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**DO WE IMPROVE, DISRUPT, OR EMBRACE SADNESS?  
EXPLORING SADNESS-BASED MEDIA CHOICE AND  
ITS ANTICIPATED EFFECTS ON COPING**

A Thesis in

Mass Communications

by

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## Abstract

Sadness, unlike other negative feelings, is unique in that its main causes are related to unpreventable and irreversible harm without any blamable objects. Due to these distinctive attributes, pre-existing theories of media use—uses and gratifications and Zillmann's mood management—that center around hedonism-driven media choice are not sufficient to explain the media preferences of individuals with sad feelings. As those theories predict, sad individuals may not always opt to improve their negative feelings into positive ones or distract themselves from those feelings. In order to predict sadness-based media preferences that correspond to the three potential salient goals of sadness regulation—improving, distracting, or embracing—the present study conducted an experiment manipulating sad and neutral feelings and repeatedly measuring preference for three media genres—comedies, game shows, and sad dramas. Results showed that most participants wanted to watch comedies over sad dramas or game shows regardless of their prevailing mood states. However, a series of mediation analyses revealed that sadness indirectly affected preference for sad dramas because of an expectation of gaining profound life meanings and purposes. Additionally, sadness indirectly affected the tendency of some viewers to avoid comedies and/or game shows because they expected viewing such programming to induce unhappy or annoyed feelings respectively. These findings were interpreted as suggesting that although most sad individuals preferred to watch comedies, some viewers are motivated to experience self-understanding and maturity and to gain insights into life and the world, and sad dramas with their truthful, compelling, and meaningful messages provide viewers with constructive coping resources. To more fully understand the media consumption of sad people, the results are further discussed in terms of the importance of cognitive responses distinct from the emotional responses that resulted from the use of media.

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## Introduction

The use of media entertainment affects and is affected by viewers' emotional experiences. Although the majority of research on this intersection explores individuals' emotional responses to different kinds of media, some media scholarship has examined the influence of emotion/mood on individuals' media-preference formation. For example, previous studies have reported that people experiencing chronic psychological distress (e.g., loneliness) or transient negative moods (e.g., experimentally induced ones) choose media content to help them improve a prevailing negative state and provide a gratifying experience.

A potential flaw in previous studies is that they have focused on "global negative affect," assuming that all negative emotional states (e.g., sadness, anger, disgust, regret, guilt, etc.) would lead media users to choose the same type of media content. However, each discrete negative emotional state has its own unique cognitive origin and core meaning, and, therefore, people may not choose homogeneous media content across all negative states. Rather, they may expose themselves to distinct media content that they see as having the most promise for helping them manage each discrete affective state.

In order to understand the formation of media preferences based on discrete emotions, the present research chooses "sadness" and explores how this discrete state may influence people's media choices. Sadness as a discrete emotion was particularly selected for this research because unlike other negative feelings, sadness appears to lead individuals to select media materials that do not present hedonically pleasant values. Previous studies, although they did not exclusively induce sadness per se, have suggested that, paradoxically, individuals experiencing sadness-related feelings may expose themselves to sadness-inducing media, such as tragic films or mournful songs (Gibson, Aust, & Zillmann, 2000; Goldenberg, Pyszczynski, Johnson, Greenberg,

& Solomon, 1999; Knobloch & Zillmann, 2003; Mares & Cantor, 1992). Such choices are counter-intuitive; presumably, as with other negative affective states, sadness should be diminished and superseded by choosing media with positive hedonic values.

To provide clues to understanding sadness-based media choices, the present review explores (a) *cognitive antecedents* that result in sad feelings; identifies (b) people's *goals* in regard to coping with the sad feelings; and suggests (c) *media genres* that have structural similarities to the goals that people experiencing sadness want to fulfill. Sadness is a complex emotion that can be traced to the cognitive construal of loss of or separation from loved people or valuable things due to irrevocable causes without blamable objects. Encompassing more than a sense of "negativity" or "unpleasantness," these core cognitive antecedents prime affect-regulation goals that are uniquely relevant to sadness.

What might be the coping goals of people with sad feelings? The present research suggests that their goals may be divided into three categories. First, sad people seek external materials presenting emotional benefits that may include improving sad feelings to the extent that they give way to positive feelings. Second, they look for external materials that may disrupt their sadness-related cognitions, yet the goal is not necessarily to obtain an emotionally pleasurable experience. Third, the present research explores the possibility that sad people may seek external materials that offer cognitive benefits; these benefits may include helping viewers to embrace sad feelings through understanding the causes of sadness in a different way, and ultimately helping them find a way to move on. Although little attention has been paid to goals that may pertain to gaining these cognitive benefits, sad people may also strive to make sense of their sadness in a meaningful way by consciously gathering insights about and trying to make

sense of what life may mean. Inclusion of goals that are relevant to the cognitive dimensions will expand previous theories of media use, which have heavily focused on emotional benefits alone.

Additionally, although people set goals of regulating sadness based on what they want (either improving, distracting, or embracing), they often change these initial goals to fulfill “appropriate” norm-based social goals. In other words, social constraints modify sadness-regulation processes and goals, laying down cultural expectations for how people should cope with sadness. For example, although men may feel that they would like to cope with sadness by talking or by expressing their emotions, cultural prohibitions against such expression may strongly deter them from doing so. If this is the case, social expectations may interfere with men’s initial goals of, for instance, coping by expressing their emotions. The present study explores a potential moderating role of gender in sadness regulation to examine whether gender-based norms and socialization influence sadness regulation goals including goals related to media use.

Finally, in addition to predicting media choices that are congruent with sad people’s perceived salient goals, the anticipated emotional and cognitive outcomes resulting from media use will be identified and examined as mediators. The mediators that also represent underlying motivations to choose media will play a role in determining the decision-making processes of sad individuals. It is expected that the distinction between anticipated emotional and cognitive consequences will identify sad individuals’ perceived primary sadness-regulation goals with regard to whether they want to change their negative feelings, their distorted thoughts, or both. Furthermore, the mediation analysis will seek to explain which theoretical mechanisms play the most significant role in sadness-based media consumption.

## Literature Review

### *Mood-Based Media Use*

In the mass communication field, research on mood-based media use as a mechanism to help cope with psychological difficulties and negative feelings has been examined using two different theoretical approaches: uses and gratifications (for a review, see Rubin, 2002) and affect-dependent media stimulus arrangement, known as “mood management” (for a review, see Knobloch-Westerwick, 2006; Oliver, 2003). Beginning with the assumption that individuals are active, involved, and rational media users, these theories claim that people purposely use media with motivations relevant to “emotional release” and wisely select media content that minimizes negative experience and maximizes or prolongs positive experience.

Uses and gratifications research categorizes different types of motivations in regard to media use, and one of them is the motivation to regulate mood (e.g., obtaining an entertaining or distracting experience) with the assumption that media use fulfills users’ psychological needs. Consequently, uses and gratifications research suggest that those who experience chronic negative feelings such as depression or loneliness are likely to consume media with the motivation of achieving an emotion-related gratification, such as a sense of companionship (Dittmar, 1994; Perloff, Quareles, & Drutz, 1983; Potts & Sanchez, 1994). Affect-dependent media stimulus arrangement theory directly examines mood per se as a predictor of media choices. This theory suggests that individuals experiencing negative affective states are likely to select media content they see as fulfilling the goal of maximizing pleasure and minimizing pain (Zillmann, 1988b; Zillmann & Bryant, 1985).

These two approaches are similar in assuming that overall media use and/or the use of specific genres will eventually provide media users with gratifying experiences and/or enjoyment.

However, they are different in several ways. First, Zillmann's mood management does not assume that people are consciously aware of their hedonism-driven motivations when selecting media; in addition, it claims that people are able to reach intelligent decisions without deliberate thinking processes. Therefore, Zillmann believes that experimental studies are a more appropriate method for examining the relationship between individuals' motivation and media selection than are self-reported survey methods, which do not always correctly represent individuals' own inner cognitive and mental processes (Nisbett & Wilson, 1977). Mood management studies unobtrusively measure viewers' selection patterns (i.e., behaviors), whereas uses and gratifications theory measures viewers' global media use based on retrospective assessments.

Second, uses and gratifications theory does not take into account the characteristics of specific media content, whereas Zillmann's mood management theory identifies media content features that potentially impact mood changes. These mood-impacting characteristics include absorbing or involving potentials, valence of hedonic values (either positive/pleasant or negative/sad), arousal/excitatory potentials (calm or exciting), and the extent to which media content has similarities associated with the antecedents of a prevailing negative mood (Zillmann, 1985, 1988a, 1988b, 2000). Zillmann presents theoretical propositions based on hedonic motivations to explain the formation of preferences between these mood-impacting media content characteristics and individuals' affective states.

During the last two decades, Zillmann and his colleagues have provided strong empirical support for their theoretical assumptions and propositions. For example, research has shown that when individuals are in negative moods, they are more likely to opt for media content including hedonically pleasing values such as comedies (Meadowcroft & Zillmann, 1987) or energetic and

joyful music (Knobloch & Zillmann, 2002). In terms of arousal regulation, Bryant and Zillmann (1984) reported that stressed participants were likely to watch calm and relaxing programming (e.g., documentaries featuring natural scenery), whereas bored participants were likely to select exciting and arousing programming (e.g., action-packed football games). The authors suggested that such selected programming provided excitatory homeostasis, that is, optimal levels of arousal (see also, Mastro, Eastin, & Tamborini, 2002). Non-experimental research has also provided further support for Zillmann's theory, reporting that stressful life events were positively associated with viewing comedies and negatively associated with viewing news and documentaries (Anderson, Collins, Schmitt, & Jacobvitz, 1996).

#### *Concerns from Previous Studies*

Although Zillmann's research program has contributed tremendously to understanding the mood-impacting characteristics of media that determine affect-dependent media-choice behavior, several concerns remain to be addressed. First, at the conceptual level, Zillmann's mood management theory does not differentiate between types of feelings within the same valence. It focuses instead on global positive and negative affect: that is, the research groups all negative feelings together and all positive feelings together. However, it should be noted that affective states governing individuals' media choices are complex.

Zillmann's valence-dimension approach is also related to drawbacks at the operationalization level: either one type of manipulated negative mood is equated with all other negative moods, or different negative moods are simply combined together and labeled as a global negative mood. For example, when inducing negative moods, Zillmann and his colleagues gave participants bogus feedback on their performance of tasks (Biswas, Riffe, & Zillmann, 1994; Knobloch & Zillmann, 2002; Medoff, 1982). However, it should be noted that the mood

induced through the bogus feedback may be akin to an angry mood, which is just one type of discrete affect among many different negative states. Alternatively, in other research, distinct types of negative affect (e.g., depression, anxiety, irritation, gloom) have simply been combined together to represent negative affect in general (see, Helregel & Weaver, 1989; Meadowcroft & Zillmann, 1987). In order to explore individuals' media choices beyond the valence-dimension approach, the present research explores the discrete affective state of "sadness" instead of a global negative mood, and explores how sadness predicts the formation of media preferences.

Second, Zillmann's studies have explained the media selections made by individuals in prevailing negative affective states as resulting solely from hedonism—people's desire to maximize pleasure and minimize pain. It has been suggested that people want and aim to use media to relieve their negative feelings and that their selections almost always serve the end of obtaining positive emotional outcomes such as overall gratification and/or enjoyment. Therefore, previous studies have explained individuals' affect-based media use in terms of a one-dimensional motivation and a one-dimensional goal.

However, research should move forward to identify different types of motivations and goals to focus on each discrete emotion rather than taking a valence-based approach. Individuals feel each discrete affective state because the discrete affect conveys corresponding cognitive antecedents (Izard & Ackerman, 2000; Lazarus, 1991; Smith & Ellsworth, 1985). For example, sadness inheres in experiences associated with irrevocable harm, such as the unavoidable loss of or separation from loved people, which are in turn the cognitive antecedents of this emotion. Therefore, goals attributable to these distinctive cognitive factors should be perceived as more salient for those experiencing sadness-related feelings. It should be noted that the formation of goals and motivations is governed not only by adaptation values, but also by socially appropriate



norms. Future research should address different types of goals attributable to the cognitive appraisal components of each discrete emotion. Further, future research should attempt to theorize plausible mechanisms to explain media content choices suitable to these goals.

Third, rather than simply assuming that the goal of affect-based media use has been reached when anticipated gratifying experiences are fulfilled, future research should evaluate whether the specific goals are or are not achieved within each discrete emotion-relevant domain. For example, if sadness motivates individuals to seek media that satisfies the goal of perceived reward and nurturance through gaining renewed insight into life, then media users' motivation of the selected media should be assessed in terms not only of changes in sad feelings but also in terms of subjectively perceived learning-relevant outcomes. In other words, the anticipated outcomes of affect-based media choice should be evaluated by the extent to which the selected media provide users with useful coping resources pertaining to a given discrete affect—not by aggregated indicators of gratification and/or enjoyment.

Fourth and related to the third, previous mood management studies evaluate only the emotional outcomes that accrue from the selected media, focusing on increased positive and decreased negative feelings. However, the present research explores the possibility that individuals select the media genre they see as providing the cognitive benefits most likely to be helpful in resolving problems resulting from the negative discrete emotions they are experiencing. For example, people may tolerate negative feelings from sadness-inducing media because they expect to obtain other types of benefits, such as a new perspective on or a renewed interest in life and the world. These cognitive learning-relevant outcomes may play a significant role in predicting a preference for sadness-inducing media. Consequently, future research should

address the possibility that individuals' media choices may be determined by cognitively favorable outcomes in addition to emotionally positive ones.

The following section discusses how the present study will address and resolve these concerns. Assuming that sadness as a discrete emotion has unique cognitive antecedents and activation patterns, the present study explores how a sad affective state (compared to a neutral one) influences individuals' media choices. Additionally, the anticipated outcomes of media use for sadness-regulation will be evaluated in terms of whether they provide useful resources for coping with sadness in an emotional and a cognitive domain respectively.

#### *Unique Characteristics of Sadness and Its Distinct Role in Predicting Media Choice*

Sadness is generally understood as resulting from being deprived of loved people or valuable things without blameworthy targets (Barr-Zisowitz, 2000; Izard & Ackerman, 2000; Lazarus, 1991; Roseman, 1991; Smith & Ellsworth, 1985). Given this core definition of sadness, the present study examines three possibilities concerning sad people's perceived salient goals in regulating their sadness and the media materials they choose to fulfill those goals. The three possibilities are derived from Zillmann's mood management theory and other alternative theoretical perspectives: a) preference for hedonically positive content to improve sad feelings to an optimal (positive) level, b) preference for cognitively involving content to disrupt the rehearsal of cognitions related to sad feelings, and c) preference for sadness-inducing content to obtain emotionally fulfilling experiences through cognitive benefits or lessons. Additionally, the potential moderating role of gender in media choice will also be discussed to examine whether gender-based socialization processes lead to differences in the media choices made by sad males and sad females.

*Selection of hedonically pleasant content.* Following Zillmann's hedonistic propositions (Zillmann, 1988a, 1988b; Zillmann & Bryant, 1985), sad individuals are motivated to terminate and/or reduce sadness (bad mood) and to maintain and/or increase gratifying and pleasurable experiences (good mood). Therefore, if available strategies for sadness-regulation are limited to media offerings, sad individuals will select media content that best accomplishes the goal of maximizing gratification and minimizing pain in terms of duration and intensity.

Indeed, if Zillmann's mood management theory is correct, sad people (compared to neutral people) should prefer media content presenting strong positive hedonic values (e.g., cheerful media materials, such as comedies) over alternatives (e.g., sad media materials, such as tragic dramas) to alleviate a sad mood. This prediction was made because Zillmann did not differentiate discrete states of the same negative valence. Therefore, sad individuals (i.e., those in a negative state) were expected to seek hedonically pleasurable materials, and as a result of viewing, a positive emotional experience and amusement and/or happy thoughts would supersede their current sad feelings.

