

Description of an elective course about mental illness and treatment in the movies

MARSHALL E. CATES^{1*}, KRISTINA M. MULLINS², THOMAS W. WOOLLEY¹

¹McWhorter School of Pharmacy Samford University, Birmingham, Alabama 35229, USA.

²New Mexico VA Health Care System, Albuquerque, New Mexico 87108, USA.

Abstract

There is little published information about the use of mental illness-themed movies in pharmacy education. In this course, students watched an assigned movie as homework each week, and then during class students presented predetermined aspects regarding the mental illness and its treatment using specific movie clips. The instructor then led the class in discussions about the mental illness and its treatment. Students also prepared and recorded fictitious movie scenes that applied what they had learned about mental illness and treatment to a representative pharmacy situation. Students expressed great satisfaction with the course. Subjective data indicated that learning had taken place in various domains, and scores on pre-/post-course scales had revealed improved attitudes toward mental illness and providing pharmaceutical care to patients with mental illness. Future plans include well-designed studies to determine more definitively the effects of the course on students' knowledge and attitudes regarding mental illness and its treatment.

Keywords: *Film, Mental Disorder, Movies, Pharmacy Student, Teaching*

Introduction

Movies are an incredibly influential medium in society. They combine visual and auditory stimuli to compel viewers to be engrossed by stories and characters, and they have the ability to elicit powerful cognitions and emotions (Berk, 2009; Wedding & Niemiec, 2014). The use of video clips (including movies and television) in the classroom can serve to foster numerous learning outcomes, and such an approach can draw upon the multiple intelligences and learning styles of the 'net generation' of students (Berk, 2009).

There are plentiful movies that can be used to teach students about mental illness (Wedding & Niemiec, 2014). In addition to their use to illustrate features of disorders (*e.g.*, symptoms), movies with psychiatric themes can be used to focus students' attention, stimulate discussion, support self-reflection, deal with cultural issues, and enable role-play (Dave & Tandon, 2011). Advantages of educating students in the healthcare professions with mental illness-themed movies include avoiding patient confidentiality issues, contributing multiple perspectives on mental illness (*e.g.*, caregiver), enabling a better understanding of the subjective experience of living with a mental illness, and showing the experiences of people with mental illness across time (Dave & Tandon, 2011; Hankir *et al.*, 2015).

Conversely, there have been criticisms of cinematic portrayals of psychopathology and psychiatry and cautions raised regarding teaching with the use of movies with these themes. There are undoubtedly numerous examples of movies with inaccuracies, oversimplifications, misconceptions, and stereotypes concerning people with mental illness, mental health professionals, and psychiatric treatments (Byrne, 2009; Damjanović, 2009; Ramchandani, 2012). However, even negative examples can present a wonderful opportunity for learning if carefully guided by an experienced instructor. Students in professional schools can hone their critical thinking skills by evaluating and reflecting on negative depictions (Berk, 2009).

Review articles concerning the use of cinema in medical education have revealed many published accounts of the teaching of mental health topics to medical students and psychiatry residents (Darbyshire & Baker, 2012; Law *et al.*, 2015). On the other hand, reports regarding the use of movies to teach about mental illness in other healthcare professional schools are less common. Only a few articles describe using movies to teach in psychiatric nursing courses (Kerber *et al.*, 2004; Masters, 2005). There are examples in the pharmacy education literature of instructors who incorporate such things as movie trailers, media clips, or movies and movie clips as part

*Correspondence: Marshall E. Cates, *Professor and Chair, Department of Pharmacy Practice, McWhorter School of Pharmacy, Samford University, 800 Lakeshore Drive, Birmingham, Alabama 35229, USA. Tel: +1 205 726 2457. Email: mecates@samford.edu*

of brief mental health-related educational interventions or relatively minor portions of psychiatry elective courses (Dipaola *et al.*, 2011; Bamgbade *et al.*, 2016; McGuire *et al.*, 2016). However, the authors are aware of only one published account that describes extensive use of mental illness-themed movies in a pharmacy course. That psychiatry elective course was comprised of eight documentaries, which were viewed during class time, and two pop-culture movies, which were viewed outside of class. The latter component also involved a student reflection assignment (Jackson, 2013). The course described in the present article differs in that the authors utilised feature films instead of documentaries. It was felt that students are generally more captivated by feature films, they learn more by actively analysing the movies as opposed to passively being presented facts, and they are more likely to gain an appreciation for matters in addition to the lived experience of the patient, such as attitudes of family, friends, coworkers, and healthcare workers toward the mental illness and its treatment.

