Detailed Methodology for studying the effect of Cinematic Depictions of Depression in Real Patients using principles of Engineering Reliability Analysis

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Abstract- This is an interdisciplinary paper integrating the concepts of engineering and Social sciences dealing with depression. This study mainly deals with audience engagement with representations of cinematic depression through Engineering risk analysis which is a continuation of the work by the authors (Putcha et al., 2020) and is part of the doctoral study of the first author at University of Liverpool. The main aim of this research work is to do a thorough review of the existing literature on depression as it relates to media, identify the main methods for measuring depression, and pick a suitable method for measuring depression and the associated Depression severity index (DSI) which is then calculated for various people before and after watching the selected movies. This will explore the effect that cinema has on depression of people. As part of the study a new method, called Liverpool method, has been developed without use of surveys to study the effect of movies on people with depression.

Key Words: Cinematic Depression, Engineering Risk Analysis, DSI, Liverpool Method, Movies

1.   General Literature Review

Wahl (1999), after surveying over 1,300 mental health patients, found an overwhelming majority had seen hurtful/offensive things about mental illness at least "sometimes" and nearly half had seen them "often" or "very often". The data is relevant, as 15% of their respondents suffered from "Major depression", behind only bipolar disorder (25%) and schizophrenia (19%). Our study, in which every film shows the depression patient portrayed sympathetically, could have significant effects as far as demonstrating the power of media to help such people.

Signorielli (1989) analyzed weeklong periods of primetime programming over the course of 17 years and found that mentally ill characters were five times as likely to be killed, with women over twice as likely to be hurt at all, and two and a half times as likely to kill another. A separate sample, consisting of weeklong period over the course of 12 years, showed they were twice as likely to be portrayed as professional failures. Overall they were twice as likely to receive negative portrayals. No specific disorders were mentioned though, and that raises concerns about what purpose a study on the broad term "mental illness" really serves. It is doubtful people would react the same way to depression as they would to schizophrenia or any other form of psychosis, and later studies wisely differentiated.

Wilson, Nairn, Coverdale, & Panapa et al (1999) analyzed the depiction of mental illness in fourteen television dramas over the course of a year – both in cases where specific conditions, such as depression, were named and cases where they weren't – and found the portrayals emphatically negative. Specifically, 75% of the 20 mentally ill characters were depicted as physically violent towards themselves or others. Furthermore, they were depicted as lacking in comprehension and appearing lost, unpredictable, unproductive, vulnerable, and dangerous. To be more specific, 70% of the 20 were simple and childlike, 60% unpredictable, and 60% unproductive failures. While less significant numbers, 45% were asocial, 45% helpless, 30% incompetent, 30% untrustworthy, and 30% socially ostracized. On the positive side, 30% were shown to be caring and empathetic. This comes with the caveat that only a single one of those characters (5%) was specifically stated to be depressed, compared with 15% for schizophrenia and 75% for an unspecified disorder.

Diefenbach (1997) had similar conclusions after conducting research over a sample drawn from three full months of primetime broadcast network programming and consisting of two full weeks worth of primetime shows. According to him, the portrayal of persons with mental disorders was highly correlated with the portrayal of violent crime. The mentally ill were found to be nearly 10 times more violent than the general population of television characters, and 10 to 20 times more violent (during a two-week sample) than the mentally ill in the U.S. population (over the course of an entire year). He cites data showing that in the real world the mentally ill are no more likely to commit crimes than others, regardless of what televisions says. In fact, the data showed that the mentally ill are far more likely to be victims of violent crime than perpetrators in real life, and are more likely to be victims of violent crime on television than in real life, and are still far more likely to be perpetrators of violent crime than victims on television. According to TV, they clearly have a negative impact on society and a negative quality of life. This comes with the caveat that depression was the condition that only 6.3% of the characters in question dealt with, taking a backseat to psychosis, paraphilia, drug abuse, alcohol abuse, mental retardation, and indefinable diagnoses.

