Original Article

Bleeding-Heart Horror Fans

Enjoyment of Horror Media Is Not Related to Lower Empathy or Compassion

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Abstract: The horror genre portrays some of the most graphic and violent scenes in media. How and why some people find enjoyment in such a graphic genre is an age-old question. One hypothesis is that people lower in prosocial traits such as empathy and compassion are more likely to enjoy horror. We found evidence against this hypothesis across three studies. Study 1 demonstrated that enjoyment of horror movies was unrelated to affective empathy, negatively associated with coldheartedness, and positively associated with cognitive empathy. A preregistered follow-up study found that measures of empathy and coldheartedness were unrelated to how many horror movies a participant had seen. In Study 3, enjoyment of horror movies was unrelated to the amount of money a participant decided to donate to a less fortunate participant. These findings contradict beliefs from the public about horror fans possessing lower levels of prosocial traits such as empathy and compassion. They also put into question findings from older studies about the relationship between empathy and enjoyment of horror media.

Keywords: horror, empathy, prosocial, compassion, personality

Horror: A Misunderstood Genre

Spiteful spirits, clandestine cults, murderous men, and malicious monsters are all right at home in the broad and multifaceted genre of horror. Horror can be difficult to define based on its subject matter. However, the aim of most horror movies is the same: to scare the audience. Horror might most simply be defined as the genre that aims to evoke feelings of fear and anxiety in its audience. Scary stories involving violent beasts, frightening monsters, and malevolent spirits can be found across the world and throughout time (Asma, 2011; Clasen, 2017; Felton, 1999; Gilmore, 2009; Scalise Sugiyama, 2006; Singh, 2021). Although the specific creatures vary widely, the scary stories we tell all share core features of danger that are informed both by evolved predispositions for threat monitoring and socioecological cues of threats (Clasen, 2012, 2017).

With threat at the core of the genre, frightening and graphic scenes are commonplace in horror. Because of the graphic nature of the genre, it is perhaps not surprising that those who enjoy horror are often misunderstood and their intentions or personalities maligned. The notion that horror movies and their fans possess immoral dispositions frequently makes its way into public discourse (Clasen, 2021). Of course, horror is not alone here. Moral panics have most notably arisen around violent video games, particularly in the early 1990s with the emergence of higher-resolution graphics and the increasing frequency of video game consoles in the home (Markey & Ferguson, 2017). The graphic nature of violent video games led to a strong intuition among many that violent video games might have a negative impact on society through increased levels of aggression. However, decades of research and hundreds of scientific studies have failed to find conclusive evidence that violent video games increase real-world violence (Elson & Ferguson, 2014).

The rise of slasher horror movies in the 1980s drew the ire of legendary film critics Gene Siskel and Roger Ebert. In his review of *I Spit on Your Grave,* Ebert claimed that there was no reason to see the movie other than to be entertained by sadism and suffering (Ebert, 1980). In a special episode of *Sneak Previews*, Ebert further claimed that slasher films "hate women" and that horror film audiences "don't seem to like women too much either" (Ebert & Siskel, 1980). Siskel shared his co-host's distaste for slashers and argued that the films are in favor of the killer and against the women fighting back. Siskel further speculated that the popularity of slasher films is the result of a "primordial response by some very sick people" (Ebert & Siskel, 1980). The rise of slasher movies in the 1980s also coincided with the prevalence of VCRs in homes and widespread availability of VHS tapes. In the United Kingdom, the

increased availability of slasher movies in homes led to a nationwide moral panic. Laws were passed that banned certain horror films, which were deemed "video nasties." This ban resulted in raids of video rental stores by the Scotland Yard in which VHS tapes of these films were confiscated and burned (Phelan, 2014).

The moral panic surrounding slasher horror films and video nasties in the 1980s was not an isolated incident. When *Spiral: From the Book of Saw* was released in 2021, *New York Post* critic Johnny Oleksinski wrote in his official review of the film that fans of the film and others like it were "depraved lunatics who should not be allowed near animals or most other living things" (Oleksinski, 2021). Some academics have also argued on philosophical grounds that horror films are immoral because they may reduce the viewers' ability to react compassionately to victimization (Muzio, 2006). Many people, it seems, believe that those who enjoy horror movies have a diminished ability to empathize and experience compassion.

Empathy and Compassion

Though a commonly studied aspect of human behavior, the precise nature and definition of empathy is an actively debated topic (Batson, 2009). Many scholars believe that empathy can be understood as a two-part system. The first part involves the capacity to recognize another person's emotion (cognitive empathy), while the second part involves experiencing that emotion or something like it (affective empathy). Cognitive empathy is related to theory of mind and perspective-taking, which afford humans the ability to mentally represent the minds of others (Spinella, 2005). Affective empathy involves the ability to feel or experience the emotions of others, which may be based in part upon the ability to mentally represent the mind of others. Although the two parts of empathy are related, they appear to arise from distinct neurocognitive processes (Blair, 2005; Shamay-Tsoory, 2009).

