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The Impact of Films on Viewer Attitudes towards People with Schizophrenia

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Abstract The media, including television, newspapers, and popular films have been implicated in the facilitation of mental illness stigmatization by presenting negative and inaccurate depictions of various diagnoses. The current study examined the impact of film on participants' knowledge, attitudes, and behaviors towards people with schizophrenia. A total of 106 participants completed questionnaires before and after viewing a 45-min film excerpt. Films viewed included a fear-based inaccurate, likeable-inaccurate, and an educational-accurate depiction of schizophrenia. There was also a control group. There were significant increases in stigmatizing attitudes for participants in the fear-based inaccurate group compared to the accurate and control group. Fear-based participants reported increased negative affect and endorsed statements suggesting that people with schizophrenia were unpredictable, dependent, and dangerous. These results provide support for the hypothesis that negative, inaccurate portrayals of severe mental illness enhance stigmatizing attitudes. Accurate film depictions, advocacy for social equality, and the continued education of individuals, clients, families, communities and organizations will help to mitigate the impact of films on mental illness stigmatization.

Keywords Films · Media · Mental Illness · Stigma · Attitudes

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It is estimated that about one-in-five youth and one-in-four adults in the United States (U.S.) have been diagnosed with a mental illness (National Institute of Mental Health 2006), but fewer than one-in-five people receive needed psychological treatment (U.S. Department of Health and Human Services 2000). Stigma has been deemed a major deterrent to treatment seeking behaviors for those with mental illness (U.S. Department of Health and Human Services 2000). One-fourth of the 50-million Americans diagnosed with a mental illness avoid seeking treatment due to stigma (Brown and Bradley 2002). Moreover, those attending treatment are less likely to comply with treatment recommendations (e.g., medications) when the level of perceived public stigma is high (Sirey et al. 2001). In a call for a national action agenda, the Surgeon General targeted reduction of mental illness stigma as a key interest and an overriding social issue (U.S. Department of Health and Human Services 2000).

Public Perceptions of those with Mental Illness

The stigmatization of those with mental illness by the general public has been well documented in psychological literature and is reinforced during childhood, adolescence, and adulthood. Wahl (2002) suggested that stereotypical attitudes toward people with mental illness are likely instilled during childhood. Specifically, Wahl reviewed a number of studies suggesting that children as young as first grade have developed a concept of mental illness and they were more likely to associate mental illness with violence and became less accepting of those with mental illness as they aged (i.e., from third grade to ninth grade). In contrast, children became more accepting of other disabilities (i.e., blindness, cancer, paraplegia, and mental retardation) over time (Wahl 2002). Research also indicates that negative attitudes toward those with mental

illness are likely to be reinforced and remain consistent or worsen into adulthood (Coverdale and Nairn 2006).

Overall, research suggests that individuals with mental illness are perceived by children, adolescents, and adults as aggressive, violent, dangerous, and unpredictable in their behavior (Corrigan 1998; Hannigan 1999; Phelan and Link 1998; Phelan et al. 2000). Phelan et al. (2000) found that although the public's conceptualization of mental illness broadened (i.e., knowledge of non-psychotic disorders) between 1950 and 1996, those with severe mental illnesses were two-and-a-half times more likely to be stereotyped as violent when compared to perceptions in the 1950's. Despite the fact that mental illness has been weakly linked with violent behavior (Corrigan and Cooper 2005), certain segments of the population still perceive those with more common non-psychotic disorders (i.e., depression) as unrealistically violent toward others (Anglin et al. 2006). As recently as 2013, Barry, McGinty, Vernick and Webster found approximately half of the respondents to a national survey believed people with mental illness were more dangerous than the general population, and they were unwilling to have a person with a mental illness as a neighbor or co-worker. Those who had more direct experience with people with mental illness had more positive views about mental illness.

Individual and Structural Discrimination

Misconceptions about a link between mental illness and dangerousness exacerbate stigmatization and discrimination toward those with mental illness (Corrigan and Cooper 2005). Individual and structural consequences of mental illness stigma include discrimination in housing, employment, and interpersonal relationships (Corrigan 1998); status loss (Link and Phelan 2010); decreased self-esteem (Corrigan 2004); internalized devaluation, shame, and withdrawal (Link and Phelan 2010); decreased treatment seeking behaviors (Wahl 2003a); prevention of funding for treatment centers and mental health parity (Corrigan and Cooper 2005; Corrigan and Kleinlein 2005); which may result in the dehumanization of those with mental illness by negating person-first identification. Stigma has long been thought to be rooted in media portrayals of mental illness (Sieff 2003).

A Call to Examine Media Outlets as a Source of Stigma

Selective media reporting is likely to exacerbate preconceived notions linking violence and mental illness (U.S. Department of Health and Human Services 1999). McGinty et al. (2013) found that reading a news story of a mass shooting committed by a person with or without a mental illness heightened negative attitudes toward people with mental illness. After the Surgeon General's call for action, literature examining the portrayal of those with mental illness in the media has expanded. Researchers in psychology and sociology have recently focused on specific media channels including television and film. Their findings suggest that films may have an impact on child, adolescent, and adult attitudes and behavior (Stout et al. 2004).

Common Negative Portrayals of Mental Illness

In general, media depictions of mental illness have been associated with violence, danger, and aggressiveness (Sieff 2003; Wahl et al. 2002). Moreover, negative stereotypes of mental illness have been found in media directed towards audiences at all developmental levels. Wahl et al. (2003) examined the media's portrayal of mental illness in child-oriented films. They found that, like adult media portrayals of mental illness, media representations of those with a mental illness in child-oriented films were also likely to be portrayed as violent, dangerous, and aggressive. Oftentimes these dehumanizing stereotypes referring to mental health problems were used to mock and isolate individuals with a mental illness (e.g., wacko, nuts, maniac) and were pervasive in children's television and film (Wahl 2003a). Therefore, young children are observing negative stereotypes and the dehumanization of those with mental illness and these depictions are reinforced throughout adolescence by the popular media.

Sargent et al. (2002) found that six out of the top ten violent movies viewed by an adolescent sample included a character labeled as having a mental illness. Characters within these violent movies are often identified by derogatory terms referring to mental illness (e.g., crazy, insane). They may display symptoms related to mental illness and/or have had prior exposure to or currently attend a mental health treatment facility. These movies typically included extreme gore, as well as gratuitous violence. For example, the villainous character from the *Halloween* films (Carpenter and Hill 1978) is notorious for gruesomely bludgeoning his victims to death. The legend to his character is that he escaped from a mental hospital.