Later Lawson & Fouts (2004) turned their attention to films – specifically Disney films and their role in shaping the minds of children. While they relied on previous studies to show how children's minds are molded, with lasting effects into adulthood, by what they are exposed to in the media, Lawson & Fouts did gather data about how often characters deemed mentally ill are featured in Disney movies and how much they are scorned and ostracized in these movies.

Two content analyses were conducted using the animated feature films (n = 34) and after-school cartoons (n = 41) of the Walt Disney Company. Each was coded for the modeling of the use of "evil" words when referring to a person, e.g., monster, devil, demon, wicked. Seventy-four percent of the Disney films contained "evil" references, with an average of 5.6 references per film. Forty-four percent of the after-school cartoons contained "evil" references, with an average of one per cartoon. Thus children watching those films think of mentally ill people as something to fear. Again, though, no specific illness is mentioned. The study mostly just mentions characters being called "crazy". While that is not surprising in films catering to children, it's appropriate that one of the films in this study is *Winnie the Pooh and a Day for Eeyore* (Rick Reinert, 1983).

The word "depression" is never used in Winnie the Pooh stories; Eeyore is simply always called "gloomy". However, the love he still receives from his friends may influence children to better treat others who seem sad. Although we are focusing on young adults in this study, we may get insight into how well socialization on this matter from childhood continues to affect them.

Moreover, it needs to be stressed that in all five movies in this study featuring depression patients, the patients are depicted compassionately. The goal is to show beneficial effects on depression sufferers watching the clips, both in terms of reducing their internal shame and getting them to disregard social stigma and seek help.

Pirkis, Blood, Francis and McCallum (2006) conducted the most detailed study on mental illness in films and television programs, including, among other things, tables listing some studies previously here. They showed that negative portrayals of patients could be classified into eight categories, including homicidal maniac, rebellious free spirit, female seductress, etc. and negative portrayals of mental health professionals into categories such as Dr. Dippy (bumbling), Dr. Evil (maniacal), Dr. Wonderful (perfect but having no boundaries), etc., with even the depiction of mental health treatments, such as ECT, consistently negative. The consequence of the negativity was to cause people to develop poorer attitudes towards mental illness and become less likely to seek professional help.

However, depression is only mentioned in their study in a footnote, in regards to a 1991-1996 "Defeat Depression" targeted campaign being one of several attempts to positively raise mental health awareness. Moreover, the authors made clear that, unlike negative effects, which had been demonstrated though numerous studies, positive effects of depictions of mental illness in media only had anecdotal or non-generalizable evidence in their favor. They do discuss how positive portrayals can have beneficial effects, but acknowledge the existing research is scant. The goal for this study is to provide the first real contribution in that regard.

Angermeyer & Matschinger (2003) did focus specifically on depression, as well as specifically on schizophrenia. They took a survey, using a representative sample of 5,025 people, presented a vignette featuring a person with an undiagnosed disorder. In some of the cases the symptoms were of schizophrenia; in the others they were of depression. That showed how a schizophrenia diagnosis leads significantly to perceptions of someone as dangerous or dependent, and in either case begets fear, pity and anger, all of which ultimately lead to social distancing from the patient. As a result, they talked about the importance of developing strategies for reducing stigma. However, the same study found no correlation of any sort when it came to depression, except for the fact that people

are less likely to get angry with someone realizing the other person suffers from depression. A reason suggested for the much more tolerant attitudes towards depression is that the word is enigmatic and can denote a wide range of health problems. The aforementioned research and anecdotal evidence show there is certainly some shame attached to people perceived as weak enough to suffer from the symptoms of depression. It will be quite interesting to see how this study's films, with their varied depictions of depression, will or won't arouse in our respondents strong emotions and a desire for distance from the suffering characters.