Empathy is often considered to lie at the core of concern and compassion for others. The rationale behind this thinking is that taking the perspective of another person and feeling what they feel is a powerful motivating factor in prosocial behavior. However, recent work contends that compassion and concern may be separable from empathy (Bloom, 2017; Jordan et al., 2016). Whereas (affective) empathy refers to *feeling* what others feel, compassion refers to *caring* about what others feel (Jordan et al., 2016). The lack of concern or compassion for others' well-being has also been conceptualized as *coldheartedness*, which refers to the callous and unemotional behavior that is often observed in psychopathy (Lilienfeld & Andrews, 1996). Trait levels of coldheartedness have been linked with lower levels of empathic concern and affective sharing (Oliver et al., 2016). Coldheartedness has also been negatively linked to behavioral measures of empathy. For example, higher levels of coldheartedness predict reduced likelihood of contagious yawning (Rundle et al., 2015).

Horror Fans and Empathy

Perhaps the most influential scientific paper on empathy in horror fans is Hoffner and Levine's (2005) meta-analysis on the enjoyment of mediated fright and violence. The authors state in the abstract of the meta-analysis that individuals lower in empathy reported greater enjoyment of mediated fright and violence. However, the meta-analysis suffers from several methodological limitations. Only six studies that measured empathic concern were included, limiting the strength with which conclusions can be drawn. The studies that were included in the analysis also had a restricted age range; participants in the six studies were exclusively high school students or undergraduates. At most, the meta-analysis might show some evidence that horror fans in their late teens and early 20s score lower in empathic concern. However, the strength of this claim rests heavily on two of the studies in the meta-analysis.

The two studies that reported the strongest negative correlations between empathic concern and enjoyment focused on enjoyment of victimization rather than enjoyment of horror per se. One of these looked at enjoyment of violent horror clips with brutal murders that yielded no satisfactory result and the other investigated the enjoyment of graphic violence such as torture. The researchers recognized these as potential outliers and performed a secondary analysis with these two studies removed. The results of this secondary analysis were null; there was no correlation between empathic concern and enjoyment of fright and violence in the remaining studies.

Since the 2005 meta-analysis was published, very few studies have been conducted to better understand the relationship between empathy or compassion and enjoyment of horror entertainment. A recent review of the literature on psychological responses to horror films found that low empathy was related to greater enjoyment and desire to watch horror, with some dimensions of empathy being better predictors than others (Martin, 2019). However, this conclusion stemmed largely from studies that were already included in the 2005 meta-analysis. Only one additional study was discussed in the review. In the additional study, Hoffner (2009) found that empathic concern was negatively correlated with enjoyment of suffering in horror films, but was associated with *increased* enjoyment of danger, excitement, and happy endings in horror films. In other words, empathic concern was positively correlated with some aspects of horror films and negatively correlated with other aspects. More recently, Scrivner (2021) found that

horror fandom was negatively correlated with trait levels of coldheartedness, suggesting that horror fans may actually have higher levels of concern for others' well-being.

The Current Studies

Empathy, or the lack thereof, has been assumed to be a key ingredient in explaining the enduring appeal of horror. However, research on the relationship between enjoyment of horror and trait empathy is surprisingly scant, and the studies that have been conducted appear to have mixed results. The actual association between traits that promote prosocial behavior and enjoyment of horror is not well understood.

The purpose of the current set of studies was to examine how enjoyment of horror movies relates to various measures of empathy and compassion. In Study 1, participants rated to what extent they enjoyed five different subgenres of horror and completed questionnaires that measured trait levels of cognitive empathy, affective empathy, and coldheartedness. In Study 2, participants indicated from a list of 50 horror movies which ones they had seen in the past 10 years. They then completed questionnaires that measured trait levels of cognitive empathy, affective empathy, and coldheartedness. In Study 3, participants from Study 1 played the dictator game 1 week after their initial participation. Participants were told they were randomly drawn to receive a bonus from their previous participation and could donate any amount of the money to another participant who was not randomly drawn to receive a bonus.

All data and code used in the current studies can be found on the Open Science Framework at https://osf.io/dzkb5/. All procedures were approved by the Social Sciences Institutional Review Board at The University of Chicago.

Study 1

The content of the horror genre may lead people to believe that horror fans do not have the same levels of kindness, empathy, or compassion as others. Several examples of this exist in popular culture, and empirical evidence for this can be found in Supplemental Study 1A. However, it is unclear whether this stereotype is accurate. Study 1 tested whether those who enjoy horror more do in fact have lower trait levels of empathy and compassion.

Given these mixed findings and the concerns raised about the conclusions drawn from Hoffner and Levine (2005), we did not expect to find a negative correlation between horror enjoyment and measures of affective empathy. Data on the relationship between cognitive empathy and enjoyment of horror are lacking, and therefore we made no specific predictions with respect to these two variables.

Hypothesis 1 (H1): Enjoyment of horror will be unrelated to affective empathy.

Scrivner (2021) found that horror fans and people who score high in trait measures of morbid curiosity score lower in measures of coldheartedness, a trait corresponding to a disregard for others' well-being. Therefore, we have some reason to believe that enjoyment of horror will be negatively correlated with coldheartedness.

Hypothesis 2 (H2): Enjoyment of horror will be negatively correlated with coldheartedness.