Most published articles concerning the broader use of cinema (*i.e.*, not exclusive to mental illness) in healthcare education have been commentaries or descriptions, with a smaller category involving research or formal evaluation (Darbyshire & Baker, 2012; Law *et al.*, 2015). When research or formal evaluation is included, it tends to measure student satisfaction, knowledge, and/or attitudes (Law *et al.*, 2015). The aforementioned article in the pharmacy education literature dealing with movies and mental illness did not include specific evaluation data; however, the author stated that a previous pre-course/post-course assessment of student knowledge did not show significant results (Jackson, 2013).

There is a scarcity of information regarding the use of movies to teach psychiatric topics to pharmacy students as well as resultant outcome measures. The purposes of this article are to provide a description of an elective course about mental illness and treatment in the movies and to report student feedback on its effectiveness.

Description of Course

'Mental Illness and Treatment in the Movies' is a two-credit hour elective course that has been offered to second (P-2) and third year (P-3) pharmacy students in the spring term since 2012. The university defines one semester credit as equivalent to a minimum of one hour in-class (defined as 50 minutes of instruction) and a minimum of two hours of out of class student work per week. The class meets once-weekly for two hours. Course learning objectives include: 1) analyse the portrayal of mental illnesses and their treatments in the movies; 2) discuss the fundamental aspects of mental illnesses and their treatments; 3) explore attitudes toward mental illnesses and their treatments; and 4) apply knowledge/attitudes concerning mental illnesses and their treatments to the pharmacy setting. The general schedule of the course, including psychiatric disorders and featured movies, are shown in Table I. The featured

movies are carefully selected so that the mix offers coverage of a wide variety of treatments and psychiatric topics (see Table II) as well as both positive and negative portrayals of treatments, healthcare workers, attitudes towards mental illness, *etc.*

Table I: General schedule of the Course including disorders and movies

Week	Activity/Disorder	Movie
1	Course introduction	
2	General psychiatry/ treatment	<i>One Flew Over the Cuckoo's Nest</i> (1975) – 1 st half (viewed in class)
3	General psychiatry/ treatment	<i>One Flew Over the Cuckoo's Nest</i> (1975) – 2 nd half (viewed in class)
4	Schizophrenia	<i>A Beautiful Mind</i> (2001)
5	Major depressive disorder	<i>Prozac Nation</i> (2001)
6	Bipolar disorder	<i>Mr. Jones</i> (1993)
7	Obsessive-compulsive disorder	<i>The Aviator</i> (2004)
8	Post-traumatic stress disorder	<i>Born on the Fourth of July</i> (1989)
9	Insomnia disorder	<i>Insomnia</i> (2002)
10	Borderline personality disorder	<i>Girl, Interrupted</i> (1999)
11	Opioid use disorder	<i>Drugstore Cowboy</i> (1989)
12	Autism spectrum disorder	<i>Rain Man</i> (1988)
13	Alzheimer's disease	<i>Iris</i> (2001)
14	Fictitious movie scenes	
15	Final exam	

'One Flew Over the Cuckoo's Nest' (1975) is shown and discussed by the instructor during the first two class sessions. The reason for this is three-fold. First, it gives student groups (see below) enough time to prepare their presentations (*i.e.*, lead-in time). Second, the movie is a classic mental health-related movie, and viewing it first helps to pique the interest of students. Finally, the movie does not centre on a particular mental illness, rather it deals with more general aspects of mental illness and treatment (*e.g.*, commitment, informed consent).

