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Fear, disgust, and pursuit of different types of horror: Introducing the Horror Themes Questionnaire

Abstract: Despite the increasing popularity of the horror genre, there are no psychometrically sound instruments that would allow for the study of horror, taking into account the complexity of the genre and the different individual responses it evokes in its recipients. In this study, we present the Horror Themes Questionnaire (HTQ), which assesses fear, disgust, and pursuit of different types of horror. The measure consists of scales related to five specific themes characteristic of the horror genre: monsters, paranormal phenomena, killers and psychopaths, mental disorders, and gore and violence. The HTQ items were evaluated by competent judges to confirm their content validity and then tested on a group of 627 adults. Factorial analyses confirmed that the questionnaire can be used to obtain overall scores regarding fear, disgust, and pursuit of horror, as well as scores on each of the five specific scales. We also confirmed configural and metric equivalence between the scores for the fear, disgust, and pursuit parts of the questionnaire. The reliability of HTQ was satisfactory in terms of both internal consistency and stability over time. The convergent and divergent validity of the measure was confirmed by showing that HTQ scores correlate with scores on questionnaires that assess personality traits, empathy, assumptions about the benevolence and meaningfulness of the world, worthiness of self, need for cognitive closure, trait anxiety, and general disgust sensitivity. HTQ is the first psychometrically sound measure that allows for comprehensive examination of the horror genre in psychological research.

Keywords: *horror; fear; disgust; pursuit of horror; assessment*

INTRODUCTION

Works labeled as horror, whether they are movies, books, graphic novels, video games or other, represent a cultural phenomenon that attracts a large and diverse audience. So far, scientific attempts to analyze horror and explain why works that appeal mainly to negative emotions are so popular have been hampered by conceptual and methodological issues. A major conceptual concern in horror studies is the lack of consensus among researchers on the definition of horror (Cherry, 2009; Pendery, 2017). Arbitrariness in terms of how to understand the studied phenomenon may cause confusion about obtained results and their interpretation. Methodologically, there are no psychometrically sound instruments enabling

the study of horror which address the complexity of the genre. Authors who engage in empirical research often propose their own classifications of horror subgenres or motifs, but these have weak or non-existent theoretical justifications (e.g., Hudson et al., 2020; Sacco et al., 2024). In this article we demonstrate that it is possible to study horror empirically in a way that takes into account the characteristic motifs of this genre. First, we present an overview of attempts to define horror and distinguish its subgenres; this overview led us to formulate a definition of horror that can serve as a starting point for empirical research. To ground our research in psychological theory, we link this definition to the morbid curiosity concept (Scrivner, 2021a). Next, we present a measure developed on the basis of our definition that makes it possible to



assess individual responses to specific horror themes, thus allowing horror to be studied in a more sophisticated manner than in previous research.

Definition of horror

The difficulty of defining horror may appear surprising, given that works representing this genre usually seem rather easy to identify, regardless of media type. However, scholars from various disciplines have struggled to create a satisfactory definition of horror. To mention several notable examples, Lovecraft (1927/2013), one of the luminaries of the genre, stated that horror (*weird tales*) should not be expected to conform to a theoretical model because this genre's most important aspect is the atmosphere, which affects the person on an emotional level, causing a sense of dread and of contact with the unknown. Carroll (1990) defined horror by the presence of a monster that is dangerous and impure and thus evokes emotions of fear and disgust. Cherry (2009), discussing cinematic representations of the genre, stated that the name "horror" serves as an umbrella term for various subgenres. According to this author, the boundaries of the horror category are constantly changing and it is difficult to indicate its main defining features apart from the function of evoking strong negative emotions, i.e., horrifying the recipient. Other recent definitions describe horror as entertainment intended to cause fear and/or disturbance in the audience (Clasen, 2018), or as narrative fiction that aims to use specific elements which typically evoke negative emotions (Clasen, 2021). So-called "horror elements" can be used in various genres, but in horror they dominate the story. The difficulties in delineating the boundaries of the horror genre lead to claims that it makes more sense to focus on describing various aspects of horror without providing a clear definition of it (Martin, 2019) or that a broad and common-sense understanding of this category is in some cases better than theoretical propositions that add confusion to the subject (Pendery, 2017).

One of the main obstacles to creating a definition of horror is the complexity of the genre, and most scholars would probably agree that the study of horror requires distinguishing its specific subgenres. Both Lovecraft (1927/2013) and Carroll (1990) suggested that supernatural horror, that is, horror in which the laws of nature are somehow violated by unexplainable forces, should be distinguished from macabre stories that do not contain supernatural elements. Several authors (for a review, see Tamborini & Weaver, 1996) distinguish between two forms of horror fiction: one in which the laws of nature are violated beyond common logic and reason (e.g., ghosts or demonic possession), and another in which strange or terrifying events are given rational or scientific explanations (e.g., aliens or catastrophic events). Cherry (2009) recognized the notion of horror subgenres as important but did not introduce a definitive taxonomy, naming several conceptually overlapping examples of subgenres, such as "slashers", "psychological horror", "body horror, splatter, and gore films" or "exploitation cinema".

The need to distinguish types of horror is also noted in empirical research. For example, in a neurobiological study of fear, participants were asked what type of movies scared them most, and they were presented with a list of a dozen seemingly random categories, such as "teen horror", "survival horror", "real events", "blood and gore" or "torture" (Hudson et al., 2020). In another study, participants were asked how often they watched horror films from eight different subgenres, which included types of horror films such as "paranormal fiction", "based on true events/re-enactments" or "found footage" (Geusens, 2023). Another group of authors focused on psychological horror, but these authors initially distinguished eight horror subgenres, including such categories as "body horror", "slasher", and "comedy horror" (Sacco et al., 2024).

Conceptual issues in horror studies have an impact on important elements of study design, making it difficult to generalize findings and precisely understand the studied phenomena. In many studies, participants are either asked general questions about their attitude towards horror (e.g., Sparks, 1986; Clasen et al., 2018) or are presented with specific examples of works that belong to the genre (e.g., Tamborini & Stiff, 1987; Sparks et al., 1999). The main limitation of both approaches concerns the fact that respondents may have different attitudes towards particular types of horror; for example, people who enjoy watching movies about aliens may react quite differently to movies about ghosts or serial killers. Thus, it should be assumed that questions or stimuli which are either too general or too specific may not provide a good basis for drawing wide-ranging conclusions. In other studies, authors recognize the need to ask participants about different horror subgenres or themes associated with the genre, but little concern is given to the introduced categories and the way they are assessed. This approach leads to the use of surveys or self-developed questionnaires that are not anchored in any theory and are not subjected to thorough psychometric validation (e.g., Hudson et al., 2020; Geusens, 2023). As of today, there is no consensus in science as to what exactly horror subgenres are and how they should be studied in empirical research.

We propose a definition of horror that takes into account different horror types and may provide a basis for researchers interested in studying the relationship between horror and the psychological characteristics of the audience. Our proposition is linked to morbid curiosity theory (Scrivner, 2021a; 2021b). According to this theory, people vary in regard to how interested in or curious they are about unpleasant things, especially those related to harm and death. This type of curiosity drives people to learn about dangerous things, which gives them knowledge that may help them to avoid danger or cope with difficult situations. However, obtaining such knowledge comes at the cost of eliciting negative emotions, mostly fear and disgust. Linking this theory to the horror genre, we recognize that horror uses morbid themes that may expand knowledge about dangers in the world; however, it may also present a high risk of eliciting negative emotional responses, therefore some people may

decide to avoid this genre due to the emotional costs of engagement in horror consumption.

Our definition of horror was based on analysis of other authors' attempts to classify horror subgenres. When comparing different classifications of subgenres, we identified five specific horror themes typically related to works labeled as horror, and we included these themes in our definition. When choosing themes for our theoretical model, we excluded subgenres related to specific aesthetic decisions, such as found-footage or gothic horror, and those that do not attempt to evoke negative emotions, such as comedy-horror (Cherry, 2009; Geusens, 2023; Hudson et al., 2020). We also excluded subgenres that possess broad and difficult-to-delineate boundaries and that may include various typical horror themes, such as science-fiction horror, teen horror, survival horror, or horror based on true events (Geusens, 2023; Hudson et al., 2020). Furthermore, we combined overlapping categories, such as body horror, torture, and exploitation cinema into one category that we called gore and violence (Cherry, 2009; Hudson et al., 2020). After we began testing our model on the first sample of participants in summer 2023, two papers were published that made similar distinctions regarding horror subgenres to those tested in our study. A study by Scrivner et al. (2024) included five types of horror: gore/splatter, monster, paranormal, psychological, and slasher. The study of Kiss et al. (2024) also included five horror subgenres: gore, killer/slasher, monster, paranormal, psychological. The decisions made in the aforementioned studies confirm that consideration of five horror themes seems the most reasonable choice when studying the horror genre. However, in both the above-mentioned

studies the authors did not test whether their choice of subgenres fits any empirically based theoretical model.

By our definition, the word "horror" describes works that have the potential to both attract the audience and evoke strong negative emotions, primarily fear and disgust, through the use of a set of specific themes that include 1) monsters, 2) paranormal phenomena, 3) killers and psychopaths, 4) mental disorders, 5) gore and violence. This definition of horror consists of two main elements. First, we addressed the paradoxical nature of horror, stating that works representing this genre are intended to evoke negative emotions, primarily fear and disgust, but they also have the capacity to attract an audience, potentially arousing interest, fascination and awe. Second, we assumed that horror uses a set of specific themes that make it easy to recognize representatives of the genre, and that these themes can serve as the basis for a taxonomy of horror subgenres. The theoretical model on which the study was based is presented in Figure 1.