A depiction of mental illness differing from the violent and dangerous character is that of a feeble-minded, needy, dependent character that cannot function at an age-appropriate level because of his or her disorder (Corrigan 1998; Sieff 2003). These characters depict those with mental illness as a laughable yet "likeable" character. However, these portrayals have been criticized for negating, or at least minimizing, the seriousness of some mental disorders (Corrigan 1998; Sieff 2003). These characters are typically rendered as unusually silly individuals, are often involved in ludicrous mishaps, or are free spirited to the point of being completely out of touch with reality. These types of portrayals are common in popular film but the impact these portrayals have on viewer's conceptualization of mental illness has not been examined (Corrigan 1998).

Impact of Educational Films on Stigmatizing Attitudes

Educational films (i.e., accurate depictions) can positively influence attitudes towards those with mental illness. For example, Laroi and Van der Linden (2009) presented a documentary depicting the lives of people diagnosed with schizophrenia. They found that an accurate depiction of schizophrenia can decrease negative attitudes. Specifically, participants had less negative stereotypical attitudes (e.g., dangerousness) and desired less social distance from people with a mental illness. Penn et al. (2003) found participants were more likely to believe the disorder could be successfully treated after viewing a documentary on mental illness.

Kerby et al. (2008) examined whether or not two educational anti-stigma films would impact fourth-year, undergraduate, medical student trainees' attitudes regarding social distance, perceived dangerousness, and psychiatry in general. The anti-stigma films directly challenged stereotypes such as dangerousness, inability to work and maintain relationships, and promoted a sense of overcoming adversity. Participants who watched the films had less stigmatizing attitudes after watching the film when compared to participants in a control condition (i.e., documentary unrelated to mental illness; Kerby et al. 2008).

Intention and Hypotheses

Negative portrayals of those with mental illness in fictional films are thought to facilitate and exacerbate the stigmatization of those with mental disorders but the impact of these fictional negative portrayals on attitude has not been examined. The current study explored the impact of viewing a film portrayal of an individual diagnosed with schizophrenia on the knowledge, attitudes, and behavior of participants. Specifically, the current study examined whether or not films consisting of a likeable yet inaccurate, fear-based and inaccurate, or educational (i.e., accurate) portrayal of schizophrenia had differing impacts on stigmatizing attitudes, accurate knowledge of schizophrenia, and potential benevolent behavior. It was hypothesized that both inaccurate film portrayals would decrease favorable attitudes, knowledge, and behavioral benevolence towards people with schizophrenia. Alternatively, educational film portrayal (i.e., accurate) would increase favorable attitudes, knowledge, and behavioral benevolence towards people diagnosed with schizophrenia while a "neutral" or control film would lead to no change in attitudes, knowledge, and behavior.

Method

Participants

One-hundred and six undergraduate students, enrolled in basic psychology courses at Wright State University, voluntarily participated in the current study. The sample was 78 % female, 91 % identified as heterosexual, and the average age was twenty. In terms of ethnicity, 74 % identified as White, 14 % Black, 4 % Asian, 3 % Native Hawaiian or Other Pacific Islander, and the remainder were in another category (i.e., Native American, Latino, or Other). With regard to marital status, 69 % participants were single, 23 % were in a non-married relationship, 7 % were married, and 1 % reported being divorced. As far as academic standing, 59 % of participants were freshman, 18 % sophomores, 12 % juniors, and 9 % were seniors at the university (numbers are rounded). The sample was comprised of 83 % of participants endorsing Christian denominations (e.g., Protestant, Roman Catholics, Evangelical). Participants received research credit that went toward requirements for an introductory psychology class. They were recruited with the use of Wright State University's SONA system (i.e., a human subject pool management software program).

Materials

The following scales were completed before viewing the film:

Demographic Questionnaire A demographics questionnaire was provided in order to assess sex, age, sexual-orientation, race/ethnicity, employment, marital status, religion, education, current academic status, and annual income. This scale was only completed prior to viewing the film.

Familiarity/Proximity Participants completed *The Level of Contact Report* (LOCR; Holmes et al. 1999) before viewing the film. The LOCR assesses familiarity with those having a mental illness. The LOCR lists 12 situations related to interaction or familiarity with those with severe mental illness. The 12 scenarios listed on the questionnaire range from least intimate contact to medium and high intimacy. For example, an item with a low intimacy score reads, "I have observed, in passing, a person I believe may have had a severe mental illness." An item with high intimacy score reads, "I have a severe mental illness." Research participants were asked to check all items which applied to their individual situation. This scale was only completed prior to viewing the film.

Attitude Social distance scales are frequently used to measure mental illness stigma (Link et al. 2004). Social distance scales typically assess the likelihood that a respondent will initiate or maintain different types of relationships with a target person

(e.g., individual with mental illness). A social distance scale (Ritterfeld and Jin 2006) was used to assess baseline attitudes towards those with mental illness, as well as to measure potential change in attitudes after viewing films. The social distance scale consisted of fifteen items which could be segmented into three constructs comprising attitude. The scale measures emotional, cognitive, and behavioral aspects of attitude. Items were put in a semi-projective format by writing them from a third-person perspective in order to account for social desirability attached to attitudes. Items were measured using a five-point Likert-type scale with anchors ranging from (1) "Completely Disagree" to (5) "Completely Agree." This scale was completed before and after the film to assess for change.

Knowledge The *Knowledge About Schizophrenia Test* (KAST; Compton et al. 2007) was given in order to measure whether the film had an impact on the viewer's knowledge about schizophrenia. The KAST is a brief, self-administered, 18-item multiple choice test that measures general knowledge of schizophrenia. This scale was completed before and after the film to assess for change.

Affect The *Positive and Negative Affect Schedule – Short Form* (I-PANAS-SF; Thompson 2007) was used to determine whether the four films had differential effects on the mood of participants. The I-PANAS-SF is a self-report measure consisting of a 10-item mood scale. The I-PANAS-SF mood scale has ten words describing either positive or negative affect. Using a five-point Likert-type scale, each participant rated how strongly s/he felt each emotion at the present moment. The terms included in the positive affect scale were "Alert," "Active," "Determined," "Attentive," and "Inspired." The terms on the negative affect scale were "Upset," "Hostile," "Nervous," "Ashamed," and "Afraid." This scale was completed before and after the film to assess for change.

