation was the possibility that the content of the trial summaries would prime participants, causing a possible influence on their ageism scores. Since the FSA scale was presented after the participants read the trial summaries, we could not be certain that the ageism scores collected by the FSA were completely accurate. One option to remedy this would be to counterbalance the scale. This means that half of the participants would see the scale before the trial and half would see the scale after. Since we did not want the participants knowing the trial was about elders before they read the summaries, we chose a different solution. We had the participants rate how warm they felt towards multiple groups of people, including elders, in a

feelings thermometer before they read the trial and then had them answer the FSA after the trial. When running the analyses, a correlation was run for the relationship between the FSA and feelings thermometer score. A strong negative correlation was found, meaning that the warmer participants felt towards elders the lower their ageism scores were, and vice versa. This shows that the content of the trial summaries did not affect participants' ageism levels and also suggests that the feelings thermometer is a reliable scale to use in these situations.

Overall, the results in this study revealed that perceptions of an elder maltreatment trial can be affected by individual differences (i.e., attitudes toward elders), legal factors (i.e., harm type), and extra-legal factors (i.e., cognitive ability) but further research is needed. Although some of the results did replicate previous research findings, there were other results that should be looked into further. Since elder physical abuse and neglect had not been compared in a court context before, we based our hypothesis on research examining the devaluing of elders, which included different harm types (Goodwin & Landy, 2014). With the results reflecting the opposite of what was predicted, with the presence of neglect increasing guilty verdicts rather than decreasing them, it raises the question "why?" There are many directions future research can stem off of the current study. Specifically, one direction future research can examine is the comparison of physical abuse and sexual abuse in an elder abuse trial. Considering the current finding that the presence of physical abuse significantly decreased the guilty verdicts rendered, and the findings from a study on elder sexual abuse observing a significant low guilty verdict rates with the presence of sexual abuse (Hodell et al., 2009), it would be informative to compare these two maltreatment types in one study to examine the possibility of one producing fewer guilty verdicts in the other. This would be interesting to examine because people may perceive both types of maltreatment as outrageous, however, the act of sexual assault on an elder may be

seen as so preposterous that participants render even fewer guilty verdicts when presented with a sexual abuse case rather than a physical abuse case. This is just one of the many possibilities of future research because of the multiple types of elder maltreatment as well as the setting it can take place in, who the perpetrator is, the victim's cognitive ability, and if it would be considered a civil or criminal case.

Conclusion

Elder maltreatment is a prevalent problem within the United States and, because of issues such as underreporting, the occurrence of elder maltreatment may be more common than society is aware of. There are multiple different types of elder maltreatment, as well as many different individuals who can commit the maltreatment. The present study supports prior findings that a victim's cognitive ability can affect how participants view a trial and the victim, by causing participants to have less favorable views of the victim and the trial when a cognitive deficit is present. This research also provides new insight into how different harm types can affect trial outcomes differently. The outcomes of this study may give researchers a starting point for future comparisons of mistreatment types and a clear path for future research. Real world implications of this study may include a more in-depth look into elder maltreatment by law enforcement and investigators and the way the trials may be treated, such as being careful to check for jurors' ageism levels before assigning them to a case by possibly giving them an ageism scale or a questionnaire. Elder maltreatment is a serious problem in the United States and should not be brushed off even though the victim may be older. These cases need more publicity and more education into how they should be investigated and prosecuted.

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Table 1

Guilty Verdict Rate, Ageism Scale Means, and Trial Ratings

Scale	Condition			
	Neglect	Physical Abuse	No Alzheimer's	Alzheimer's
Participants	<i>n</i> = 126	<i>n</i> = 129	<i>n</i> = 129	<i>n</i> = 126
Guilty Verdict Rate	54.8%	39.5%	53.5%	40.5%
Fraboni Agesim Scale	42.78 (10.83)	44.05 (10.57)	43.55 (10.04)	43.3 (11.39)
Elder Feelings Thermometer	78.63 (19.89)	79.63 (20.64)	79.79 (19)	78.46 (21.49)
Seriousness	5.59 (1.78)	3.96 (1.26)	5.54 (1.21)	5.57 (1.22)
Victim Credibility	5.38 (1.17)	4.83 (1.45)	5.56 (1.21)	4.63 (1.32)
Victim Blame	2.15 (1.27)	3.02 (1.62)	2.52 (1.55)	2.67 (1.48)
Victim Memory	4.45 (1.76)	4.16 (1.8)	5.33 (1.43)	3.25 (1.46)
Victim Sympathy	6.32 (0.94)	6.21 (1.08)	6.23 (1.09)	6.29 (0.92)
Victim Pity	5.87 (1.39)	5.81 (1.29)	5.73 (1.47)	5.96 (1.18)
Victim Anger	1.52 (1.16)	1.72 (1.48)	1.8 (1.58)	1.44 (1)
Victim Empathy	6.75 (2.4)	6.38 (2.41)	6.71 (2.5)	6.41 (2.31)
Defendant Credibility	4.28 (1.69)	4.48 (1.43)	4.21 (1.59)	4.55 (1.52)
Defendant Blame	4.81 (1.75)	4.32 (1.73)	4.79 (1.73)	4.32 (1.76)
Defendant Sympathy	3.63 (1.87)	3.65 (1.67)	3.5 (1.81)	3.79 (1.72)
Defendant Pity	3.11 (1.7)	3.19 (1.74)	3.02 (1.72)	3.28 (1.71)
Defendant Anger	3.66 (2.01)	3.41 (2)	3.78 (2.04)	3.29 (1.95)
Defendant Empathy	3.66 (1.83)	3.67 (1.74)	3.57 (1.81)	3.77 (1.75)
Defendant Guilt	4.57 (1.78)	3.96 (1.79)	4.55 (1.72)	3.97 (1.85)