Horror in psychological research

Psychological studies on attraction to horror are sparse and their results are often inconsistent due to differences in particular elements of study design. It is often assumed that enjoyment of horror should be associated with rather antisocial characteristics, such as low empathy and compassion (Scrivner, 2024). A meta-analysis conducted by Hoffner and Levine (2005), which included data from 35 articles on enjoyment of frightening and violent content in media, found a negative correlation between enjoyment of this type of media content and empathy. However, after excluding the results of two

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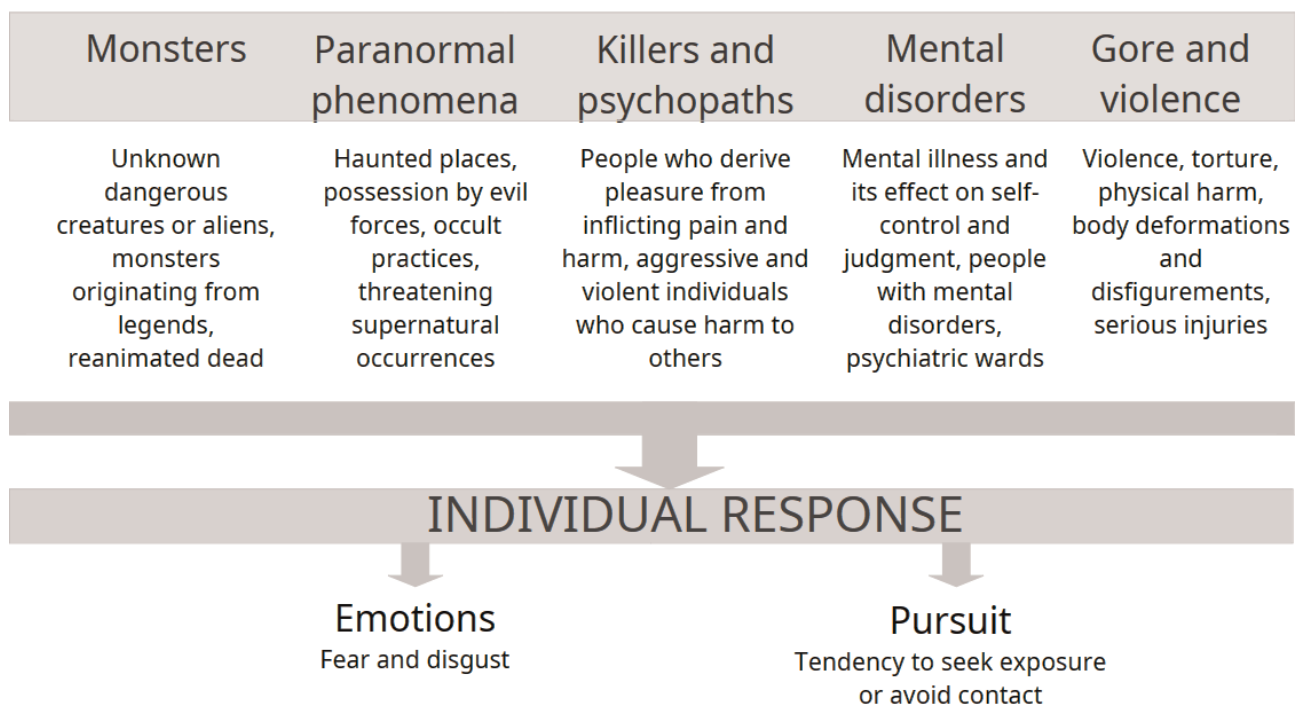


Figure 1. Theoretical model presenting definitions of the horror themes under study and their relations to individuals' response.

studies that focused specifically on enjoyment of victimization, the correlation became nonsignificant. Also, this meta-analysis found that enjoyment of frightening and violent media was positively correlated with sensation-seeking and aggressiveness, and that this enjoyment was greater for male participants. Contrary to the tendency to attribute negative qualities to people who enjoy horror, several more recent studies have linked engagement in horror with positive characteristics of participants. For example, engagement in psychological horror was associated with a reduced proclivity toward the stigmatization and dehumanization of people with mental disorders (Sacco et al., 2024). Also, in other studies interest in horror was associated with psychological resilience and preparedness for the COVID-19 pandemic (Scrivner et al., 2021; Compton & Schultz-Hansen, 2023). Scrivner (2024) provided evidence against the hypothesis that people who enjoy horror have deficits in prosocial traits, reporting that enjoyment of horror was negatively related to coldheartedness and positively related to cognitive empathy.

Several psychological studies have attempted to link enjoyment of horror with personality traits. Clasen et al. (2020) found that the Intellect/Imagination trait of the Big-Five theory predicted horror consumption, and other traits from this theory, i.e., Extraversion, Agreeableness, Conscientiousness, and Emotional Stability, showed small but statistically significant correlations with various aspects related to enjoyment of horror ($|r|$ range from .06 to .23). In this study, Extraversion and Agreeableness were related to enjoying horror in the company of other people, Extraversion was related to the frequency of using horror, and Conscientiousness and Emotional Stability were related to being afraid after consuming horror. Other studies found that participants high in psychopathy were more likely to enjoy clips from frightening video games (Book et al., 2020), and that more intense physiological responses to frightening films were associated with higher neuroticism (Reynauld et al., 2012). Also, a moderate positive correlation ($r = .56$) was found between morbid curiosity and horror media use (Scrivner, 2021a). In this context it is important to note that the relationship between personality traits and horror enjoyment may be moderated by other personality characteristics. Scrivner et al. (2022) showed that people differ in why they enjoy horror and distinguished three groups of horror fans. The first group, “Adrenaline Junkies”, derived pleasure from being afraid while engaged in horror. The second group, “White Knucklers”, did not enjoy the feeling of being scared, but people from this group declared that watching horror allowed them to learn new things about themselves and develop as a person. Finally, the third group, “Dark Copers”, was a group in which engagement in horror was linked with coping with their own existential problems. Taken together, the findings of more recent studies on horror indicate the need to move beyond the stereotypical and superficial perception of horror as entertainment for a relatively homogenous and antisocial group of people and to employ more sophisticated measures and study designs in empirical research.

Aim of the study

The aim of our research was to develop a psychometrically sound measure that would enable study of the horror genre while taking into account its complexity. We decided to base our research on the definition of horror presented in this paper, which addresses five specific themes: 1) monsters, 2) paranormal phenomena, 3) killers and psychopaths, 4) mental disorders, 5) gore and violence. We prepared a measure that would allow the study of emotions of fear and disgust related to these themes, and the tendency to seek exposure to them. The measure should make it possible to distinguish between different types of horror preferences and to obtain in-depth knowledge regarding individual responses to the horror genre, potentially explaining some contradictory results of prior research (Hoffner & Levine, 2005; Scrivner, 2024). We decided to assess emotional responses related to fear and disgust separately, assuming that although both emotions are associated with negative affect, people typically distinguish between fear and disgust, and this distinction may be important in evaluating responses to specific horror themes.

The measure that we developed was first subjected to the evaluation of competent judges, namely four published horror-fiction writers and promoters; we then tested the measure in two independent samples to determine its psychometric properties. We assumed that emotions regarding horror and the tendency to pursue themes characteristic of this genre should be related to several psychological constructs. Specifically, we assumed that fear of horror should be positively correlated with neuroticism due to the fact that higher levels of neuroticism are linked to higher anxiety, which should result in being more afraid of horror (Reynauld et al., 2012). Furthermore, stronger pursuit of horror should be positively correlated with higher psychoticism because people who are more willing to take risks and act in a non-conforming way – as is typically associated with psychoticism – should tend to seek exposure to works that present strong and controversial images and themes (Book et al., 2020). Also, we assumed that fear and disgust towards horror should positively correlate with general tendencies to feel anxiety and disgust, and that fear and disgust towards certain horror themes should be positively correlated with empathy because themes like gore and violence or killers and psychopaths often contain realistic depictions of harm which should elicit stronger negative feelings in more empathetic individuals (Hoffner & Levine, 2005). Furthermore, based on Carroll’s (1990) assumption that pleasure derived from horror is linked to intellectual curiosity, we assumed that pursuit of horror should be negatively related with a need for cognitive closure because people who are more open-minded about the world should find more enjoyment in hypothetical and strange scenarios that contain elements that are difficult to explain rationally. Finally, as horror often represents visions of the world in which bad things happen to people for no specific reason, we assumed that enjoyment of horror might be negatively correlated with beliefs about the benevolence of the world and its meaningfulness.

METHOD

Participants

The study was conducted among 627 students from four universities in Kraków, Poland. The participants studied various fields, such as psychology, pedagogy, philology, engineering, and management. In the first part of the study, we surveyed the 226 students who comprised sample 1 (49 men, 175 women, and 2 who identified as “other”, $M_{age} = 22.09$, $SD_{age} = 2.64$, age range 18–38). In the second part of the study, we assessed the 401 students who comprised sample 2 (104 men, 294 women, and 3 who identified as “other”, $M_{age} = 22.35$, $SD_{age} = 3.93$, age range 18–49).

Measures

Horror Themes Questionnaire (HTQ). This measure, prepared specifically for our study, consists of 20 items, each of which covers one of five general themes related to the horror genre: monsters (HTQ-M), paranormal phenomena (HTQ-P), killers and psychopaths (HTQ-KP), mental disorders (HTQ-MD), and gore and violence (HTQ-GV). Each theme is assessed by four items. The questionnaire consists of three parts (HTQ-FEAR, HTQ-DISGUST, HTQ-PURSUIT). In the first part, respondents indicate how frightening particular themes are for them. In the second part, they indicate how disgusting these themes are for them. Finally, in the last part, respondents are asked to indicate how much they avoid or seek exposure to specific themes in various cultural products, such as films, books, or video games. In each part, answers are marked on a 7-point Likert scale, with higher scores indicating greater degrees of fear, disgust, and a tendency to pursue the genre. The total scores for each part of the questionnaire and the scores for each of the subscales were calculated as arithmetic mean. The original Polish language version and its English translation are presented in Appendices A and B. This measure was used in the studies on sample 1 and sample 2. The psychometric properties of HTQ are described in detail in the Results section.

The Eysenck Personality Questionnaire-Revised Short Scale (EPQ-RS; Eysenck & Eysenck, 1991; Polish language version by Jaworowska, 2011). This well-known personality questionnaire assesses three personality traits: Extraversion (EPQ-E), Neuroticism (EPQ-N), and Psychoticism (EPQ-P). It also contains a Lie scale to measure the tendency to present oneself in a positive way. High scores in EPQ-E are related to being sociable, outgoing, and ready to make contact with others, while people who score low on this trait have a higher need to be alone and limit their interactions with others. People with high scores in EPQ-N tend to be anxious and emotionally unstable, while people who score low in this dimension are considered emotionally stable. High scores in EPQ-P relate to being independent, cold towards others, anti-social, and noncomfortable, while people who score low on this scale tend to be more altruistic, empathetic, and conventional. In EPQ-RS, each trait is assessed with

12 questions which require a “yes” (1 point) or “no” (0 points) response. We calculated the final score for each scale as an arithmetic mean, with scores ranging from 0 to 1. The reliability of the scales included in our study was EPQ-E $\alpha = .84$, EPQ-N $\alpha = .84$, EPQ-P $\alpha = .49$. This measure was used in the study on sample 1.

Empathy Quotient – short (EQ; Wakabayashi et al., 2006; Polish language version by Jankowiak-Siuda et al., 2017). This measure was developed to assess empathy. The questions concern the affective component of empathy, which relates to feeling an appropriate emotion initiated by another’s emotion; the cognitive component relates to understanding and/or predicting what another person might think, feel or do. The measure is unidimensional and the final score addresses the general level of empathy. The questionnaire consists of 22 statements, and respondents are asked to indicate their degree of agreement with each statement. We assessed the statements on a Likert scale ranging from 1 (“definitely no”) to 4 (“definitely yes”) points, and we calculated the final score as arithmetic mean. Higher scores represent a higher level of empathy. In our study, the reliability of this measure was $\alpha = .87$. This measure was used in the study on sample 1.