After viewing the film participants completed the social distance scale, the I-PANAS-SF and the KAST again, as well as the following:

Behavioral Benevolence The behavior of participants is a difficult construct to measure in mental illness stigmatization research. In order to measure "potential" behavior, the primary investigator created a mock "Community Volunteer Application." This last measure requested participants volunteer two-hours of their time, for a single day, engaging in a recreational activity (e.g., board games, arts and crafts, reading) with a person diagnosed with schizophrenia. Participants were informed that there would be no monetary compensation but volunteering their time was presented as a rewarding experience in itself.

Immediate Impact Participants completed an additional self-report questionnaire quantifying their perceived attitude change, if any, after viewing the film. The *Impact on Attitude Self-Report Scale* (IOA-SR) was constructed in order to assess the immediate impact of viewing each film. The IOA-SR was completed after watching the film. The IOA-SR consists of 10-items adapted from the Community Attitudes Toward the Mentally Ill scale (CAMI; see Taylor and Dear 1981). Participants were instructed to rate their agreement with each of the statements included on the measure after viewing the film. Statements include stereotypical attitudes, as well as attitudes of benevolence and separatism.

Films

All experimental films portrayed an individual labeled in the film as having schizophrenia. The negative (i.e., likeable yet inaccurate or fear-based inaccurate) and educational (i.e. accurate) portrayals of mental illness were selected based on brief descriptions in the psychological literature.

***Me, Myself, and Irene*, (Likeable – Inaccurate)** The selected movie *Me, Myself, and Irene* (Farrelly and Farrelly 2000), starring Jim Carrey, is a comedy released in 2000. *Me, Myself, and Irene* has been identified as an inaccurate portrayal of schizophrenia (Owen 2012). Jim Carrey plays a "nice guy" cop (Charlie) who becomes "schizo" after his wife leaves him. Charlie quickly develops a "split personality" that could be characterized as a modern day Jekyll and Hyde. On one hand, he is kind, warm, and caring. However, he quickly switches to his outrageous alternate personality (i.e., Hank) who has a filthy mouth, a bad attitude, and is easily angered. Overall, the film paints a picture of a laughable character that has no control of his diagnosed "advanced delusionary schizophrenia" (which is inaccurately depicted as dissociative identity disorder). Rosenstock (2003) describes the film as a "clownish comedy that advocacy groups see as being almost entirely devoid of accuracy" (p. 118).

***Donnie Darko* (Fear-Based - Inaccurate)** The selected movie *Donnie Darko* (Juvonen and Kelly 2004) starring Jake Gyllenhaal, is drama/thriller released in 2001. *Donnie Darko* has been identified as an inaccurate portrayal of schizophrenia (Owen 2012). In the film, Donnie is portrayed as delusional and experiences auditory and visual hallucinations. Specifically, he is often plagued by visions of a large bunny rabbit named "Frank" that influences Donnie to commit a series of crimes including violent acts and vandalism (See Garrett 2008).

***The Brush, the Pen, and Recovery* (Educational – Accurate)** The selected movie, *The Brush, The Pen, and Recovery* (Ross and Dawson 2010) is a documentary about

an art program for people with schizophrenia. The artists are preparing for their first show in a commercial gallery, and the audience is able to experience their immediate thoughts and feelings.

***What the Bleep Do We Know*!? (Control – Neutral)** The selected movie "*What the Bleep Do We Know*!?," (Chasse and Chasse 2004) is a film that follows a deaf photographer, as she questions the meaning of life. The film is an exploration of spirituality, quantum physics, and consciousness.

Procedure

Students were informed that they would be taking part in a study investigating societal and mental health issues. Once the total number of participants was acquired, each individual was randomly assigned to one-of-four conditions. The four conditions are as follows: (1) Likeable – inaccurate portrayal film, (2) Fear-based – inaccurate portrayal film, (3) Educational – accurate portrayal film, and (4) Film lacking any portrayal of mental illness (control). All participants were then notified to report to a classroom located on Wright State University's campus at a chosen time. Each group met on the same day and at the same specified time.

The primary investigator, as well as three other doctoral level trainees, concurrently implemented the following procedure in separate classrooms. All participants first signed a written informed consent in order to provide research credit. Participants were informed that their responses would be completely confidential, as all identifying information would be absent from their response packet. Ensuring confidentiality minimized responses influenced by social desirability and assisted in maximizing responses representing genuine attitudes towards people with schizophrenia. Students were provided a packet that included the demographic questionnaire, the KAST (KAST; Compton et al. 2007), the I-PANAS-SF (Thompson 2007), the LOCR (Holmes et al. 1999), and the social distance scale (Ritterfeld and Jin 2006). Students were instructed to stop completing their packets upon reaching a page with a 'STOP' sign.

Next, participants viewed a 45-min excerpt of one of the films. All participants were then instructed to complete another questionnaire packet directly after watching the film. The packet was identical to the packet participants completed before viewing the film except that it also contained the behavioral benevolence scale, the manipulation check, and the IOA-SR but did not include the demographic questionnaire or the LOCR.

Finally, participants were debriefed on the intention of the current study and given a synopsis of the existing literature regarding the stigmatization of those with severe mental illness. Participants were also provided with psychoeducational information regarding schizophrenia and other severe mental illnesses and were given resources for treatment seeking and genuine volunteer opportunities. The primary investigator and doctoral level trainees processed any questions or concerns before the conclusion of each group. Participants spent a total of two hours engaged in the research.

Results

Familiarity/Proximity

A Chi-Square analysis was used to determine whether or not differences existed between groups in participants' familiarity with severe mental illness. The analysis did not yield any significant differences between groups.