Method

Participants

A power analysis indicated that a correlation effect size of 0.2 could be detected with 90% power at an alpha of .05 with 255 participants. Based on this and availability of funds, 250 participants were recruited from Prolific for a study on personality, behavior, and media interests. Eligibility requirements included living in the United States and speaking English fluently. Six participants failed data quality checks and were removed from the analysis, leaving a sample of 244 (121 male; 118 female; M_{age} = 34) for analysis. Participants who reported neither male nor female as their sex were excluded from analyses where sex was a variable.

Measures

Horror Enjoyment

Like other movie genres, horror may be split into many different subgenres. It is difficult to determine an objective manner in which the genre may be split. One way to split the horror genre would be by the source of the main threat. For example, the main threat may be a monster, a human killer, a paranormal entity, the vulnerability of the human body, or feelings of insanity. These categories also map quite well to the domains of morbid curiosity (Scrivner, 2021), which are theorized to underlie the appeal of the horror genre. Based on this, five subgenres of horror were investigated in the study: gore/splatter, monster, paranormal, psychological, and slasher. These subgenres were chosen to cover a wide range of horror movies that may be divided by the broad type of threat they present.

Participants were given a brief definition of each subgenre followed by a couple of examples of that subgenre. For example, the paranormal descriptor read:

> The subgenre **Paranormal** focuses on the monsters we can't touch – supernatural entities like ghosts, spirits, and demons. Paranormal films often feature haunted houses, possession, exorcism, or occult worship. Examples include: *The Conjuring, The Exorcist, Paranormal Activity, Poltergeist,* and *The Omen.*

Table 1. Descriptive statistics for horror enjoyment, empathy, and coldheartedness

Measure	*M*	*SD*
Gore	1.96	1.06
Monster	2.48	1.07
Paranormal	2.58	1.03
Psychological	2.91	1.02
Slasher	2.22	1.08
Overall horror	2.43	0.84
Cognitive empathy	3.01	0.41
Affective empathy	2.92	0.51
Coldheartedness	1.92	0.51

Participants were then asked to rate the extent to which they agreed with the statement "I usually enjoy [**subgenre**] movies and TV shows" from 1 (= *strongly disagree*) to 4 (= *strongly agree*). Presentation order of subgenres was randomized for each participant. The enjoyment ratings for each of the five subgenres were averaged to calculate an overall horror enjoyment score. Finally, participants indicated which subgenre of the five was their favorite or selected "none" if they did not enjoy any of them. Analysis of favorite genres is reported in the Electronic Supplementary Material, ESM 1.

Empathy

The Questionnaire of Cognitive and Affective Empathy (QCAE; Reniers et al., 2011) was used to assess participants' trait levels of cognitive and affective empathy. Cognitive empathy is composed of the perspective taking and online simulation factors while affective empathy is composed of the emotion contagion, peripheral responsivity, and proximal responsivity factors.

Coldheartedness

The coldheartedness factor of the Psychopathic Personality Inventory short-form (Lilienfeld & Hess, 2001) was used to measure participants' trait coldheartedness. Coldheartedness refers to a general disregard for other people's well-being and can be understood as the opposite of compassion.

Procedure

Participants first completed the QCAE and coldheartedness scale. They then rated how much they enjoyed five subgenres of horror and indicated which of those five subgenres was their favorite.

Results

Descriptive Statistics

Descriptive statistics for horror enjoyment, empathy, and coldheartedness measures are presented in Table 1. Overall, participants reported that they enjoyed psychological horror the most and gore/splatter the least. A one-way ANOVA indicated that enjoyment varied significantly by subgenre, $F(5, 1458) = 24.53$, $p < .001$. Tukey's HSD test revealed that gore/splatter was enjoyed less than paranormal ($p < .001$), psychological ($p < .001$), and monster ($p < .001$). Slasher was enjoyed less than monster ($p = .002$) and psychological ($p < .001$). Monster ($p = .004$) and paranormal ($p < .001$) were enjoyed less than psychological horror.

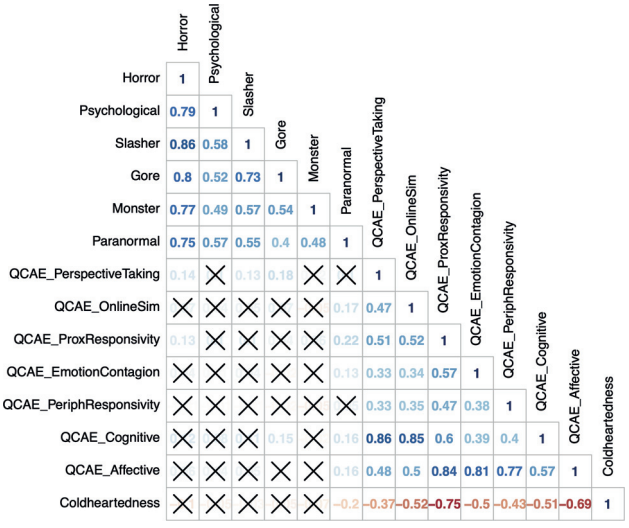

Figure 1. Correlation matrix for measures of enjoyment, empathy, and coldheartedness. Darker blue numbers indicate stronger positive correlations while darker red numbers indicate stronger negative correlations. An X indicates a nonsignificant correlation at the $p < .05$ level.