*Selection of absorbing content.* In addition to preference for content presenting pleasant values to improve sad feelings, Zillmann's mood management theory also predicts that sad individuals prefer media content that may have the ability to effectively impair a negative mood-maintaining rehearsal of thoughts. Therefore, as the second possibility, the mood management theory hypothesizes that sad individuals prefer cognitively absorbing material devoid of sadness-related content and feelings such as game shows. Sad people would expect a distracting experience to result in decreased sadness-related feelings because such media materials may help keep their minds off sad thoughts for a while and so allow them a break from their sadness.

The idea that sad individuals will choose either comedies or game shows is consistent with Zillmann's theory; however, if comedies are preferred over game shows, it might be argued that humor may have unique properties that contribute to effectively attenuating feelings of sadness. On the other hand, if game shows are preferred over comedies, it may be that the former genre has a stronger absorbing potential than do comedies. Game shows would, therefore, be more effective in disrupting sad feelings and the related distorted thoughts that occur in this state.

However, it should be noted that, positive affect, like humor, may not always serve the end of sadness regulation. This may be the case for a number of reasons. First, given that comedies often depict people who are funny, joyful, and invulnerable with their normal lives and easily solved problems, this particular genre may produce negative affect (e.g., frustration, discouragement, and complaint) and worse self-evaluations (e.g., "except for me, everyone seems happy"), especially among people with sad feelings. This prediction is consistent with the theory of upward social comparison with its claim that after comparing the self with superior others in relevant comparison domains (here, emotional states), the self tends to have a less positive mood and a lower self-evaluation (e.g., Aspinwall & Taylor, 1993).

In addition to producing negative feelings among sad people, humor may not be perceived as an appropriate tool for regulating sadness due to perceived social norms. Affect-regulation processes often follow appropriate norms imposed by social constraints. People learn these emotional norms as a way to be in keeping with a set of social beliefs and knowledge about the rules and meanings associated with each emotion (Gordon, 1989; Thompson, 1994). From these beliefs, sad individuals may perceive that experiencing a hedonically pleasurable affect and/or indulging in loud laughter are socially inappropriate means of coping. In this context, the goal of sadness regulation may not be affect-optimization but affect-adjustment, with the goal of

achieving, or at least presenting, a socially acceptable state (Erber & Erber, 2001; Knobloch-Westerwick & Alter, 2006; Knobloch, 2003).

*Selection of sadness-inducing content.* Preference for content with positive hedonic values and/or strong absorbing potential is also relevant to regulating other negative states. This prediction, derived from Zillmann's theorizing, assumes uniform media preference across all negative affective states. However, the third possibility in regard to media choice inheres in a consideration of the unique cognitive origins of negative states: It is plausible that individuals in a sad state will choose media content distinct from the choices predicted by those who experience other negative states.

People feel "sad" when their goals are interrupted due to harm associated with the loss of or separation from loved people or treasured things due to uncontrollable and unpreventable factors (Barr-Zisowitz, 2000; Lazarus, 1991; Roseman, 1991). Sadness turns people's attention inward to reflect upon their grief (Brody & Hall, 1993; Parrott, 2002), slows mental processes (Ekman, 2004; Izard & Ackerman, 2000), and tends to isolate people as they withdraw from activities (Lazarus, 1991). The attempt to predict accurately the distinctive goals and motivations primed by these unique characteristics of sadness would be greatly facilitated by taking a closer look at the cognitive antecedents that trigger sadness. The antecedents would include irrevocable separation from or bereavement in regard to parents, siblings, relatives, or friends among other things. With that said, the present study uses theoretical models of stress and coping that view loss, bereavement, or grief as stressful life events in larger contexts in order to determine the perceived salient goals and motivations activated by sadness and external media stimuli that would fulfill those goals and motivations.

The theoretical models of coping with loss or bereavement predict that sadness after losing a loved one will motivate people to revise the assumption that they are relatively safe from traumatic events and that bad things happen to others, but not to them (Janoff-Bulman & Berger, 2000). In order to make sense of the challenges experienced as a result of sad life events, individuals should confront the difficult reality by means of contemplating and processing the event's causes and consequences. In mulling over their sad life events, individuals could reflect on their anguish in a detached manner, try to reinterpret their difficult circumstances more positively, and finally gain a renewed perspective on and find new meaning in their lives (Folkman, 2001; Folkman & Moskowitz, 2004; Nolen-Hoeksema & Larson, 1999). One effective outcome of these cognitively involved coping processes is that individuals may also experience a positive affect associated with perceived reward and nurturance that will ultimately serve as an adaptive value in fighting the sad emotion (Plutchik, 1980; Smith & Lazarus, 1990).

With these salient goals of sad individuals in mind, the present research explores the possibility that sadness-evoking media content provides sad individuals with the aforementioned constructive meanings and adaptive values. Although several mechanisms have already been theorized to predict preference for sad media, they do not directly address the potential cognitive benefits from viewing this genre. Therefore, reinterpretations of their underlying assumptions and conclusions will provide some supporting foundation for and cast some light on the predictions of the study. The following paragraphs will discuss several theories and how they may elaborate the theoretical linkage posited by the current study.

First, sad individuals may be attracted to sadness-inducing media often depicting people in similar or even worse situations, because such content may allow them to realize that they are not the only people in despair. The theory of *downward social comparison* (for a review, see

Wills, 1981) has been employed by media scholars as a theoretical framework to explain the selection and enjoyment of sadness-inducing media content. For example, research has reported that young people (hypothetically) abandoned by their romantic partners are attracted to music lamenting the loss of a loved one rather than music celebrating the love of a happy couple (Gibson et al., 2000; see also, Knobloch & Zillmann, 2003). Likewise, research has also shown that lonely elderly viewers prefer negative portrayals of old age (e.g., a lonely old person) over positive ones (e.g., a socially engaged old person) (Mares & Cantor, 1992). These findings have been interpreted as suggesting that “heart-broken” and/or lonely people expect to obtain positive emotional benefits by realizing that their situations are not so very bad when compared to those of similar others.

Although comparative evaluations include viewers’ reflections on their difficulties in comparison with people featured in the media, the authors of the aforementioned studies interpreted their findings as supporting Zillmann’s hedonism-driven media choices. In other words, they focus on only the positive emotional outcomes of using sadness-inducing media, overlooking the possibility that comparisons with media characters could also generate reflection and evaluation processes that, in turn, serve as cognitive resources for coping with sadness. Consequently, re-interpretations of findings from studies employing downward social comparison theory provide plausible theoretical evidence supporting the idea that sad individuals prefer sad dramas because of motivations relevant to cognitive learning-related outcomes.

In addition to the theory of downward social comparison, the notion of information utility also provides support for the current theoretical project. From recent developments in mood management theory, Zillmann (2000) suggests that individuals with ailments expose themselves to media content featuring those ailments because they expect to learn about the nature of their

problems and find ways of recovering from them. It should be clearly noted that Zillmann did move beyond focusing solely on emotional outcomes. He addressed expected changes in viewers' cognitions as one of the motivations for using sadness-inducing media. However, his reference to information utility does not fully consider the possibility that sad individuals may seek meanings, perspectives, or insights from this genre. Rather, his argument implies that viewers use sadness-inducing media to find potential practical strategies that may provide specific and proximal resources for coping with life difficulties.

A final pre-existing theory that provides more direct evidence for the present proposition is the *terror management theory*. This theory offers an account in which sad people may use sad dramas in order to gain cognitive resources relevant to overcoming their difficulties and eventually effecting positive personal growth. Goldenberg and his colleagues (1999) claimed that individuals are motivated to deal with their negative feelings about mortality in a distant manner by immersing themselves in the nature of reality, worldviews, and cultural values. They further argued that individuals who saliently perceive their mortality are attracted to sadness-inducing media (tragedies) because this particular genre presents profound life meanings and values, and thereby creates a non-threatening environment. By obtaining meaningful resources from these typical depictions of tragedies, they may integrate mortality salience with a sense of insight into their lives.

Although Goldenberg and his colleagues explain preference for sad media genres with mortality salience (i.e., thinking about one's own death) as a main predictor, it should be noted that their manipulation of mortality salience is closely associated with the appraisal components of sadness. That is, thinking about one's own death might cause people to more strongly realize possible detachments from relationships with valuable people and the world of which they are



currently a part. Indeed, Davis and McKearney (2003) reported that the manipulation procedure of traditional mortality salience produces similar effects to the recall of loss or trauma in one's life. Consequently, the idea that saliently perceived mortality motivates individuals to seek life meanings and values in order to adjust to their fears about death provides more relevant theoretical rationale for the present study predicting that sad individuals' attraction to sadness-inducing media may be motivated by expectations of learning about renewed perspectives and outlooks.

Taken together, discussions of the above three theoretical mechanisms provide supporting arguments regarding the possibility that sad people choose sadness-inducing media with the hope of finding an alternative way to embrace their sad experiences through a) reflecting and re-evaluating their difficult situations by comparing themselves with others in similar or worse situations, b) learning how to recover from their problems, and/or c) gaining insights into and possibly finding new meanings in life. Although comparative evaluation processes may not be necessary for obtaining cognitive learning-relevant outcomes, these evaluations may be one possible element of the cognitive reaction processes through which viewers relate their situations to the media.

In addition to the aforementioned downward social comparison, information utility, and terror management theories, several other theoretical mechanisms have also been employed to explain preference for sadness-inducing media, though with greater emphasis on the possible positive emotional outcomes. First, the *meta-moods* explanation distinguishes the initial sad responses to viewing sadness-inducing media from the responses and reactions that result from those sad responses. This mechanism suggests that viewers perceive their sadness as a gratifying experience at the reflective level. For example, viewers feel sad after watching sad films;

however, they reappraise those sad feelings in positive ways (e.g., “it is good to experience even sad emotions”). These independent emotional experiences at the direct and indirect levels provide plausible explanations regarding why viewers favorably evaluate sad feelings evoked from media as pleasurable ones, and therefore, why they enjoy this particular genre (Mayer & Gaschke, 1988; Oliver, 1993).

Second, *catharsis beliefs* explain why sad individuals may expect to obtain emotional comfort from sadness-evoking media. The idea of catharsis beliefs explains that after “having a good cry” as a result of viewing sadness-inducing media, lay-persons expect to experience feelings of release and decreases in tension. As a result of some imagined hydraulic-like process, people expect sadness and related negative feelings to be alleviated. This notion of gaining relief from having a good cry promotes the choice of sadness-evoking media as consistent with the belief that venting negative emotions provides an effective way to purge sadness-related feelings.

Third and finally, *the need to feel sympathetic* also offers an explanation for the possibility that sad people perceive sadness as desirable and appropriate given particular circumstances, even if the sadness itself presents negative hedonic values. For example, Mills (1993) proposed that attraction to tragedies can be explained by the idea that people feel compassionate or sympathetic toward people in pain, and that they interpret these feelings as necessary and even desirable. This reasoning suggests that sad people prefer to watch sadness-inducing media in order to experience the right or appropriate emotional states, not necessarily gratifying ones.

It should be noted that the theories emphasizing the accrual of favorable emotional outcomes from viewing sadness-evoking media (i.e., meta-mood experience, catharsis beliefs, the need to feel sympathetic) do not necessarily require alternative means of resolving the

cognitive antecedents of sadness. On the other hand, the theories implying accrual of cognitive learning outcomes from viewing sadness-inducing media (i.e., downward social comparison, information utility, and terror management theory) require practical and/or alternative ways to figure out problems and make sense of the causes of sad events.

*The potential moderating role of gender.* Although previous sections discussed the potential effects of sadness on media choice in a parallel way, social and cultural contexts influence what it means to be sad and, therefore, content choices may be determined by a third factor related to social constraints. Because individuals consider their affective states in regard to cultural rules or norms, they may evaluate their current sad feelings and want to modify them to satisfy appropriate norms-based emotion-regulation goals (Thompson, 1994). If this is the case, it is crucial to identify potential moderating variables that may influence sadness-regulation goals. The present research suggests that gender is one of the potential moderating variables for understanding norms-based sadness-regulation processes. Specifically, males and females may apply different logic to regulate sadness due to distinct sadness-socialization processes; therefore, males and females may choose different media materials to meet similar goals.

Males and females understand, interpret, and regulate the emotion of sadness differently in accordance with gender-specific social norms. Sadness is stereotypically perceived as a feminine emotion associated with weakness and lack of control (Brody, 1985). In terms of social norms, females often do not question experiencing and even expressing sadness (Fivush & Buckner, 2000). Furthermore, females tend to believe that the expression of sadness is a relieving experience, and they may not have a strong motivation to avoid giving an impression of being emotional (Timmers, Fischer, & Manstead, 1998). Sad females, the present research suggests, may opt for sadness-inducing media content in the belief that although this particular

genre may not help them alleviate sad feelings per se, it may provide them with fulfilling experiences that may make them better informed. If this is the case, the likelihood that females' preference for sadness-evoking media when they are sad themselves will be increased compared to when they are not sad.

Sad males, on the other hand, may have a different goal for regulating sadness. Specifically, they may respond to social demands or prescriptive beliefs, such as "Boys do not cry" or "Men should be strong," and try to gain control over sadness. If this is the case, they may evaluate the use of sad media as representing gender-inappropriate media selection. Hence, rather than embracing and tolerating sad feelings by, for example, engaging with sad and meaningful narratives, their main goals, especially in the context of media choices, may be to successfully disrupt sad feelings or to make them more positive in order to avoid possible negative social consequences. In light of these differing theorized goals, the present research predicts that males will opt for media content including either hedonically pleasant material (e.g., comedies) to alleviate sad feelings or strong absorbing potential (e.g., game shows) in order to avoid sadness-maintaining cognitions.

#### *Research Hypotheses and Question*

A total of four research hypotheses were posited to predict sad individuals' media choices. If Zillmann's mood management theory is correct, sad people will seek external materials to satisfy the goal of hedonism—replacing sad feelings with pleasant ones or disrupting sadness-perpetuating cognitions. Hence, Zillmann's theory predicts that sad people will prefer media materials presenting hedonically positive values (e.g., comedies) in order to improve their sad feelings into positive ones; or they will prefer media materials presenting strong absorbing

potential devoid of sadness-inducing depictions (e.g., game shows) in order to distract themselves from sad feelings. This reasoning leads to the following hypothesis:

H1a: Sad individuals will be more likely than neutral individuals to prefer media content presenting positive hedonic values (e.g., comedies).

However, it should be noted that sad individuals may hesitate to approach comedies because this genre typically features happy people living in what are generally understood to be safe and normal environments—a possible contrast with how sad people see their lives, and thus a cause of frustration and discouragement. Furthermore, social constraints may hinder sad individuals from using comic materials. If a person has lost a loved one, experiencing exuberant joy and expressing it with unrestrained laughter may be perceived as an inappropriate way to behave. Consequently, if theories of upward social comparison and social norms concerning sadness are correct, sad individuals may opt for absorbing content over comedies in order to effectively adjust to sad feelings. This reasoning leads to the following hypothesis:

H1b: Sad individuals will be more likely than neutral individuals to prefer media content presenting a strong absorbing potential (e.g., quiz shows).

Building on theoretical models of coping with loss and bereavement, it is hypothesized that sad individuals seek external stimuli to satisfy goals of achieving new perspectives in general, affirming values, and gaining insight into their own lives. Additionally, pre-existing theories emphasizing favorable emotional benefits at the reflective level (e.g., catharsis beliefs and meta-mood experience) also predict preference for sad media. The third hypothesis is in line with this reasoning:

H1c: Sad individuals will be more likely than neutral individuals to prefer sadness-inducing media (e.g., sad dramas).

Finally, people evaluate their sad feelings and modify them to satisfy the goal of socialization-based affect regulation. If sadness-regulation goals are influenced by emotion-socialization processes, males should seek media materials that satisfy the goals of either distracting them from sad feelings or improving the sad feelings because they do not want to be seen or see themselves as emotionally vulnerable. Conversely, females will opt for sadness-evoking media (e.g., sad dramas) consistent with the predictions of theories emphasizing a favorable experience of sadness at the reflective level and theories of cognitive structure of sadness. This reasoning leads to the following hypothesis:

H2: While sad females will be more likely than sad males to prefer sadness-inducing media (consistent with H1c), sad males will be more likely than sad females to prefer either absorbing content or hedonically pleasant content (consistent with H1a or H1b).