Note: Ratings presented as *M(SD)*. Trial ratings were rated on a scale from 1 to 7. The feelings thermometer was rated on a scale from 0 (*very cold*) to 100 (*very warm*). The FSA scores were summed and had a minimum score of 23 (more favorable feelings towards elders) and maximum score of 92 (less favorable feelings towards elders).

Table 2

Correlations Between Participant Ageism, Victim Ratings, and Defendant Ratings

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. FSA	-.478**	-.154*	-.092	-.257**	-.257**	.368**	-.158*	-.337**	-.321**	-.168**	.290**	.148*	-.104	.134*	.111	.175**	-.109
2. Elder feelings thermometer		.219**	.144	.219**	.208**	-.209**	.122	.286**	.299**	.202**	-.101	-.034	.098	-.053	-.020	-.028	.097
3. Participant age			.004	.085	.157*	-.042	.092	.157*	.176**	.128*	-.115	-.018	.002	.050	.040	.008	-.045
4. Guilt of defendant				.389**	.522**	-.411**	.540**	.115	.110	.118	.151*	-.693**	.887**	-.671**	-.635**	-.511**	.723**
5. Seriousness					.323**	-.368**	.203**	.386**	.351**	.302**	-.134*	-.263**	.361**	-.268**	-.263**	-.209**	.396**
6. Victim credibility						-.461**	.698**	.340**	.323**	.138*	-.075	-.303**	.500**	-.291**	-.283**	-.305**	.354**
7. Victim blame							-.291**	-.389**	-.351**	-.234**	.295**	.355**	-.411**	.345**	.345**	.309**	-.286**
8. Victim's memory								.139*	.187**	.001	.099	-.370**	.507**	-.355**	-.345**	-.310**	.404**
9. Sympathy for victim									.714**	.636**	-.302**	-.046	.136*	-.064	-.095	-.093	.187**
10. Empathy for victim										.568**	-.212**	-.042	.118	-.080	-.092	-.096	.143*
11. Pity for victim											-.104	.007	.108	.046	-.004	.080	.228**
12. Anger towards victim												-.057	.125*	.011	-.034	.049	.198**
13. Defendant credibility													-.679**	.746**	.735**	.590**	-.630**
14. Defendant blame														-.628**	-.605**	-.492**	.739**
15. Sympathy for defendant															.920**	.818**	-.583**
16. Empathy for defendant																.803**	-.573**
17. Pity for defendant																	-.436**
18. Anger towards defendant																	

Note: * $p < 0.05$, ** $p < 0.01$.