The World Assumptions Scale (WAS; Janoff-Bulman, 1989; Polish language version by Załuski & Gajdosz, 2012). This measure was developed to assess basic assumptions about the world regarding three categories: benevolence of the world (WAS-B), meaningfulness of the world (WAS-M), and worthiness of self (WAS-W). Benevolence of the world concerns the extent to which people view the world and other people as good or bad, and which type of outcomes they perceive as more common in the world. Meaningfulness of the world concerns beliefs about the distribution of good and bad outcomes, and to what extent they are just, controllable, and random. Worthiness of self concerns beliefs about the extent to which people believe that they deserve to and are likely to experience good or bad outcomes. The Polish adaptation of the measure comprises 32 items, out of which 8 are used to measure benevolence of the world, 12 are used to measure meaningfulness of the world, and 12 are used to measure worthiness of self. Items contain statements marked on a Likert scale from 1 (“I strongly disagree”) to 6 (“I strongly agree”). We used arithmetic mean to calculate the scores for each of the scales. Higher scores indicate beliefs that the world is a rather benevolent (WAS-B) and meaningful (WAS-M) place and that the respondent believes that they are likely to experience good outcomes rather than bad ones (WAS-W). The reliabilities of the scales included in our study were WAS-B $\alpha = .85$, WAS-M $\alpha = .68$, WAS-W $\alpha = .81$. This measure was used in the study on sample 1.

Need for Cognitive Closure Scale – short version (NFC; Webster & Kruglanski, 1994; short version developed in Polish by Kossowska et al., 2012). This measure assesses need for cognitive closure, understood as individual differences in motivation to seek knowledge which reduces uncertainty about the world. A high level of

need for closure is associated with superficial analysis of information and a search for information corresponding with current knowledge and beliefs. A low level of need for closure is associated with tolerance of uncertainty and makes individuals less willing to quickly form judgments and be open to new information. The short version of the measure consists of 15 items, evaluated on a Likert scale of 1 (“completely disagree”) to 6 (“completely agree”). We used arithmetic mean to calculate the score for this scale. Higher scores indicate higher levels of need for cognitive closure. In our study, the reliability of this measure was $\alpha = .70$. This measure was used in the study on sample 2.

State-Trait Anxiety Inventory Questionnaire (STAI; Spielberger et al., 1970; Polish language version by Wrześniewski et al., 2011). This questionnaire was developed to assess anxiety, understood as a currently experienced state and as a relatively stable personality trait. In our study, we used only the part of the questionnaire that assesses anxiety as a personality trait (STAI-X2). High trait anxiety is related to the disposition to perceive a wide range of situations as threatening and to react emotionally in a way that is not suitable in such situations. The trait anxiety part of the measure comprises 20 statements which describe a person and are evaluated on a scale from 1 (“almost never”) to 4 (“almost always”). We used arithmetic mean to calculate the score for this scale. Higher scores indicate higher anxiety. In our study, the reliability of this measure was $\alpha = .90$. This measure was used in the study on sample 2.

Questionnaire for the Assessment of Disgust Sensitivity (QADS; Petrowski et al., 2010; Polish language version by Szewczuk-Bogusławska et al., 2015). This questionnaire assesses disgust sensitivity related to three categories. Core disgust is triggered by things such as spoiled food or vermin and is a defensive reaction that is supposed to prevent illness or infection. Animal-reminder disgust pertains to animalistic aspects of human nature related to, e.g., sexual activity, death, or lack of hygiene. Contamination-interpersonal disgust is related to contact with other people and objects that belong to them. The Polish version of QADS consists of 37 items which describe different situations that may be related to feelings of disgust. Respondents rate how disgusting they find each situation on a scale from 1 (“almost not at all”) to 5 (“very much”). In our study, we used the total score on the scale to measure general disgust sensitivity. The total score was calculated as an arithmetic mean of scores for all the statements in the questionnaire. Higher scores indicate greater disgust sensitivity. In our study, the reliability of this measure was $\alpha = .91$. This measure was used in the study on sample 2.

Procedure

We began the study by preparing twenty items for the Horror Themes Questionnaire (four items for each of the themes that we identified) and presenting them to four competent judges who are all published horror writers, each holding vast knowledge about the history of the genre and its current developments. After analysis of the judges' responses, we decided that there was no need to adjust the

item content of HTQ. The first sample was collected during the summer of 2023. Participants in this sample were assessed with HTQ, EPQ-RS, EQ, and WAS. We collected the second sample in the summer of 2024. Participants in this sample were assessed with HTQ, NFC, STAI, and QADS.

Statistical analyses

In the first step of the analysis, we evaluated the content validity of the measure, asking the four competent judges about the items proposed for each of the subscales. Each judge assigned 20 items to one of the five subscales (monsters, paranormal phenomena, killers and psychopaths, mental disorders, gore and violence). If a judge wanted to state that an item could be classified in more than one category, we asked them to mark this in the answer sheet and indicate which category seemed most appropriate (first choice), and which ones seemed less appropriate. A value of “1” was assigned to each response when a judge classified an item in a given category; a value of “0” was assigned when they did not. The level of agreement between the judges was calculated using the average of the responses of the four judges. The closer the result was to 1, the greater the agreement.

In the next step, we tested the factorial validity of the measure. We used confirmatory factor analysis (CFA; *lavaan* package; Rosseel, 2012) to test the hierarchical five-factor structure of HTQ for each part of the scale: HTQ-FEAR, HTQ-DISGUST, and HTQ-PURSUIT. We used CFA rather than exploratory factor analysis because our research was based on a theoretical model with a pre-specified number of factors that were distinguished after an in-depth examination of contemporary approaches to horror research in psychology. We tested the structure of the scale in two independent samples, assuming that each of the three parts of the questionnaire should make it possible to obtain a total score and separate scores for the five subscales. To test whether the hierarchical five-factor model explains the results better than the unidimensional model, we also compared it with a one-factor model using the chi-square difference test. We used the Diagonally Weighted Least Squares estimator (DWLS; Míndrilă, 2010) due to the ordinal variables and multivariate non-normality. The following criteria of the model's fit to the data were adopted as satisfactory: χ^2 ($p > .05$), RMSEA and SRMR $< .08$, CFI and TLI $> .95$ (Hu & Bentler, 1999; Kline, 2016). Minimum factor loadings were accepted if λ was equal to or higher than .30 (Tabachnick & Fidell, 2001; de Jong & Nooteboom, 2000).

Then, we also tested measurement invariance between the three parts of the HTQ (HTQ-FEAR, HTQ-DISGUST, and HTQ-PURSUIT) to evaluate their comparability. We performed the analysis on combined data from both samples to increase the power of the test and the stability of the model. Measurement invariance was evaluated by comparing successive models (configural, metric, and scalar) using changes in fit indices (Δ RMSEA, Δ SRMR, Δ CFI, Δ TLI) as well as chi-square difference tests. Following commonly accepted guidelines (Chen,

2007; $N > 300$), invariance was considered supported when changes in CFI and TLI were $\leq .010$, changes in RMSEA were $\leq .015$, and changes in SRMR were $\leq .030$ for metric invariance and $\leq .015$ for scalar invariance.

Also, by conducting a CFA analysis and correlation-based analysis between factors, we checked whether fear and disgust could be treated as separate factors or as one factor representing negative affect.

Next, we tested the reliability of the measure, assuming a value of .70 as the minimum acceptable level of Cronbach's α , and a minimal test-retest Pearson's correlation coefficient of .50. We tested internal reliability in two independent samples and test-retest correlation in one sample.

Finally, we tested the convergent and divergent validity of the questionnaire, correlating the HTQ scores with the neuroticism, psychopathy, and extraversion personality traits, empathy quotient, assumptions about the benevolence of the world, its meaningfulness, and worthiness of self, need for cognitive closure, trait anxiety, and general disgust sensitivity. We used Evans' (1996) interpretation of effect sizes for Pearson's r correlation: $r < .20$ very weak correlation; .20–.39 weak relationship; .40–.59 moderate relationship; .60–.79 strong relationship; $> .80$ very strong relationship.

The sample sizes were sufficient for the planned analyses. Methodological guidelines indicate that CFA models of moderate complexity are adequately powered with samples of at least 200 participants (sample 1, $N = 206$), while samples above 300 (sample 2, $N = 401$) provide good to very good power and parameter stability (Kline, 2016). Both samples independently met these criteria, and the combined sample ($N = 627$) provided sufficient power for measurement invariance testing and correlational analyses (Chen, 2007).

RESULTS

Content evaluation of HTQ items by competent judges

In the first step of the questionnaire development, we evaluated content validity. Four judges assessed 20 items, indicating which of the five scales (monsters, paranormal phenomena, killers and psychopaths, mental disorders, gore and violence) the items fit into. The agreement between judges was perfect (compatibility equal to 1) for 16 items, while the compatibility was .75 for 4 items (7, 9, 14, 20). For these four items, judges who marked a different choice than their colleagues always indicated that the items belonged to the scale that was initially intended for the item as their second choice. Based on the judges' ratings, we stated that all the items represent the subscales' content very well.

Factorial structure, measurement invariance, and descriptive statistics of HTQ

To establish construct validity, we examined the structure of the scale for HTQ-FEAR, HTQ-DISGUST, and HTQ-PURSUIT in two independent samples (see Table 1). Although some results (see TLI, CFI, RMSEA, SRMR) were slightly below the adopted criteria, based on the obtained values of all the model fit indices we concluded that the hierarchical five-factor structure is a good solution. Moreover, the hierarchical model is significantly better fitted to the data than the unidimensional model in both samples. The factor loadings for the five-factor solution for each part of the scale in both samples were very good and met the adopted criteria (see Figures 2-4). The obtained CFA results confirmed the assumed structure of the HTQ scale. Descriptive statistics for each part of the scale are presented in Table 2.

Table 1. CFA model fit for the three parts of the HTQ scale

		Sample 1					Sample 2				
		$\chi^2(df)$	CFI	TLI	RMSEA [90% CI]	SRMR	$\chi^2(df)$	CFI	TLI	RMSEA [90% CI]	SRMR
Fear	Hierarchical five-factor model	288.88***	.96	.95	.059 [.048, .070]	.081	471.33***	.93	.92	.07 [.063, .078]	.081
	Unidimensional model	547.03***	.87	.86	.101 [.092, .111]	.110	911.11***	.83	.81	.11 [.101, .115]	.112
	χ^2 model comparison	$p < .001$					$p < .001$				
Disgust	Hierarchical five-factor model	385.52***	.93	.92	.078 [.068, .088]	.095	443.12***	.94	.93	.067 [.059, .074]	.078
	Unidimensional model	706.78***	.82	.80	.120 [.111, .129]	.133	881.25***	.84	.82	.105 [.098, .112]	.119
	χ^2 model comparison	$p < .001$					$p < .001$				
Pursuit	Hierarchical five-factor model	342.63***	.96	.95	.071 [.060, .082]	.091	502.24***	.95	.94	.073 [.066, .080]	.082
	Unidimensional model	772.48***	.86	.84	.129 [.12, .138]	.138	1127.05***	.86	.84	.121 [.114, .128]	.127
	χ^2 model comparison	$p < .001$					$p < .001$				

*** $p < .001$; Sample 1 $N = 217$; Sample 2 $N = 372$. $df = 165$ for five-factor model and $df = 170$ for unidimensional model.