Finally, in order to determine which theoretical processes will significantly mediate the relationship between sadness and preference for sadness-inducing programs, a series of mediation analyses will be conducted. These mediators include individuals' beliefs about positive emotional outcomes from viewing this genre at the reflective level, such as reappraising sad feelings as positive or enjoyable (i.e., meta-mood experience) and venting negative emotions and feeling relieved (i.e., emotional catharsis). The mediators also include individuals' beliefs about favorable cognitive learning–relevant outcomes from viewing this genre, such as realizing that some people are going through even worse situations (i.e., downward social comparison) and rebuilding their sense of meaning in life as well as gaining new perspectives (i.e., positive reinterpretations and personal growth). Therefore, the present study directly compares these distinct theoretical mechanisms in order to determine the significant mediator(s) between sadness and preference for sad media. This reasoning leads to the following research question:

RQ1: Among theories of meta-mood, catharsis beliefs, downward social comparison, and positive re-interpretations, which mechanisms play significant roles in mediating the relationship between sadness and preference for sadness-inducing media?

## Methods

### *Overview*

A 2 (Mood: Sad or Neutral) X 2 (Participant's Gender) X 3 (Type of Programs: Sad Drama, Comedy, or Game Show) mixed factorial experiment with mood and gender as between-subjects factors and type of programs as a within-subjects factor was conducted to examine media choices made by individuals with sad feelings. Participant's gender was included to look at whether males and females would make different media choices given the induced feelings. Anticipated outcomes when choosing each of the three media genres were also explored to determine which media genre would provide potential resources that could help people cope with their sad feelings.

Participants were randomly assigned into either a sad or neutral mood condition that was induced by asking participants to describe an autobiographic memory concerning sad or ordinary life events. Participants were also asked to listen to music that was associated with either sad or neutral feelings to augment the intended mood for each condition. After completing the mood induction task, participants were told that they would participate in the second study labeled as entertainment media use. In this ostensibly unrelated study, they were asked to indicate their media preferences for the three media genres and anticipated reactions after viewing each of the three genres respectively.

### *Participants*

One-hundred undergraduate students (60 females and 40 males) participated in the present study in exchange for extra credit for their courses. Most of them were White (88 %), and their age ranged from 18 to 28 ( $M = 19.97$ ,  $SD = 1.55$ ).



### *Pre-testing Effectiveness of Sadness Induction*

In order to induce sad or neutral feelings, the present study employed two different pre-existing established mood induction procedures in which participants were asked to write about their past personal experiences and listen to music. These two mood induction procedures are successful in evoking negative (specifically, depressed) moods, and their effectiveness scores are similar to those of procedures of viewing films or reading stories (Gerrards-Hesse, Spies, & Hesse, 1994; Westermann, Spies, Stahl, & Hesse, 1996). Furthermore, these two combined procedures have been widely employed to increase effectiveness of mood induction procedures (e.g., Siemer & Reisenzein, 1998). While listening to the music clip that was associated with either sad or neutral mood, participants were asked to recall and describe their personal experiences related to either irrevocable loss of or separation from valuable people (sad condition) or to recall and describe their daily routines or ordinary life events (neutral condition).

*Creating music clips.* Two different music clips were used to enhance sad or neutral feelings respectively, resulting in a total of four clips. “Adagio in G-minor” (Albinoni, 1996, track1) and “Adagio for strings” (Barber, 1996, track10) were used to augment sad feelings. These music pieces are known as effective ones to evoke sadness (Butler & Nolen-Hoeksema, 1994; Knight, Maines, & Robinson, 2002; Wenzlaff, Wegner, & Klein, 1991). Similarly, two music pieces that were not too cheerful or depressing were used for the neutral condition: combined two pieces of Chopin’s Waltzes—“Waltz no. 11 in G-flat major” (Chopin, 1992a, track11) and “Waltz no. 12 in F-minor” (Chopin, 1992b, track12)—and also combined two new age guitar pieces—“Aerial Boundaries” (Hedges, 1990a, track1) and “Bensusan” (Hedges, 1990b, track2). These waltzes and guitar pieces are also reported as effective ones to stimulate neutral feelings (Wood, Saltzberg, & Goldsamt, 1990). These music pieces which were used to create

four clips in .wma format were either downloaded from Naxos Music Library or extracted from the original CDs and were finally edited to make equal-length clips (12 minutes) with constant volume sizes using a digital audio editor, GoldWave.

*Procedures of the pre-test.* These combined procedures (reconstructing memory while listening to music) were pre-tested to ensure the intended specific mood induction (i.e., sadness) and its effectiveness and validity. Forty-one undergraduate students (29 females, 12 males; age,  $M = 19.73$ ,  $SD = 1.57$ ) participated in the study that was labeled as “Psychological Structure of Memory.” The pretest was conducted via an on-line questionnaire and administered to a small group of students, up to six. Upon arriving at the experiment lab that was equipped with headphones and computers, each of the participants was seated in front of a computer monitor with a partition so that they did not see the other participants’ monitors. Subsequently, participants were randomly assigned (via a javascript) into either a sad or neutral mood condition. They were instructed to recall and write about their past life experiences (irrevocable loss of or separation from valuable people versus daily routines), and the associated background music clips were automatically played. Wright and Mischel’s (1982) mood induction script was used to instruct participants to vividly reconstruct their sad or neutral life events as follows:

Picture in your “mind’s eye” the surroundings as clearly as possible. See the people or objects; hear the sounds; experience the events happening to you. Think the thoughts you would actually think in these situations. Feel the same feelings you would feel in these situations. Let yourself react as if you were actually there (p. 903).

Participants were told that they would have approximately 15 minutes to write their memory, but, following Gasper and Clore’s mood induction procedures (2000), they were

actually asked to submit their responses after around 10 minutes. It was expected that they would write more detailed descriptions if they were led to believe that they had more time than they would actually have. After the mood induction task, participants completed a questionnaire labeled as “How are you feeling now?” that had twenty-four adjectives presenting four subscales of mood states (Sadness, Anger, Anxiety, and Positive Affect) taken from the Multiple Affect Adjective Check List Revised (MAACL-R, Zuckerman & Lubin, 1985). The order of adjective mood items was counter-balanced among participants. In order to minimize demand characteristics of the experiment, questions that asked about their current feelings did not directly refer to the previous task. Therefore, instead of asking how the previous writing task while listening to the music made them feel, participants were asked to rate how well each of the adjectives describe their current feelings on a 7-point Likert-type scale ranging from 1 (*Not at All*) to 7 (*Very Much*).

Factor analysis using principal components extraction and varimax rotation was employed on the current feeling adjectives. After dropping seven items that failed to load at least .60 or above on one factor and less than .40 on other factors, four factors with eigenvalues greater than 1 were obtained, which accounted for 73.14% of the variance. The first factor was labeled as *Sad Feelings* (Eigenvalue = 3.67, Explained variance = 21.59%), and included the variables “sad,” “downhearted,” “blue,” and “gloomy.” The second factor was labeled as *Angry Feelings* (Eigenvalue = 2.50, Explained variance = 14.70%), and included the variables “hostile,” “aggressive,” and “angry.” The third factor was labeled as *Anxious Feelings* (Eigenvalue = 2.35, Explained variance = 13.85%), and included the variables “nervous,” “afraid,” “jittery”, and “anxious.” The final factor was labeled as *Positive Feelings* (Eigenvalue = 3.91, Explained variance = 23.01%), and included the variables “delighted,” “happy,” “excited,”

“lively,” “cheerful,” “joyful.” Four scales were created by averaging the ratings of the variables that represented these four factors. All scales showed acceptable levels of reliability (Sad,  $\alpha = .93$ ; Angry,  $\alpha = .72$ ; Anxious,  $\alpha = .77$ ; Positive Feelings,  $\alpha = .88$ )

*Results of the pre-test.* A 2 (Mood Induction: Sad or Neutral) X 4 (Mean of Self-Reported Feelings: Sadness, Anger, Anxiety, or Positive Affect) repeated measures analysis of variance was conducted in order to examine the intended mood induction from the task.<sup>1</sup> Four different self-reported feelings served as a repeated-measures variable. As expected, a Mood Induction X Self-Reported Feelings interaction was obtained, Wilks'  $\Lambda = .61$ ,  $F(3, 37) = 7.98$ ,  $p < .001$ ,  $\eta_p^2 = .39$ . Table 1 shows the means and standard errors associated with this interaction, and illustrates that sadness ratings were significantly higher in the sad ( $M = 4.44_A$ ,  $SE = .35$ ) compared to the neutral condition ( $M = 2.32_B$ ,  $SE = .31$ ), whereas ratings of anxious and positive feelings were not different across the two conditions. Additionally, participants in the sad condition reported significantly higher estimates for sad feelings ( $M_{sad} = 4.44_a$ ,  $SE = .35$ ) than for the other three subscales of feelings ( $M_{angry} = 2.30_b$ ,  $SE = .23$ ;  $M_{anxious} = 2.36_b$ ,  $SE = .27$ ;  $M_{positive} = 2.27_b$ ,  $SE = .31$ ).

Although anger ratings were significantly higher in sad ( $M = 2.30_A$ ,  $SE = .23$ ) compared to neutral ( $M = 1.38_B$ ,  $SE = .20$ ) condition, and the anger ratings ( $M_{angry} = 1.38_b$ ,  $SE = .20$ ) were significantly lower than the other two subscales of feelings in neutral condition ( $M_{anxious} = 2.34_a$ ,  $SE = .24$ ;  $M_{positive} = 2.81_a$ ,  $SE = .28$ ), these overall results confirmed that the two mood induction procedures are effective in evoking a specific state of mood (i.e., sadness). Most of mean scores

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<sup>1</sup> A gender variable was not included as another between-subjects factor because gender did not significantly moderate the relationship between manipulated moods and self-reported four types of feelings. In other words, a 2 (Mood Induction) X 2 (Gender) X 4 (Mean of Self-Reported Feelings) repeated measures analysis of variance did not reveal a significant three-way interaction, Wilks'  $\Lambda = .14$ ,  $F(3, 35) = 1.59$ ,  $p = .21$ ,  $\eta_p^2 = .12$ .

were similarly low except for the scores of sadness in the sad condition, and it is difficult to induce purely sad and neutral mood states in the laboratory setting (Polivy, 1981).

Table 1  
*Pre-testing Effectiveness of Sadness Induction*

	Sadness	Anger	Anxiety	Positive Feelings
Sad Condition				
<i>M</i>	4.44 <sub>aA</sub>	2.30 <sub>bA</sub>	2.36 <sub>bA</sub>	2.27 <sub>bA</sub>
<i>SE</i>	.35	.23	.27	.31
Neutral Condition				
<i>M</i>	2.32 <sub>abB</sub>	1.38 <sub>bB</sub>	2.34 <sub>aA</sub>	2.81 <sub>aA</sub>
<i>SE</i>	.31	.20	.24	.28

Wilks'  $\Lambda = .61$ ,  $F(3, 37) = 7.98$ ,  $p < .001$ ,  $\eta_p^2 = .39$ .

*Note.* Using Holm's sequential bonferroni post hoc comparisons, within row, means with no lower case subscript in common differ at  $p < .05$ ; with columns, means with no upper case subscript in common differ at  $p < .05$ .

### *Stimulus Materials*

Three short descriptions for each genre—sad dramas, comedies, and game shows—were devised, resulting in a total of nine descriptions. Short descriptions or headlines were used as stimulus materials rather than descriptions with detailed storylines or video clips such as movie trailers because of several potential confounding factors across the three genres. For example, comedies and sad dramas have a variety of storylines, whereas game shows are unfolded with

repetitive rules without any storyline. Therefore, in order to control for the presence or absence of storylines and diverse narrative elements, short descriptions without specific storylines were used as stimulus materials. These descriptions were modeled after the types of descriptions commonly employed in the “What’s on TV” section in newspapers, therefore, the stimulus materials for the present research have ecological validity.

In order to create these short program descriptions, various short headlines with typical adjectives representing each genre were collected by three different means: a pilot study, blurbs of pre-existing DVD or VHS covers (e.g., “A deep and provocative delight”), and users’ short comments (e.g., “During the throes of Winter, remembering Spring”) from Internet Movie/TV Databases ([www.imdb.com](http://www.imdb.com)). The pilot study was conducted as a part of another comprehensive study where one-hundred and thirty female and fifty-one male undergraduate students (age,  $M = 20.70$ ,  $SD = 1.13$ ) participated. In this study, participants were first asked to provide titles of one of their favorite sad dramas (tearjerkers), comedies, and game shows respectively. Second, for each favorite entertainment genre, they were asked to write two words/adjectives that came to mind when they were reminded of the named title in the previous question. For various words or adjectives representing the three genres from the pilot study, see Appendix A.

These three means served as preliminary resources to develop short descriptions that were varied as a function of three types of genres with their presumed mood-altering properties. All nine descriptions directly indicated the name of genres—drama, comedy, or game/quiz show—and presented typical adjectives that are relevant to mood-altering characteristics of each genre, such as “*heart-wrenching*” for sad dramas, “*hilarious*” for comedies, and “*intriguing*” for game shows. For the nine descriptions of the three genres that served as the stimulus materials, see Appendix B.

*Manipulation check for the stimulus.* A manipulation check test was conducted in order to ensure potential mood-altering properties of the nine program descriptions. Nineteen undergraduate students (15 females, 4 males; age,  $M = 20.6$ ,  $SD = .51$ ) participated in this test for course credit. Participants were asked to rate the extent to which they perceived each program would be sad, funny, involving, demanding, and interesting based on the short descriptions using a 7-point Likert-typed scale ranging from 1 (*Not at All*) to 7 (*Very Much*). The order of program descriptions and manipulation check items were counter-balanced among participants.

Average ratings of the manipulation check items were computed and served as repeated-measures variables. Multivariate repeated measures of analyses showed that descriptions of sad dramas ( $M = 5.16_a$ ,  $SE = .30$ ) obtained significantly higher sad ratings than those of comedies ( $M = 1.28_b$ ,  $SE = .10$ ) and game shows ( $M = 1.14_b$ ,  $SE = .06$ ), Wilks'  $\Lambda = .09$ ,  $F(2, 17) = 83.99$ ,  $p < .001$ ,  $\eta_p^2 = .91$ . Participants perceived descriptions of comedies ( $M = 6.39_a$ ,  $SE = .14$ ) as significantly funnier than those of game shows ( $M = 3.47_b$ ,  $SE = .24$ ) and sad dramas ( $M = 1.91_c$ ,  $SE = .16$ ), Wilks'  $\Lambda = .03$ ,  $F(2, 17) = 281.46$ ,  $p < .001$ ,  $\eta_p^2 = .97$ . Additionally, descriptions of game shows ( $M = 4.91_a$ ,  $SE = .22$ ) obtained higher ratings of involvement than those of sad dramas ( $M = 4.44_{ab}$ ,  $SE = .30$ ) and comedies ( $M = 3.70_b$ ,  $SE = .19$ ), Wilks'  $\Lambda = .40$ ,  $F(2, 17) = 12.73$ ,  $p < .001$ ,  $\eta_p^2 = .60$ . Similarly, participants perceived descriptions of game shows ( $M = 4.53_a$ ,  $SE = .22$ ) as more demanding than those of sad dramas ( $M = 3.89_{ab}$ ,  $SE = .36$ ) and comedies ( $M = 2.56_b$ ,  $SE = .22$ ), Wilks'  $\Lambda = .27$ ,  $F(2, 17) = 23.09$ ,  $p < .001$ ,  $\eta_p^2 = .73$ . However, all descriptions of the three genres were equally perceived as *interesting* ( $M_{\text{drama}} = 4.58$ ,  $SE = .21$ ;  $M_{\text{comedy}} = 4.61$ ,  $SE = .22$ ;  $M_{\text{game}} = 4.04$ ,  $SE = .26$ ), Wilks'  $\Lambda = .96$ ,  $F(2, 17) = .71$ ,  $p = .71$ ,  $\eta_p^2 = .04$ . Overall, these results showed that intended mood-altering characteristics of program descriptions were successfully manipulated.