Attitude

A 2 (time) × 4 (film) mixed design ANOVA was used to test the impact of films on participant's attitudes towards those diagnosed with schizophrenia based on their total responses to the social distance scale (Ritterfeld and Jin 2006). The main effects were not significant but there was a significant interaction [$F(3102) = 12.50$, $MSE = 400.52$, $p < .00$]. A Tukey-Kramer Multiple Comparison Test indicated social distance scores for participants in the fear-based group ($M = 44.18$) were significantly increased compared to participants in both the accurate group ($M = 34.19$) and the control group ($M = 37.23$) but not the likeable group ($M = 40.81$). In other words, participants who viewed the fear-based film were more likely to endorse stigmatizing attitudes towards people diagnosed with schizophrenia compared to participants who viewed an accurate depiction or neutral film. Furthermore, social distance scores for the accurate group ($M = 34.19$) were significantly lower than both the likeable group ($M = 40.81$) and the fear-based group ($M = 44.18$). That is, participants who viewed the accurate film were less likely to endorse stigmatizing attitudes towards people diagnosed with schizophrenia compared to participants who viewed either one of the inaccurate films (i.e., likeable and fear-based).

There were significant interactions for eight statements on the social distance scale (see Table 1). In general, those who saw inaccurate portrayals of people with schizophrenia expressed greater social distance attitudes. A higher number represents more agreement with the item.

In regards to emotional attitudes on the social distance scale, participants in the fear-based group ($M = 3.79$) were significantly more likely to endorse the statement "I can't blame anybody for being scared of schizophrenia" than the accurate group ($M = 2.5$) after viewing the film. Participants in the fear-based group were also significantly more likely to endorse the statement "I would be afraid to meet somebody who has schizophrenia" ($M = 2.21$) than the accurate group

Table 1 Means on attitude measure from before and after viewing films

Item	Likable-inaccurate	Fear based-inaccurate	Accurate	Control	*F* and *p* values
I cannot blame anybody for being scared of schizophrenia	Pre = 3.35 Post = 3.19	Pre = 3.46 Post = 3.79	Pre = 3.38 Post = 2.5	Pre = 3.65 Post = 3.15	$F = 5.00$ $p = .002$
I would not be able to cope with having a roommate with schizophrenia	Pre = 2.96 Post = 3.08	Pre = 3.18 Post = 3.61	Pre = 3.54 Post = 3.0	Pre = 3.23 Post = 3.08	$F = 3.05$ $p = .03$
I would be afraid to meet somebody who has schizophrenia	Pre = 1.73 Post = 1.92	Pre = 1.79 Post = 2.21	Pre = 1.96 Post = 1.5	Pre = 2.27 Post = 1.81	$F = 5.58$ $p = .001$
If I met somebody who admitted to having schizophrenia I would feel quite uneasy	Pre = 2.35 Post = 2.62	Pre = 2.14 Post = 2.61	Pre = 2.5 Post = 1.92	Pre = 2.54 Post = 1.96	$F = 8.71$ $p = .000$
People with schizophrenia need to be supervised at all times	Pre = 2.5 Post = 2.46	Pre = 2.54 Post = 3.14	Pre = 2.84 Post = 2.03	Pre = 2.65 Post = 2.19	$F = 6.65$ $p = .000$
Healthy people should not become romantically involved with somebody who has schizophrenia	Pre = 1.73 Post = 1.81	Pre = 1.5 Post = 2.11	Pre = 1.96 Post = 1.73	Pre = 2.08 Post = 1.81	$F = 6.14$ $p = .000$
People with schizophrenia should try to be more in control of themselves	Pre = 2.5 Post = 2.92	Pre = 2.54 Post = 2.89	Pre = 2.69 Post = 2.65	Pre = 2.62 Post = 2.31	$F = 2.86$ $p = .04$
I can understand why nobody would like to have somebody with schizophrenia as a co-worker	Pre = 2.81 Post = 3.23	Pre = 2.57 Post = 3.18	Pre = 2.69 Post = 2.15	Pre = 2.58 Post = 2.5	$F = 6.17$ $p = .000$

($M = 1.50$) after viewing the film. Furthermore, after viewing the film, participants in the fear-based group ($M = 2.5$) were significantly more likely to endorse the statement "If I met somebody who admitted to having schizophrenia I would feel quite uneasy" when compared to the both the accurate ($M = 1.92$) and the control group ($M = 1.96$). Participants in the likeable group reported feeling the most uneasy around somebody who admitted to having schizophrenia ($M = 2.61$).

In terms of cognitive attitudes on the social distance scale, after viewing the film, participants in the fear-based group ($M = 3.14$) were significantly more likely to endorse the statement "People with schizophrenia need to be supervised at all times" when compared to the accurate ($M = 2.03$) and control group ($M = 2.19$). Furthermore, those in the fear-based group were more likely to endorse the statement "Healthy people should not become romantically involved with somebody who has schizophrenia" after watching the film ($M = 2.12$) compared to baseline measures of the same group ($M = 1.5$). In regards to behavioral questions on the social distance scale, participants in the fear-based group ($M = 3.36$) were significantly more likely to endorse the statement "I understand why companies don't want to offer jobs to people with schizophrenia" when compared to the accurate group ($M = 2.46$). Furthermore, participants in the accurate group ($M = 2.15$) and the control group ($M = 2.50$) were significantly less likely to endorse the statement "I can understand why nobody would like to have somebody with schizophrenia as a co-worker" than both the fear-based group ($M = 3.18$) and the likeable group ($M = 3.23$).

There were no interactions or main effects for three items on the social distance scale. These included, "I don't want to deal with people who have schizophrenia or other mental problems," "Having schizophrenia means to be totally different than anybody else," and "I would agree to invite someone from a psychiatric institution to celebrate a holiday with my family and me." There were main effects for time on three items, "I would really be interested in getting to know someone who has schizophrenia," "I would never hire somebody with a history of schizophrenia as a babysitter," and "I can't blame anybody for being scared of schizophrenia." In every one of these cases, social distance decreased after watching the film. There was one main effect for film condition. On the item, "I understand why most people dislike people with schizophrenia," the group that watched the accurate film had significantly less social distance attitudes than the fear based or likeable group.

Knowledge

A 2 × 4 mixed design ANOVA was used to determine the impact of each film on participants' general knowledge about schizophrenia. Analyses yielded no significant differences in increases or decreases of participant knowledge about schizophrenia.