Table 2. Descriptive statistics

	Fear				Disgust				Pursuit			
	<i>M</i>	<i>SD</i>	<i>Sk.</i>	<i>Kurtosis</i>	<i>M</i>	<i>SD</i>	<i>Sk.</i>	<i>Kurtosis</i>	<i>M</i>	<i>SD</i>	<i>Sk.</i>	<i>Kurtosis</i>
Sample 1												
HTQ-M	2.77	1.23	.54	-.22	2.64	1.20	.65	.06	3.58	1.51	-.05	-.77
HTQ-P	3.52	1.42	.16	-.69	2.15	1.16	1.19	1.07	3.84	1.62	.01	-.98
HTQ-KP	4.21	1.38	-.29	-.46	3.75	1.60	.10	-.96	3.49	1.40	-.08	-.68
HTQ-MD	3.15	1.36	.38	-.93	2.02	1.06	1.20	.94	4.36	1.53	-.24	-.58
HTQ-GV	3.74	1.33	.05	-.96	4.53	1.48	-.35	-.63	2.70	1.28	.52	-.38
HTQ Total	3.48	.96	.01	-.38	3.02	.92	.27	.02	3.59	1.07	-.29	.11
Sample 2												
HTQ-M	2.89	1.23	.72	.24	2.72	1.25	.77	.42	3.53	1.39	-.10	-.75
HTQ-P	3.75	1.44	.12	-.77	2.33	1.25	.92	.17	3.65	1.50	.03	-.95
HTQ-KP	4.35	1.41	-.46	-.58	3.87	1.50	.01	-.72	3.49	1.48	.01	-.84
HTQ-MD	3.12	1.31	.32	-.60	2.03	1.16	1.26	1.23	4.40	1.44	-.23	-.44
HTQ-GV	4.06	1.30	-.11	-.44	4.94	1.24	-.56	-.10	2.62	1.28	.88	.66
HTQ Total	3.63	.93	.10	.04	3.18	.89	.36	.27	3.54	1.03	-.36	-.27

Sample 1 *N* = 225–226; Sample 2 *N* = 399–400. HTQ-M – monsters, HTQ-P – paranormal phenomena, HTQ-KP – killers and psychopaths, HTQ-MD – mental disorders, HTQ-GV – gore and violence, HTQ-Total – total score in HTQ scale.

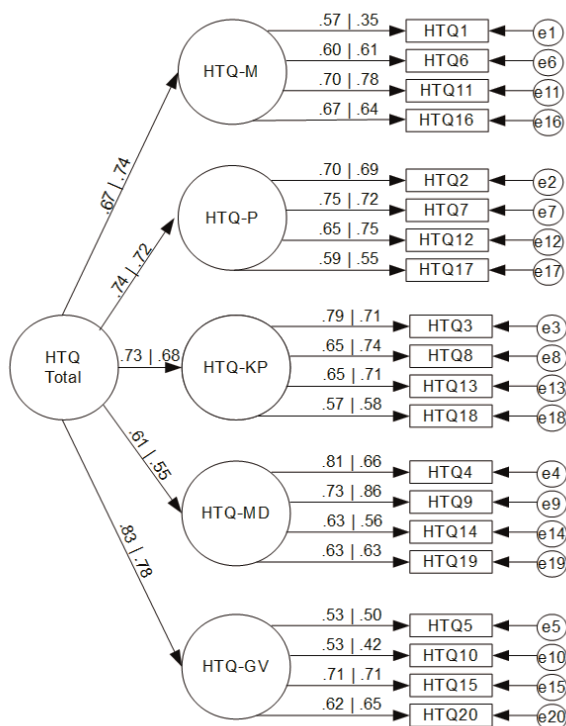


Figure 2. Factor loadings for HTQ-FAIR. The λ values on the left and right above the arrows indicate the results for Sample 1 and Sample 2, respectively.

Since the CFA model fit was satisfactory in both samples, as was also confirmed on combined data (see CFA combined data at OSF repository: <https://doi.org/10.17605/OSF.IO/R2CZ5>), measurement equivalence across HTQ versions was performed on the combined data (sample 1 and

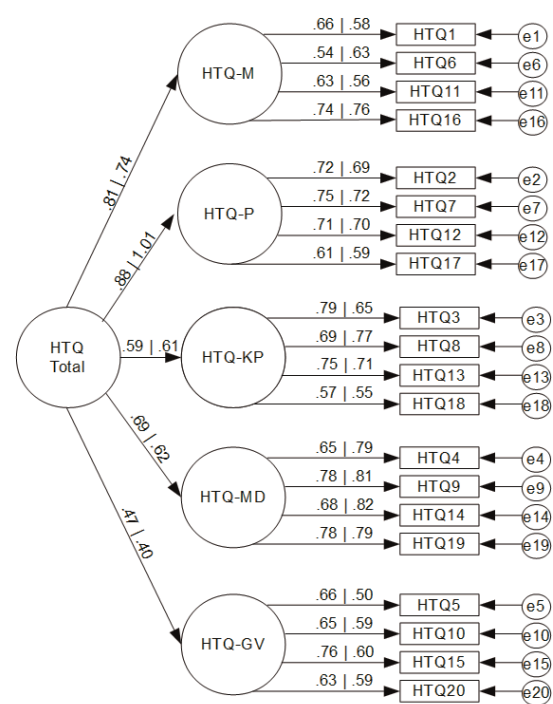


Figure 3. Factor loadings for HTQ-DISGUST. The λ values on the left and right above the arrows indicate the results for Sample 1 and Sample 2, respectively.

sample 2). We tested measurement equivalence across the HTQ-FAIR, HTQ-DISGUST, and HTQ-PURSUIT measures using a hierarchical factor model in which the fear, disgust, and pursuit scores were specified as second-order latent factors loading on five first-order latent factors, each

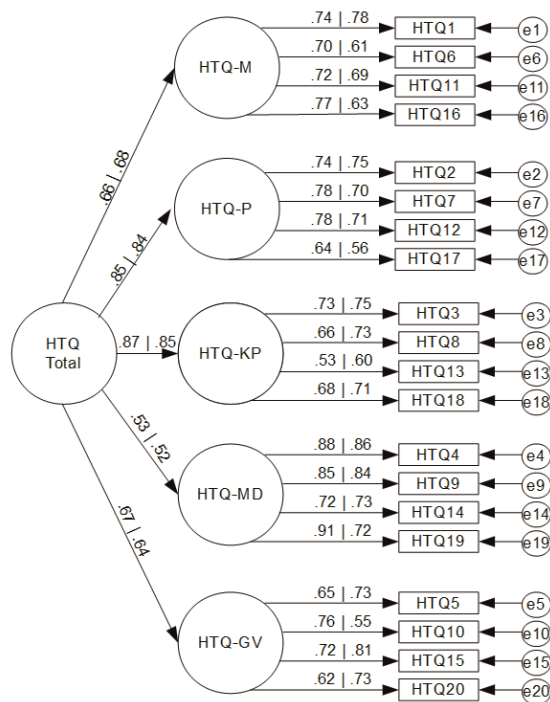


Figure 4. Factor loadings for HTQ-PURSUIT. The λ values on the left and right above the arrows indicate the results for Sample 1 and Sample 2, respectively.

measured by the four observed items. However, this model failed to converge. Consequently, we simplified the model to include only the five first-order latent factors and their corresponding observed variables in each version of the instrument. Based on the adopted criteria for changing the model fit indices, we confirmed configural ($CFI = .972$, $TLI = .967$, $RMSEA = .082$, $SRMR = .072$) and metric invariance ($CFI = .968$, $TLI = .964$, $RMSEA = .085$, $SRMR = .077$), but failed to confirm scalar invariance ($CFI = .912$, $TLI = .928$, $RMSEA = .12$, $SRMR = .076$). The results suggest that mean-based scores from the three parts of the questionnaire should not be directly compared with each other; however, it is appropriate to conduct correlation analyses across the three versions of the instrument for negative emotions (fear and disgust) as well as for pursuit.

Because metric equivalence analysis confirmed the ability to test correlations between factors, we tested these relationships in combined data from sample 1 and sample 2, particularly focusing on the correlation between negative emotions (fear and disgust). We found that total score in HTQ-FEAR was positively and strongly correlated with total score in HTQ-DISGUST ($r = .67$, $p < .001$), and weakly and negatively correlated with total score in HTQ-PURSUIT ($r = -.23$, $p < .001$). HTQ-DISGUST correlated with HTQ-PURSUIT in similar way as HTQ-FEAR version ($r = -.18$, $p < .001$). All the intercorrelations between HTQ scores are presented in Appendix C.

Following the strong correlation between HTQ-FEAR and HTQ-DISGUST, we tested on combined data from sample 1 and sample 2 whether the CFA model in which fear and disgust were included as two separate factors better fits the data than model in which fear and disgust are combined into a negative affect factor. Model fit indices for independent factors were $CFI = .889$, $TLI = .882$, $RMSEA = .090$, $SRMR = .097$. For the model in which two separate factors loaded one negative affect factor, the indices were $CFI = .884$, $TLI = .876$, $RMSEA = .092$, $SRMR = .099$. The tested models had similar fit and it made no difference whether the additional factor (pursuit) was included in the analysis. This suggests that it is statistically justified to treat fear and disgust scores either as indicators of two separate but strongly correlated emotions, or as general negative affect. However, it should be noted that including fear and disgust as one negative affect factor (both with and without the pursuit factor) resulted in a decrease in the overall model fit.

Reliability of HTQ

We tested the reliability of the three parts of HTQ in the two samples. In the first and second samples, we checked internal consistency; in the first sample, we additionally established test-retest correlation (see Table 3). The results indicate very good reliability of all parts and subscales of the measure. Although the internal consistency coefficients were slightly below the adopted criteria for HTQ-GV, the test-retest reliability for this subscale yielded very good results.

Table 3. Reliability of HTQ

	Sample 1			Sample 1 retest			Sample 2		
	Fear	Disgust	Pursuit	Fear	Disgust	Pursuit	Fear	Disgust	Pursuit
HTQ-M	.73	.73	.82	.76***	.70***	.72***	.70	.71	.77
HTQ-P	.77	.79	.82	.61***	.76***	.68***	.76	.77	.77
HTQ-KP	.76	.79	.75	.55***	.72***	.75***	.77	.76	.80
HTQ-MD	.79	.81	.90	.81***	.75***	.70***	.76	.87	.90
HTQ-GV	.69	.77	.79	.73***	.79***	.68***	.66	.67	.80
HTQ Total	.87	.87	.90	.63***	.76***	.71***	.86	.86	.89

*** $p < .001$; Sample 1 $N = 216$; Sample 1 retest $N = 43$; Sample 2 $N = 386$. HTQ-M – monsters, HTQ-P – paranormal phenomena, HTQ-KP – killers and psychopaths, HTQ-MD – mental disorders, HTQ-GV – gore and violence, HTQ-Total – total score in HTQ scale.

Convergent and divergent validity of HTQ

We tested convergent and divergent validity of HTQ for each part of the measure (see Table 4). We found similarities in the values and direction of the correlation coefficients for most of the results of the HTQ-FEAR and HTQ-DISGUST parts of the questionnaire, thereby suggesting that many of the associations obtained in the study could be related to the general negative affect evoked by one of the horror themes rather than to a specific emotion.

Personality traits We observed that higher extraversion was weakly related to higher HTQ-MD in the Fear and Disgust parts of HTQ. Higher neuroticism correlated weakly and positively with HTQ-KP and HTQ Total in the Fear part of HTQ, and with HTQ-KP and HTQ-GV in the Disgust part of HTQ. Higher psychoticism was weakly related to lower HTQ-P, HTQ-KP, and HTQ Total in HTQ-FEAR. Psychoticism was positively correlated with HTQ-M, HTQ-P, HTQ-GV and HTQ Total in HTQ-PURSUIT.