## *Procedures*

When researchers address the validity of mood induction procedures, explicitly asking participants to enter the specific desired mood has been criticized and debated on the basis of heightened demand characteristics because participants may just pretend that they are experiencing the target mood by guessing the purpose of study and conforming to the experimenters' intentions (Berkowitz & Troccoli, 1986; Martin, 1990; Westermann et al., 1996). In order to control for these demand characteristics and ensure experimental construct validity, the true purpose of the present study was disguised in that mood induction and assessment of dependent variables (i.e., media choices and their anticipated reactions) were done in two ostensibly unrelated studies. An open-ended question which asked what participants understood the purpose of these studies to be was included at the end of the questionnaire in order to possibly exclude participants who guessed the true purpose of the study from further analyses.<sup>2</sup>

The main experiment was conducted via an on-line questionnaire and administered to small groups of up to six students. Mood induction procedures were labeled as "Study 1 Psychological Structure of Memory," which served as a cover story, and estimations of the dependent variables were labeled as "Study 2 Entertainment Media Use." Upon arriving at the experimental lab, participants were told that they would participate in two independent studies. In the first study, they were randomly assigned (via a javascript) into either sad or neutral mood condition and asked to write about past life events while listening to the associated music clip, which followed the identical procedures of the mood-induction pretest.

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<sup>2</sup> Although suspicious participants ( $N = 13$ ) who knew the association between the two studies were found, their awareness did not make any significant differences in estimating dependent measures. Therefore, these participants were included into further analyses.



The purpose of the study 1 was described as research designed to examine people's psychological structure of memory to develop scales later. Unlike the mood-induction pretest, participants were additionally told that researchers are also interested in exploring how different kinds of music would influence people's memory reconstruction. Through this cover story, it was expected that the *source* of mood induction would not be saliently perceived to participants, so they would not notice the true purpose of the two combined mood-induction tasks and the association between the Study 1 and the Study 2. Also, unlike the mood-induction pretest, mood manipulation check items were included after participants completed the dependent measures in order to prevent participants from perceiving mood factors saliently. If participants focus on specific mood states by rating them, they may correct subsequent evaluative judgments concerning their media preferences by noticing the experimenter's intentions and hypotheses (DeSteno, Petty, Wegener, & Rucker, 2000).

In the ostensibly unrelated second study, participants were told that the Study 2 would ask about their media preferences and anticipated reactions to different entertainment programs. They were also told that they would have a chance to view several edited video clips using Windows Media Player according to their indicated program preferences. Subsequently, they filled out the on-line questionnaires that measured their media preferences and anticipated reactions to the entertainment programs. Therefore, the present study measured participants' media preferences based on their behavioral intention within actual sad or neutral feelings rather than beliefs about their media preferences in imagined situations. After they completed the questionnaires, they were thanked and debriefed.

### *Dependent Measures and Index Construction*

*Program preferences.* In order to assess program choices made by people with sad or neutral feelings, relative preferences for each program were measured with the following three items. First, participants were asked how much they were *interested* in viewing each of the nine programs using a 7-point Likert-type scale ranging from 1 (*Not at All Interested*) to 7 (*Very Interested*). Second, in order to examine participants' behavioral intention, they were asked to indicate how much they would like to *choose* each of the nine programs using a 7-point Likert-type scale ranging from 1 (*Definitely Would not Choose*) to 7 (*Definitely Would Choose*). Finally, because media preferences are often manifested through avoidance of the target program in addition to selection, participants were also asked to rate how much they would *avoid* watching the programs using a 7-point Likert-type scale ranging from 1 (*Definitely Would not Avoid*) to 7 (*Definitely Would Avoid*). The order of these three items (i.e., having interest, choosing, and avoiding) to measure relative preferences and the order of list of program descriptions were counter-balanced respectively among participants. After recoding the avoidance item, the three items were averaged with high numbers representing high levels of preferences and served as indices representing relative preferences for sad drama, comedy and game show (sad drama,  $\alpha = .92$ ; comedy,  $\alpha = .92$ ; game show,  $\alpha = .93$ ).

*Anticipated feelings after viewing the three groups of programs.* Participants' anticipated feelings after viewing the programs were measured to examine the extent to which participants believed media use would increase, maintain, or decrease levels of sadness and positive feelings. Measurement items representing sadness consisted of five adjectives (e.g., sad, downhearted, blue, sad, and gloomy) taken from the depression subscale of the Multiple Affect Adjective Checklist Revised (MAACL-R, Zuckerman & Lubin, 1985). Unpleasant activated affect states

(e.g., irritated, annoyed, upset, etc.) taken from Barrett and Russell's Current Mood Questionnaire (1998) were also included in order to distinguish these states from sadness (i.e., unpleasant deactivated states) when examining anticipated emotional consequences. Finally, the positive affect measures consisted of two subscales of pleasant mood with 10 adjectives (e.g., happy, pleased, satisfied, calm, etc.) were also taken from the same source (Barrett & Russell, 1998). It was expected that the inclusion of these scales from Barrett and Russell would make clearer the nature of positive emotional outcomes resulting from media use because their definitions of mood encompass the degree of activation (i.e., high- and low-activation states) as an another independent affect structure in addition to the pleasure-displeasure dimension alone (see also, Barrett & Russell, 1999). These items were presented after each of the three groups of program descriptions.

The three types of programs were labeled as Group A, B, or C and each of the groups had the three descriptions representing sad dramas, comedies, or game shows respectively that were used for the previous preference section. The presentation order of the three groups was counter-balanced among participants. Participants were asked to rate the extent to which they would feel a particular way (e.g., sad, happy, calm, etc.) after viewing the programs in each group using a 7-point Likert-type scale ranging from 1 (*Not at All*) to 7 (*Very Much*), keeping in mind their previously indicated media preference ratings.

Factor analysis using principal components extraction and varimax rotation was employed on the anticipated feeling adjectives measured at three different points: after viewing sad dramas, comedies, and game shows respectively. This analysis revealed four factors with eigenvalues greater than 1 that accounted for 75.14% of the variance. Their factor loadings are shown in Table 2.

Table 2

*Factor Loadings of Anticipated Feelings from Viewing the Three Genres*

Items	Factor 1 (Unhappy)	Factor 2 (Elated)	Factor 3 (Annoyed)	Factor 4 (Calm)
Sad	<b>.92</b>	-.19	.05	.04
Blue	<b>.88</b>	-.24	.08	.02
Depressed	<b>.86</b>	-.21	.19	-.10
Gloomy	<b>.85</b>	-.20	.25	-.02
Downhearted	<b>.84</b>	-.18	.04	-.04
Upset	<b>.81</b>	-.22	.23	-.12
Distressed	<b>.71</b>	-.03	.48	-.13
Happy	-.35	<b>.76</b>	-.26	.22
Excited	-.38	<b>.76</b>	-.14	-.01
Delighted	-.35	<b>.75</b>	-.30	.09
Pleased	-.21	<b>.74</b>	-.33	.19
Satisfied	-.11	<b>.69</b>	-.49	.21
Elated	-.10	<b>.68</b>	.18	.21
Content	-.11	<b>.63</b>	-.25	.28
Irritated	.15	-.29	<b>.84</b>	-.16
Annoyed	.17	-.33	<b>.78</b>	-.18
Angry	.40	-.08	<b>.76</b>	-.18
Calm	-.06	.13	-.16	<b>.86</b>
Relaxed	-.16	.22	-.19	<b>.75</b>
Serene	.13	.40	-.10	<b>.66</b>
Eigenvalue	5.64	4.26	3.00	2.16
% of Explained Variance*	28.19	21.32	14.83	10.80

*Note.* \* indicates proportions of variance for the rotated solutions.

The first factor was labeled as *Unhappy Feelings*, and included the variables “sad,” “downhearted,” “blue,” “gloomy,” “depressed,” “upset,” and “distressed.” The second factor was labeled as *Elated Feelings*, and included the variables “delighted,” “excited,” “elated,”

“satisfied,” “happy,” “pleased,” and “content.” The third factor was labeled as “Annoyed Feelings,” and included the variables “annoyed,” “irritated,” and “angry.” The final factor was labeled as *Clam Feelings*, and included the variables “calm,” “relaxed,” and “serene.” Four scales pertaining to each genre, resulting in a total of 12 scales, were created by averaging the ratings of the variables that represented these four factors. All scales showed acceptable levels of reliability (see Table 3 for means, standard deviations, and Cronbach’s alphas of the scales).

Table 3  
*Characteristics of Anticipated-Feelings Scales*

	Sad Dramas	Comedies	Game Shows
Unhappy			
<i>M</i>	3.73	1.40	1.70
<i>SD</i>	1.20	.62	.94
$\alpha$	.90	.90	.90
Elated			
<i>M</i>	3.18	5.13	3.64
<i>SD</i>	1.14	.90	1.23
$\alpha$	.89	.90	.91
Annoyed			
<i>M</i>	2.82	1.69	3.05
<i>SD</i>	1.44	.91	1.51
$\alpha$	.84	.85	.87
Calm			
<i>M</i>	3.63	4.38	3.13
<i>SD</i>	1.21	1.02	1.04
$\alpha$	.76	.69	.68

*Anticipated thoughts after viewing the three groups of programs.* In order to examine individuals' distinct motivations or anticipated cognitive consequences from viewing each of the three types of programs, a series of questions which tapped into theoretical mechanisms to predict selections of sad dramas, comedies and game shows were presented. These theoretical motivations included meta-mood experience, downward social comparison, catharsis beliefs, and positive transformation and personal growth that are relevant to use of sad drama, and distracting and entertaining experience that are relevant to use of game show and comedy respectively.

Specific items for these anticipated thoughts were developed through two different sources. First, pre-existing established measures of coping scales which reflect beliefs in catharsis and learning-relevant outcomes were collected. These scales include “focus on and venting of emotions,” “positive reinterpretation and personal growth” and “positive reappraisal” (see, Carver, Scheier, & Weintraub, 1989; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Additionally, pre-existing established measures of downward social comparison (VanderZee, Buunk, & Sanderman, 1996) was also obtained. In order to include anticipated outcomes that are relevant to game shows and comedies, “entertainment,” “diversion” and “escape” related motivations were taken from pre-existing measure of uses and gratification scales (Perse, 1994; Rubin, 1983).

Second, a pilot study was conducted in order to contextualize these obtained pre-established scales into the present study, which directly examines anticipated thoughts after using entertainment programs, particularly when individuals feel sad, gloomy and low. As one part of a large questionnaire, undergraduate students (168 females, 102 males; age,  $M = 20.64$ ,  $SD = 1.31$ ) were asked to write what would be some of their anticipated thoughts after viewing each of the three groups of programs (i.e., sad dramas, comedies and game shows), particularly

when they feel sad, gloomy, and blue. Each of the three groups were presented with three short descriptions of programs, resulting in a total of nine descriptions. Their answers served as resources to contextualize the pre-existing established scales into the current research.

Consequently, for the motivations that are relevant to use sad dramas, four scales of anticipated cognitive consequences were developed: *downward social comparisons* (e.g., I would think that my problems are not so bad after seeing that other people have them much worse), *catharsis beliefs* (e.g., I would purge myself of negative feelings because these programs would make me let those feelings out), and *positive transformation and personal growth* (e.g., I would re-evaluate my difficult situations and try to build new perspectives on my life). Additionally, a scale for meta-mood experience particularly focusing on acceptance of their currently experienced feelings was taken from Mayer and Gaschke (1988) in order to assess anticipated evaluations concerning direct feelings at the reflective level. For the motivations that are relevant to use of game shows and comedies, each scale of anticipated cognitive consequences was developed respectively: *being distracted* (e.g., I would think about something totally different from my difficult situation) and *having entertaining thoughts* (e.g., I would feel amused with happy and optimistic thought). For the full detailed items tapping into the aforementioned anticipated outcomes, see Appendix C.

Similar to the previous section of anticipated feelings, the three types of programs were labeled as Group A, B, or C and each of the three groups had three descriptions representing sad dramas, comedies, or game shows. The presentation order of the three groups was counter-balanced among participants. Participants were asked how much they would agree or disagree with each of the statements after viewing the programs in each group using a 7-point Likert scale

ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*), keeping in mind their previously indicated media preferences.

When creating scales for these anticipated cognitive consequences that served as mediating variables, the measurement items for “downward social comparison” and “positive transformation and personal growth” were combined and newly labeled as “Cognitive Learning.” Conceptually, comparing with others in worse situations could be parts of learning processes from viewing media. Viewers may re-evaluate their difficult situations and find positive life meanings by realizing that other people (i.e., characters) also have their own hardships and that viewers’ problems are not so bad after seeing others have them much worse. Therefore, the processes of downward social comparison may serve as a potential necessary condition for viewers to evoke learning-relevant thoughts.

Additionally, correlations between the two scales were very high ( $r = .84$  for drama,  $r = .79$  for comedy,  $r = .76$  for game show) which may have caused multicollinearity in later mediation analyses. Indeed, factor analysis with nine items that measured these two scales yielded one factor (Eigenvalue = 5.60, Explained variance = 62.25%). Finally, four more scales pertaining to anticipated cognitive consequences were created for each genre and labeled as “Catharsis Beliefs,” “Meta-Mood Experience” “Distraction,” and “Entertainment.” All scales revealed accept levels of reliability (see Table 4 for means, standard deviations and Cronbach’s Alphas of the scales)



Table 4

*Characteristics of Anticipated-Thoughts Scales*

	Sad Dramas	Comedies	Game Shows
Learning			
<i>M</i>	4.64	3.37	2.59
<i>SD</i>	1.13	1.23	1.09
$\alpha$	.89	.89	.86
Catharsis			
<i>M</i>	3.77	2.37	1.97
<i>SD</i>	1.50	1.31	.96
$\alpha$	.77	.71	.62
Meta-Mood			
<i>M</i>	5.34	6.34	5.70
<i>SD</i>	1.33	.95	1.18
$\alpha$	.80	.73	.73
Distraction			
<i>M</i>	3.64	5.29	4.03
<i>SD</i>	1.28	1.24	1.40
$\alpha$	.68	.77	.74
Entertainment			
<i>M</i>	2.82	5.82	4.36
<i>SD</i>	1.11	1.03	1.36
$\alpha$	.63	.81	.81

## Results

### *Data Analyses Overview*

Three sets of data analyses were conducted to test the research hypotheses. First, repeated measures analysis of variance with a multivariate approach was employed to test simple effects of manipulated sadness on individuals' media preferences for comedies, game shows, and sad dramas. Second, mediation analyses for each genre were conducted to examine how sadness would affect media preference through anticipated feelings that served as mediators. Third, similar to the second analyses, mediation analyses pertaining to each genre were conducted to examine how sadness would affect media preference through anticipated thoughts that also served as mediators. It was expected that separate analyses for emotional and cognitive responses as distinct mediators would make it possible to compare distinct theoretical mechanisms that predict media choice made by individuals with sad feelings.

### *Simple Effects of Sadness on Media Preferences*

A 2 (Manipulated Mood: Sad or Neutral) X 2 (Participant's Gender) X 3 (Media Preference: Sad Drama, Comedy, or Game Show) repeated measures analysis of variance employing a multivariate approach was conducted to examine how media preferences vary as a function of manipulated mood and the participant's gender. Three different self-reported media preference indices served as a repeated-measures variable. This analysis revealed a significant main effect for Media Preference, Wilks'  $\Lambda = .31$ ,  $F(2, 95) = 106.76$ ,  $p < .001$ ,  $\eta_p^2 = .69$ , showing that individuals preferred to watch comedies ( $M = 5.58_a$ ,  $SE = .12$ ) over sad dramas ( $M = 3.90_b$ ,  $SE = .14$ ) or game shows ( $M = 3.65_b$ ,  $SE = .14$ ). Additionally, a marginally significant interaction effect for Media Preference X Gender was found, Wilks'  $\Lambda = .94$ ,  $F(2, 95) = 2.98$ ,  $p = .06$ ,  $\eta_p^2 = .06$ . This interaction occurred because sad dramas were more preferred by females

( $M = 4.20$ ,  $SE = .18$ ) than by males ( $M = 3.60$ ,  $SE = .22$ ), whereas the other two genres were equally preferred by both males and females (Comedies,  $M_{\text{female}} = 5.80$ ,  $SE = .15$  vs.  $M_{\text{male}} = 5.40$ ,  $SE = .18$ ; Game Shows,  $M_{\text{female}} = 3.79$ ,  $SE = .22$  vs.  $M_{\text{male}} = 3.51$ ,  $SE = .18$ ). However, the hypothesized expected interaction for Mood X Media Preference was not significant, Wilks'  $\Lambda = .98$ ,  $F(2, 95) = 1.04$ ,  $p = .36$ ,  $\eta_p^2 = .02$ , indicating that most participants in the both mood conditions wanted to view comedies ( $M_{\text{neutral}} = 5.71$ ,  $SE = .17$ ;  $M_{\text{sad}} = 5.45$ ,  $SE = .17$ ) over sad dramas ( $M_{\text{neutral}} = 3.77$ ,  $SE = .20$ ;  $M_{\text{sad}} = 4.03$ ,  $SE = .20$ ) or game shows ( $M_{\text{neutral}} = 3.85$ ,  $SE = .20$ ;  $M_{\text{sad}} = 3.45$ ,  $SE = .20$ ). Therefore, relative preferences for the three genres did not differ by sad or neutral mood conditions.