Subsequent movies are viewed by students prior to class as a homework assignment. They must come to class prepared to discuss the featured movie. Students can readily stream/download movies from sites such as Netflix, Amazon, and iTunes at a nominal cost. However, each student group (see below) is provided with a DVD

of the movie that they are assigned to present in class. These movies (along with 'One Flew Over the Cuckoo's Nest') are purchased by the university. The reason for this is to standardise the exact timing of clips, which facilitates efficient and effective group presentations.

Table II: Treatments and psychiatric topics depicted in various movies

Treatments	Psychiatric Topics
Antidepressants	Acute agitation
Antipsychotics	Cheeking of medication
Art therapy	Cognitive assessment
Dance/movement therapy	Elopement
Electroconvulsive therapy	History of psychiatric treatment
Group therapy	Informed consent
Hospitalisation	Institutionalisation
Individual psychotherapy	Involuntary commitment
Insulin shock therapy	Involuntary medication
Lobotomy	Malingering
Methadone clinic	Neuro-imaging
Mood stabilisers	Non-adherence
Sedative-hypnotics	Patient confidentiality
Support group	Psychiatric comorbidity
	Psychiatric evaluation
	Relapse/recidivism
	Restraint/seclusion
	Stigma
	Suicide
	Therapeutic boundaries
	Violence against staff

Students are divided into groups of three, and each group is randomly assigned to present one movie during class. Groups are required to research the mental illness and its treatment, watch the featured movie to select certain scenes that illustrate important aspects of the mental illness and its treatment (see Table III, which is a set of questions for movie analysis that were developed by the instructor), prepare a handout that addresses these aspects and summarises/applies the movie scenes that will be shown in class, and present the movie scenes (clips) in class while simultaneously reviewing the handout. The groups' handouts must include information from at least four references, one of which must be the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) (American Psychiatric Association, 2013). The handouts must follow the exact template that is provided by the instructor (*i.e.*, 15 questions in Table

III), and must address all the points. Finally, the handout must not exceed four typewritten pages (12 font), which compels the group to concentrate their efforts on the most important information. Following the group presentation, the instructor leads a class discussion session to emphasise and augment important points from the group presentation, facilitate student reflections on the movie, and provide further clinical insights. The group presentation and follow-up questions from other students occur during the first hour of class, and the instructor-led class discussion occurs during the second hour of class. The group presentation grade is based on selection of movie scenes (20%), application of movie scenes to mental illness and treatment (20%), information in handout (20%), verbal and written communication skills (20%), response to questions/knowledge of subject (10%), and compliance with guidelines (10%).

Table III: Required components of movie analysis

1. Which diagnostic features of the mental illness are displayed by the character? Does the character meet diagnostic criteria for the mental illness?
2. Which aspects of the mental illness are displayed by the character in terms of associated features, development and course, risk and prognostic factors, functional consequences, and comorbidity?
3. What are the effects of the mental illness on the character's life?
4. What are the effects of the character's mental illness on the lives of others (*e.g.*, family, friends)?
5. What is the character's attitude toward his/her mental illness?
6. What are the attitudes of others (*e.g.*, family, friends, co-workers, strangers) toward the character's mental illness?
7. How are health care workers portrayed?
8. Are one or more treatments for the mental illness depicted? If so, which one(s)?
9. Is the treatment shown in a positive, negative, or neutral manner?
10. Are the benefits and/or risks associated with the treatment accurately depicted and typical?
11. What is the character's attitude toward his/her treatment?
12. What are the attitudes of others (*e.g.*, family, friends) toward the character's treatment?
13. Overall, how accurate is the movie in its portrayal of the mental illness and treatment? Are certain aspects inaccurate, atypical, and/or unbalanced?
14. How are cinematic techniques (*e.g.*, shots, lighting, sound, editing) used to convey features of the mental illness and treatment?
15. What is your favourite scene regarding mental illness or treatment, and why? What is your favourite quote regarding mental illness or treatment, and why?