Barney, Griffiths, Jorm, & Christensen (2005) asked a random sample of 1312 adults how likely they were 1) to seek help from a professional 2) feel ashamed for needing help and 3) feel judged by the provider if they had the same DSM-IV symptoms of major depression that a fictional character named "John" was described as having. After viewing vignettes filmed with an actor playing John, they were asked to rate on a five-point scale how likely they would be to see help from each of five professional sources (general practitioner, counselor, psychologist, psychiatrist, complementary practitioner), how embarrassed they would feel by needing such help, and what sort of stigma they would feel from others if they sought such help. They were also asked about their history with depression and current symptoms, measured using PHQ-9. The results showed how much both internal shame and fear of being viewed "weak" by others prevented people with symptoms of major depression from seeking help, especially young people. With this research, we aim to show that seeing people suffering from depression depicted sympathetically in movies can undo such societal conditioning.

Dolphin & Hennessy (2017) describe an interesting study in which 156 adolescents (76 male, 80 female, mean age 16.25 years, standard deviation=0.36), assigned to conditions Control, Label, or Continuum) were shown short films featuring actors portraying characters named Mark, Paul, Killian, and Simon describing their specific depression-like symptoms. Mark showed very little evidence of depressive symptoms, Paul showed evidence but not severe enough to meet the DSM-5 criteria, Killian met the criteria, and Simon not only met the criteria but also was more impaired than Killian. The respondents were then asked for their emotional reactions, using the Angermeyer & Matschinger categories described earlier. The process was repeated twice, with only the second time being preceded by diagnoses of the characters described. How detailed the description was varied based on which of the three groups the participants were in.

According to this study, the diagnoses did not make a difference in the reactions to the characters; only the respondents' individual perceptions mattered. That could be very relevant in this PhD research project, where the characters with depression have their diagnoses given in some movies but not in others. Their study does also allude to how males deal with more stigma from others when dealing with symptoms of depression than females do, so it will be interesting to see how the depressed character whose symptoms are most foregrounded also being the one female affects these results, if at all.

Link, Cullen, Frank, Wozniak (1987) focused on the struggles of former mental patients. The phrase "former mental patient" itself may have dark connotations. Their research went into that – a fictional character named "Jim Johnson" was referred to as having been in a mental hospital two years earlier in one version of the written vignette and as having simply been hospitalized for a back problem in the other. Both versions were sometimes (although not always) manipulated by having either mild or severe objectionable behavior by Jim described in an extra paragraph. The results, which measured respondents desire to avoid Jim socially, showed his hospitalization for mental health reasons negatively affecting perceptions of him. Link, et al do mention depression specifically, albeit only to reject the conclusion of a previous paper that a label itself can lead to inaccurate perception by patients. They cite a dozen previous studies by other researchers, over half of which showed labels significant in causing a desire to ostracize the former mental patient and all of which showed behavior significant in causing such desires. Again, behavior is more important, but labels are also important. It will be interesting to see what different effects different combinations of the behavior and labels have.

Wright, Gronfein, and Owens (2000) directly interviewed former mental patients for their research. Theirs was a longitudinal study, showing how patients, for three years following their release from the mental ward, perceived stigma from the general population, experienced explicit rejection from it, felt their self-worth lower as a result, and let the idea of themselves as this damaged person take over their identity. Oftentimes there was a correlation at the 99.9% level among these various outcomes! Positive portrayals of mental

patients appear quite beneficial to real patients, especially within the near-aftermath of their hospital stays. Although depression is not specifically mentioned, their study seems to underlie the importance of this one if it can reach people who have had experiences like the protagonist in *Unsane*.

The authors call for specific further research. They mention the value of testing by genre, and would likely appreciate this study's tackling a completely different genre with every film. Furthermore, they discuss how vivid, acute images are more likely to affect decision-making, as they will more quickly come to people's minds. Although most of the movies in this study don't feature psychiatrists or therapists (or only feature them minimally), mental health professionals are a major part of *Unsane*. That begets the question of whether the corruption and outright immorality of those characters affects respondents' views of whether to seek mental health providers, or it's all written off as simply a movie. In any case, positive portrayal of the patients remains an aspect that needs to be researched.