Empathy Empathy was weakly and positively related to HTQ-KP in HTQ-FEAR. Also, it was weakly and positively related to HTQ-KP and HTQ-GV and negatively to HTQ-MD in HTQ-DISGUST. Finally, higher empathy was correlated weakly with higher HTQ-MD and with lower HTQ-GV in HTQ-PURSUIT.

Assumptions about the world The beliefs about the benevolence of the world scale was weakly and positively

related to HTQ-GV in the HTQ-FEAR and HTQ-DISGUST parts. Also, it was weakly and negatively connected with HTQ-M, HTQ-P, HTQ-GV and HTQ Total in HTQ-PURSUIT. Higher scores on the beliefs about the meaningfulness of the world scale were weakly related to higher HTQ-M and HTQ-P in HTQ-DISGUST. Beliefs about worthiness of self were positively and weakly associated with HTQ-MD in HTQ-FEAR. Also, they were positively and weakly related to HTQ-GV in HTQ-DISGUST and negatively and weakly to HTQ-M, HTQ-P, HTQ-GV, and HTQ Total in HTQ-PURSUIT.

Need for closure Higher need for cognitive closure was weakly related to higher HTQ-P in HTQ-FEAR, and HTQ-P, HTQ-MD, and HTQ Total in HTQ-DISGUST. Also, need for cognitive closure was negatively and weakly related to HTQ-M, HTQ-KP, HTQ-MD, and HTQ Total in HTQ-PURSUIT.

Trait-anxiety Higher trait anxiety was weakly related to higher HTQ-GV in HTQ-FEAR, and with HTQ-KP and HTQ-GV in HTQ-DISGUST, and HTQ-MD in HTQ-PURSUIT.

Disgust sensitivity Disgust sensitivity was weakly or moderately related to all subscales and total scores in HTQ-FEAR and HTQ-DISGUST. The pattern of correlations with disgust sensitivity was almost identical for these two parts of the questionnaire (r value differences lower

Table 4. Correlates of HTQ

		EPQ-E	EPQ-N	EPQ-P	EQ	WAS-B	WAS-M	WAS-W	NFC	STAI	QADS total
Fear	HTQ-M	-.02	.13	.01	-.08	.09	.12	-.05	.08	.07	.34***
	HTQ-P	.12	.03	-.18**	.04	.08	.07	.10	.11*	.02	.34***
	HTQ-KP	-.07	.20**	-.15*	.16*	-.09	-.12	.04	.03	.09	.36***
	HTQ-MD	.14*	.06	-.06	-.02	.01	-.04	.17*	.09	.04	.22***
	HTQ-GV	-.08	.13	-.13	.02	.16*	.04	.08	-.03	.11*	.41***
	HTQ Total	.03	.15*	-.15*	.04	.06	.02	.10	.08	.10	.48***
Disgust	HTQ-M	-.03	.08	-.09	-.05	.06	.15*	.04	.09	.05	.34***
	HTQ-P	.11	-.06	-.05	-.05	.04	.22***	-.01	.14**	.02	.33***
	HTQ-KP	-.02	.16*	-.05	.19**	-.07	-.03	-.02	.08	.10*	.32***
	HTQ-MD	.16*	-.05	.03	-.17*	-.06	.07	.03	.15**	-.03	.22***
	HTQ-GV	-.06	.18**	-.13	.22**	.23***	-.06	.17*	-.01	.12*	.38***
	HTQ Total	.03	.11	-.09	.08	.06	.08	.06	.13**	.08	.46***
Pursuit	HTQ-M	-.01	-.03	.16*	-.13	-.16*	.05	-.16*	-.18**	.03	-.24***
	HTQ-P	-.04	.08	.21**	-.02	-.18**	-.13	-.15*	-.09	.06	-.25***
	HTQ-KP	-.01	-.07	.09	-.07	-.13	-.06	-.08	-.13*	.04	-.18***
	HTQ-MD	.01	.10	.04	.17*	-.03	-.01	.09	-.14**	.16**	-.03
	HTQ-GV	-.06	-.03	.17*	-.22**	-.29***	-.03	-.24***	-.07	.01	-.24***
	HTQ Total	-.03	.02	.19**	-.07	-.21**	-.05	-.14*	-.17***	.09	-.26***

* $p < .05$, ** $p < .01$, *** $p < .001$, HTQ-M – monsters, HTQ-P – paranormal phenomena, HTQ-KP – killers and psychopaths, HTQ-MD – mental disorders, HTQ-GV – gore and violence, HTQ-Total – total score in HTQ scale, EPQ-E – extraversion, EPQ-N – neuroticism, EPQ-P – psychoticism, EQ – empathy quotient, WAS-B – beliefs about the benevolence of the world, WAS-M – beliefs about the meaningfulness of the world, WAS-W – beliefs about worthiness of self, NFC – need for cognitive closure, STAI – trait anxiety, QADS – disgust sensitivity.

than .05 for each of the themes and the total score). Also, disgust sensitivity was weakly and negatively correlated with total score and almost all subscales in HTQ-PURSUIT, with the exception of HTQ-MD. For the remaining results, no significant relationships were observed.

DISCUSSION

In our study, we aimed to develop a psychometrically sound measure that would enable study of the horror genre. We defined horror as works that have the potential to attract the audience and evoke negative emotions, primarily fear and disgust, through the use of a set of specific themes: 1) monsters; 2) paranormal phenomena; 3) killers and psychopaths; 4) mental disorders; 5) gore and violence. Based on this definition, we prepared the Horror Themes Questionnaire, which addressed these five specific horror themes. HTQ comprised three parts, which made it possible to assess fear and disgust evoked by different horror themes and the tendency to pursue them.

Items in HTQ were evaluated by four horror authors with vast knowledge of the genre. High content validity was indicated by the fact that almost all items were unanimously assigned to one of the five themes, and only four items had slightly lower compatibility. Confirmatory factor analyses indicated that the hierarchical five-factor model, which included factors for each of the five specific themes and for a total score, was better fitted to the data than the unidimensional model, which contained only a total score. The five-factor solution was confirmed for each part of the scale, i.e., HTQ-FEAR, HTQ-DISGUST, and HTQ-PURSUIT. The equivalence of the three parts of the questionnaire was further confirmed in measurement invariance analysis. Since the scalar invariance between the three parts of the measure was not confirmed, correlational analyses between factors are acceptable, but comparison of means between each of the three parts of the questionnaire should not be performed. Following the results, we tested whether fear and disgust are independent factors or whether they create a higher-level negative affect factor. Correlational analyses indicated that responses regarding fear and disgust are closely related, suggesting that they can potentially be treated as facets of general negative affect. However, the CFA conducted to determine whether the factors either formed a superordinate factor or were independent did not reveal any differences between the two models. This suggests that the fear and disgust parts of the HTQ can be used independently, but if the need arose to use the score as an indicator of negative affect, this is also possible. The results obtained in this part of analysis confirm that the measure can assess individual differences regarding fear, disgust, and pursuit of five specific horror themes, and it can obtain information about general fear, disgust, and pursuit of horror.

In terms of both stability over time and internal consistency, the reliability of the new measure was satisfactory for each of its parts. Results slightly below the threshold of $\alpha = .70$ were obtained only for the gore and violence scale in the HTQ-FEAR and HTQ-DISGUST

parts. This indicates that although the HTQ scales consist of only four items each, they can accurately assess the five specific themes in each part of the measure.

To test the convergent and divergent validity of HTQ, we assessed personality traits, empathy, beliefs about the world, need for cognitive closure, and tendencies to feel anxiety and disgust. As expected, we found that higher neuroticism was positively linked to total score in HTQ-FEAR; psychoticism was negatively correlated with total score in HTQ-FEAR and positively correlated with total score in HTQ-PURSUIT. These results are in accordance with the results of previous studies on personality and horror (Book et al., 2020; Clasen et al., 2020; Reynauld et al., 2012). However, it is important to note that the EPQ-P scale had low reliability in our study ($\alpha = .49$), so the results related to this scale should be treated with caution. Furthermore, similar to the study by Clasen et al., (2020), the correlations between personality traits and fear, disgust, and pursuit of horror were very weak or weak. As for empathy, we observed a weak positive correlation with disgust regarding the gore and violence theme, and a negative correlation with the pursuit of gore and violence theme. Also, we observed that empathy correlated weakly with fear and disgust regarding the killers and psychopaths theme. This confirms that more empathetic people may be more emotional when confronted with depictions of violence and harm (Hoffner & Levine, 2005). Interestingly, we found very weak negative correlation between empathy and disgust of mental disorders theme, and positive correlation between empathy and the pursuit of this theme. This result stands in accordance with the results of a study by Sacco et al. (2024), in which enjoyment of horror was found to be linked to positive attitudes towards people with mental disorders. Beliefs about benevolence of the world and about oneself as likely to experience positive outcomes were negatively correlated with general pursuit of horror and with the pursuit of monsters, paranormal phenomena, and gore and violence themes. This may indicate that there are certain assumptions about the nature of the world which make people less likely to seek content that involves scenes of harm and unrealistic elements, such as strange creatures or paranormal events. Need for closure was negatively correlated with general pursuit of horror, and with pursuit of monsters, mental disorders, and killers and psychopaths themes. This stands in accordance with idea of Carroll (1990) that enjoyment of horror is related to intellectual curiosity. People who have higher tolerance for uncertainty and are more open-minded about ideas or events that may seem unrealistic or not probable may also be more likely to show interest in the horror genre. Finally, in our study we observed only a very weak correlation between trait-anxiety and the fear of gore and violence theme. Also, trait anxiety very weakly correlated with disgust towards the killers and psychopaths and gore and violence themes, and it very weakly correlated with the pursuit of the mental disorder theme. On the other hand, we found weak and moderate positive correlations between disgust sensitivity and all the scales and total scores in HTQ-FEAR and

HTQ-DISGUST. Also, we found negative correlations between disgust sensitivity and pursuit of horror for the total score, and for all the specific themes except the mental disorders theme. The reason that disgust was correlated more strongly with our measure than trait-anxiety may be related to the item content of the measures we used. The items in the disgust sensitivity questionnaire addressed specific situations, thus they were similar to items in HTQ; however, the items in STAI contained only self-descriptive judgments (e.g., “I worry too much over something that doesn’t really matter”, or “I am content; I am a steady person”) which give information about the degree of anxiety but not whether the anxiety is related to specific stimuli or situations. To sum up, our results confirm the validity of HTQ. We obtained the expected pattern of correlations in all the measures used except STAI. Most of the correlations were very weak or weak, which indicates that our measure has high divergent validity. Also, the obtained pattern of correlations in the three parts of the measure and the five subscales indicate that people differ in their attitudes towards the horror genre and that these attitudes may be related to various psychological characteristics that may constitute specific personality profiles.