Groups also prepare and record fictitious movie scenes toward the end of the course (Table I). The purpose of this exercise is for students to apply what they have learned about mental illness and treatment to a representative pharmacy situation. Each group creates a movie scene, and the group members are the three actors in the movie scene. The group does not use the same character(s) from their featured movie, rather they use the mental illness portrayed in their featured movie and apply it to a newly created movie scene. Requirements for the movie scene are: the setting is a community pharmacy (the school has a simulated pharmacy); the characters are the patient who has the mental illness, a pharmacist, and a third character of the group's choosing (e.g., pharmacy technician, another patient in the pharmacy); the plot must focus on an applicable and important pharmacy-related issue that deals with mental illness and treatment; and the patient must prominently display at least two relevant signs/symptoms of their mental illness. The groups film two scenes, with each lasting approximately three-four minutes. In the 'original scene', the pharmacist displays an inappropriate response to the situation in regard to knowledge (e.g., deficient, erroneous), values, attitudes, and/or behaviours, and in the 'alternate ending', the pharmacist displays an appropriate response to the situation. Groups upload their movie scenes onto a YouTube account created by the instructor for easy viewing in the classroom. Examples of fictitious movie scenes that students have presented include the community pharmacist's response to patients' unusual symptomatology (e.g., obsessive-compulsive disorder, schizophrenia), patients' irritability/

anger (e.g., borderline personality disorder, post-traumatic stress disorder), medication education and adherence issues (e.g., major depressive disorder, bipolar disorder), caregivers' concerns (e.g., autism spectrum disorder, Alzheimer's disease), drug-seeking behaviour (e.g., opioid use disorder), and counselling on over the counter products (e.g., insomnia disorder). The fictitious movie scene grade is based on creativity (20%), relevancy (20%), accuracy (20%), overall quality (20%), and compliance with guidelines (20%).

Quizzes are given during the first few minutes of each class period to ensure that students have carefully watched and have a basic understanding of the featured movie. Each quiz is comprised of four multiple choice questions that are worth two and a half points each (i.e., total of ten points per quiz). The questions vary each week, and they concentrate on the disease state and its treatment. The questions are specific enough that students would not know the correct answers by simply reading summaries of the featured movie. There is also an open note (i.e., weekly handouts), essay format final exam at the end of the course that is concentrated on more global concepts and that compares and contrasts themes from different movies. The course grade is determined by: 100 points for the group presentation of featured movie, 50 points for the group presentation of fictitious movie scene, 100 points for quizzes, and 50 points for the final exam. Grades are assigned according to the final average: 92 – 100 = A, 90 – < 92 = A-, 88 – < 90 = B+, 82 – < 88 = B, 80 – < 82 = B-, 78 – < 80 = C+, 70 – < 78 = C, 67 – < 70 = D, and < 67 = F.

Table IV: Attitude scales used in the survey*

Attitude	Scale	Scoring
Dangerousness	Perceived Dangerousness of Mental Patients Scale (Link, 1987; Penn <i>et al.</i> , 1994). 8-item scale with 6 negative statements and 2 positive statements regarding dangerousness of mentally ill patients.	6-point Likert scale from 0 ("strongly agree") to 5 ("strongly disagree"). Negative statements are reverse scored. Total scores range from 0 to 40; higher scores indicate the belief that patients are more dangerous.
Social distance	Social Distance Scale (Link, 1987; Penn <i>et al.</i> , 1994). 7-item scale with statements regarding willingness to interact with a person who was previously hospitalised with schizophrenia.	4-point Likert scale from 1 ("definitely willing") to 4 ("definitely unwilling"). Total scores range from 7 to 28; higher scores indicate greater desire to distance oneself from the person with mental illness.
Stigmatisation towards patients with schizophrenia and depression	Scale related to mental health stigma derived from 2 previously published surveys Crisp <i>et al.</i> , 2000; Mukherjee <i>et al.</i> , 2002). 8-item scale with negative statements regarding people with various mental illnesses.	5-point Likert scale from 1 ("strongly agree") to 5 ("strongly disagree"). Total scores range from 8 to 40; higher scores indicate more favourable attitudes.
Stigmatisation towards patients with mental illness	Index of Attitudes Toward the Mentally Ill Scale (Hiday, 1983). 11-item scale with 7 negative statements and 4 positive statements regarding mental illness.	5-point Likert scale from 1 ("strongly agree") to 5 ("strongly disagree"). Positive statements are reverse scored. Total scores range from 11 to 55; higher scores indicate more favourable attitudes.
Provision of pharmaceutical care services for patients with schizophrenia and depression	Scale related to delivery of pharmaceutical care to patients with schizophrenia derived from 2 previously published surveys Bell <i>et al.</i> , 2006a; O'Reilly <i>et al.</i> , 2010). Scale was adapted for patients with severe depression. 10-item scale with negative statements regarding delivery of pharmaceutical care.	5-point Likert scale from 1 ("strongly agree") to 5 ("strongly disagree"). Total scores range from 10 to 50; higher scores indicate more favourable attitudes.