That's where this study enters. The harmful effects of negative media depiction on patients have been proven by multiple studies, but the research on helpful effects of positive depiction is lacking. Moreover, the research on depression in media not specifically made for research purposes is lacking altogether. This project now approaches that from all sorts of angles via the variety of movies, and hopefully will show that such films can help others with depression, especially if respondents with histories of depression struggles are used.

2. <u>Specific Literature Review</u>

Based on the detailed general literature review for depression analysis Patient Health Questionnaire (PHQ-9), (Kroenke, K., Spitzer, R.L. and William, J.B. "The PHQ-9: Validity of a brief depression measure, 2001). The details are given below:

Patient Health Questionnaire (PHQ-9)

* Little interest or pleasure in doing things?

Not at all
0
Several days
+1
More than half the days
+2
Nearly every day
+3

Feeling down, depressed, or hopeless?

Not at all
0
Several days
+1
More than half the days

+2

Nearly every day

+3

Trouble falling or staying asleep, or sleeping too much?

Not at all

0

Several days

+1

More than half the days

+2

Nearly every day

+3

Feeling tired or having little energy?

Not at all

0

Several days

+1

More than half the days

+2

Nearly every day

+3

Poor appetite or overeating?

Not at all

0

Several days

+1

More than half the days

+2

Nearly every day

+3

Feeling bad about yourself — or that you are a failure or have let yourself or your family down?

Not at all

0

Several days

+1

More than half the days

+2

Nearly every day

+3

Trouble concentrating on things, such as reading the newspaper or watching television?

Not at all

0

Several days

+1

More than half the days

+2

Nearly every day

+3

Moving or speaking so slowly that other people could have noticed? Or so fidgety or restless that you have been moving a lot more than usual?

Not at all

0

Several days

+1

More than half the days

+2

Nearly every day

+3

Thoughts that you would be better off dead, or thoughts of hurting yourself in some way?

Not at all

0

Several days

+1

More than half the days

+2

Nearly every day

+3

*** Use Machine learning/ANN (Artificial Neural Network to analyze the survey data.

3. Liverpool Method: Development of a new method for depression analysis of movies:

This method has been developed by the authors of this paper. It consists of following steps.

1. Calculate Cinema Portrayal Depression index (CPDI) for each of the chosen movie giving a numerical score to each of the 7 depressive attributes/indicators in the link below:
    https://www.mhe-sme.org/7-tips-for-portraying-mental-health-in-media/

2. Assign CPDI and DSI values for each of the depression attribute for each of the movie based on the critical analysis (section 6) and the link shown in Step 1.

    CPDI is on a scale of 1 to 10. Higher CPDI means depiction of that attribute is done poorly in that movie.

    DSI index is from 1 to 4 based on PHQ-9 stated in section 3 in this paper which in turn is based on DSM-5 (Diagnostic and Statistical Manual of Mental Disorders). The higher the DSI value implies higher depression.

3. Calculate Depression Severity index (DSI) using CPDI for each of the chosen movie.
4. Connect all the 7 CPDI indices to the nine PHQ-9 indices for all the chosen movies, which is the main method chosen for depression analysis.
5. The DSI indices can easily be converted to standard Depression Rating , called DR. Then, each of the movie can be rated as DR-1, DR-2, or DR-3 for audiences based on its content. DR-1 would imply highest Depression content, DR -2, would have medium level depression content and DR-3 will have lowest depression content. This will analogous to the ratings of R, PG- and G based on the subject content.

6. Application of the Liverpool method to two movies.

Before the method is applied, critical analysis of the two movies is presented here.

4.1 Critical analysis of the movies

4.1.1 Critical Analysis of Movie 1 (Avengers-Endgame)

1) It showed how depression can be (successfully or unsuccessfully) hidden under a cheerful façade, thus making clear people should search for warning signs.

- The Kinks' incredibly upbeat *Supersonic Rocket Ship* plays as Hulk and Rocket go to see Thor, setting the mood.
- Thor acts incredibly jovial upon seeing his friends
- He apparently fills his days drinking beer, watching cable TV, and playing video games
- When Hulk asks if Thor's all right, Thor acts obliviously as he insists he's fine and asks, "Why, don't I look all right?". This is despite the formerly chiseled Thor now looking "like melted ice cream", as Rocket describes it.