Zero-Order Correlations

Enjoyment of horror subgenres varied, but all correlations between them were positive and ranged from .40 to .73 (Figure 1). This suggests that enjoyment of subgenres as different as gore/splatter and psychological thrillers has something in common. Measures of cognitive and affective empathy were positively correlated ($r = .57$). Coldheartedness was negatively correlated with both cognitive ($r = -.51$) and affective empathy ($r = -.69$). These correlations indicate some common ground between the measures of compassion and empathy, but also suggest that each is measuring a somewhat distinct aspect of prosocial behavior.

Ratings of enjoyment of horror and all five subgenres were either positively correlated with measures of empathy, negatively correlated with coldheartedness, or demonstrated a nonsignificant correlation with empathy and coldheartedness (Figure 1). In other words, zero-order correlations showed no indication that enjoyment of horror broadly or any subgenre of it is related to lower empathy or compassion. In fact, some evidence emerged for greater

Table 2. Horror enjoyment regression models controlling for age and sex

Predictor variable	Unstandardized B	*SE*	Standardized beta	*t*	Sig.
Affective empathy	0.13	0.11	0.08	1.15	.253
Cognitive empathy	0.28	0.13	0.14	2.16	**.031**
Coldheartedness	−0.28	0.11	−0.17	−2.58	**.010**

Note. Bold indicates $p < .05$.

empathy and compassion among those who enjoyed horror more.

Horror, Empathy, and Coldheartedness

We predicted that enjoyment of horror would be unrelated to affective empathy. A two one-sided test (TOST) for equivalency was conducted. While traditional null hypothesis testing cannot be used to truly determine whether an effect is zero, TOST allows researchers to determine whether effects extreme enough to be considered meaningful can be rejected (Lakens et al., 2018). Based on a sensitivity analysis, the 244 participants in our analysis allowed us to detect effect sizes beyond $r = .20$ and $-.20$ with 86% power with α set to .05. An effect size of 0.2 was chosen because it is a typical effect size for media research (Rains et al., 2018) and effects smaller than this may be of little practical significance.

Affective Empathy

A TOST analysis found that the correlation between affective empathy and degree of horror enjoyment was statistically equivalent, $r(242) = .06$, $p = .015$. This means that correlations at least as extreme as ±.20 between affective empathy and horror enjoyment can be rejected.

Coldheartedness

We predicted that coldheartedness would be negatively correlated with horror enjoyment. We found that the zero-order correlation between coldheartedness and horror enjoyment was negative but not significant ($r = -.10$, $p = .115$).

Cognitive Empathy

Finally, we explored the association between cognitive empathy and horror fandom. We found that cognitive empathy had a trending positive correlation with horror enjoyment ($r = .12$, $p = .059$), and a post hoc TOST analysis found that the null equivalence hypothesis could not be rejected, $r(242) = -.12$, $p = .059$, meaning that a firm conclusion could not be drawn on this correlation.

Age and Sex

Older participants had lower affective ($r = -.25$, $p < .001$) and cognitive empathy ($r = -13$, $p = .042$), but age was unrelated to coldheartedness ($r = .02$; $p = .800$). Older participants also reported less enjoyment of horror overall ($r = -.21$, $p < .001$). Male participants had lower affective empathy ($t = -5.61$, $p < .001$, Cohen's $d = -0.73$), lower cognitive empathy ($t = -2.76$, $p = .006$, $d = -0.36$) and greater coldheartedness ($t = 5.15$, $p < .001$, $d = 0.66$) than female participants. Male participants also reported more enjoyment of horror overall compared with female participants ($t = 2.47$, $p = .014$, $d = 0.32$).

Regression Models

Because age and sex were significantly correlated with measures of horror enjoyment, empathy, and coldheartedness, regression models were conducted. Three regressions were conducted with horror enjoyment as the outcome, either cognitive empathy, affective empathy, or coldheartedness as the predictor, and age and sex as covariates.

Controlling for age and sex, lower coldheartedness predicted overall horror enjoyment ($p = .010$), as did higher cognitive empathy ($p = .031$). Affective empathy was not significantly associated with overall horror enjoyment ($p = .253$). See Table 2 for more details on the regression models.

Discussion

Study 1 demonstrated that common stereotypes about horror fans being callous and low in empathy are inaccurate. Those who enjoyed horror movies were no less empathetic or compassionate than those who did not enjoy horror movies. In fact, horror fans appear to possess higher levels of some prosocial traits. Participants who reported enjoying horror movies had higher levels of cognitive empathy and lower levels of coldheartedness. Moreover, we found no evidence that affective empathy was related to enjoyment of horror films. It is possible that a correlation between these variables exists at a smaller effect size. However, effects of those sizes are likely to be of little practical significance.

We also explored how enjoyment of various horror subgenres related to empathy and coldheartedness. Enjoyment of specific subgenres followed the same trend as overall horror enjoyment. There were no instances where greater enjoyment of a horror subgenre was associated with lower empathy or higher coldheartedness. This finding contradicts concerns among the public and critics that those who enjoy some subgenres of horror are lacking in empathy and compassion. Enjoyment of paranormal horror showed the strongest association with empathy and compassion.