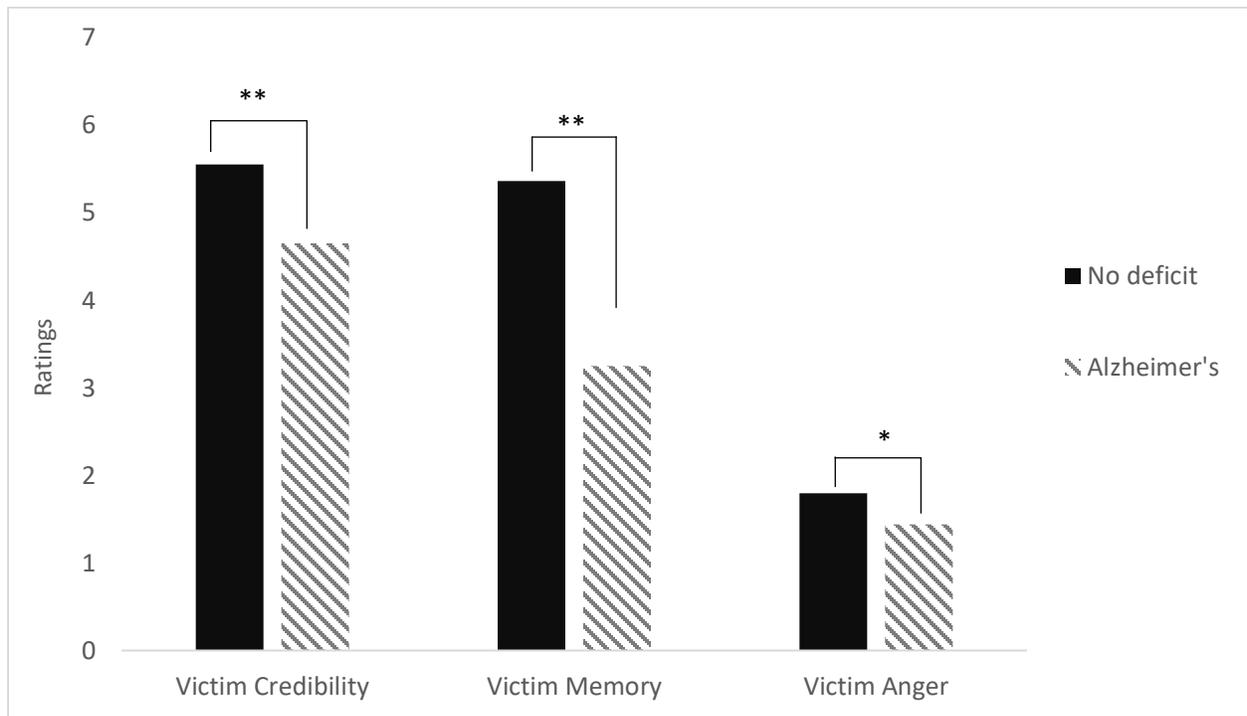


Figure 1. Effect of victim cognitive ability on victim ratings (* $p < 0.05$, ** $p < 0.01$)

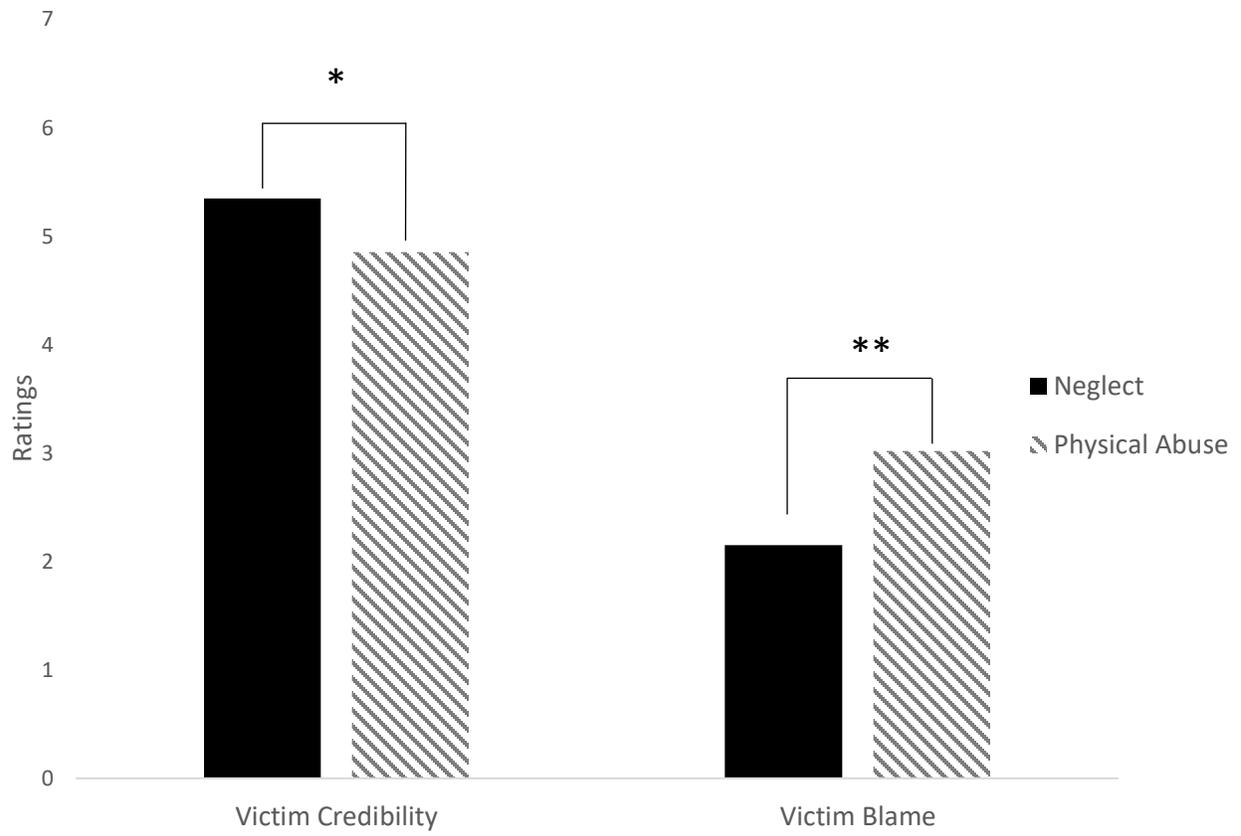


Figure 2. Effect of type of harm on victim ratings ($*p < 0.05$; $**p < 0.01$)