#### *Mediation Analyses and Exploring Indirect Effects of Sadness*

These analyses suggest that the manipulated mood condition (predictor, X) does not have any simple (or total) effects on individuals' media choices (criterion, Y). Theoretically, this non-significant total effect of X on Y may imply that sadness does not have universal influence on media selections made by all individuals. However, sadness may *indirectly* exert influence on media choices through certain intervening variables. Alternatively, potential conditional variables may moderate the extent to which sadness affects media choices. Consequently, the goal of subsequent analyses was to determine potential mediators and moderators in order to predict sad individuals' media preferences.

Among the various variables that could potentially constrain direct effects of sadness on media preferences, the present study examines viewers' anticipated reactions (both emotional and cognitive) from viewing the three genres. These anticipated responses could serve as underlying processes of media-choice decision-making because media users may associate the three media genres with certain emotional and cognitive consequences based on prior media-

consumption experience. In other words, individuals may learn and develop schemas concerning connections between certain media stimuli and their associated unique emotional and cognitive characteristics through repeated exposure to the stimuli in their every day media use (Bryant & Davies, 2006). For example, sadness may predict anticipated pleasant feelings and/or enjoyment-relevant thoughts from viewing a certain genre, which in turn, may predict preference for that genre. Alternatively, individual-difference variables (e.g., enduring dispositions such as catharsis beliefs after viewing sad dramas) may moderate the relationship between sadness and preferences for difference genres. In addition to the anticipated reactions, as one of potential moderating variables, the participants' gender will be included to explore whether sadness-based media-choice decisions are different for males and females due to distinct emotion-socialization processes.

Methodologically, these initial non-significant simple (total) effects make it questionable for the present study to assess whether anticipated reactions of entertainment programs (M) would have significant mediated effects between sadness and media choice. As Baron and Kenny (1986) suggested, the total effect of the IV on the DV should be significant in order to estimate the mediated effects. However, researchers have noted the distinction between mediated effects and indirect effects, explaining that indirect effects can be significant in the absence of an initial significant total effect of X on Y because X could influence Y through M (Holbert & Stephenson, 2003; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Preacher & Hayes, 2004).

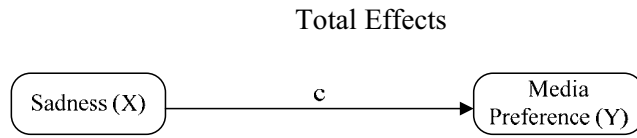
Consequently, instead of following Baron and Kenny's four different steps to establish mediated effects, the present study formally tested the *significance of specific indirect effects* known as the Sobel test (Sobel, 1982). The indirect effect of X on Y through M is defined as the reduction of the effects of IV (X) on the DV (Y) after the addition of the mediator (M) to the

model. The amount of reduction ( $c - c'$ , where  $c$  is  $X \rightarrow Y$  path coefficient and  $c'$  is  $X \rightarrow Y$  path coefficient after the addition of  $M$  to the model) is theoretically equivalent to the product of two regression coefficients (MacKinnon, Warsi, & Dwyer, 1995): the product of the regression coefficient linking the  $X$  to the  $M$  (denoted  $a$ ) and coefficient linking the  $M$  to the  $Y$  while  $X$  is held constant (denoted  $b$ ). In order to establish significant indirect effects, the product term should be significantly different from zero (i.e.,  $H_0: a*b = 0$ ).

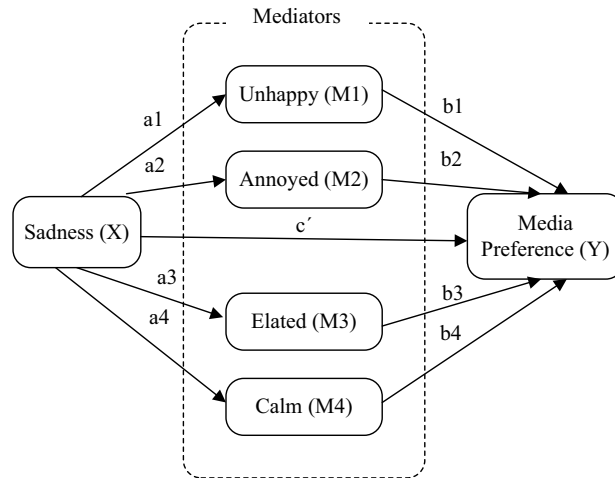
Taken together, the focus of the mediation analyses for the present study was to assess specific indirect effects of sadness on media preferences through anticipated reactions (i.e., emotional and cognitive responses respectively). Additionally, the participant's gender, as a potential moderating variable was included to examine whether the indirect effects of sadness on media preferences through anticipated emotional and cognitive consequences are different for females and males.

#### *Testing Indirect Effects of Sadness on Media Preference through Anticipated Responses.*

Mediation analyses for each genre were conducted to assess specific indirect effects of sadness on media preference through anticipated emotional and cognitive responses respectively. As multiple mediators, anticipated emotional responses consisted of four distinct emotional consequences (unhappy-, annoyed-, elated-, and calm-related feelings from the factor analysis) after viewing each of the three genres. Similarly, as multiple mediators, anticipated cognitive responses consisted of five distinct cognitive consequences (cognitive learning, beliefs about catharsis, meta-mood experience, distraction, and entertainment) after viewing each of the three genres.



Multiple Mediator Model with Anticipated Feelings



Multiple Mediator Model with Anticipated Thoughts

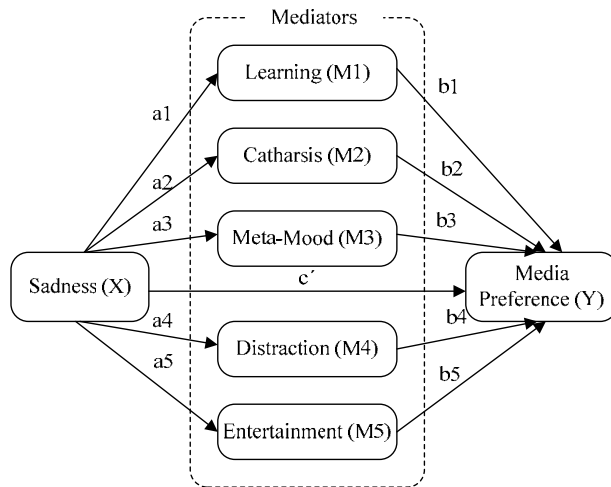


Figure 1. Testing indirect effects of sadness on media preference with multiple mediator model.

In order to test the multiple mediator models presented in the Figure 1, the present research included the following variables: sadness as an independent variable, preference for sad dramas, comedies, or game shows as dependent variables, and anticipated reactions (either emotional or cognitive responses) as multiple mediators. The independent variable, sadness, represents levels of measured sad feelings in the manipulated conditions, which consists of six adjective items (gloomy, sad, depressed, blue, downhearted, and lonely;  $\alpha = .94$ ). Given that the sadness induction procedures in the present study were successful, and the dummy coded manipulation condition was included in the models, results and conclusions from these analyses could provide robust and valid conclusions concerning sadness-based media preferences.

*Gender differences.* Initial path analyses with the participant's gender as another between-subject variable revealed that females were more likely than males to anticipate catharsis experience from viewing sad dramas,  $\beta = .55$ ,  $t = 2.95$ ,  $p < .01$ .<sup>3</sup> Aside from this tendency, the variable of gender yielded no additional main effects for the remaining paths. More importantly, no interactions for Gender X Sadness were revealed for any of the paths presented in the Figure 1, and therefore all subsequent analyses were conducted without including gender as a variable.

Unlike the findings from the pre-test, however, it should be noted that gender significantly moderated the relationship between experiment manipulation condition (i.e., sad versus neutral) and the ratings of sadness,  $\beta = .28$ ,  $t = 2.03$ ,  $p < .05$ . Mean scores from an analysis of variance comparable to the regression analysis showed that this interaction occurred because females ( $M = 4.40$ ,  $SE = .24$ ) reported significantly higher levels of sadness than did

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<sup>3</sup> Participants' gender was dummy coded (Females = 1, Males = 0).

males ( $M = 3.50$ ,  $SE = .27$ ) in the sad condition, whereas both females ( $M = 1.92$ ,  $SE = .21$ ) and males ( $M = 2.05$ ,  $SE = .29$ ) reported equally low levels of sadness in the neutral condition.

These findings may suggest that after reconstructing their sad life events while listening to the associated music, females did experience more intense sad feelings than did males. However, it is also likely that these gender differences may just reflect their stereotypes or implicit beliefs about emotions because the present research employed self-reported *direct* ratings to estimate their feelings. These direct ratings tend to encourage participants to use gender-stereotyped schemas that could play as a heuristic device when evaluating their current feelings (LaFrance & Banaji, 1992; Madden, Barrett, & Pietromonaco, 2000; Robinson, Johnson, & Shields, 1998). If the gender differences that the present study found are attributed to the measurement context (i.e., direct ratings), both males and females could experience approximately equal levels of sadness across the two conditions. Research findings show that, in many situations, both males and females *experience* emotions in similar ways except for one consistent finding that females *express* their emotions more freely than do males (Fischer, 1993).

*Bootstrapping.* A series of regression analyses were conducted to obtain path coefficients for the models in the present study. Additionally, the present study formally tested specific indirect effects of sadness on media preference through multiple mediators. One of assumptions of the Sobel test is a large sample size (200 or larger), with normal sampling distributions of the product of the  $X \rightarrow M$  path ( $a$ ) and  $M \rightarrow Y$  path ( $b$ ), or  $a*b$ . However, this assumption has been questioned because the distribution of  $a*b$  is not necessarily normal but often skewed, especially with a small sample (MacKinnon et al., 2002; Preacher & Hayes, 2004; Shrout & Bolger, 2002).

Therefore, confidence interval based on the normal distribution assumption may often lead researchers to make type II errors by reducing power when detecting the significance of



indirect effects that may exist in the population. As an alternative way to test indirect effects, many researchers including Preacher and Hayes (2005) recommended that researchers bootstrap the sampling distribution of  $a*b$  and compute a confidence interval based on the bootstrapped distribution (see also, Preacher & Hayes, 2004; Shrout & Bolger, 2002). If zero falls outside of this 95% confidence interval, the indirect effect is significant. In that way, indirect effects can be assessed without assumptions of the normal sampling distributions.

Consequently, the present research estimated the bootstrap coefficient product of  $a*b$  instead of the same product from the Sobel test (z-statistic) to formally assess specific indirect effects of sadness on media choice through the proposed mediators. The SPSS macro developed by Preacher and Hayes (2005) was executed and a series of syntaxes with indirect commands were created with 1,000 random samples from the original data set. Subsequently, the bootstrap coefficient product of  $a*b$  and confidence interval were generated.

Bias-corrected bootstrap confidence intervals were reported throughout the results because percentile bootstrap confidence intervals, unlike regular confidence intervals that assume normal sampling distribution, can be asymmetrical around the estimation of indirect effects. Furthermore, MacKinnon, Lockwood, and Williams (2004) found that the bias-corrected intervals compared to percentile ones provided greater statistical power and reduced Type I error rates when estimating indirect effects. Other major structural equation modeling software packages, such as AMOS, were not used to examine specific indirect effects in the presented models. Although AMOS has the bootstrap procedure, it provides estimation of *total* indirect effects only, not the specific indirect effects for assessing multiple mediators.

*Testing specific indirect effects through anticipated emotional responses.* A series of regression analyses were conducted in order to obtain path coefficients ( $a$ ,  $b$ ,  $c$ , and  $c'$  paths) and

to formally test specific indirect effects of sadness on media preferences through anticipated feelings after viewing each of the three genres. Estimated path values from sadness (X) to anticipated feelings (M) for each media genre (*a* paths) were obtained from four regression analyses with each mediator entered as a dependent variable. A path coefficient from manipulation to sadness was attained by regressing dummy coded manipulation condition to the ratings of sadness, and the path value was statistically significant, reflecting successful experimental manipulation,  $\beta = .63, t = 7.96, p < .001$ .

As we can see from Table 5 and Figure 2 (*a* paths), the four regression analyses showed that sadness did not significantly predict any expected positive feelings (elated or calm) from viewing the three genres but did predict negative feelings (unhappy or annoyed). When testing the model for comedy preference, one case with extremely high scores on anticipated unhappy ( $Z = 6.05$ ) and annoyed ( $Z = 5.81$ ) feelings was detected as a univariate outliers. The same case was found through Mahalanobis distance as a multivariate outlier ( $mah = 43.10$ ) at  $p < .001$ . Therefore, this case was deleted, and 99 cases were used when analyzing preferences for comedies. Results showed that sadness significantly predicted anticipated unhappy feelings from viewing comedies,  $\beta = .31, t = 3.21, p < .01$  and game shows,  $\beta = .25, t = 2.50, p < .05$  and also predicted anticipated annoyed feelings from viewing game shows,  $\beta = .21, t = 2.09, p < .05$  and comedies,  $\beta = .17, t = 1.69, p = .09$ .

Estimated path values from anticipated feelings (M) to media preference (Y) for each media genre (*b* paths) were obtained from regression analyses with all four mediators and the ratings of sadness entered as predictors. As we can see from the Table 5 and Figure 2, anticipated elated feelings significantly predicted preferences for all three genres: sad dramas ( $\beta = .53, t = 5.32, p < .001$ ); comedies,  $\beta = .47, t = 4.68, p < .001$ ; game shows,  $\beta = .59, t = 6.75, p < .001$ ).