*Adapted from Cates & Woolley, 2017 with permission

Methods

An Institutional Review Board (IRB)-approved quasi-experimental study was conducted in one semester (total of 27 students) to acquire preliminary data on the effects of the elective course on students' attitudes toward the mentally ill and providing pharmaceutical care to the mentally ill (*i.e.*, learning objective #3). Standard mental illness attitude scales concerning dangerousness, social distance, stigmatisation, and provision of care were utilised in the study (see Tables IV & V) (Hiday, 1983; Link *et al.*, 1987; Penn *et al.*, 1994; Crisp *et al.*, 2000; Mukherjee *et al.*, 2002; Bell *et al.*, 2006a; O'Reilly *et al.*, 2010; Cates & Woolley, 2017). Scales were administered at the beginning and end of the course (*i.e.*, pre/post design). Two-independent samples *t*-tests were used to compare mean scores, and results were corroborated by Wilcoxon-Mann-Whitney tests. In all analyses, the type I error rate (α) was maintained at ≤ 0.05 . Minitab (release 17.1) was used for all data management and analytics.

Table V: Total scores on attitude scales completed by students at pre-course and post-course* (N=27)

Scale	Pre-course (mean \pm SD)	Post-course (mean \pm SD)	<i>p</i> value
Dangerousness	16.42 \pm 4.10	12.70 \pm 4.11	0.002
Social distance	18.78 \pm 3.15	16.07 \pm 3.19	0.003
Stigma – schizophrenia	27.63 \pm 2.15	29.67 \pm 3.34	0.01
Stigma – depression	29.44 \pm 2.99	31.70 \pm 3.01	0.008
Stigma – mentally ill	39.89 \pm 3.50	40.96 \pm 3.73	0.28
Provision of pharmaceutical care services – schizophrenia	33.59 \pm 4.39	37.96 \pm 3.33	<0.001
Provision of pharmaceutical care services – depression	36.07 \pm 4.13	39.93 \pm 3.76	0.001

*Please see Table IV for information concerning scales and scoring of scales.

Another IRB-approved research project was conducted over two semesters (total of 51 students) to determine student perceptions of their learning in the course. A survey instrument with Likert scale questions was given each week after students watched the movie and participated in class presentations and discussions. Students were asked to rate their knowledge and understanding of the mental illness and its treatment, effects of the mental illness on the lives of patients and others, and attitudes of patients and others toward the mental illness and its treatment as extremely more, moderately more, slightly more, or not at all more relative to before taking the course (Table VI). Students could also leave open-ended comments. Data were recorded each week as the percentage of students who chose each answer, and then data were reported as mean percentage who chose each answer across all movies/disease states.

In academic year 2015-2016, the school implemented course evaluations for elective courses. Therefore, the course has been evaluated by the standard evaluation instrument over three semesters (total of 85 students). The course evaluation instrument was comprised of six Likert scale questions and one categorical (*i.e.*, yes/no) global question regarding the course providing a meaningful educational experience (Table VII). The instrument was administered electronically by the School's assessment office at the end of the semester.