2) Characters we root for, Hulk, Rocket, and Valkyrie, express their concern about Thor, sending the message that we should do the same about depressed people.
   - When Rocket comments on how unimpressive "New Asgard" seems compared to Asgard, Hulk points out he should be sympathetic after how much Thor lost
   - Valkyrie shares how Thor only comes out of his home once a month and then only for beer, making clear that if someone is acting withdrawn we should be concerned

3) We see self-destructive behaviors are a warning sign of depression, and thus are taught to have compassion for people acting that way instead of judging them.
   - Valkyrie shows us how many kegs of beer Thor goes through.
   - Thor wastes no time offering his guests a drink, mentioning he has all sorts of stuff including beer and tequila, and walks around drinking from a beer bottle
   - He only agrees to leave with Hulk and Rocket after the latter mentions there's beer on the ship

4) We learn that traumatic experiences can be hard to process, and we must persist in case the depressed person puts up resistance.
   - When Hulk says they can fix everything, Thor again acts oblivious, asking if Hulk means the cable and then going on a tangent about that
   - Hulk then explicitly mentions Thanos, which leas to Thor dropping the smile and falling silent as somber music plays
   - Thor makes clear how much he's suppressed the memory of failing to save half of humanity by tearfully grabbing Hulk's shoulder, pointing at him aggressively, and ordering, "Don't say that name."
   - Thor's Asgardian friend Korg staying adds, "Yeah, we don't actually say that name here," indicating Thor has been explicit about that rule
   - Thor is being hostile enough that Hulk actually says, "Please talk your hand off me."
   - When Hulk tried to get Thor to admit he might be scared of Thanos, Thor indicates the denial he was living in by saying, "Why would I be afraid of that guy? I killed that guy," and tried to get Korg to brag on his behalf
   - When Hulk says Thanos' harm can possibly be undone, Thor tells him to stop and insists that he's not wallowing in self-pity waiting to be rescure and is "fine". He even adds that he doesn't care and "couldn't care less" about Hulk and Rockcet's plan and bluntly tells them, "Goodbye."
   - He then ignores Hulk's plea, "We need you, pal."

5) It's shown how anyone can deal with depression to some degree, and empathy instead of judgement can help.
   - Hulk says, "I get it. You're in a rough spot. I've been there."

6) We see people with depression need to be reminded of their own worth
   - After reminding Thor about his own depression, Hulk asks, "And you want to know who helped me out of it?"
   - Thor dismissively suggests it was Black Widow, and when Hulk insists it was Thor the latter suggests that the other Asgardians vouch for the worthlessness of his help

4.1.2 Critical Analysis of Movie 2 (Unsane)

Unsane gets you inside the experience of being hospitalized for depression in a way no other movie ever has, and the entire time it's meant to make you empathize with the patient. Let's count the ways:

1) It was filmed on a iPhone.
   - Nowadays everyone takes out their phone to film something interesting happening, and thus this technique makes us feel like we're right there with her.

2) It establishes the heroine as someone to root for.
   - Claire Foy is pretty, she's successful in her career and has integrity, she's got a close bond with her mom.

3) Yet she's in pain.

- After showing us how much she has going for her, the movie shows us she's not well due to her extreme reaction. That gets us thinking about what pain might be lurking underneath the surface of those around us, and makes us less inclined to look down on those with mental health issues.

4) She confides in us and gets us to care.
   - She shares her trauma and neuroses, and it's framed in such a way that it's like we're her therapists. She also answers the questions of whether she has had suicidal thoughts and how she would do it. In what's supposed to be a safe space, if we were asked something like that, what would we honestly say?