Table 5

*Standardized Coefficients from Mediation Analyses with Anticipated Feelings*

Media Preference (DVs)	Sad Dramas	Comedies	Game Shows
<b>Sadness to Mediators (<i>a</i> paths)</b>			
Anticipated unhappy	.13	.31**	.25*
Anticipated annoyed	.02	.17+	.21*
Anticipated elated	.11	-.03	-.04
Anticipated calm	.10	-.05	.04
<b>Mediators to Preference (<i>b</i> paths)</b>			
Anticipated unhappy	.10	-.21+	-.06
Anticipated annoyed	-.28**	-.03	-.22*
Anticipated elated	.53***	.47***	.59***
Anticipated calm	.06	.06	-.06
<b>Total Effect (<i>c</i> path)</b>			
Sadness	.12	-.01	-.06
<b>Direct Effect (<i>c'</i> path)</b>			
Sadness	.05	.08	.02
$R^2$	.49	.39	.53
Adj. $R^2$	.46	.36	.50
$F$	18.10	11.98	21.36
$N$	100	99	100
$p$	.000	.000	.000

Note. + $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

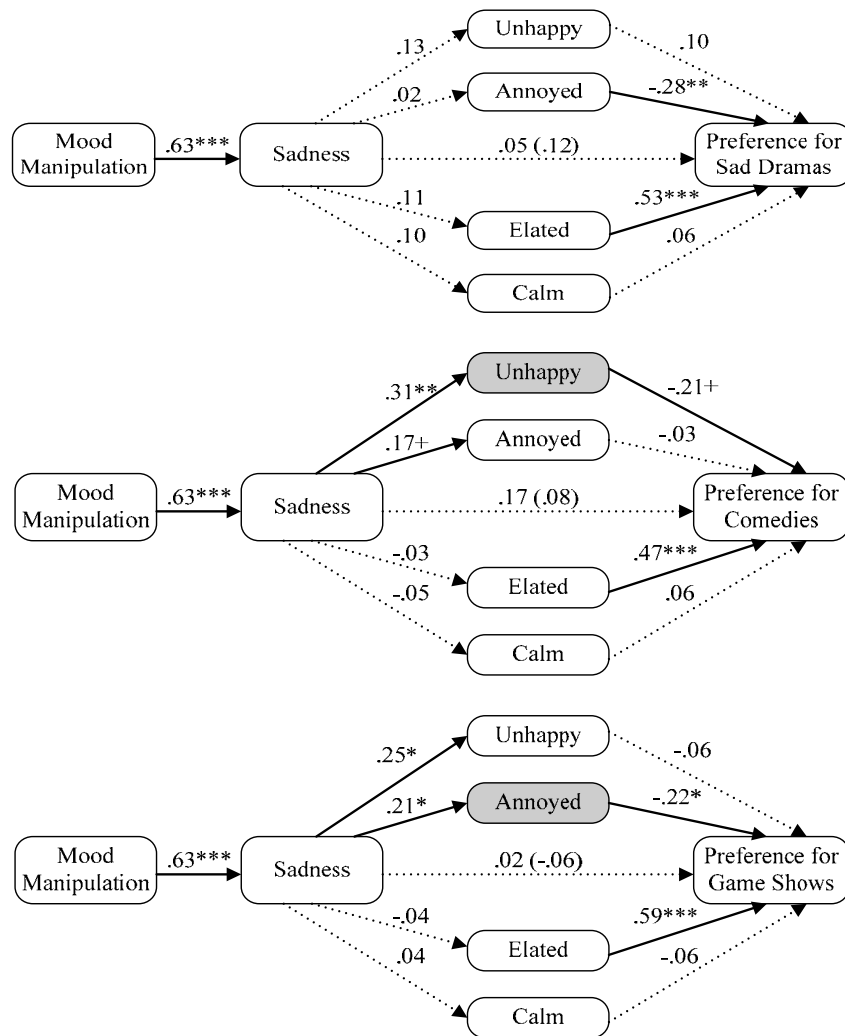


Figure 2. Path diagrams with anticipated feelings as mediators.

Note 1. + $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . Mediators highlighted with gray colors represent significant specific indirect effects at  $p < .05$ .

Note 2. Standardized regression coefficients are near arrows. Manipulated mood was dummy coded (0: Neutral, 1: Sad).

Note 3. Numbers inside parentheses are total effects ( $c$ ) of sadness on preference for sad dramas, comedies, and game shows respectively, without including mediators.

Table 6

*Bootstrapped Estimates and Confidence Intervals for Specific Indirect Effects of Sadness on Media Preference through Anticipated Feelings*

	Indirect Effects ( <i>ab</i> paths)	SE	Z	Bias-Corrected 95% Bootstrap CI	
				Lower	Upper
<b>Sad Dramas</b>					
Unhappy	.012	.01	.88	-.007	.058
Annoyed	-.005	.02	-.19	-.062	.050
Elated	.051	.05	1.10	-.044	.158
Calm	.005	.01	.56	-.008	.043
Total	.063	.06	1.02	-.079	.200
<b>Comedies</b>					
<b>Unhappy*</b>	<b>-.044</b>	<b>.03</b>	<b>-1.70</b>	<b>-.104</b>	<b>-.004</b>
Annoyed	-.003	.01	-.27	-.043	.020
Elated	-.011	.03	-.32	-.074	.048
Calm	-.002	.01	-.44	-.036	.006
Total	-.060	.05	-1.28	-.143	.026
<b>Game Shows</b>					
Unhappy	-.012	.02	-.64	-.056	.015
<b>Annoyed*</b>	<b>-.039</b>	<b>.03</b>	<b>-1.53</b>	<b>-.115</b>	<b>-.003</b>
Elated	-.019	.05	-.38	-.110	.083
Calm	-.002	.01	-.37	-.033	.008
Total	-.073	.06	-1.12	-.188	.054

*Note.* Number of bootstrap re-samples = 1,000. CI = confidence interval.

\* represents significant specific indirect effects at  $p < .05$ .

Additionally, anticipated annoyed feelings significantly predicted low levels of preference for sad dramas ( $\beta = -.28, t = -3.06, p < .01$ ) and game shows ( $\beta = -.22, t = -2.16, p < .05$ ), whereas anticipated unhappy feelings marginally predicted low levels of preference for comedies ( $\beta = -.21, t = -1.94, p = .06$ ).

In addition to estimating statistical significance of coefficients from the IV to mediators (*a* paths) and mediators to DVs (*b* paths), the main purpose of the present analyses was to assess direction and size of the indirect effects. Consequently, *specific indirect effects* (i.e., *a\*b* path for each mediator) of sadness on media preferences through the proposed four mediators were formally tested employing the bootstrapping procedure. Table 6 shows the results of bootstrap indirect effects for these multiple mediator models. Two specific indirect effects were significant. First, sadness indirectly affected lower levels of preference for comedies through anticipated unhappy feelings (estimated indirect effect =  $-.044, p < .05$ , bias-corrected 95% bootstrap CI =  $-.104, -.004$ ). Second, sadness indirectly affected lower levels of preference for game shows through anticipated annoyed feelings (estimated indirect effect =  $-.039, p < .05$ , bias-corrected 95% bootstrap CI =  $-.115, -.003$ ). Therefore, these significant specific indirect effects suggest that individuals with sad feelings who anticipate unhappy or irritating emotional consequences from viewing comedies or game shows respectively tend not to choose those genres to regulate their sadness.

*Testing specific indirect effects through anticipated cognitive responses.* Similar to the previous analyses, a series of regression analyses was conducted in order to obtain path coefficients and to formally test specific indirect effects of sadness on media preference through anticipated thoughts from viewing each of the three genres. Estimated path values from sadness

(X) to anticipated cognitive responses (M) for each genre (*a* paths) were obtained from five regression analyses with each mediator entered as a dependent variable.

As we can see from Table 7 and Figure 3 path diagrams (*a* paths), sadness marginally predicted anticipated learning outcomes ( $\beta = .18, t = 1.83, p = .07$ ) and negative meta-mood experience ( $\beta = -.18, t = 1.80, p = .08$ ) from viewing sad dramas; however, sadness significantly predicted beliefs about catharsis experience ( $\beta = .26, t = 2.68, p < .01$ ) from this genre. Sadness also significantly predicted anticipated catharsis experience from viewing comedies ( $\beta = .21, t = 2.16, p < .05$ ). Additionally, sadness significantly predicted anticipated negative meta-mood experience from watching game shows ( $\beta = -.20, t = -2.04, p < .05$ ).

Estimated path values from anticipated cognitive responses (M) to media preference (Y) for each genre (*b* paths) were attained from regression analyses with all five mediators and the ratings of sadness entered as predictors. As we can see from the Figure 3 (*b* paths), anticipated entertainment experience significantly predicted preference for all three genres (Sad Dramas,  $\beta = .33, t = 3.32, p < .01$ ; Comedies,  $\beta = .30, t = 2.97, p < .01$ ; Game Shows,  $\beta = .46, t = 4.37, p < .001$ ). Positive meta-mood experience significantly and marginally predicted preference for comedies ( $\beta = .37, t = 4.18, p < .001$ ) and game shows ( $\beta = .17, t = 1.76, p = .08$ ) respectively. Finally, it should be highly noted that anticipated cognitive learning outcomes uniquely predicted preference for sad dramas ( $\beta = .35, t = 3.08, p < .01$ ) alone, not comedies or game shows.

In addition to assessing path coefficients from independent variable to mediators (*a* paths) and mediators to dependent variables (*b* paths), the present study also formally tested *specific indirect effects* of sadness on media preference through the proposed mediators. Table 8 shows bootstrap results of the tests of indirect effects for the three models. Only one specific indirect effect was significant. Sadness indirectly affected preference for sad dramas through

Table 7

*Standardized Coefficients from Mediation Analyses with Anticipated Thoughts*

Media Preference (DVs)	Sad Dramas	Comedies	Game Shows
Sadness to Mediators ( <i>a</i> paths)			
Cognitive learning	.18+	.02	-.02
Catharsis beliefs	.26**	.21*	-.05
Meta-mood	-.18+	-.02	-.20*
Distraction	.01	.11	-.06
Entertainment	-.01	-.05	-.09
Mediators to Preference ( <i>b</i> paths)			
Cognitive learning	.35**	.14	-.04
Catharsis beliefs	-.10	.05	.12
Meta-emotion	-.03	.37***	.17+
Distraction	-.08	.06	.09
Entertainment	.33**	.30**	.46***
Total Effect ( <i>c</i> path)			
Sadness	.12	.01	-.06
Direct Effect ( <i>c'</i> path)			
Sadness	.08	.01	.03
$R^2$	.30	.31	.31
Adj. $R^2$	.25	.27	.27
$F$	6.47	7.08	7.09
$N$	100	100	100
$p$	.000	.000	.000

Note. + $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .



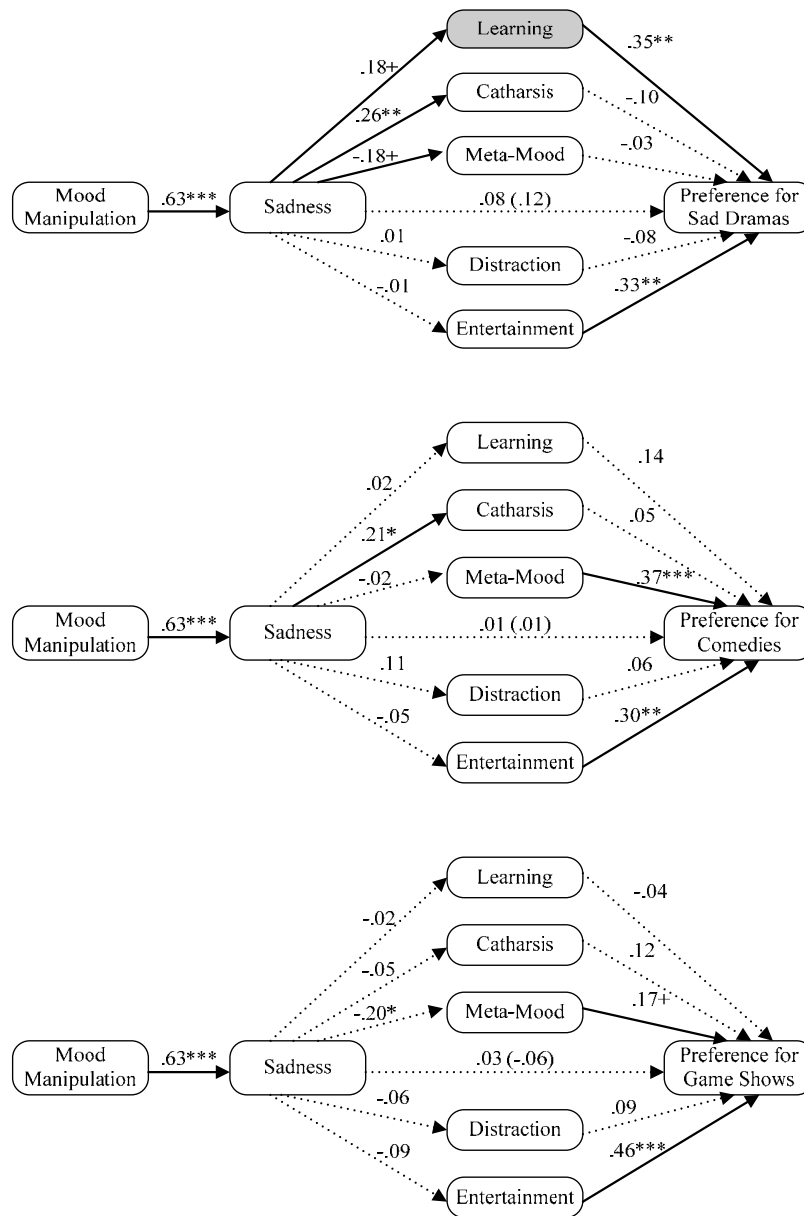


Figure 3. Path diagrams with anticipated thoughts as mediators.

Note 1. + $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . Mediator highlighted with gray colors represents significant specific indirect effects at  $p < .05$ .

Note 2. Standardized regression coefficients are near arrows. Manipulated mood was dummy coded (0: Neutral, 1: Sad).

Note 3. Numbers inside parentheses are total effects ( $c$ ) of sadness on preference for sad dramas, comedies, and game shows respectively, without including mediators.

Table 8

*Bootstrapped Estimates and Confidence Intervals for Specific Indirect Effects of Sadness on Media Preference through Anticipated Thoughts*

	Indirect Effects ( <i>ab</i> paths)	SE	Z	Bias-Corrected 95% Bootstrap CI	
				Lower	Upper
<b>Sad Dramas</b>					
<b>Learning*</b>	<b>.054</b>	<b>.03</b>	<b>1.59</b>	<b>.008</b>	<b>.156</b>
Catharsis	-.022	.02	-.92	-.110	.017
Meta-mood	.005	.01	.37	-.016	.047
Distraction	.001	.01	.10	-.023	.040
Entertainment	-.001	.03	-.05	-.066	.060
Total	.037	.05	.71	-.074	.154
<b>Comedies</b>					
Learning	.002	.01	.22	-.019	.041
Catharsis	.007	.02	.46	-.019	.053
Meta-mood	-.005	.03	-.17	-.067	.037
Distraction	.005	.01	.53	-.006	.052
Entertainment	-.011	.02	-.48	-.085	.030
Total	-.001	.04	-.01	-.080	.091
<b>Game Shows</b>					
Learning	.001	.004	.14	-.013	.026
Catharsis	-.005	.01	-.48	-.052	.011
Meta-mood	-.029	.02	-1.36	-.096	.001
Distraction	-.004	.01	-.48	-.058	.008
Entertainment	-.036	.04	-.90	-.129	.034
Total	-.074	.05	-1.45	-.196	.009

*Note.* Number of bootstrap re-samples = 1,000. CI = confidence interval.

\* represents significant specific indirect effects at  $p < .05$ .

anticipated cognitive learning outcomes (estimated indirect effect = .054,  $p < .05$ , bias-corrected 95% bootstrap CI = .008, .156), but not through the other mediators such as anticipated beliefs about catharsis.

### *Supplemental Analyses*

*Testing second-order indirect effects from mood manipulation.* The significant first-order indirect effects that previous mediation analyses found are based on measured levels of sadness as an independent variable, not mood manipulation per se (i.e., sadness → learning → preference for sad dramas, sadness → unhappiness → avoidance of comedies, sadness → annoyance → avoidance of game shows). Consequently, three sets of path analyses using AMOS with the bootstrapping procedure were conducted in order to explore second-order indirect effects from mood *manipulation* to preference for sad dramas, avoidance of comedies and avoidance of game shows respectively. Measured sadness and anticipated learning, unhappiness, or annoyance served as two mediators for each path analysis.

Results confirmed that mood manipulation indirectly affected selection of sad dramas (estimated second-order indirect effect = .126,  $p < .05$ , bias-corrected 95% bootstrap CI = .012, .306), avoidance of comedies (estimated second-order indirect effect = -.174,  $p < .01$ , bias-corrected 95% bootstrap CI = -.349, -.055) and avoidance of game shows (estimated second-order indirect effect = -.195,  $p < .05$ , bias-corrected 95% bootstrap CI = -.385, -.025) by way of the proposed two mediators respectively (i.e., mood manipulation → sadness → learning → preference for sad dramas, mood manipulation → sadness → unhappiness → avoidance of comedies, mood manipulation → sadness → annoyance → avoidance of game shows).

*Testing “conditional” indirect effects of sadness.* In addition to reporting indirect effects of sadness on media preferences through anticipated reactions, it may be another critical interest

to examine whether the significant effects of anticipated reactions on levels of media preference (i.e., learning → preference for sad dramas, unhappiness → avoidance of comedies, annoyance → avoidance of game shows) are potentially moderated by levels of sadness.