Table VI: Students' perceptions of their learning in the course* (mean percent) (N=51)

Question [†]	Extremely more	Moderately more	Slightly more	Not at all more
Mental illness and its treatment	38.9 \pm 10.1	52.4 \pm 5.6	7.0 \pm 5.7	1.7 \pm 1.8
Effects of the mental illness on the lives of patients and their families and friends	41.5 \pm 10.4	46.9 \pm 10.1	8.0 \pm 5.1	3.6 \pm 3.9
Attitudes of patients, family, friends, healthcare workers, <i>etc.</i> , toward the mental illness and its treatment	28.1 \pm 8.4	58.8 \pm 5.2	10.9 \pm 6.4	2.2 \pm 2.2

[†]Knowledge and understanding after course participation vs. before course participation

Table VII: Course evaluation results (N=85)

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Course requirements and expectations were clear	82	3	0	0	0
2. The course was well organised	83	2	0	0	0
3. Instructional resources were beneficial in learning and understanding course concepts	83	2	0	0	0
4. Assessments were fair	82	3	0	0	0
5. The amount of work required was appropriate for the academic credit received	82	3	0	0	0
6. The course coordinator was effective in coordinating this course	83	2	0	0	0
	<u>Yes</u>	<u>No</u>			
7. The course provided me with a meaningful educational experience	85	0			

Evaluation

Both pre-course and post-course attitude scales were completed by 27 (100%) students enrolled in the course in one semester. Mean total scores on the attitude scales are shown in Table V. Statistically significant improvements in mean total scores from the beginning to the end of the course were seen on all scales except for the Index of Attitudes Toward the Mentally Ill Scale, which showed numerical but not statistically significant improvement.

Fifty-one (100%) students participated in weekly ratings of their learning over two semesters (Table VI). Knowledge and understanding about the mental illness and its treatment, effects of the mental illness on the lives of patients and others, and attitudes of patients and others toward the mental illness and its treatment were rated as “moderately more” or “extremely more” by 91.3%, 88.4%, and 86.9% of students, respectively, across all movies/disease states. Open-ended responses sometimes revealed that students had previous exposure to certain disease states (e.g., undergraduate coursework) or personal/family experience with certain disease states, therefore possibly explaining some of the “slightly more” or “not at all more” responses.

Course evaluations were completed by 85 (100%) students over three semesters. Results are shown in Table VII. Each item received the highest rating approximately 97% of the time, and the global item (“The course provided me with a meaningful educational experience”) was 100% affirmative.

Discussion

The findings from this study suggest that the innovative course design and instructional techniques have been very successful. Course evaluations and measures of student perceptions of their learning in the course were quite positive, and measures of student attitudes toward patients with mental illness and providing pharmaceutical care to patients with mental illness were improved from beginning to end of course. The course is now well-established, as it has been offered for the past seven years. Furthermore, the class always meets the cap on enrolment numbers, which has been raised to 30 students over the past several years. In fact, approximately one-fourth of the students at the School take this elective course during their pharmacy education.

The authors’ findings of student satisfaction with the course and positive student perceptions of their learning in the course are consistent with those from studies that have examined the use of movies and television in medical education (Law *et al.*, 2015). Specifically regarding the use of movies that deal with mental illness, there have been other studies involving students and residents in the healthcare professions that have shown positive outcomes in learners’ satisfaction, knowledge, and attitudes (McNeilly & Wengel, 2001; Welsh, 2003;

Tarsitani *et al.*, 2004; Masters, 2005; Retamero *et al.*, 2014).

Previous research has revealed that neither traditional classroom instruction on psychiatric disorders and pharmacotherapy nor clinical rotations in psychiatric settings have proven sufficiently useful at improving the attitudes of pharmacy students toward mental illness (Jermain & Crismon, 1991; Bell *et al.*, 2006b; Cates *et al.*, 2012; Cates & Woolley, 2017). Presumably students need instruction that is designed to promote a greater understanding of mental illness and patients’ experiences with mental illness, so coursework that provides these opportunities *via* direct or indirect (*i.e.*, videotaped) contact with mental health consumers has been shown to reduce mental illness-related stigma (Bell *et al.*, 2006a; Buhler & Karimi, 2008; O’Reilly *et al.*, 2010; Dipaula *et al.*, 2011; Gable *et al.*, 2011; Nguyen *et al.*, 2012; Patten *et al.*, 2012; Bamgbade *et al.*, 2016). The findings suggest that characters in movies might be able to serve as the conduit for meaningful exposure to mental illness that consequently affects pharmacy students’ attitudes toward mental illness in a positive manner.