5) The staff dehumanizes her.
   - Things like the famous Milgram experiment (https://nature.berkeley.edu/ucce50/ag-labor/7article/article35.htm), where subjects let the researcher talk them into seemingly giving someone else progressively painful and deadly shocks, have shown how much people listen to authority. Even if we felt we didn't belong in a mental hospital, if staff members spoke to us in a stern voice, took all our belongings including our clothes, and pressured us to take medicine, essentially saying it was the easy way or the hard way, would we acquiesce?

6) They treat her as no different from the others.
   - When she tries arguing she doesn't belong there and even calls the police, she's told many people do that. Other patients even laugh at her claim that she doesn't belong.

7) She gets ostracized for not accepting her fate.
   - They mock her for thinking she's not like them, and they torment her, and her attempts to stand up for herself lead to her urinating herself and the other patients looking down on HER.

8) She tries to point out how similar she is to us.
   - She asks who HASN'T had depressed thoughts. She got asked point blank and it turns into a Catch-22 because if she protests she doesn't belong in the hospital her hysterical reaction is used as proof she IS crazy. The doctor is dismissive. If people don't care that you say you're sane what can you do?

9) The forces keeping her in there are pointed out.
   - The only relatable out of her fellow patients is played by a charismatic actor. He says, "That's all they need," after finding out she confessed to suicidal thoughts. Even though she says, "I just needed someone to talk to", he replies, "You talk, they find a way to keep you and get you admitted." He adds that most people in there are sane but their insurance will pay for them. After making clear they would let her out once the insurance runs out, he says, "Do your time, keep your head down", "Don't cause any scenes", and "Learn how to live with the routine. I'll be over before you know it."

10) She says, "You're talking to me like we're in prison," and everything he'd told her supports that.
    - This further drives home the point that the person struggling with depression deserves our sympathy, and not our scorn, given any one of us could have been in that hospital under different circumstances.

11) This conversation takes place outside, in the light, and thus looks very different from other hospital scenes.
    - This scene provides hope – we see she just needed someone who understands that she was simply depressed, like everyone is sometimes, and shouldn't be stripped of her dignity because of it.

12) However, she needs to deal with the loss of dignity if she at least wants to be released quickly. Thus she further garners our sympathy.

She later accepts the medicine she is forced to take by hospital

5 Illustrative Examples for Liverpool Method

Liverpool method is applied for two movies picked above based on method described in Section 4.

CPDI (cinema portrayal depression index) is on a scale of 1 to 10, while DSI, based on PHQ-9 is on a scale of 1-4 and are assigned based on the procedure described in Section 4 in this paper.

Table 1   CPDI and DSI values   for Movie 1

Depression Attribute	CPDI	DSI
1.Depiction of Lived experience	6	3
2.Portrayal of Psychosocial Disability	8	4
3.Portrayal of sensitive topics	9	3
4.Portraying certain stereotypes	5	3
5.Normalizing mental ill health	8	4
6.Depicting positive mental stories	7	4
7. Making production accessible to people with psychosocial disabilities	3	3
Average	6.57 (out of 10)	3.4 (out of 4)

This means that DR rating for this movie is DR-2.

Table 2   CPDI and DSI values   for Movie 2

Depression Attribute	CPDI	DSI
1.Depiction of Lived experience	6	3
2.Portrayal of Psychosocial Disability	9	4
3.Portrayal of sensitive topics	8	3
4.Portraying certain stereotypes	5	3
5.Normalizing mental ill health	9	4
5.Depicting positive mental stories	7	4
6.Making production accessible to people with psychosocial disabilities	3	3
Average	6.71 (out of 10)	3.42 (out of 4)

This means that DR rating for this movie is DR-2.

6. **Reliability Analysis**

The statistical properties of CPDI are given below for Movie 1 and Movie 2.

Movie 1

μCPDI = 6.57

σCPDI   = 1.90

Movie 2

μCPDI = 6.71

σCPDI   = 2.05

The Reliability of $(CPDI)_{actual}$ exceeding $CPDI_{threshold\ 1}$ is given as,

 1- P_f

 Where,

$P_f = P[\ (CPDI)_{actual} > (CPDI)threshold) = 1 - \Phi\ [\ (\ CPDI\ )threshold - \mu CPDI/\ \sigma CPDI)\ ]$

Where,

P (…) represents the probability of the event in parenthesis.