In order to test these possible conditional indirect effects (or moderated mediation) of sadness, a series of regression analyses was conducted, with sadness, anticipated reactions, and interaction terms entered as predictors respectively. Media preferences served as dependent variables. Results showed that interaction terms for Unhappy Feelings X Sadness and Annoyed Feelings X Sadness did not significantly predict avoidance tendencies for comedies,  $\beta = .39$ ,  $t = .97$ ,  $p = .34$  or game shows,  $\beta = -.07$ ,  $t = -.24$ ,  $p = .81$  respectively. However, a marginally significant Cognitive Learning X Sadness interaction emerged for preference for sad dramas,  $\beta = .94$ ,  $t = 1.85$ ,  $p = .07$ .

To interpret interaction regression lines that correspond to the preference for sad dramas as a function of levels of sadness and anticipated cognitive learning outcomes were drawn following procedures by Hayes (2005) that originally modeled from Aiken and West (1991). As we can see from the Figure 4, this interaction occurred because the effects of anticipated learning outcomes on preference for sad dramas are stronger among individuals scoring high on levels of sadness. More specifically, among participants who reported high levels of sadness based on median split, there was a strong significant effect of anticipated learning on preference for sad dramas,  $\beta = .58$ ,  $t = 4.91$ ,  $p < .001$ ; however, the anticipated learning had weaker effects on preference for sad dramas for the participants reporting below the median in sad states,  $\beta = .24$ ,  $t = 1.76$ ,  $p = .09$ . This finding implies that expectations of learning from viewing sad dramas, which may be operationalized as one of individual-differences, appear to play a critical role in choosing sad dramas in the selective exposure context.

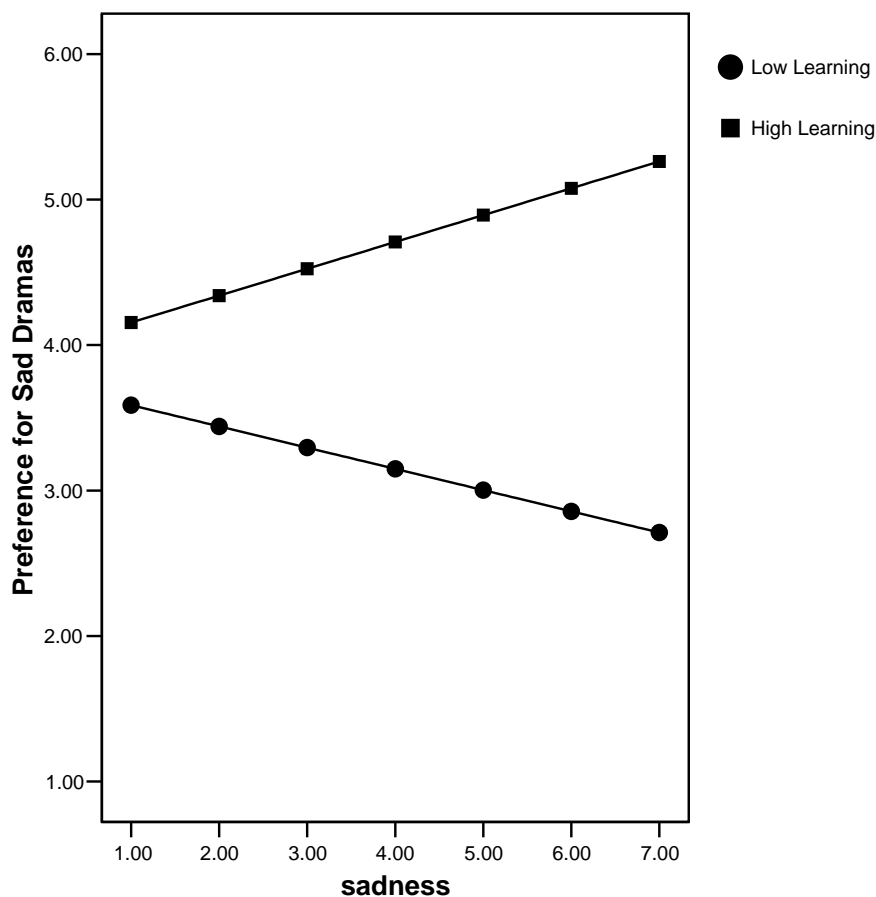


Figure 4. Regression slopes of Sadness X Cognitive Learning for preference for sad dramas.

Note. The two regression lines for the low versus high levels of anticipated cognitive learning ( $M_{low} = 3.51$ ,  $M_{high} = 5.77$ , mean  $\pm$  standard deviation respectively) were obtained from the following equation:  $\hat{Y}$  (Preference for Sad Dramas) =  $3.37 + (-.658 * Sadness) + (.105 * Learning) + (.146 * Sadness * Learning)$ . The regression line for the mean score of cognitive learning ( $M = 4.64$ ,  $SD = 1.13$ ) is hidden for a parsimonious illustration.

### Summary of Results

Hypotheses that predicted that sad individuals would be more likely than neutral individuals to prefer comedies (H1a) or game shows (H1b) were not supported. Analyses of simple effects of manipulated mood conditions on media preferences revealed that individuals in

both neutral and sad conditions preferred to watch comedies over sad dramas or game shows. Although both sad and neutral individuals equally liked to watch comedies, Zillmann's mood management theory that predicted that sad individuals would prefer hedonically pleasant media content should not be fully rejected because they clearly showed preference for comedies over sad dramas.

H1c that predicted that sad individuals would prefer sad dramas was partially supported. Regression analyses and formal tests of specific indirect effects using the bootstrapping procedure revealed that some sad individuals preferred to view sad dramas through the expectation of cognitive learning experience. Therefore, it is concluded that although not all sad individuals were attracted to watch sad dramas, some sad individuals who expect to reflect profound life meanings preferred to watch this genre. As answers for the RQ1, theoretical mechanisms that solely concentrate on positive emotional reappraisals of sadness (i.e., catharsis beliefs and meta-mood experience) did not function as significant mediators to predict preference for sad dramas. Rather, cognitive-learning relevant outcomes were a significant explanatory mechanism to explain some sad individuals' attraction to view sad dramas.

It should be also noted that although both sad and neutral individuals equally wanted to view comedies or, to a lesser extent, game shows, mediation analyses with anticipated feelings from viewing each of the three genres as mediators revealed that some sad individuals tended to avoid comedies or game shows particularly through the expectation of unhappy or annoying consequences from viewing these genres respectively. Finally, gender did not make any difference in sadness-based media preferences, so H2 was not supported.

Supplemental analyses confirmed significant second-order indirect effects of the mood manipulation on media preferences through the proposed mediators. Also, testing of conditional

indirect effects of sadness showed that the ratings of sadness potentially moderated the relationship between beliefs about anticipated cognitive learning and choice of sad dramas. This finding suggests that individuals who expect to find profound life meanings are attracted to view sadness-evoking media regardless of prevailing mood states, and this relationship tends to be stronger when they experience sad life events.

## Discussion

### *Summary of Findings*

*Formation of sadness-based media preference.* The findings of the present research showed that participants preferred to watch comedies over sad dramas or game shows regardless of their prevailing sad or neutral mood. However, a series of mediation analyses revealed that some sad individuals opt for sad dramas with the expectation that they would gain renewed life meanings and perspectives through the self-reflection induced by sad dramas. The anticipation of emotional relief through catharsis or positive reappraisal of sadness did not significantly predict a preference for sad dramas on the part of those sad individuals. Therefore, changes of negative and distorted thoughts, not necessarily of sad feelings per se, were the primary motivation for the choice of sad dramas. Simply re-evaluating their grieving feelings as positive experiences without cognitive transformation did not seem to be a major concern for them. Consequently, this study concluded that although most sad individuals wanted to watch comedies over sad dramas, some of them preferred to watch sad dramas. In this case, their main goal in terms of sadness regulation was to embrace sad feelings through cognitive coping strategies that include transforming their pessimistic thoughts into positive ones; therefore, sad dramas with their powerful, informed, inspiring, and philosophical messages could be useful resources for such a cognitive coping strategy.

The mediation analyses also revealed, contrary to Zillmann's predictions, that some sad individuals tended to avoid comedies and/or game shows because they anticipated negative emotional outcomes from viewing them. More specifically, some sad individuals tended to avoid viewing comedies when they anticipated ensuing feelings of unhappiness (e.g., feeling gloomy, blue, distressed, and upset); likewise, some of them tended to avoid game shows when they



anticipated ensuing feelings of annoyance (e.g., irritation and anger). These findings call for greater attention to theorizing people's avoidance of media presenting other people's celebrations and daily pleasure because such portrayals have been assumed to almost always play functional roles for media users with favorable experience.

Special caution should be taken in interpreting potential avoidance tendencies in regard to game shows and their underlying motivations. It was originally hypothesized that sad individuals may choose this cognitively involving genre in order to distract themselves from sadness for a while. These unexpected results may be explained in terms of the potential confounding mood-impacting characteristics of this genre. That is, although game shows have cognitively challenging, involving, and demanding characteristics, they also have loud, fast, dramatic, and intense features. Therefore, this genre may not represent clear-cut mood-impacting features, because shows in this genre may be both absorbing and exciting. If this interpretation is correct, it may be that sad individuals who make media choices in the hope in of being distracted from their sadness do not select game shows because they present emotionally arousing states (i.e., excitement) that conflict with the states that sad individuals are experiencing.

*The role of gender in sadness-based media preference.* Although females were more likely than males to prefer sad dramas regardless of their prevailing mood states, the present study did not find gender to be significant in moderating sadness regulation in regard to media choice. The only significant finding in the mediation analyses in regard to gender was that sad females were more likely than sad males to report high levels of anticipated catharsis experience from viewing sad dramas. Non-significant moderating effects of gender could be explained in terms of sad individuals' main motivation to choose sad dramas. In this study, participants chose this genre in order to gain meaningful experiences by immersing themselves into the sad

narratives, not to express sad feelings or to simply re-evaluate sadness as favorable experience. Consequently, females and males with sad feelings may expect to obtain self-understanding and maturity from viewing sad dramas.

*Alternative explanations.* Although the present study found that some sad individuals choose sad dramas because they expect a learning-relevant outcome, the idea that they may choose this particular genre because of catharsis beliefs should not be ignored. Anticipation of an experience of catharsis did not significantly predict preference for sad dramas; however, sadness did significantly predict the presence of catharsis beliefs. The reason why anticipating an experience of catharsis did not predict selection of sad dramas may be found in the context of the experimental setting that the present study employed. The temporarily induced sadness and public viewing contexts with the presence of unknown others including the experimenter may have hindered the participants from choosing sad dramas because of an anticipated experience of catharsis. The short-lived sadness may not strongly motivate participants to actually choose sadness-inducing dramas with the expectation of a catharsis experience. Additionally, the presence of unknown others may make participants attempt to control their emotions because they may feel that crying, for example, is inappropriate, shows weakness, or induces shame in public situations (Vingerhoets, Boelhouwer, Van Tilburg, & Van Heck, 2001). Consequently, if the present study had been conducted in a more natural setting such as solitary- or co-viewing with trusted others, the role of catharsis beliefs might have played a significant role in choosing sadness-evoking media.

With the scenario of a natural viewing setting in mind, if sad individuals choose this particular genre and report catharsis as well as learning experience as their actual media use outcomes, the catharsis experience may form part of a cognitive learning process; that is, in

confronting a difficult reality, a sad person may express negative emotions with tears. However, if sad individuals choose this genre and report catharsis experience alone as their actual media use outcomes without changes in their negative thoughts, it might potentially imply counter-productive media use. Because feeling (temporarily or perhaps illusively) relieved without resolving underlying problems may result in experiencing worse distress ultimately.

### *Theoretical Implications*

*Beyond hedonism-based media use.* The present research clearly showed that individuals use media for purposes other than simple hedonism. In addition to using media featuring joy, pleasure, celebration, and happiness, individuals are also willing to use media presenting other people's sorrow, pain, struggle, anguish, grief, and so on. Theories of media use have centered on identifying individuals' psychological needs for using media solely and have generally understood media use as being determined by a quest for an emotionally pleasurable experience. Even the use of sadness-inducing media has been somewhat tautologically interpreted as suggesting that people use those kinds of media because they are ultimately gratifying and enjoyable. However, as the findings of the present study showed, individuals clearly have distinct motivations for using sadness-inducing media. They expect to gain profound insight into life, to learn lessons, or to gain a new life purpose by reflecting on themselves and re-evaluating their painful experiences as an essential part of their lives.

*The importance of distinguishing between emotional and cognitive responses.* Given that different kinds of media induce various emotional responses, such as fright, thrill, humor, sadness, it is no wonder that media scholars have concentrated on those responses when examining reaction processes in regard to media use. Little attention has been paid to media users' cognitive reaction processes, even though it is common to hear viewers say that they

gained or learned something from an entertainment program. Although sadness per se is a negative feeling, distinguishing emotional responses from cognitive responses provides a strong theoretical rationale for explaining why viewers tolerate sad feelings induced by sad media and often report feelings of being fulfilled, inspired, or refreshed by viewing it. Indeed, viewers may not simply evaluate sad feelings in a positive manner; rather, they may experience transformations in their negative thoughts before and after viewing the media and finally gain the cognitive benefits of assistance in coping with difficult life events.

*Media use as a meaning-based coping tool.* The present research also clearly showed that media use constitutes a meaning-based coping tool, that is, it may help viewers reinterpret sad life events, find alternative ways to understand the causes of such events, and finally create new viewpoints infused with a sense of having found a meaning in life. Meaning-based coping, one of the three types of coping strategies identified by Folkman and Moskowitz (2004), is quite akin to cognitive coping strategies including positive reappraisals, transformation, and personal growth. The theory informing prior research on hedonism-based media choice is similar to emotion-focused coping strategies in that the goal of hedonism-based coping is to improve or avoid negative feelings. Similarly, Zillmann's recent argument on information utility-based media choice is parallel to that of problem-focused coping strategies in that it emphasizes the use of practical and instrumental ways to overcome difficult situations. Finally, the present research, highlighting cognitive benefits, implies that meaning-based coping strategies are often used by viewers. Those who go through irrevocable loss or separation often feel that their lives are meaningless, and they look for new meaning and purpose in their lives. Accordingly, the present research shows that sad dramas can provide the kind of profound meanings that sad people seek.

### *Practical Implications*

*Therapeutic media use.* Findings from the present study suggest that appropriate media use may provide therapeutic resources for coping with negative life events. It should be also noted that it may not always be desirable to pursue favorable emotional benefits alone. That is, people who experience difficult life events may need to understand the problems that trigger specific negative affective states. Among diverse media channels, movies are considered a powerful healing modality by some therapists in clinical psychology. For example, many books suggest that movies are an effective tool for coping with various negative life events. Examples of such books include *Movies and mental illness: Using films to understand psychotherapy* (Wedding & Boyd, 1999), *Reel therapy: How movies inspire you to overcome life's problems* (Solomon, 2001), and *E-Motion picture magic: A movie lover's guide to healing and transformation* (Wolz, 2005). It should be noted that the suggestions and recommendations of these books are based on the authors' subjective arguments, not on carefully conducted research with theoretical propositions. Therefore, the findings of the present study could provide a starting point for calling greater attention to the cognitive benefits, in addition to the emotional enjoyment of using entertainment media.

*Mood-based selectivity and customization.* Given that mood or situation associated with a specific mood state is a strong predictor of what kind of media will be selected, the media industry could benefit from providing mood-based selectivity and customization. In terms of selectivity, instead of classifying movies or music based on traditional genre categories, movies and music web site creators might usefully consider users' psychological needs and so provide mood-based navigation options. Similarly, in terms of customization, given that mood is a prime motivator in media choice, users might experience mood-based customization as more relevant

to them and thus perceive themselves as more involved in movie or music web sites. For example, music users may not always have artists or titles in mind when searching for songs but rather they may focus on their own moods and seek music to fit that mood. Therefore, the media industry could usefully recognize users' moods as a crucial decision-making factor.