This teaching innovation can be easily implemented at other colleges and schools of pharmacy. The most obvious requirement is to have an instructor with expertise in psychiatric pharmacy. Also, the classroom must have the necessary equipment for showing movie clips, including a computer for playing the DVD, a projector, and a screen. Students should have access to movies that are purchased by the university as well as the DSM-5 in order to prepare presentations. Although the course described here is a two-credit hour course, it can be adapted for a course with fewer or more credit hours by simply adjusting the number of disease states/movies that are covered.

There are possible barriers to implementation of the course at particular colleges and schools of pharmacy. First, the instructor should check with the university’s legal department to ensure compliance with copyright laws. These laws differ from country to country. Section 110 of the United States Copyright Act permits the viewing of films inside or outside of the classroom for teaching purposes if viewings do not meet criteria for public performances (Copyrights, 2011; Xavier University Library, 2014; Indiana University of Pennsylvania Libraries, 2018). The Copyright, Designs and Patent Act 1988 – the current copyright law in the United Kingdom – allows for the showing of films or clips from films for teaching purposes, but certain circumstances must be met, and the educational exemption is not valid in some countries (*e.g.*, Canada) (Dave & Tandon, 2011). Next, the instructor must gain approval of the course from the school and/or university curriculum committee. Initial perceptions may be that the instructor is merely going to be showing movies in class and that the course lacks academic rigour. However, this teaching innovation requires a great deal of preparation time on the part of both students and the instructor. Movies are not being watched for their entertainment value, rather they are being used as tools to teach/learn

about mental illnesses and their treatments, and they must be viewed intently and intellectually. Furthermore, movies are not being shown/viewed in class, rather clips are being shown to illustrate specific aspects about mental illnesses and their treatments. Finally, the instructor must deal with sensitivities that might be present at the institutional and/or individual student level regarding such things as profanity, violence, nudity/sex, and substance use, which are fairly common occurrences in movies that portray mental illness in a 'real world' manner. For example, practically all the movies that are covered in the current course are rated 'R'. A disclaimer is included in information about the elective course as well as the course syllabus that advises students who might be offended by these issues to avoid taking the course.

Limitations and Future Plans

The research project that was performed to determine the effects of the course on students' attitudes toward the mentally ill and providing pharmaceutical care to the mentally ill provided preliminary data only. The quasi-experimental pre-/post-course design did not allow for definitive conclusions in this regard. The authors are currently planning a research project that will involve a control arm of students who are taking a different elective course. Moreover, the data that were collected regarding student learning in the course only measured student perceptions and included only a few broad areas. The authors are currently planning a pedagogical research project that objectively measures student learning in the course *via* content analysis of fictitious movie scenes. Finally, data were collected at one pharmacy school only, so generalisability of findings to other pharmacy schools is unknown. The authors are currently planning a joint research project with a faculty member who will be offering a similar course at a different pharmacy school.

Conclusion

An elective course that utilises mental illness-themed movies as the pedagogical method to teach mental illness and treatment was successfully implemented at a school of pharmacy. Students have expressed great satisfaction with the course, have subjectively reported that learning has taken place in various domains, and have experienced improved attitudes toward mental illness and providing pharmaceutical care to patients with mental illness.

References

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Washington, DC: Author.

Bamgbade, B.A., Ford, K.H. & Barner, J.C. (2016). Impact of a mental illness stigma awareness intervention on pharmacy student attitudes and knowledge. *American Journal of Pharmaceutical Education*, **80**(5), Article 80

Bell, J.S., Johns, R., Rose, G. & Chen, T.F. (2006a). A comparative study of consumer participation in mental health pharmacy education. *Annals of Pharmacotherapy*, **40**(10), 1759-1765

Bell, J.S., Johns, R. & Chen, T.F. (2006b). Pharmacy students' and graduates' attitudes towards people with schizophrenia and severe depression. *American Journal of Pharmaceutical Education*, **70**(4), Article 77

Berk, R. A. (2009). Multimedia teaching with video clips: TV, movies, YouTube, and mtvU in the college classroom. *International Journal of Technology in Teaching and Learning*, **5**(1), 1–21