As for the strengths of our study, it describes the first attempt to develop a psychometrically sound measure to assess fear and disgust evoked by horror, and the tendency to pursue this genre, giving differentiated insight into horror preferences of respondents that has not been obtained in other studies. We used two independent samples to confirm the factorial validity of HTQ. Our results give strong empirical arguments for distinguishing five specific horror themes. The measure we have developed is reliable and valid and can be used by other researchers interested in the subject of horror. Limitations of our research concern the fact that we did not test some psychological constructs that are often related to horror, such as sensation seeking or belief in paranormal phenomena. Such relations should be analyzed in future studies. Also, we used only questionnaires to assess the validity of the measure. Future studies should include more diverse groups of participants and more diverse measures to assess the validity of HTQ, for example those that make it possible to obtain physiological or neurological responses to horror. Finally, in this study we focused on describing the psychometric properties of the new measure. In future studies, information provided by the measure could be used to seek out personality profiles of horror users, thus expanding knowledge regarding relations between emotions and the tendency to seek exposure to the various themes typical of this genre.

CONCLUSION

We have developed a reliable and valid measure called the Horror Themes Questionnaire, which studies the fear and disgust evoked by the horror genre and the tendency to seek exposure to horror. Our measure can assess five specific horror themes that should be

considered when studying the horror genre: monsters, paranormal phenomena, killers and psychopaths, mental disorders, and gore and violence. Also, HTQ can assess the general tendency to pursue the horror genre and the general fear and disgust evoked by it. HTQ is the first psychometrically sound measure that can study the horror genre in such a complex manner. This measure should be useful in academic studies that attempt to empirically explain the paradox related to enjoyment of works that evoke fear and disgust.

DATA AVAILABILITY STATEMENT

The materials used in the study, the data, and the code needed to perform analyses supporting the findings is in a public repository (<https://doi.org/10.17605/OSF.IO/R2CZ5>).

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ETHICAL CONSIDERATIONS

The research was approved by the ethical committee at Jagiellonian University (approval number 221.0042.30_2023 for the study on sample 1; approval number 221.0042.4_2024 for the study on sample 2). Informed consent was obtained from all participants.

REFERENCES

- Book, A., Stark, S., MacEachern, J., Forth, A., Visser, B., Wattam, T., Young, J., Power, J., & Roters, J. (2020). In the eye of the beholder: Psychopathy and fear enjoyment. *Journal of Personality*, 88(6), 1286–1301. <https://doi.org/10.1111/jopy.12571>
- Carroll, N. (1990). *The philosophy of horror or paradoxes of the heart*. New York: Routledge.
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 14(3), 464–504. <https://doi.org/10.1080/10705510701301834>
- Cherry, B. (2009). *Horror*. New York: Routledge.
- Clasen, M. (2018). The evolution of horror: A neo-lovecraftian poetics. In S. Moreland (Ed.) *New directions in supernatural horror literature. The critical influence of H. P. Lovecraft* (pp. 43–60). Cham: Palgrave Macmillan. https://doi.org/10.1007/978-3-319-95477-6_3
- Clasen, M. (2021). *A very nervous person's guide to horror movies*. New York: Oxford Academic. <https://doi.org/10.1093/oso/9780197535899.001.0001>
- Clasen, M., Kjeldgaard-Christiansen, J., & Johnson, J. A. (2020). Horror, personality, and threat stimulation: A survey on the psychology of scary media. *Evolutionary Behavioral Sciences*, 14(3), 213–230. <http://dx.doi.org/10.1037/ebs0000152>
- Compton, D. M., & Schultz-Hansen, K. (2023). What's 12 Monkeys got to do with it? Resilience during the COVID-19 pandemic as

- a function of personality and interest in suspense-horror. *Psychology*, 14, 1217–1249. <https://doi.org/10.4236/psych.2023.148067>
- de Jong, G., & Nootboom, B. (2000). *The causal structure of long-term supply relationships – an empirical test of a generalized transaction cost theory*. Kluwer Academic Publishers. <https://doi.org/10.1007/978-1-4615-4525-5>
- Evans, J. (1996). *Straightforward statistics for the behavioral sciences*. Brooks/Cole Publishing.
- Eysenck, H. J., & Eysenck, S. B. G. (1991). *Manual of the Eysenck Personality Scales*. London: Hodder & Stoughton.
- Geusens, F. (2023). “I see dead people”: Exploring the associations between watching horror and belief in the paranormal. *Psychology of Popular Media*. <https://doi.org/10.1037/ppm0000513>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
- Hudson, M., Seppala, K., Putkinen, V., Sun, L., Glerean, E., Karjalainen, T., Karlsson, H. K., Hirvonen, J., & Nummenmaa, L. (2020). Dissociable neural systems for unconditioned acute and sustained fear. *NeuroImage*, 216, 116522. <https://doi.org/10.1016/j.neuroimage.2020.116522>
- Hoffner, C. A., & Levine, K. J. (2005). Enjoyment of mediated fright and violence: A meta-analysis. *Media Psychology*, 7, 207–237. https://doi.org/10.1207/S1532785XMEP0702_5
- Jankowiak-Siuda, K., Kantor-Martynuska, J., Siwy-Hudowska, A., Śmieja, M., Dobrowicz-Konkol, M., Zars-Wieczorek, I., & Siedler, A. (2017). Psychometric properties of the Polish adaptation of short form of the Empathy Quotient (EQ-Short). *Psychiatria Polska*, 51(4), 719–734. <https://doi.org/10.12740/PP/64270>
- Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events: Applications of the schema construct. *Social Cognition*, 7(2), 113–136. <https://doi.org/10.1521/soco.1989.7.2.113>
- Jaworowska, A. (2011). *Kwestionariusze osobowości Eysencka EPQ-R oraz EPQ-R w wersji skróconej* [Eysenck EPQ-R and EPQ-R-short version personality questionnaires.] Warsaw: Pracownia Testów Psychologicznych.
- Kiss, B. L., Deak, A., Veszpremi, M. D., Blenessy, A., & Zsido, A. N. (2024). The role of excitement and enjoyment through subjective evaluation of horror film scenes. *Scientific Reports*, 14(2987). <https://doi.org/10.1038/s41598-024-53533-y>
- Kline, R. B. (2016). *Principles and practice of structural equation modeling*. The Guilford Press.
- Kossowska, M., Hanusz, K., & Trejtowicz, M. (2012). Skrócona wersja Skali Potrzeby Poznawczego Domknięcia. Dobór pozycji i walidacja skali. [Short version of the Need for Cognitive Closure Scale: Items selection and scale validation]. *Psychologia Społeczna*, 7(1), 89–99.
- Lovecraft, H. P. (2013). *Supernatural horror in literature*. Abergele, UK: The Palingenesis Project (Wemod & Wermod Publishing Group).
- Martin, G. N. (2019). (Why) do you like scary movies? A review of the empirical research on psychological responses to horror films. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.02298>
- Míndrilă, D. (2010). Maximum Likelihood (ML) and Diagonally Weighted Least Squares (DWLS) estimation procedures: A comparison of estimation bias with ordinal and multivariate non-normal data. *International Journal of Digital Society*, 1(1), 60–66.
- Pendery, D. R. (2017). Biochemical responses to horror, or, “why do we like this stuff?”. *Horror Studies*, 8(1), 147–163. https://doi.org/10.1386/host.8.1.147_1
- Petrowski, K., Soren, P., Schmutzer, G., Roth, M., Brahler, E., & Albani, C. (2010). Domains of disgust sensitivity: Revisited factor structure of the Questionnaire for the Assessment of Disgust Sensitivity (QADS) in a cross-section, representative German survey. *BMC Medical Research Methodology*, 10(95). <https://doi.org/10.1186/1471-2288-10-95>
- Reynauld, E., El Khoury-Malhame, M., Rossier, J., Blin, O., & Khalfa, S. (2012). Neuroticism modifies psychophysiological responses to fearful films. *PLoS ONE*, 7(3), e32413. <https://doi.org/10.1371/journal.pone.0032413>
- Rosseel, Y. (2012). lavaan An R package for structural equation modeling. *Journal of Statistical Software*, 48, 1–36.
- Sacco, D. F., Walters, M., & Brown, M. (2024). Consumption of psychological horror is associated with reduced stigmatization of mental illness. *Journal of Media Psychology: Theories, Methods, and Applications*. <https://dx.doi.org/10.1027/1864-1105/a000421>
- Scrivner, C. (2021a). The psychology of morbid curiosity: Development and initial validation of the morbid curiosity scale. *Personality and Individual Differences*, 183, 111139. <https://doi.org/10.1016/j.paid.2021.111139>
- Scrivner, C. (2021b). An infectious curiosity: Morbid curiosity and media preferences during a pandemic. *Evolutionary Studies in Imaginative Culture*, 5(1), 1–12. <https://doi.org/10.26613/esic.5.1.206>
- Scrivner, C., Johnson, J. A., Kjeldgaard-Christiansen, J., & Clasen, M. (2021). Pandemic practice: Horror fans and morbidly curious individuals are more psychologically resilient during the COVID-19 pandemic. *Personality and Individual Differences*, 168, 110397. <https://doi.org/10.1016/j.paid.2020.110397>
- Scrivner, C. (2024). Bleeding-heart horror fans. Enjoyment of horror media is not related to lower empathy or compassion. *Journal of Media Psychology: Theories, Methods and Applications*. <https://doi.org/10.1027/1864-1105/a000405>
- Scrivner, C., Andersen, M., M., Schjodt, U., & Clasen, M. (2022). The psychological benefits of scary play in three types of horror fans. *Journal of Media Psychology: Theories, Methods, and Applications*. <http://dx.doi.org/10.1027/1864-1105/a000354>
- Sparks, G. G. (1986). Developing a scale to assess cognitive responses to frightening films. *Journal of Broadcasting & Electronic Media*, 30(1), 65–73. <http://dx.doi.org/10.1080/08838158609386608>
- Sparks, G. G., Pellechia, M., & Irvine, C. (1999). The repressive coping style and fright reactions to mass media. *Communication Research*, 26(2), 176–192. <https://doi.org/10.1177/009365099026002004>
- Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E. (1970). *Manual for the State-Trait Anxiety Inventory*. Palo Alto: Consulting Psychologists Press.
- Szewczuk-Bogusławska, M., Słowińska, A., Bąk, O., Oleszkowicz, A., Kasibowska-Kuźniar, K., Dudek, K., Stępień, A., Kaliszewski, K., Timler, D., & Zyśko, D. (2015). The study of the Polish version of the Questionnaire for the Assessment of Disgust Sensitivity (QADS). *Psychiatria Polska*, 49(1), 145–157. <https://doi.org/10.12740/PP/34043>
- Tabachnick, B.G., & Fidell, L.S. (2001). *Using Multivariate Statistics*. Allyn and Bacon.
- Tamborini, R., & Stiff, J. (1987). Predictors of horror film attendance and appeal: An analysis of the audience for frightening films. *Communication Research*, 14(4), 415–436. <https://doi.org/10.1177/009365087014004003>
- Tamborini, R., & Weaver, J. B. (1996). Frightening entertainment: A historical perspective of fictional horror. In J. B. Weaver & R. Tamborini (Eds.) *Horror films. Current research on audience preferences and reactions*. New York: Routledge.
- Wakabayashi, A., Baron-Cohen, S., Wheelwright, S., Goldenfeld, N., Delaney, J., Fine, D., Smith, R., & Weil, L. (2006). Development of short forms of the Empathy Quotient (EQ-Short) and the Systemizing Quotient (SQ-Short). *Personality and Individual Differences*, 41(5), 929–940. <https://doi.org/10.1016/j.paid.2006.03.017>
- Webster, D. M., & Kruglanski, A. W. (1994). Individual differences in need for cognitive closure. *Journal of Personality and Social Psychology*, 67(6), 1049–1062. <https://doi.org/10.1037/0022-3514.67.6.1049>
- Wrześniewski, K., Jaworowska, A., Sosnowski, T., & Fecenc, D. (2011). *Inwentarz Stanu i Cechy Lęku. Polska adaptacja STAI* [State-Trait Anxiety Inventory. Polish adaptation of STAI]. Warsaw: Pracownia Testów Psychologicznych.
- Żalwski, M., & Gajdosz, M. (2012). Skala założeń wobec świata – polska adaptacja i analiza walidacyjna World Assumptions Scale [Polish adaptation and validation of the World Assumptions Scale]. *Psychoterapia*, 162(3), 17–31.