Affect

A 2 × 4 mixed design ANOVA was used to test the film's impact on the affect of participants after viewing their respective film using their responses to the I-PANAS-SF (Thompson 2007). Significant interactions were obtained for Upset [$F(3102) = 3.17$, $MSE = 1.07$, $p < .05$], Nervous [$F(3102) = 4.84$, $MSE = 2.19$, $p <. 01$], Afraid [$F(3102) = 4.84$, $MSE = 1.03$, $p <. 01$], Alert [$F(3102) = 4.81$, $MSE = 2.91$, $p = .003$], Attentive [$F = (3102) = 4.18$, $MSE = 2.68$, $p = .008$], Hostile

[$F(3102) = 2.68$, $MSE = .45$, $p = .05$] and for the total score [F = (3102) = 4.46, $MSE = 45.77$, $p = .005$]. Tukey-Kramer Multiple Comparison Tests indicated that after viewing the film those in the fear-based group ($M = 1.79$, $SD = 1.13$) were significantly more likely to feel "Upset" when compared to control ($M = 1.12$, $SD = .43$) and accurate group ($M = 1.23$, $SD = .43$) and they were also significantly more likely to feel "Nervous" ($M = 2.00$, $SD = 1.28$) compared to those in the control ($M = 1.27$, $SD = .60$) and accurate group ($M = 1.19$, $SD = .57$). Participants in the fear-based group ($M = 1.82$, $SD = 1.12$) were significantly more likely to feel "Afraid" after viewing the film compared to the control ($M = 1.15$, $SD = .46$), accurate ($M = 1.04$, $SD = .20$), and the likeable-inaccurate group ($M = 1.35$, $SD = .85$). Lastly, participants in the fear-based group ($M = 1.36$, $SD = .83$) were significantly more likely to feel "Hostile" compared to both the control ($M = 1.04$, $SD = .20$) and accurate group ($M = 1.04$, $SD = .20$). Interestingly, the lowest scores for attentiveness were from the accurate and control groups after viewing the films. These items were analyzed for gender differences and the only item that was significant was "Active," in that males felt more active (M = 3.35, $SD = 1.12$) than females (M = 2.80, $SD = 1.08$).

Behavior

A Chi-Square analysis was used to determine if there were any differences in whether participants would volunteer two-hours of their time to engage in recreational activities with an individual diagnosed with schizophrenia based on the type of film they had viewed. The Chi-Square analysis did not yield significant results in potential benevolent behaviors towards people diagnosed with schizophrenia [X^2 (3) = 6.38, $p = .09$]. However, the analysis approached statistical significance thereby suggesting a notable pattern. Specifically, participants in the likeable (61 %) and accurate group (52 %) were more likely to volunteer than those in the fear-based (32 %) and control group (35 %).

Immediate Impact Scale

The *Impact on Attitude Self-Report Scale* (IOA-SR) assessed the immediate impact of viewing each film on participants. There are ten items and only one, "My knowledge of mental illness comes from the media," was not significant. The other nine items are in Table 2. Each item was also examined for gender effects. Overall males and females rated the items similarly except for two items. Females felt more concerned for their safety ($M = 3.39$, $SD = 3.06$) than males ($M = 1.74$, $SD = 2.14$) when responding to the item, "This film made me feel more concerned for my safety when around people with schizophrenia." Females also felt more empathetic toward people with schizophrenia ($M = 6.51$, $SD = 2.52$) than males ($M = 4.78$, $SD = 2.79$).

Discussion

The purpose of the current study was to explore the impact of films portraying characters with schizophrenia on the knowledge, attitudes, and behaviors of viewers. Specifically, this study was designed to examine the impact of films depicting individuals diagnosed with schizophrenia in fear-based/inaccurate, likeable/inaccurate, educational or accurate portrayals. Impact was measured by self-reported attitudes (i.e., social distance scale), knowledge, and potential benevolent behaviors towards individuals diagnosed with schizophrenia.

Attitudes

In regards to attitudes, participants watching the fear-based portrayal of schizophrenia were more likely to endorse stigmatizing attitudes across emotional, cognitive, and behavioral domains when compared to the accurate and control group. The current study supports previous studies (e.g., Kerby et al. 2008; Laroi and Van der Linden 2009; Penn et al. 2003) suggesting viewing an accurate portrayal of schizophrenia decreases stigmatizing attitudes. The accurate portrayal successfully decreased overall stigmatizing attitudes when compared to the likeable/inaccurate and fear-based/inaccurate group.

The accurate and control groups did not differ in stigmatizing attitudes. In fact, the control group's stigmatizing attitudes towards those with schizophrenia slightly decreased after watching the neutral film. This decrease in stigmatizing attitudes within the control group may have occurred due to the content of the neutral film (i.e., "*What the Bleep Do We Know*!?"). The film explores theories of quantum physics and encourages people to challenge their perception of reality and normalcy. In addition, the main character has a hearing deficiency and is portrayed as a productive member of society. In spite of the absence of a character diagnosed with schizophrenia, the neutral film may have challenged participants' perceptions and biases towards individuals that are diverse.

Knowledge

Whether or not selected films would have an impact on the participant's general knowledge about schizophrenia was also investigated. There were no differences in the attainment or loss of knowledge among the four groups in the study. Previous researchers (e.g., Ritterfeld and Jin 2006) have found increases in participant knowledge about schizophrenia after viewing a sympathetic portrayal of schizophrenia. However, Ritterfeld and Jin (2006) had a more tailored approach and followed their film with an educational trailer that covered content directly related to their measure of knowledge of schizophrenia. For example, types of medication commonly

Table 2 Individual items from immediate impact scale analysis

Items	*F* Score	Significance	Likeable	*SD*	Fear-Based	*SD*	Accurate	*SD*	Control	*SD*
This film made me feel that people with schizophrenia are unpredicable	24.18	$p < .001$	6.80[3,4]	2.79	7.68[3,4]	2.48	2.85[1,2]	2.2	3.07[1,2]	2.98
After watching this film, I believe that people with schizophrenia can live on their own	9.32	$p < .001$	6.38[2]	2.30	3.61[1,3]	2.04	6.92[2]	2.31	5.23	3.23
After watching this film, I think that people with schizophrenia are dangerous	32.21	$p < .001$	5.15[3,4]	2.48	6.60[3,4]	2.35	1.65[1,2]	1.38	2.19[1,2]	2.26
Viewing this film made me feel more positive about people with schizophrenia	10.98	$p < .001$	4.46[3]	2.73	2.82[3,4]	2.07	6.81[1,2]	2.35	5.08[2]	3.08
Viewing this film made me feel less positive about people with schizophrenia	27.20	$p < .001$	5.54[3,4]	2.91	6.46[3,4]	2.97	1.46[1,2]	2.08	1.88[1,2]	1.82
This film makes me feel more concerned for my safety when around people with schizophrenia	15.95	$p < .001$	3.42[2,3]	2.64	5.5[1,3,4]	2.98	1.46[1,2]	2.27	1.58[2]	1.84
This film helped me to be more empathic towards those with schizophrenia	5.68	$p = .001$	6.35	2.83	6.50[4]	2.10	7.19[4]	2.00	4.46[2,3]	2.97
This film was an accurate portrayal of schizophrenia	13.91	$p < .001$	3.15[2,3]	2.65	5.21[1,4]	1.89	5.96[1,4]	2.34	2.31[2,3]	2.31
My knowledge of mental illness comes from the media	2.19	NS	2.85	2.66	4.75	3.13	3.81	2.99	4.5	3.05
I think films can impact they way people perceive others with mental illness	4.69	$p < .005$	8.85[4]	1.59	9.11[4]	1.37	8.58	1.70	7.11[1,2]	3.28