*Program-induced sad mood and deciding types of commercials.* The idea that sad media can induce not only sad feelings but meaningful thoughts has implications for decision making concerning the type of television commercials to air in the programming breaks of sadness-inducing media. If the decision makers expect to achieve effective outcomes, it is recommended that they use the breaks for the placement of thought-provoking advertising characterized by strong message arguments instead of advertising emphasizing peripheral cues, such as background, colors, models, music, and so on. Because viewers are already in highly cognitively involved states affected by the sadness-inducing programming, they may be ready to process information in a systematic and central way (Petty & Priester, 1994). Equally, placing humorous or silly commercials in the middle of sadness-inducing programming is not advisable, as such commercials may be deemed inappropriate and, therefore, may receive a negative response (see, Yang & Oliver, 2004, for online news contexts).

*Packaging entertainment media.* The idea that media users also expect diverse cognitive benefits associated with potential learning outcomes also has implications for media marketing. That is, it offers guidance regarding what kind of information should be included in the blurbs on, for example, movie posters or DVD covers. As home entertainment is a growing industry and DVD covers may play an important role in influencing media selections (Oliver, Banjo, & Kim, 2003), it is recommended that cover blurbs should be designed, keeping in mind the potential cognitive responses of media choosers. For example, instead of writing blurbs that emphasize

emotional responses only (e.g., “the best tearjerker of the year,” or “this movie will steal your heart”), the inclusion of cognitive responses (e.g., “perceptive journey,” “unforgettable powerful messages”) could attract more diverse consumers including males because extreme emotional responses alone may be perceived as a “chick-flicks.” This reasoning is also applicable to developing movie posters and the narrations in movie previews.

### *Limitations*

*Conceptual issues of sadness.* The present study employed autobiographic sad memories to induce sadness. Partly because of the idiosyncratic nature of memories, sadness was broadly defined in terms of its intensity, duration, cause, proximity, and so on. Although the present research provided evidence for sad individuals’ attraction to sad dramas, it is possible that, given the diverse spectrum of sad feelings, media choices made by sad individuals might be different, depending on greater variations at the conceptual level. Individuals may appraise sadness differently when they lose their family and friends, read or watch news covering national tragic events, or feel themselves to be isolated. Therefore, for example, when individuals are too overwhelmed immediately after tragic life events, they may not have any motivation to regulate their sadness through the use of media. Also, when experiencing their own sadness compared to observing others’ grief, individuals may develop stronger motivations to obtain wisdom, strength, and hope through the use of sadness-evoking media. Future research would benefit from defining sadness in a more specific way and theorizing individuals’ distinct media choices based on more nuanced definitions of sadness that take into account diverse situational causes, levels of intensity, duration, etc.

*Dimensions of mood-impacting features of media genres.* Media content’s diverse and potentially confounded mood-impacting characteristics make it difficult to pinpoint precise

predictions regarding mood-based media choices and the specific motivations that lead to them.

The manipulation check for the present study showed that both game shows and sad dramas were perceived as equally involving and demanding. Although sad dramas are involving in a meaningful way, whereas game shows are involving in a cognitively challenging way, future research should either devise adjectives that can clearly capture the different ways of involving features as manipulation check items or make the involving characteristics in the descriptions of game shows more salient. Also, the absorbing characteristics of game shows may be perceived as exciting and arousing. Therefore, future research should disentangle cognitively involving characteristics from emotionally exciting characteristics in order to more precisely understand the underlying motivations for the use of game shows.

*Measurement contexts of media choice.* Previous studies on selective exposure to media have employed unobtrusive measures of media choices. For example, in studies measuring media choice behavior after a negative mood has been induced, participants were told that they had 10 minutes to listen to music, watch television, or read on-line news while they waited to participate in what they thought would be an unrelated second study (Bryant & Zillmann, 1984; Knobloch & Zillmann, 2002; Zillmann, 1988a). Furthermore, such testing strategies make it unlikely that participants will guess the true purpose of the research. However, the present study measured intentions in regard to media choice behavior without using such explicit decoy conditions. This may be why some participants correctly guessed the connections between mood induction and subsequent media choice and, therefore, apprehended the true purpose of the present study. Future research should devise more sophisticated experimental protocols that provide feasible rationales concerning why participants have to involve media choice procedures, thus rendering the study's interest in mood factors less obvious to participants.



*Rethinking neutral mood.* The neutral feelings directly compared with sad feelings were defined as not too cheerful or depressed mood states. However, the results of the mood-induction pretest showed that anger ratings were significantly lower in the neutral condition than in the sad condition. Furthermore, in the neutral condition, anger ratings were significantly lower than the other two subscales of feelings—anxiety and positive affect. Of course, these findings do not necessarily mean that participants in the sad condition experienced more anger than participants in the neutral condition. Nor do they necessarily mean that participants in the neutral condition experienced more anxiety or positive affect than anger. In fact, associated mean scores were very low. Rather, these results suggest that it is difficult to induce purely neutral feelings in an experimental setting. The difficulty of inducing wholly neutral feelings could also be found in individuals' different sense of what is neutral. Some participants may perceive calmness or contentment as neutral; others may perceive boredom or monotony as such. Future research would benefit from employing multiple ways of checking the effectiveness of mood manipulation (e.g., blood pressure, heart rates, skin-conductance, or indirect self-reported measures, such as story completions) in addition to self-reported direct ratings to precisely understand the nature of neutral feelings.

*Limited demographic profile.* Some caveats should be taken into account in interpreting the findings of the present study because the findings are limited to young White undergraduate students in Western society. College students may be an appropriate sample to explore mood-based media selection because they are active users of diverse media including new technologies and may have more sophisticated schema than other populations for determining emotional media use. However, it should be noted that the present study cannot explain formations of media preferences based on sadness by considering life-span or cross-cultural perspectives.

Distinct motivations and goals of sadness regulation may be shaped by individuals in old versus young generations or Eastern versus Western cultures because they may hold different meanings about grief and loss and emphasize different aspects of coping with sadness due to a different set of social rules. Future research should identify the characteristics of sadness and its coping strategies that may be unique to or at least more marked in different demographic groups.

### *Suggestions for Future Research*

*Beyond valence approach.* Profound life meanings seem to be often conveyed via sadness-inducing media formats that feature a character's introspective journey through unexpected tragic life events. However, it may be premature to conclude that only a sad media format delivers meaningful messages. Profound life meanings could also be exemplified by a happiness-inducing media format that does not necessarily portray tragic life events. Media offering joy, wonder, passion, and happiness and not offering a sad narrative may also suggest great insights about life, relationships, and the world. Therefore, future research would benefit from disentangling the valence (either happy or sad) from meaningful messages in order to precisely predict sadness-based media choices. For example, if sad individuals prefer to watch media featuring meaningful messages regardless of whether the format is happy or sad, the degree of meaningfulness rather than valence is a key element in predicting their media consumption. Additionally, future research should attempt to explore other mood states or situations that may motivate viewers to consume meaningful entertainment programs.

*Fleshing out cognitive response processes.* The finding that meaningful life messages in media can provide sad individuals with constructive coping resources calls for further elaborations on cognitive learning-relevant outcomes. At this exploratory level, cognitive responses could make viewers relate to the programs, reflect on themselves through the difficult

situations that characters are going through, re-evaluate their stressful life events, and restore a sense that the world is full of meanings and that they have many options to pursue. Given that these cognitive reactions to media use are prevalent, future research should attempt to explicate them. Furthermore, it may be worthwhile to apply pre-existing theories of entertainment media (e.g., theories of identification and para-social interaction) that concentrate on explaining enjoyment to cognitive learning–relevant outcomes of media use to examine whether these theories could also explain processes of personal growth and transformation.

*Considering distinct portrayals of sadness-evoking media.* Although the present study manipulated sadness-inducing media with both “sad” and “meaningful” features with a short description format, future research would benefit from examining more diverse narrative characteristics of this particular genre. Sadness seems to be contextualized in different ways across diverse narratives: tragic events with sad endings (e.g., *Titanic*), going through difficult situations with hope and courage (e.g., *Life is Beautiful*), sad events with uplifting endings (e.g., *I am Sam*), etc. Examination of these different depictions relevant to sad events would shed further light on which type of portrayals particularly appeal to individuals with sad feelings in addition to choice per se. That is, in addition to predicting kinds of media (i.e., genres), identifying types of depictions in the target genre would provide researchers with valuable insights for explaining and predicting mood-based media consumption (Nabi, Finnerty, Domschke, & Hull, 2006).

*Conceptualizing selective avoidance as a distinct means of mood regulation.* Prior studies have concentrated on a selective *exposure* approach, assuming that individuals would obtain maximized gratification from the chosen target media. However, under certain circumstances, individuals may experience more positive states by avoiding the target media. For example, on Valentine’s Day, for those who are not in a love relationship, for example, avoiding the right

media (e.g., love stories) could evoke a more positive state than choosing other alternative media. Individuals, then, may often have a stronger motivation to avoid the right media than to choose the right media (Higgins, 1997; Higgins & Spiegel, 2004, for further discussion about dual motivations). To examine dual motivations for media use, future research would benefit from devising measurement items of preferences that tap into comparison scores from selecting versus avoiding the target media (e.g., “How would you feel after selecting vs. avoiding the following media?”). If individuals report more positive experiences by avoiding the target media instead of selecting them, their main goal may be to ensure absence of negative states, not necessarily to experience desired positive states. Identifying dual motivations underlying media consumption would help define distinct means of mood regulation through the use of media.

*Exploring other discrete emotions and actual outcomes of media use.* Among various negative emotional states, the present study explored sadness. Future research should explore other discrete emotion-based media preferences in order to advance and expand theories of media use. For each discrete emotion, examination of its cognitive antecedent and unique appraisal component may provide rationales for explaining theoretical connections between each discrete emotion and the formation of media preference (see, Nabi et al., 2006, for regret-based media use). Theories of media use may be advanced thus: (1) by exploring the media selections that might not necessarily lead to productive outcomes in terms of coping with negative emotions, and (2) by identifying the underlying mechanisms for people’s selection of media that may be ultimately adverse to regulating their negative mood states. For example, angry individuals who have a main goal of retaliation may be attracted to action movies with the expectation of identifying with characters who assault or even kill the target of retaliation. However, the actual outcomes from viewing this violent genre might be counter-productive because angry viewers

may maintain or even increase aggressiveness because this particular genre may not offer any resources to help the viewer resolve the problems that triggered the anger.

*Media use in co-viewing situations.* Most studies on media use have been conducted with each individual viewer as a unit of analysis, assuming a solitary viewing situation. However, co-viewing situations in which several people watch entertainment programs together are very common. Watching programs with others could influence not only choice processes but actual outcomes from the chosen media. For example, romantic couples may like to watch sad love stories together because while watching those kinds of movies, they have a chance to reflect on their own relationship and talk about profound meanings about true love. Discussions after viewing such a movie may, in fact, strengthen their pre-existing relationship. Similarly, individuals with sad feelings could benefit from co-viewing with trusted others because perceived emotional support from co-viewers through sharing feelings may facilitate engaging in active meaning-based coping processes.

### *Concluding Remarks*

Theories of media use have explained individuals' media consumption in accordance with their enjoyment-relevant motivations. Although sadness-inducing media is considered a paradoxical genre in terms of media users' desires to maximize positive experience, the use of this particular type of media has been interpreted as supporting the pre-existing media use theories based on hedonism-driven motivations. That is, researchers have suggested that individuals use this genre because it is gratifying, appropriate, or informational at best. However, as the present study clearly showed, individuals have distinct motivations for using sadness-evoking media: they expect to learn about profound life meaning, to gain wisdom, and to experience a sense of maturity while tolerating sad feelings.

In the context of selective exposure to media, the present research found that at least for some individuals, sadness leads to greater learning-relevant motivations, which in turn leads to preference for sad dramas. Also, the strength of the relationship between learning-relevant motivations and preference for sad dramas tends to be stronger when individuals are going through sad life events. The present study advances theories of media use in the context of selective exposure by distinguishing cognitive responses from emotional ones and suggesting the importance of viewers' cognitive learning-relevant motivations beyond simple hedonism-driven ones. For some sad individuals, it is more imperative to transform their negative thoughts and distorted beliefs first in order to effectively cope with sad life events and to ultimately gain a positive emotional experience at last.

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Appendix A: Various Words or Adjectives Representing the Three Genres

Sad Drama	Comedy	Game Show
Touching	Hilarious	Money
Uplifting	Funny	Suspenseful
Inspiring	Sarcastic	Intellectual
Compassion	Witty	Entertaining
Truthful	Slapstick	Thought-provoking
Empathetic	Outrageous	Exciting
Sincere	Fabulous	Fast
Compelling	Amusing	Amusing
Heartbreaking	Dumb	Challenging
Hopeful	Spontaneous	Tricky
Powerful	Smart	Quick
Realistic	Goofy	Smart
Moving	Clever	Difficult
Honest	Laugh	Luck
Thought-provoking	Loud	Prizes
Struggle	Silly	Repetitive
Sympathetic	Exciting	Informative
Nostalgic	Entertaining	Skill
Profound	Crazy	Knowledgeable
Brave	Preposterous	Strategy
Appreciative	Jovial	Interactive
Fulfilled	Vulgar	Guessing
Heartfelt	Absurd	Competitive
Encouraging	Eventful	Surprising
Self-actualization	Creative	Serious
Meaningful	Eccentric	Dramatic
Eye-opening	Light-hearted	Engaging
Educational	Energetic	Entertaining
Elegant	Stupid	Difficult
Relatable	Ridiculous	Enticing
Relationship	Enlightening	Showy
Bittersweet	Stimulating	Lucky
Strong	Humor	Light-hearted
Informed	Upbeat	Involving
Kindhearted	Parody	Educational
Well-made	Awesome	Intriguing
Endearing	Saucy	Unpredictable
Perseverance	Corny	Informative
Motivational	Jokes	Intense
Passionate	Pointless	Random
Riveting	Farce	Smart
Valiant	Quirky	Curiosity
Quaint	Innovative	Retarded
Thankful	Charming	Brainy
Influential	Incredible	Competition
Introspective	Cheery	Appealing

## Appendix B: Short Descriptions of the Three Genres

### Descriptions of Sad Dramas

- A heart-wrenching true-life drama: An inspirational, courageous, and introspective journey.
- A tale of inner anguish...filled with heart and soul: An intelligent, perceptive, and deeply moving drama.
- A sorrowful, informing, and powerful drama: Discovering a renewed passion for your life.

### Descriptions of Comedies

- A delightful and awesome comedy! Lots of freewheeling fun, big fat laughs, and outrageous extras.
- Spectacularly hilarious! A fabulously fresh and totally charming comedy.
- Tons of fun! A deliciously smart comedy that hits all the laugh bases.

### Descriptions of Game Shows

- Fascinating brain-teasers! Intrigue your mind with players' unexpected outcomes in a clever game format.
- The ultimate captivating quiz show! Kick start your brain during our play-off special.
- An engaging game show with various twists and turns! Guess questions instead of answers.

## Appendix C: Measures of Anticipated Cognitive Responses

### Downward social comparison

- I would realize that other people are also experiencing ups and downs in their lives.
- I would put myself in the shoes of the characters on the programs and compare my own life hardships to the hardships they faced.
- I would realize that life is hard on everyone, so I would not let the bad things bring me down.
- I would think that my problems are not so bad after seeing that other people have them much worse.

### Positive transformation and personal growth

- I would relate the programs to my situation and would reflect about my life.
- I would feel empowered and want to do something constructive with my life.
- I would think that I should better appreciate everything in my life, not taking things for granted.
- I would re-evaluate my difficult situations and try to build new perspectives on my life.
- I would feel exhilarated about my life and the fact that I have so many options in my life.

### Catharsis beliefs

- These shows would make me vent inside negative feelings and experience feelings of “release.”
- I would purge myself of negative feelings because these programs would make me let those feelings out.
- I would have a good cry and cleanse distress or tension from my mind.
- These programs would help me to drain off my painful feelings.

### Meta-mood experience

- I would be fine with the way I would feel.
- I would be embarrassed of how I would feel.
- There would be nothing wrong with feeling the way I would.
- I would not be ashamed at all of how I would feel.

### Distraction

- These programs would make me think about something totally different from my difficult situation.
- These programs would take my mind off of the things that are going on in my life.
- I would forget my problems and have a chance to escape reality during the programs.

### Entertainment

- I would feel amused with happy and optimistic thoughts.
- I would see myself happy and having fun.
- I would be entertained because I watched something funny and light-hearted.

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