Those who enjoyed paranormal horror more had significantly greater cognitive and affective empathy as well as significantly lower coldheartedness.

Study 2

Study 1 provided some evidence that those who report enjoying horror movies have higher levels of cognitive empathy and lower levels of trait coldheartedness. There was no evidence that those who enjoyed horror more had higher or lower levels of affective empathy. However, the range of choices on the horror enjoyment item was relatively restricted and did not include a midpoint. Participants may also not have a good idea of how much of a horror fan they are relative to other people, and therefore two people may give the same answer but still differ in how much they engage with the genre. Study 2 aimed to address some of the limitations in Study 1 by using a more concrete measure of horror engagement.

The preregistered hypotheses and analysis plan for this study can be found on Researchbox.com (https://researchbox.org/1184&PEER_REVIEW_passcode=LBLVBZ). On the basis of previous literature and the findings from Study 1, we predicted that participants who had seen more horror movies in the past 10 years would have higher levels of cognitive empathy and lower levels of coldheartedness. Given the mixed findings on affective empathy and the statistical equivalence found in Study 1, we predicted that affective empathy would be unrelated to the number of horror movies seen in the past 10 years.

Hypothesis 3 (H3): Number of horror movies seen in the past 10 years will be positively correlated with trait levels of cognitive empathy.

Hypothesis 4 (H4): Number of horror movies seen in the past 10 years will be negatively correlated with trait levels of coldheartedness.

Hypothesis 5 (H5): Number of horror movies seen in the past 10 years will be unrelated to trait levels of affective empathy.

Method

Participants

An a priori power analysis indicated that an effect size of r = .20 could be detected with 95% power at an α of .05 with 314 participants. In anticipation that some participants may fail the data quality checks, 320 participants were recruited from Prolific for a study on personality, behavior, and media interests. Eligibility requirements included living in the United States and fluency in English. Thirteen participants failed data quality checks and were removed from analysis, leaving a sample of 307 (156 male; 145 female; M_{age} = 36) for analysis.

Measures

Horror Engagement and Fandom

The key variable for horror fandom in this study was the number of horror movies watched in the past 10 years from a list of 50 horror movies. The list of 50 horror movies was drawn from IMBD (https://www.imdb.com/list/ls045017156/) and was determined by rankings from 30 horror movie experts from across the industry. The experts were asked to name their top 25 horror movies. Each expert's #1 selection was granted 25 points, their #2 selection was granted 24 points, and so on down to one point for each #25 selection. Points were tallied to create the list and determine the top 100 horror films of all time. Only the top 50 from this list were shown to participants to help prevent survey fatigue. Participants also rated how much they like horror movies in general from 1 (= *not at all*) to 9 (= *very much*). Number of movies watched from the top 50 list were compared with these ratings to assess convergent validity.

Empathy

As with Study 1, the Questionnaire of Cognitive and Affective Empathy (QCAE; Reniers et al., 2011) was used to assess participants' trait levels of cognitive and affective empathy.

Coldheartedness

As with Study 1, the coldheartedness factor of the Psychopathic Personality Inventory short form (Lilienfeld & Hess, 2001) was used to measure participants' trait coldheartedness.

Procedure

Participants first completed the QCAE and coldheartedness scale and reported how much they generally like horror movies. Finally, participants indicated which of the 50 horror movies on the list they had watched in the past 10 years. The 10-year time frame was chosen to help eliminate strong effects of age (i.e., older participants might have seen more movies simply because they have had more time to watch movies) and to better estimate current levels of horror engagement rather than horror engagement in the past.

Results

Descriptive Statistics

Descriptive statistics for each main variable can be found in Table 3. Average scores on empathy and coldheartedness measures in Study 2 closely matched scores in Study 1

Table 3. Correlation between amount donated and enjoyment of horror subgenres

Genre	*r*	*p*
Gore	.00	.948
Monster	−.05	.441
Paranormal	.03	.687
Psychological	−.10	.135
Slasher	−.01	.840
Overall horror	−.04	.606

(Table 1). The average participant in Study 2 reported having seen about 11 of the 50 movies on the list. Most (93%) participants had seen at least one of the movies on the list, and the participant who had seen the most movies reported having seen 47 of the 50 movies.

Horror Fandom, Empathy, and Coldheartedness

Horror Movies and Horror Enjoyment

Our preregistered analysis plan indicated that we would only use the number of movies seen variable if the number of movies seen was at least moderately correlated ($r > .40$) with self-reported enjoyment of horror movies. Number of horror movies seen was strongly correlated with self-reported enjoyment ($r = .61$, $p < .001$), and therefore we continued the analysis using only the number of movies seen.

Cognitive Empathy

On the basis of our findings in Study 1, we predicted that cognitive empathy would be positively correlated with the number of horror movies seen. Although a positive association did appear, the zero-order correlation was not significant ($r = .10$, $p = .075$). A post hoc TOST analysis found that the null equivalence hypothesis could be rejected, $r(305) = .10$, $p = .037$, indicating that correlations at least as extreme as ±.20 between cognitive empathy and horror enjoyment can be rejected.