[1] Significant difference from likeable-inaccurate group

[2] Significant difference from fear-based group

[3] Significant difference from accurate group

[4] Significant difference from control group

NS Non significant

used to treat schizophrenia were directly addressed in both their film and within their measure of knowledge. While the KAST (Compton et al. 2007) has been noted as a valid and reliable measure of general knowledge of schizophrenia, films used in the present study made no direct reference to questions asked on the measure. Therefore, the lack of differences between groups on knowledge about schizophrenia is not surprising.

Affect

Overall, participants in the fear-based group increasingly endorsed negative affect on the I-PANAS-SF (Thompson 2007) including feeling nervous, upset, hostile, and afraid. In fact, participants in the fear-based group left the study more afraid than all other groups, suggesting the film had the expected impact on participants. The fear-based film provoked negative affect typically associated with stigmatizing attitudes, increased social distance, and discriminatory behaviors.

Behavioral Benevolence

Assessing participant's behavior was difficult given the methodology used in the current study. Therefore, a mock volunteer form was used to measure whether or not participants would "potentially" be willing to spend a brief amount of time engaged in a recreational activity with an individual diagnosed with schizophrenia. There was no difference in behavioral benevolence between groups. However, the results revealed a pattern suggesting that participants in the fear-based and control group tended to be less likely than participants in the likeable and accurate group to volunteer. The fear-based and control group were not presented with stimuli from the films that would have disconfirmed previously held attitudes that people with schizophrenia are dangerous. Therefore, stigmatizing attitudes may have either been reinforced or unchallenged. On the other hand, participants in the likeable and accurate groups were presented with information that could potentially challenge previously held fears of dangerousness, which may have made them more inclined to volunteer. For example, both of these films contain characters diagnosed with schizophrenia that are polite, conscientious, and agreeable. The inaccuracies of the likeable film portrayal occur when he switches to his more 'antisocial personality,' which is relatively unthreatening as well. The character in the likeable film is not only non-threatening, but he is also portrayed as humorous and adventurous. These qualities may have challenged fears of dangerousness in the likeable group, allowing for the pattern in behavioral benevolence. It is important to note that this was merely a trend and the measure of behavioral benevolence was only administered after participants

viewed the films. Although participants were randomly assigned, it is possible that there was some variation in the groups before viewing the films. The benevolence measure is a unique way to assess participant behavior and should be explored more in future research.

Immediate Impact Scale

The immediate impact scale assessed the impact of the film on participants. Information gathered from this scale coincides with other measures, such as the affect and social distance scales, suggesting that each film impacted participants as expected. Overall, those in the fear-based and likeable-inaccurate group endorsed statements insinuating that people with schizophrenia are unpredictable, unable to live independently, dangerous, and they had less positive feelings towards people with schizophrenia. The accurate portrayal of schizophrenia had the opposite impact on participants as they did not endorse these attitudes and, overall, felt more positive towards people diagnosed with schizophrenia. Furthermore, participants in the fear-based group tended to believe they were viewing an accurate portrayal of schizophrenia.

Implications

Research Implications An abundance of literature suggests that films are more likely to present negative, inaccurate depictions of people with mental illness (Corrigan 1998; Sieff 2003; Wahl 2003a, b; Wahl et al. 2003, 2002). Previous researchers have indicated that accurate film portrayals decrease stigmatizing attitudes and can increase knowledge of severe mental illness (Laroi and Van der Linden 2009; Penn et al. 2003). However, the immediate impact of negative, inaccurate film portrayals of mental illness on viewers' knowledge, attitudes, and behaviors towards those with a severe mental illness has not been clearly examined in the literature until now. The findings of the current study indicate that viewing a fear-based, inaccurate film depiction of a character with schizophrenia has a stigmatizing impact on viewer attitudes. The current study provides empirical support to researchers, mental health advocacy groups, and government organizations that have insinuated that the media is, at least, partially responsible in exacerbating mental illness stigmatization via negative depictions in popular film.

Individual, Social, and Clinical Implications The current study did not directly address the potential stigmatizing effects that fear-based, inaccurate film depictions of schizophrenia may have on people diagnosed with a severe mental illness. Researchers have proposed that negative, inaccurate media depictions may intensify aspects of internalized stigma such as low self-esteem (Corrigan 2004), and increase stress, isolation, and feelings of hopelessness, embarrassment, and shame (Link and Phelan 2010) for those diagnosed with a severe mental illness, but empirical evidence is lacking. Given the current results, it is reasonable to expect that these films are having a stigmatizing effect on people diagnosed with a severe mental illness in part because negative, inaccurate film depictions are influencing children, adolescents, and young adults who are learning about psychological symptoms for the first time. The stigmatizing impact of these films may be increasing hopelessness, embarrassment, and shame thereby impeding the likelihood that these individuals will actively seek necessary treatment. Furthermore, the increase in stigmatizing attitudes and behaviors of those in the general population will also impede treatment seeking of those diagnosed with a severe mental illness (Brown and Bradley 2002), potentially due to a lack of social support, which is instrumental in the initiation of psychological treatment.

On the other hand, viewing accurate film depictions may afford hope for those experiencing symptoms related to severe mental illness. Individuals experiencing psychiatric symptoms may be more inclined to seek treatment by simply viewing images of hope and success in coping with mental illness. These images may be normalizing and evoke a sense of relief for viewers who are currently experiencing severe psychological symptoms. In regards to the general population, accurate portrayals have the ability to promote more positive feelings and less social distance towards individuals with a severe mental illness.