APPENDIX A

KWESTIONARIUSZ MOTYWÓW
ZWIĄZANYCH Z ODCZUCIAMI STRACHU I OBRZYDZENIA

Michał Gacek, Monika Szczygieł

INSTRUKCJA

Twierdzenia zawarte w kwestionariuszu dotyczą motywów znanych z filmów i książek grozy (horrorów) i mogą odnosić się do kwestii, które wzbudzają negatywne emocje i skojarzenia.

Kwestionariusz składa się z trzech części. Pierwsza i druga część kwestionariusza dotyczą emocji strachu i wstrętu. Twoim zadaniem jest wskazanie, jakie są twoje odczucia związane z poszczególnymi motywami grozy.

Trzecia część kwestionariusza dotyczy kwestii unikania lub dążenia do kontaktu z określonymi motywami w wytworach kultury (filmach, książkach lub grach). Twoim zadaniem w tej części jest wskazanie, w jakim stopniu informacja o występowaniu jakiegoś motywu wywołuje u ciebie unikanie lub dążenie do poznania danego wytworu kultury.

W każdej części zaznacz swoje odpowiedzi na skali od 1 do 7. Staraj się zaznaczać odpowiedzi po kolei, nie opuszczając żadnej.

CZĘŚĆ I (BADANIE EMOCJI STRACHU)

Zaznacz na skali od 1 (wcale mnie nie przeraża) do 7 (bardzo mnie przeraża) Twoje odczucia związane z poszczególnymi twierdzeniami w tabeli

1. Nieznane stworzenia (człekokształtne lub podobne do dużych zwierząt) groźne dla człowieka żyjące w odludnych miejscach takich jak lasy, jaskinie, kanały	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
2. Nawiedzone miejsca związane z przemocą i śmiercią (np. domy, w których popełniono morderstwo, więzienia, cmentarze)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
3. Ludzie, którzy bez wyraźnego powodu krzywdzą innych i czerpią z tego przyjemność (seryjni zabójcy, psychopaci)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
4. Choroba psychiczna związana z brakiem zdolności do odróżniania tego, co jest rzeczywiste od tego, co jest urojeniem lub halucynacją (schizofrenia, psychoza)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
5. Sytuacje poważnych uszkodzeń ciała (np. obfite krwawienie, rany, widok wnętrzości, złamania)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
6. Potwory wywodzące się z mitów, legend i podań ludowych (np. wilkołaki, wampiry, trole)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
7. Opętanie przez złe moce (związane z utratą kontroli nad ciałem i zmysłami)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
8. Agresywni anonimowi napastnicy, zamierzający wyrządzić fizyczną krzywdę (napaść w ciemnej alejce, izolowanym miejscu)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
9. Osoby wykazujące wyraźne oznaki chorób i zaburzeń psychicznych	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
10. Deformacje ciała, widoczne zeszpecenia, anomalie w wyglądzie	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
11. Ożywieni zmarli (zwłoki poruszające się samodzielnie, zombie)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)

12. Miejsca i motywy związane z okultyzmem (praktykami satanistycznymi, kontaktem z demonami)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
13. Osoby z marginesu społecznego dążące do kontaktu i wyrządzenia krzywdy (narkomani, recydywiści)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
14. Choroba psychiczna związana z brakiem możliwości panowania nad swoimi emocjami i zachowaniem (np. zaburzenia nastroju, ataki paniki)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
15. Okrutne, bezceremonialne traktowanie zwłok lub odciętych części ciała drugiej osoby	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
16. Groźne stworzenia z innej planety lub innego wymiaru dążące do wyrządzenia krzywdy ludziom	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
17. Złe lub nieczłowieczne osoby posiadające nadprzyrodzone zdolności (np. czytanie w myślach, przewidywanie przyszłości, poruszanie przedmiotów siłą woli)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
18. Ludzie o złych intencjach, którzy manipulują innymi i wykorzystują zdobytą władzę i pozycję w celu wyrządzenia krzywdy (religijni guru, wpływowi politycy)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
19. Szpitale i oddziały psychiatryczne (miejsc, w których przebywają pacjenci z diagnozami zaburzeń psychicznych)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)
20. Sceny przemocy i celowego wyrządzania fizycznej krzywdy ludziom lub zwierzętom	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie przeraża) (bardzo mnie przeraża)

CZĘŚĆ II (BADANIE EMOCJI WSTRĘTU)

Zaznacz na skali od 1 (wcale mnie nie brzydzi) do 7 (bardzo mnie brzydzi) Twoje odczucia związane z poszczególnymi twierdzeniami w tabeli

1. Nieznane stworzenia (człecokształtne lub podobne do dużych zwierząt) groźne dla człowieka żyjące w odludnych miejscach takich jak lasy, jaskinie, kanały	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
2. Nawiedzone miejsca związane z przemocą i śmiercią (np. domy, w których popełniono morderstwo, więzienia, cmentarze)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
3. Ludzie, którzy bez wyraźnego powodu krzywdzą innych i czerpią z tego przyjemność (seryjni zabójcy, psychopaci)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
4. Choroba psychiczna związana z brakiem zdolności do odróżniania tego, co jest rzeczywiste od tego, co jest urojeniem lub halucynacją (schizofrenia, psychoza)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
5. Sytuacje poważnych uszkodzeń ciała (np. obfite krwawienie, rany, widok wnętrzości, złamania)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
6. Potwory wywodzące się z mitów, legend i podań ludowych (np. wilkołaki, wampiry, trole)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
7. Opętanie przez złe moce (związane z utratą kontroli nad ciałem i zmysłami)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
8. Agresywni anonimowi napastnicy, zamierzający wyrządzić fizyczną krzywdę (napaść w ciemnej alejce, izolowanym miejscu)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
9. Osoby wykazujące wyraźne oznaki chorób i zaburzeń psychicznych	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
10. Deformacje ciała, widoczne zszpecenia, anomalie w wyglądzie	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
11. Ożywieni zmarli (zwłoki poruszające się samodzielnie, zombie)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)

12. Miejsca i motywy związane z okultyzmem (praktykami satanistycznymi, kontaktem z demonami)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
13. Osoby z marginesu społecznego dążące do kontaktu i wyrządzenia krzywdy (narkomani, recydywiści)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
14. Choroba psychiczna związana z brakiem możliwości panowania nad swoimi emocjami i zachowaniem (np. zaburzenia nastroju, ataki paniki)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
15. Okrutne, bezceremonialne traktowanie zwłok lub odciętych części ciała drugiej osoby	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
16. Groźne stworzenia z innej planety lub innego wymiaru dążące do wyrządzenia krzywdy ludziom	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
17. Złe lub niezrównoważone osoby posiadające nadprzyrodzone zdolności (np. czytanie w myślach, przewidywanie przyszłości, poruszanie przedmiotów siłą woli)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
18. Ludzie o złych intencjach, którzy manipulują innymi i wykorzystują zdobytą władzę i pozycję w celu wyrządzenia krzywdy (religijni guru, wpływowi politycy)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
19. Szpitale i oddziały psychiatryczne (miejsc, w których przebywają pacjenci z diagnozami zaburzeń psychicznych)	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)
20. Sceny przemocy i celowego wyrządzania fizycznej krzywdy ludziom lub zwierzętom	1 – 2 – 3 – 4 – 5 – 6 – 7 (wcale mnie nie brzydzi) (bardzo mnie brzydzi)

CZĘŚĆ III (BADANIE UNIKANIA/DĄŻENIA DO MOTYWÓW GROZY)

Zaznacz na skali od 1 (zdecydowanie unikam tego rodzaju treści) do 7 (zdecydowanie dążę do kontaktu z tego rodzaju treściami) Twoje odczucia związane z informacją, że jakiś tekst kultury (film, książka, gra wideo) zawiera dany motyw.

1. Nieznane stworzenia (człokształtne lub podobne do dużych zwierząt) groźne dla człowieka żyjące w odludnych miejscach takich jak lasy, jaskinie, kanały	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam) (zdecydowanie dążę)
2. Nawiedzone miejsca związane z przemocą i śmiercią (np. domy, w których popełniono morderstwo, więzienia, cmentarze)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam) (zdecydowanie dążę)
3. Ludzie, którzy bez wyraźnego powodu krzywdzą innych i czerpią z tego przyjemność (seryjni zabójcy, psychopaci)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam) (zdecydowanie dążę)
4. Choroba psychiczna związana z brakiem zdolności do odróżniania tego, co jest rzeczywiste od tego, co jest urojeniem lub halucynacją (schizofrenia, psychoza)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam) (zdecydowanie dążę)
5. Sytuacje poważnych uszkodzeń ciała (np. obfite krwawienie, rany, widok wnętrzności, złamania)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam) (zdecydowanie dążę)
6. Potwory wywodzące się z mitów, legend i podań ludowych (np. wilkołaki, wampiry, trole)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam) (zdecydowanie dążę)
7. Opętanie przez złe moce (związane z utratą kontroli nad ciałem i zmysłami)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam) (zdecydowanie dążę)
8. Agresywni anonimowi napastnicy, zamierzający wyrządzić fizyczną krzywdę (napaść w ciemnej alejce, izolowanym miejscu)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam) (zdecydowanie dążę)
9. Osoby wykazujące wyraźne oznaki chorób i zaburzeń psychicznych	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam) (zdecydowanie dążę)
10. Deformacje ciała, widoczne zeszpecenia, anomalie w wyglądzie	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam) (zdecydowanie dążę)
11. Ożywieni zmarli (zwłoki poruszające się samodzielnie, zombie)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam) (zdecydowanie dążę)

12. Miejsca i motywy związane z okultyzmem (praktykami satanistycznymi, kontaktem z demonami)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam)	(zdecydowanie dążę)
13. Osoby z marginesu społecznego dążące do kontaktu i wyrządzenia krzywdy (narkomani, recydywiści)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam)	(zdecydowanie dążę)
14. Choroba psychiczna związana z brakiem możliwości panowania nad swoimi emocjami i zachowaniem (np. zaburzenia nastroju, ataki paniki)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam)	(zdecydowanie dążę)
15. Okrutne, bezceremonialne traktowanie zwłok lub odciętych części ciała drugiej osoby	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam)	(zdecydowanie dążę)
16. Groźne stworzenia z innej planety lub innego wymiaru dążące do wyrządzenia krzywdy ludziom	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam)	(zdecydowanie dążę)
17. Złe lub nie zrównoważone osoby posiadające nadprzyrodzone zdolności (np. czytanie w myślach, przewidywanie przyszłości, poruszanie przedmiotów siłą woli)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam)	(zdecydowanie dążę)
18. Ludzie o złych intencjach, którzy manipulują innymi i wykorzystują zdobytą władzę i pozycję w celu wyrządzenia krzywdy (religijni guru, wpływowi politycy)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam)	(zdecydowanie dążę)
19. Szpitale i oddziały psychiatryczne (miejsc, w których przebywają pacjenci z diagnozami zaburzeń psychicznych)	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam)	(zdecydowanie dążę)
20. Sceny przemocy i celowego wyrządzania fizycznej krzywdy ludziom lub zwierzętom	1 – 2 – 3 – 4 – 5 – 6 – 7 (zdecydowanie unikam)	(zdecydowanie dążę)

APPENDIX B

The English version of the measure is presented here to make it available to a wide range of readers.