Coldheartedness

We predicted that coldheartedness would be negatively correlated with horror enjoyment based on our findings from Study 1 and findings from Scrivner (2021). However, the zero-order correlation between coldheartedness and horror enjoyment was not significant ($r = -.02$, $p = .613$). A post hoc TOST analysis found that the null equivalence hypothesis could be rejected, $r(305) = -.02$, $p = .001$, indicating that correlations at least as extreme as ±.20 between coldheartedness and horror enjoyment can be rejected

Affective Empathy

On the basis of the equivalence test from Study 1, we predicted that affective empathy would be unrelated to the number of horror movies seen on the list. A TOST analysis with bounds set at ± $r = .20$ found that the correlation between affective empathy and number of horror movies seen was statistically equivalent, $r(305) = .06$, $p = .006$. This indicates that correlations at least as extreme as ±.20 between affective empathy and horror enjoyment can be rejected, supporting H5.

Age and Sex

Older participants had lower affective empathy ($r = -.15$, $p = .010$), but age showed no association with coldheartedness ($r = .01$; $p = .875$) or cognitive empathy ($r = .01$, $p = .851$). Age was also not significantly associated with the number of horror movies seen in the past 10 years ($r = .09$, $p = .111$).

Male participants had significantly lower affective empathy ($t = -6.10$, $p < .001$, $d = -0.70$), lower cognitive empathy ($t = -2.04$, $p = .042$, $d = -0.23$) and greater coldheartedness ($t = 5.67$, $p < .001$, $d = 0.65$) than female participants. These sex differences mirrored those in Study 1 and the existing literature. Male participants had not seen significantly more horror movies on average (11.8) than female participants (10.7), $t = 0.95$, $p = .343$. However, male participants did report slightly greater enjoyment of horror movies (4.99) than female participants did (4.30), $t = 2.09$, $p = .038$, $d = 0.24$. Because age and sex were not related to the number of horror movies seen, regression models were not conducted in Study 2.

Discussion

In a preregistered conceptual replication, Study 2 showed that horror fandom was unrelated to measures of cognitive empathy, affective empathy, and coldheartedness. A positive trending correlation did emerge for cognitive empathy, but the effect size was quite small and well below the power of our study. It seems likely that a small positive correlation (∼ 0.10–0.15) might exist between cognitive empathy and horror fandom, but this would need to be verified in a future study with a much larger sample size.

Although each of the prosocial traits we measured were found to be unrelated to horror fandom, it is interesting to note that the correlations in both Study 1 and Study 2 were all positive between horror fandom and prosocial traits. Together, the results of Study 1 and Study 2 provide evidence against the common assumption that those who watch and enjoy horror movies do so because they are lacking in empathy or compassion for others.

Study 3

Studies 1 and 2 provided evidence that the stereotype of those who enjoy the horror genre as coldhearted and unempathetic is inaccurate. However, it is possible that people

who enjoy horror act less empathetic or compassionate in a real situation. To test whether enjoyment of horror was related to acts of compassion, participants played a dictator game approximately 1 week after their participation in Study 1. We did not expect horror fandom to be related to donation amount.

Hypothesis 6 (H6): Donation amount will be unrelated to reported horror fandom.

Method

Participants

Between 7 and 14 days after their initial participation, participants from Study 1 were offered the opportunity to complete Study 3. Of the 244 participants who were included in analyses in Study 1, 88% (n = 215) participated in Study 3.

Procedure

Participants were given a bonus equal to 50% of their initial compensation and told they could donate any portion of it to another participant who did not receive a bonus. Participants' donations were anonymous, and they had no expectation of reciprocity. Participants were given the following prompt:

> You recently participated in a study on personality, behavior, and media interests with 250 other participants from Prolific. Due to leftover funds, we are able to allocate a bonus to some participants.
>
> Half of the participants who completed the study were randomly selected to receive a $0.50 bonus. Your Prolific ID was in the random half that was drawn to receive the bonus.
>
> You may donate some portion of the bonus to another participant whose name was not drawn if you wish to do so. You may donate any amount of the bonus, from 0 cents to 50 cents, to another participant whose Prolific ID was not drawn for the bonus.

Results

Donations

Donations ranged from 0% to 100%, with a mean of 21% and median of 2%. Approximately half of the participants (51%; n = 109) decided to donate some portion of their bonus to another participant. Of those who decided to donate, the mean percent donated was 41% and the median was 50%.

A sensitivity analysis indicated that we had 81% power for equivalence bounds of r = −.20 and .20. A post hoc TOST analysis found that the null equivalence hypothesis could be rejected, $r(212)$ = .10, p = .007, indicating that correlations at least as extreme as ±.20 between donation amount and horror enjoyment can be rejected. Horror fans were also not more or less likely to donate some portion of their winnings (t = −0.02, p = .981). Greater enjoyment of horror overall was not significantly correlated with how much a participant donated (r = −.04; p = .606; Figure 2, Table 3).

Age was also unrelated to donation amount (r = .06, p = .414) and male participants and female participants did not donate significantly different amounts (t = −0.13, p = .900). Donation amount was negatively correlated with coldheartedness (r = −.21, p = .002), but was not significantly correlated with cognitive (r = .02, p = .782) or affective empathy (r = .10, p = .127).