The current study also provides support for the use of film as a primary, secondary, and tertiary intervention for decreasing stigmatizing attitudes towards mental illness in the general population. Specifically, these results support the idea that young adults viewing accurate portrayals of mental illness can, at least temporarily, decrease their stigmatizing attitudes towards those with a severe mental illness. On the other hand, identifying inaccurate depictions of severe mental illness, and labeling them as such, may provide parents, teachers, and mental health clinicians the opportunity to educate the general population on the inaccuracies of the media's portrayal of severe mental illness. Incorporating accurate portrayals, and identifying inaccurate portrayals of severe mental illness within academic curriculums (e.g., elementary, high school, college) has the potential to decrease stigmatizing attitudes towards those with a mental illness.

Limitations

The current study provides support for the stigmatizing effects of fear-based inaccurate portrayals of schizophrenia, as well as confirms the destigmatizing effects of educational, accurate portrayals of schizophrenia. However, the current study has some limitations. Undergraduate students at a specific university participated in this study. This is a common concern within sociological and psychological literature. Future research

could potentially include a more diverse sample such as varying races, ages and socioeconomic statuses. Utilizing a similar methodological approach across varying ages may lend cross sectional information regarding the ages at which people are more or less vulnerable to a film's impact on their knowledge, attitudes, and behaviors towards people with a severe mental illness. For example, children may be more or less vulnerable to having their attitude influenced by watching a film, whereas older adults may be less influenced from watching a film.

Another potential limitation is that a selected 45-min excerpt of each film was used due to time limitations and research credits available to undergraduate students. On average, this leaves half of the fear-based, likeable, and control films unseen. It is possible that participants viewing the fear-based, likeable, and control films may have missed redeeming or non-redeeming qualities in the film's portrayal of the character diagnosed with schizophrenia. For example, participants were unable to see Donnie Darko, the main character in the fear-based film, protect others by fighting off bullies. While the fear-based and likeable films were not viewed in their entirety, each film as a whole has been cited in the literature as either an inaccurate or accurate portrayal of schizophrenia. Furthermore, this study was about the impact a portrayal has on viewers and it was not necessary to see the whole film. Still, future researchers may want to explore the impact of showing full-length films to participants, when time permits.

Last, a possible limitation of the current study is a lack of follow-up data. Specifically, this study did not gather data to confirm or disconfirm the lasting impact of the viewed films. Previous research has shown that the destigmatizing values of accurate portrayals can have lasting effects on attitudes and knowledge acquisition. The lasting effects of negative portrayals have yet to be established in the literature. It is possible that the impact of film on mental illness stigma may be more of a cumulative effect. Research indicates that children understand the concept of mental illness by the first grade. Negative portrayals of mental illness are documented in films geared towards children, adolescents, and adults alike. Therefore, negative depictions of mental illness have been reinforced throughout most of our lives. While it is important to measure the lasting effects of each film, it is also important to assess the impact of a lifetime of viewing.

Conclusions

According to the U.S. Department of Health and Human Services (2000) mental illness stigma is one of, if not the most, powerful constructs that hinders treatment seeking among those experiencing mental illness symptoms. Negative portrayals of mental illness in the media likely exacerbates the stigmatization of the mentally ill by encouraging social distance from people with mental illness (Sieff 2003), as well as discourages housing, employment, and funding opportunities for people with mental illness diagnoses (Corrigan 1998; Corrigan and Cooper 2005). Ultimately, individual and structural discrimination due to stigma leave people with severe mental illness largely underserved and untreated.

Ideally, the media would simply use its power to educate the general population on the accuracies of severe mental illness. However, inaccurate portrayals are what the general population consider entertaining and ultimately yield more money for the film industry (Benbow 2007). Social change can seem daunting when confronting an entity as powerful and pervasive as media. Still, it is an ethical obligation for psychologists and other mental health clinicians to systemically intervene in a culturally competent manner above and beyond the therapeutic relationship. Culturally competent clinicians seek social justice and equality for groups of people who are oppressed and underserved, which includes people diagnosed with severe mental illness. It is imperative that mental health professionals attempt to utilize information gained from the current study to counterbalance stigmatized views of people with mental illness by publically advocating for the equitable treatment and a fair media portrayal of this minority group in the same way that the Gay and Lesbian Alliance Against Defamation (GLAAD) and the National Association for the Advancement of Colored People (NAACP) affiliated "Hollywood Bureau" has done for years. Accurate film depictions, advocacy for social equality, and the continued education of individuals, clients, families, communities and organizations are the ways in which the U.S. culture can overcome the impact of film on mental illness stigmatization.

Compliance with Ethical Standards The method and design of the current study was approved by the University Institutional Review Board. All participants were treated in accordance with the "Ethical Principles of Psychologists and Code of Conduct." All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study. Both authors declare they have no conflict of interest.

References

Anglin, D. M., Link, B. G., & Phelan, J. C. (2006). Racial differences in stigmatizing attitudes toward people with mental illness. *Psychiatric Services, 57*, 857–862.

Barry, C. L., McGinty, E. E., Vernick, J. S., & Webster, D. W. (2013). After Newtown-public opinion on gun policy and mental illness. *New England Journal of Medicine, 368*, 1077–1081.

Benbow, A. (2007). Mental illness, stigma, and the media. *Journal of Clinical Psychiatry, 68*, 31–35.

Brown, K., & Bradley, L. J. (2002). Reducing the stigma of mental illness. *Journal of Mental Health Counseling, 24*, 81–87.

Carpenter, J. & Hill, D. (1978). *Halloween*. United States: Compass International Pictures.

Chasse, B. (Producer), & Chasse, B. (Director). (2004). *What the bleep do we know*!? [motion picture]. United States: Samuel Goldwyn Films.

Compton, M. T., Quintero, L., & Esterberg, M. L. (2007). Assessing knowledge of schizophrenia: development and psychometric properties of a brief, multiple-choice knowledge test for use across various samples. *Psychiatry Research, 30*, 87–95.

Corrigan, P. (1998). The impact of stigma on severe mental illness. *Cognitive and Behavioral Practice, 5*, 201–222.

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist, 59*, 614–625.

Corrigan, P., & Cooper, A. (2005). Mental illness and dangerousness: fact or misperception, and implications for stigma. In P. W. Corrigan (Ed.), *One the stigma of mental illness: Practical strategies for research and social change* (pp. 165–179). Washington, DC: American Psychological Association.