HORROR THEMES QUESTIONNAIRE

Michał Gacek, Monika Szczygieł

INSTRUCTION

The statements included in the questionnaire concern themes known from horror films and books and may refer to issues that arouse negative emotions and associations.

The questionnaire consists of three parts. The first and second parts of the questionnaire concern the emotions of fear and disgust. Your task is to indicate your feelings about particular horror themes.

The third part of the questionnaire concerns the issue of avoiding or striving for contact with specific themes in cultural products (films, books or games). Your task in this part is to indicate the extent to which information about the occurrence of a certain theme causes you to avoid or pursue a given cultural product.

In each part, mark your answers on a scale from 1 to 7. Try to mark the answers one by one without missing any.

PART I (EXAMINATION OF THE EMOTION OF FEAR)

On a scale from 1 (it doesn't scare me at all) to 7 (it scares me a lot), mark your feelings about the statements in the table

1. Unknown creatures (humanoid or large animal-like) dangerous to humans, living in remote places such as forests, caves, canals	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
2. Haunted places associated with violence and death (e.g., houses where a murder was committed, prisons, cemeteries)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
3. People who hurt others for no apparent reason and derive pleasure from it (serial killers, psychopaths)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
4. A mental illness involving the inability to distinguish what is real from what is delusion or hallucination (schizophrenia, psychosis)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
5. Situations of serious bodily injury (e.g., abundant bleeding, wounds, view of entrails, fractures)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
6. Monsters originating from myths, legends and folk tales (e.g., werewolves, vampires, trolls)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
7. Possession by evil forces (related to loss of control over body and senses)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
8. Aggressive anonymous attackers intent on causing physical harm (assault in a dark alley or isolated place)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
9. People showing obvious signs of mental illness or disorders	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
10. Body deformations, visible disfigurements, anomalies in appearance	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
11. Reanimated dead (moving corpses, zombies)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
12. Places and motifs related to occultism (satanic practices, contact with demons)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
13. People from the margins of society seeking contact and causing harm (drug addicts, recidivists)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
14. Mental illness related to inability to control emotions and behavior (e.g., mood disorders, panic attacks)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
15. Cruel, unceremonious treatment of corpses or severed body parts of another person	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
16. Dangerous creatures from another planet or another dimension seeking to harm people	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)

17. Evil or unstable people with supernatural abilities (e.g., mind reading, predicting the future, moving objects by force of will)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
18. People with bad intentions who manipulate others and use the power and position they have to cause harm (religious gurus, influential politicians)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
19. Hospitals and psychiatric wards (places where patients diagnosed with mental disorders stay)	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)
20. Scenes of violence and intentional physical harm to people or animals	1 – 2 – 3 – 4 – 5 – 6 – 7 (it doesn't scare me at all) (it scares me a lot)

PART II (EXAMINATION OF THE EMOTION OF DISGUST)

On a scale from 1 (not at all disgusting) to 7 (disgusting very much), mark your feelings about the individual statements in the table

1. Unknown creatures (humanoid or large animal-like) dangerous to humans, living in remote places such as forests, caves, canals	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
2. Haunted places associated with violence and death (e.g., houses where a murder was committed, prisons, cemeteries)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
3. People who hurt others for no apparent reason and derive pleasure from it (serial killers, psychopaths)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
4. A mental illness involving the inability to distinguish what is real from what is delusion or hallucination (schizophrenia, psychosis)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
5. Situations of serious bodily injury (e.g., abundant bleeding, wounds, view of entrails, fractures)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
6. Monsters originating from myths, legends and folk tales (e.g., werewolves, vampires, trolls)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
7. Possession by evil forces (related to loss of control over body and senses)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
8. Aggressive anonymous attackers intent on causing physical harm (assault in a dark alley or isolated place)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
9. People showing obvious signs of mental illness or disorders	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
10. Body deformations, visible disfigurements, anomalies in appearance	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
11. Reanimated dead (moving corpses, zombies)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
12. Places and motifs related to occultism (satanic practices, contact with demons)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting 1) (disgusting very much)
13. People from the margins of society seeking contact and causing harm (drug addicts, recidivists)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
14. Mental illness related to inability to control emotions and behavior (e.g., mood disorders, panic attacks)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
15. Cruel, unceremonious treatment of corpses or severed body parts of another person	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
16. Dangerous creatures from another planet or another dimension seeking to harm people	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
17. Evil or unstable people with supernatural abilities (e.g., mind reading, predicting the future, moving objects by force of will)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
18. People with bad intentions who manipulate others and use the power and position they have to cause harm (religious gurus, influential politicians)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)

19. Hospitals and psychiatric wards (places where patients diagnosed with mental disorders stay)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)
20. Scenes of violence and intentional physical harm to people or animals	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (disgusting very much)

PART III (EXAMINATION OF AVOIDANCE/PURSUIT OF HORROR THEMES)

On a scale from 1 (I definitely avoid) to 7 (I definitely pursuit), mark your feelings related to the information that a cultural text (film, book, video game) contains a given theme.

1. Unknown creatures (humanoid or large animal-like) dangerous to humans, living in remote places such as forests, caves, canals	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
2. Haunted places associated with violence and death (e.g., houses where a murder was committed, prisons, cemeteries)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
3. People who hurt others for no apparent reason and derive pleasure from it (serial killers, psychopaths)	1 – 2 – 3 – 4 – 5 – 6 – 7 (not at all disgusting) (I definitely pursuit)
4. A mental illness involving the inability to distinguish what is real from what is delusion or hallucination (schizophrenia, psychosis)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
5. Situations of serious bodily injury (e.g., abundant bleeding, wounds, view of entrails, fractures)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
6. Monsters originating from myths, legends and folk tales (e.g., werewolves, vampires, trolls)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
7. Possession by evil forces (related to loss of control over body and senses)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
8. Aggressive anonymous attackers intent on causing physical harm (assault in a dark alley or isolated place)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
9. People showing obvious signs of mental illness or disorders	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
10. Body deformations, visible disfigurements, anomalies in appearance	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
11. Reanimated dead (moving corpses, zombies)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
12. Places and motifs related to occultism (satanic practices, contact with demons)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
13. People from the margins of society seeking contact and causing harm (drug addicts, recidivists)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
14. Mental illness related to inability to control your emotions and behavior (e.g., mood disorders, panic attacks)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
15. Cruel, unceremonious treatment of corpses or severed body parts of another person	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
16. Dangerous creatures from another planet or another dimension seeking to harm people	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
17. Evil or unstable people with supernatural abilities (e.g., mind reading, predicting the future, moving objects by force of will)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
18. People with bad intentions who manipulate others and use the power and position they have to cause harm (religious gurus, influential politicians)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
19. Hospitals and psychiatric wards (places where patients diagnosed with mental disorders stay)	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)
20. Scenes of violence and intentional physical harm to people or animals	1 – 2 – 3 – 4 – 5 – 6 – 7 (I definitely avoid) (I definitely pursuit)

Appendix C

Zero-order Pearson's r correlations between all total and subscale scores in the HTQ-FEAR, HTQ-DISGUST, HTQ-PURSUIT parts

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 HTQ_FEAR_Total	3.58	0.95																	
2 HTQ_FEAR_GV	3.94	1.32	.72***																
3 HTQ_FEAR_MD	3.13	1.33	.64***	.33***															
4 HTQ_FEAR_KP	4.30	1.40	.73***	.50***	.38***														
5 HTQ_FEAR_P	3.67	1.44	.74***	.36***	.30***	.35***													
6 HTQ_FEAR_M	2.85	1.23	.69***	.37***	.24***	.32***	.56***												
HTQ_DISGUST_- Total	3.12	.90	.67***	.54***	.39***	.46***	.48***	.48***											
8 HTQ_DIS- GUST_GV	4.80	1.35	.48***	.66***	.17***	.34***	.26***	.24***	.61***										
9 HTQ_DIS- GUST_MD	2.02	1.12	.42***	.26***	.52***	.18***	.27***	.25***	.66***	.14***									
10 HTQ_DIS- GUST_KP	3.82	1.54	.39***	.27***	.22***	.51***	.19***	.19***	.71***	.33***	.32***								
11 HTQ_DISGUST_P	2.26	1.21	.51***	.32***	.30***	.25***	.52***	.40***	.78***	.22***	.60***	.41***							
12 HTQ_DISGUST_M	2.68	1.22	.55***	.36***	.22***	.26***	.46***	.65***	.73***	.38***	.36***	.29***	.58***						
HTQ_PURSUIT_- Total	3.56	1.05	-.23***	-.17***	-.07	-.15***	-.25***	-.17***	-.18***	-.09*	-.13**	-.10*	-.18***	-.15***					
14 HTQ_PUR- SUIT_GV	2.65	1.28	-.18***	-.28***	.03	-.19***	-.13***	-.07	-.16***	-.36***	.06	-.10*	-.02	-.10*	.68***				
15 HTQ_PUR- SUIT_MD	4.39	1.47	-.09*	-.02	-.16***	.04	-.09*	-.09*	-.09*	.13**	-.29***	.00	-.16***	-.03	.64***	.22***			
16 HTQ_PUR- SUIT_KP	3.49	1.45	-.20***	-.14***	-.05	-.19***	-.18***	-.16***	-.16***	-.06	-.08*	-.18***	-.12**	-.08*	.80***	.50***	.53***		
17 HTQ_PURSUIT_P	3.72	1.55	-.22***	-.11**	-.06	-.13***	-.30***	-.17***	-.17***	-.03	-.11**	-.07	-.22***	-.17***	.81***	.42***	.38***	.51***	
18 HTQ_PURSUIT_M	3.55	1.43	-.16***	-.09*	-.02	-.08*	-.22***	-.13***	-.10**	-.04	-.04	-.02	-.10*	-.18***	.70***	.42***	.17***	.37***	.59***

* $p < .05$, ** $p < .01$, *** $p < .001$, $N = 623-626$. HTQ-Total – total score in HTQ scale, HTQ-GV – gore and violence, HTQ-MD – mental disorders, HTQ-KP – killers and psychopaths, HTQ-P – paranormal phenomena, HTQ-M – monsters.