Discussion

In Study 3, participants were told they were randomly selected to receive a bonus. They were allowed to anonymously donate any portion of that bonus to another participant who they were told was not randomly selected to receive a bonus. About half of the participants decided to donate some portion of their bonus.

Horror fans were not more or less likely to donate some portion of their bonus. There was also no correlation between amount donated and reported enjoyment of any subgenre of horror or enjoyment of horror overall. This study further supports the hypothesis that those who express greater enjoyment of any given subgenre of horror act just as kindly and compassionately as those who do not enjoy horror. These findings build on the results from Studies 1 and 2 to support the conclusion that horror fans are no less compassionate or empathetic than those who dislike horror.

The only variable that predicted the amount participants chose to donate was trait coldheartedness; those who were lower in coldheartedness donated more of their bonus. This is in line with the idea that coldheartedness taps into the general disregard one has for another person's well-being and is distinct from the capacity to understand the mind and perspective of another person (cognitive empathy) and to feel what they feel (affective empathy). The lack of association between affective empathy and donation amount may seem surprising at first. However, some previous studies have also reported no association between induced empathy and generosity in a dictator game (e.g., Herne et al., 2022; Lönnqvist & Walkowitz, 2019). This

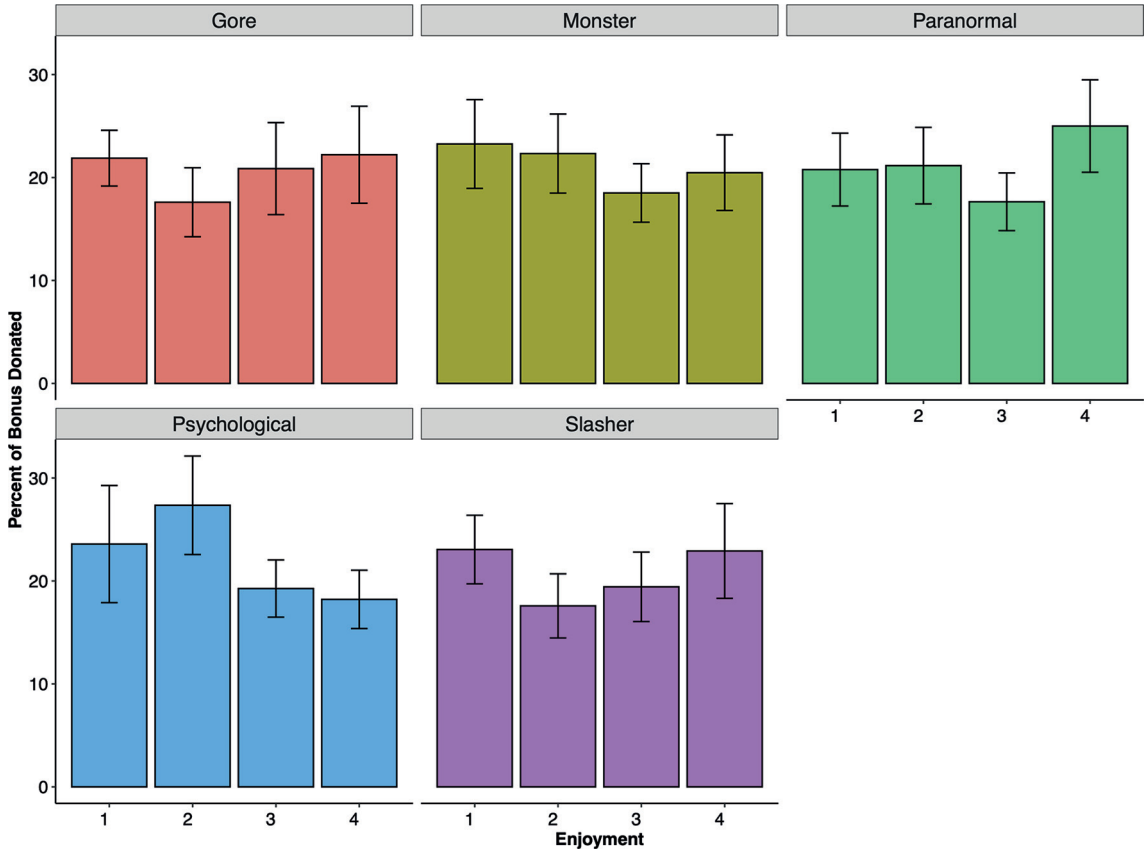

Figure 2. Enjoyment of horror subgenres and percent of bonus donated. Enjoyment of horror subgenres was unrelated to how much of their bonus a participant donated. Enjoyment was rated from 1 (= *strongly disagree*) to 4 (= *strongly agree*) when participants were presented with the statement, "I usually enjoy [**Subgenre**] movies and TV shows" in Study 2. Error bars represent *SE*.

suggests that the dictator game may be measuring a slightly different aspect of prosocial behavior than affective empathy, albeit one that does not seem to differ in horror fans.