Φ represents the standard cumulative normal distribution function, the values of
Which can found from standard normal distribution tables.

μCPDI   and σCPDI   are the mean value and standard deviation of CPDI.

Using the (CPDI)actual threshold   value of 6.0,   the following results are obtained:

Movie 1

  P_f = 0.61

  R = 0.39

Movie 2

P_f = 0.63

R = 0.37

7. Discussion of Results

These results may show that, for the two movies chosen, the probability of CPDI exceeding the threshold value is quite high.

Conclusions

Effect of movies on people with depression has been studied in this paper. A new method, called Liverpool method has been developed without need of survey data using the mathematical principles. Based on this newly developed method, the movies are rated from DR-1, DR-2 and DR-3 analogous to the regular movie ratings of R, PG and PG-13. The results, upon further development, will be very useful to academic as well as general audience.

REFERENCES:

1) Angermeyer MC, Matschinger H. The stigma of mental illness: effects of labeling on public attitudes towards people with mental disorder. Acta Psychiatr Scand. 2003 Oct;108(4):304-9. doi: 10.1034/j.1600-0447.2003.00150.x. PMID: 12956832.
2) Barney LJ, Griffiths KM, Christensen H, Jorm AF. Exploring the nature of stigmatizing beliefs about depression and help-seeking: implications for reducing stigma. BMC Public Health. 2009 Feb 20;9:61. doi: 10.1186/1471-2458-9-61. PMID: 19228435; PMCID: PMC2654888.
3) Diefenbach, D., 2021. The portrayal of mental illness on prime-time television.
4) Dolphin L, Hennessy E. Labeling effects and adolescent responses to peers with depression: an experimental investigation. BMC Psychiatry. 2017 Jun 24;17(1):228. doi: 10.1186/s12888-017-1389-9. PMID: 28646873; PMCID: PMC5483288.
5) Lawson A, Fouts G. Mental illness in Disney animated films. Can J Psychiatry. 2004 May;49(5):310-4. doi: 10.1177/070674370404900506. PMID: 15198467.
6) Link BG, Cullen FT, Frank J, Wozniak JF. The Social Rejection of Former Mental Patients: Understanding Why Labels Matter. American Journal of Sociology 92(6). 1987 Apr. DOI: American Journal of Sociology 92(6)
7) Wahl, O., 2021. Mental Health Consumers' Experience of Stigma.
8) Löwe B, Unützer J, Callahan CM, Perkins AJ, Kroenke K. Monitoring depression treatment outcomes with the patient health questionnaire-9. Med Care. 2004 Dec;42(12):1194-201. doi: 10.1097/00005650-200412000-00006. PMID: 15550799.
9) Pirkis J, Blood RW, Francis C, McCallum K. On-screen portrayals of mental illness: extent, nature, and impacts. J Health Commun. 2006 Jul-Aug;11(5):523-41. doi: 10.1080/10810730600755889. PMID: 16846952.
10) Stout PA, Villegas J, Jennings NA. Images of mental illness in the media: identifying gaps in the research. Schizophr Bull. 2004;30(3):543-61. doi: 10.1093/oxfordjournals.schbul.a007099. PMID: 15631244.
11) Wahl, O., 2021. Mental Health Consumers' Experience of Stigma.
12) Wilson C, Nairn R, Coverdale J, Panapa A. Mental illness depictions in prime-time drama: identifying the discursive resources. Aust N Z J Psychiatry. 1999 Apr;33(2):232-9. doi: 10.1046/j.1440-1614.1999.00543.x. PMID: 10336221

13) Wright ER, Gronfein WP, Owens TJ. Deinstitutionalization, social rejection, and the self-esteem of former mental patients. J Health Soc Behav. 2000 Mar;41(1):68-90. PMID: 10750323