Corrigan, P. W., & Kleinlein, P. (2005). The impact of mental illness stigma. In P. Corrigan (Ed.), *On the stigma of mental illness: practical strategies for research and social change* (pp. 11–44). Washington: American Psychological Association.

Coverdale, J. H., & Nairn, R. N. (2006). A research agenda concerning depictions of mental illness in children's media. *Academic Psychiatry, 30*, 83–87.

Farrelly, B. (Producer), & Farrelly, P. (Director). (2000). *Me*, *Myself*, *and Irene* [Motion Picture]. United States: 20th Century Fox.

Garrett, J. L. (2008). *Social outcast cinema* (doctoral dissertation). Retrieved from ProQuest Dissertation & Theses. (1495948691).

Hannigan, B. (1999). Mental health care in the community: An analysis of contemporary public attitudes towards, and public representations of, mental illness. *Journal of Mental Health, 8*, 431–440.

Holmes, E. P., Corrigan, P. W., Williams, P., Canar, J., & Kubiak, M. A. (1999). Changing attitudes about schizophrenia. *Schizophrenia Bulletin, 25*, 447–456.

Juvonen, N. (Producer), & Kelly, R. (2004). *Donnie Darko* [motion picture]. United States: Flower Films.

Kerby, J., Calton, T., Dimambro, B., Flood, C., & Glazebrook, C. (2008). Anti-stigma films and medical students' attitudes towards mental illness and psychiatry: randomized controlled trail. *Psychiatric Bulletin, 32*, 345–349.

Laroi, F., & Van der Linden, M. (2009). The effects of documentary film on reducing stigmatization about schizophrenia. *Psychosis, 1*, 61–72.

Link, B. G., & Phelan, J. C. (2010). Labeling and stigma. In T. L. Scheid & T. N. Brown (Eds.), *A Handbook for the Study of Mental Health: Social Contexts, Theories, and Systems* (2nd ed.pp. 571–587). New York, NY: Cambridge University Press.

Link, B. G., Yang, L. H., Phelan, J. C., & Collins, P. Y. (2004). Measuring mental illness stigma. *Schizophrenia Bulletin, 30*, 511–541.

McGinty, E. E., Webster, D. W., & Barry, C. L. (2013). Effects of news media messages about mass shootings on attitudes toward persons with serious mental illness and public support for gun control policies. *American Journal of Psychiatry, 70*, 494–501.

National Institute of Mental Health. (2006). *The numbers count*: *Mental disorders in America*. Retrieved January 3, 2008, from http://www.nimh.nih.gov/healthinformation/statisticsmenu.cfm.

Owen, P. R. (2012). Portrayal of schizophrenia by entertainment media: A content analysis of contemporary movies. *Psychiatric Services, 63*, 655–659.

Penn, D. L., Chamberlin, C., & Mueser, K. T. (2003). The effects of a documentary film about schizophrenia and psychiatric stigma. *Schizophrenia Bulletin, 29*, 383–391.

Phelan, J. C., & Link, B. G. (1998). The growing belief that people with mental illnesses are violent: the role of the dangerousness criterion for civil commitment. *Social Psychiatry and Psychiatric Epidemiology, 33*, S7–S12.

Phelan, J. C., Link, B. G., Stueve, A., & Pescosolido, B. A. (2000). Public conceptions of mental illness in 1950 and 1996: what is mental illness and is it to be feared? *Journal of Health and Social Behavior, 41*, 188–207.

Ritterfeld, U., & Jin, S. (2006). Addressing media stigma for people experiencing mental illness using an entertainment-education strategy. *Journal of Health Psychology, 11*, 247–267.

Rosenstock, J. (2003). Beyond A beautiful mind: film choices for teaching schizophrenia. *Academic Psychiatry, 27*, 117–122.

Ross, M. (Producer), & Dawson, D. L. (Director) (2010). *The pen*, *the brush*, *and recovery*. [DVD]. Canada: Bridgeross Communications.

Sargent, J. D., Dalton, M. A., Beach, M. L., Mott, L. A., Tickle, J. J., Ahrens, B. M., & Heatherton, T. F. (2002). Viewing tobacco use in movies: does it shape attitudes that mediate adolescent smoking? *American Journal of Preventive Medicine, 22*, 137–145.

Sieff, E. M. (2003). Media frames of mental illness: the potential impact of negative frames. *Journal of Mental Health, 12*, 259–269.

Sirey, J., Bruce, M. L., Alexopoulos, G. S., Perlick, D. A., Friedman, S. J., DeBennedetto, A., & Meyers, B. S. (2001). Perceived stigma and patient-related illness severity as predictors of adherence. *Psychiatric Services, 52*, 1633–1638.

Stout, P. A., Villegas, J., & Jennings, N. A. (2004). Images of mental illness in the media: identifying gaps in the research. *Schizophrenia Bulletin, 30*, 534–561.

Taylor, S. M., & Dear, M. J. (1981). Scaling community attitudes toward the mentally ill. *Schizophrenia Bulletin, 7*, 225–240.

Thompson, E. R. (2007). Development and validation of an internationally reliable short-form of the positive and negative affect scale. *Journal of Cross-Cultural Psychology, 38*, 227–242.

U.S. Department of Health and Human Services (1999). *Mental health: A report of the surgeon general*. Rockville, MD: U.S. Department of Health and Human Services.

U.S. Department of Health and Human Services (2000). *Report of the surgeon General's conference on Children's mental health: A National Action Agenda*. DC. Department of Health and Human Services: Washington.

Wahl, O. F. (2002). Children's views of mental illness: A review of the literature. *Psychiatric Rehabilitation Journal, 6*, 134–158.

Wahl, O. F. (2003a). Depictions of mental illnesses in children's media. *Journal of Mental Health, 12*, 249–258.

Wahl, O. F. (2003b). News media portrayal of mental illness. *American Behavioral Scientist, 46*, 1594–1600.

Wahl, O. F., Wood, A., & Richards, R. (2002). Newspaper coverage of mental illness: Is it changing? *Psychiatric Rehabilitation Skills, 6*, 9–31.

Wahl, O., Wood, A., Zaveri, P., Drapalski, A., & Mann, B. (2003). Mental illness depiction in children's films. *Journal of Community Psychology, 31*, 553–560.