General Discussion

The violent and graphic nature of the horror genre can sometimes lend itself to criticism. It may seem intuitive to some that those who enjoy a graphic story where violence and suffering are inflicted upon the protagonists might be lacking in empathy or compassion. Examples of this assumption about horror fans can easily be found in public discourse, from film critic reviews to policy discussions about violence in movies and video games. Previous research on horror fans and empathy, which took place largely in the 1980s, does provide some support for the notion that horror fans are lower in empathy (Hoffner & Levine, 2005; see also Lynch & Martins, 2015, for evidence in video games). However, as discussed in the Introduction, many of these studies suffer from methodological or conceptual limitations. Moreover, there is a lack of recent research on the association between enjoyment of horror and traits that promote prosocial behavior.

Studies 1 and 2 found little evidence linking empathy, coldheartedness, and compassion to enjoyment of horror movies. Indeed, the only associations that appeared were *higher* empathy and *lower* coldheartedness among those who expressed greater enjoyment of horror movies. Those who enjoyed paranormal horror more scored higher on nearly every domain of cognitive and affective empathy and lower on coldheartedness in Study 1. Enjoyment of even the most violent subgenres of horror, such as gore/splatter and slashers, correlated positively with some aspects of cognitive empathy and was not significantly associated with affective empathy and coldheartedness. When participants were given the opportunity to donate a portion of their bonus to less fortunate participants in Study 3, the extent to which a participant enjoyed horror was unrelated to how much money they donated.

Some of the assumptions about low empathy and compassion in horror fans may come from work showing that horror fans score higher in dark traits, particularly subclinical psychopathy. For example, Bowes et al. (2018) found that fans of horror and thriller movies scored higher in

the fearless dominance factor of subclinical psychopathy. Scrivner (2021) also found that horror fans and people with higher morbid curiosity score lower in honesty–humility and higher in overall psychopathy.

Clinical psychopathy has traditionally been linked to low empathy (Hare, 2003). However, capacity for empathy may be somewhat unrelated to subclinical psychopathy. Lishner et al. (2012) found little evidence that subclinical psychopathy was related to empathic concern, and in some cases, subclinical psychopathy was positively correlated with empathy. Mihailides et al. (2017) used what they call the *moral inversion method* to induce higher levels of state psychopathy, as measured by the Triarchic Psychopathy Measure. After psychopathy induction, empathy was impaired for outgroup members, but remained unchanged for ingroup members. Further evidence that psychopathy and empathy are not mutually exclusive can be found in the recent discovery of "dark empaths." Using latent profile analysis, Heym et al. (2021) found that a subpopulation of individuals with high dark traits (i.e., psychopathy, Machiavellianism, and narcissism) also have elevated levels of empathy. This group of studies suggests that global deficits in empathy may not be a necessary condition for subclinical psychopathic attitudes and behaviors.

Limitations and Future Directions

Although the present studies provide evidence countering the notion that enjoyment of horror is related to lower empathy and compassion, there is still more work to be done to understand the personality and behavior of those who enjoy horror entertainment. Aside from Study 3, which measured actual prosocial behavior, the other findings in this paper are based on self-reported behaviors and attitudes. In Study 3, the amount of money that could be donated or kept was quite small. It is possible that the results would change with a larger and more meaningful amount of money. The relationship between the use and enjoyment of horror media and behavioral measures of prosociality should be further investigated beyond dictator games.

It is possible that some horror fans have different levels of empathy or compassion on average, even if this does not show up across rated enjoyment of subgenres. Scrivner et al. (2022) recently identified three types of horror fans: adrenaline junkies, white knucklers, and dark copers. These three types of horror fans appear to be attracted to horror for different reasons and experience different psychological benefits from horror engagement. Because these three types of horror fans use horror for different reasons and experience different benefits from engagement with horror, it is possible that they differ in traits such as empathy or compassion. In other words, the reasons why people engage in horror media use may be more relevant to prosocial behavior than the types of horror movies they enjoy or the extent to which they enjoy them.

Conclusion

Those who enjoy the horror genre are often seen as having deficits in traits that promote prosocial behavior such as empathy and compassion. Study 1 found no evidence that those who enjoy horror are lower in traits related to prosocial behavior, and in some cases, found the opposite. Enjoyment of horror was unrelated to trait levels of affective empathy, was positively associated with cognitive empathy, and negatively associated with coldheartedness. A conceptual replication in Study 2 found that empathy and coldheartedness were unrelated to the number of horror movies a participant had seen in the past 10 years. Study 3 used a dictator game to test whether greater enjoyment of horror would predict decreased donations. Consistent with Studies 1 and 2, horror enjoyment was unrelated to how much money participants decided to donate.

The results of these studies call into question previous findings on the negative association between empathy and the enjoyment of horror entertainment. Future studies should extend this research by looking into the association between prosocial traits and the reasons people use horror. The reasons people use horror may be more closely related to prosocial behavior than simple enjoyment of the genre. The present research suggests that enjoying horror movies – even the most violent and gory subgenres – has little to do with how empathetic or compassionate a person is.

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Publication Ethics
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Open Data
All data and code used in the current studies can be found on the Open Science Framework at https://osf.io/dzkb5/ (Scrivner, 2023). Supplemental data for this article can be accessed online at https://osf.io/dzkb5/.

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