Buhler, A.V. & Karimi, R.M. (2008). Peer-level patient presenters decrease pharmacy students' social distance from patients with schizophrenia and clinical depression. *American Journal of Pharmaceutical Education*, **72**(5), Article 106

Byrne P. (2009). Why psychiatrists should watch films (or What has cinema ever done for psychiatry?). *Advances in Psychiatric Treatment*, **15**(4), 286–296

Cates, M.E., Neace, A.L. & Woolley, T.W. (2012). Pharmacy students' attitudes toward mental illness at the beginning and end of the professional curriculum. *Currents in Pharmacy Teaching and Learning*, **4**(2), 132-136

Cates, M.E. & Woolley, T.W. (2017) Effects of a psychiatric clinical rotation on pharmacy students' attitudes toward mental illness and the provision of pharmaceutical care to the mentally ill. *Mental Health Clinician*, **7**(5), 194-200

Copyrights, 17 C.F.R. §110 (2011). Available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title17/html/USCODE-2011-title17-chap1-sec110.htm>. Accessed 24th June, 2018

Crisp, A.H., Gelder, M.G., Rix, S., Meltzer, H.I. & Rowlands OJ. (2000). Stigmatisation of people with mental illnesses. *British Journal of Psychiatry*, **177**(1), 4-7

Damjanović, A., Vuković, O., Jovanović, A.A. & Jašović-Gašić, M. (2009) Psychiatry and movies. *Psychiatria Danubina*, **21**(2), 230–235

Darbyshire D, Baker P. (2012). A systematic review and thematic analysis of cinema in medical education. *Medical Humanities*, **38**(1), 28-33

Dave, S. & Tandon, K. (2011) Cinemeducation in psychiatry. *Advances in Psychiatric Treatment*, **17**(4), 301–308

Dipaula, B.A., Qian, J., Mehdizadegan, N. & Simoni-Wastila, L. (2011) An elective psychiatric course to reduce pharmacy students' social distance toward people with severe mental illness. *American Journal of Pharmaceutical Education*, **75**(4), Article 72

- Gable, K.N., Muhlstadt, K.L. & Celio, M.A. (2011). A mental health elective to improve pharmacy students' perspectives on mental illness. *American Journal of Pharmaceutical Education*, **75**(2), Article 34
- Hankir, A., Holloway, D., Zaman, R. & Agius, M. (2015). Cinematherapy and film as an educational tool in undergraduate psychiatry teaching: a case report and review of the literature. *Psychiatria Danubina*, **27**(Suppl 1), S136-142
- Hiday, V.A. (1983). Are lawyers enemies of psychiatrists? A survey of civil commitment counsel and judges. *American Journal of Psychiatry*, **140**(3), 323-326
- Indiana University of Pennsylvania Libraries. (2018). Copyright, fair use and public performance (online). Available at: <https://www.iup.edu/library/services/copyright/>. Accessed 24th June, 2018
- Jackson, C.W. (2013). Movies and mental illness: A psychiatry elective for third year pharmacy students. *Mental Health Clinician*, **2**(10), 314-318
- Jermain, D.M. & Crismon, M.L. (1991). Students' attitudes toward the mentally ill before and after clinical rotations. *American Journal of Pharmaceutical Education*, **55**(1), 45-48
- Kerber, C.H.S., Clemens, D. & Medina, W. (2004). Seeing is believing: learning about mental illness as portrayed in movie clips. *Journal of Nursing Education*, **43**(10), 479
- Law, M., Kwong, W., Friesen, F., Veinot, P. & Ng, S.L. (2015). The current landscape of television and movies in medical education. *Perspectives on Medical Education*, **4**(5), 218-224
- Link, B.G., Cullen, F.T., Frank, J. & Wozniak, J.F. (1987). The social rejection of former mental patients: understanding why labels matter. *American Journal of Sociology*, **92**(6), 1461-1500
- Masters, J.C. (2005). Hollywood in the classroom: using feature films to teach. *Nurse Educator*, **30**(3), 113-116
- McGuire, J.M., Bynum, L.A. & Wright, E. (2016). The effect of an elective psychiatry course on pharmacy student empathy. *Currents in Pharmacy Teaching and Learning*, **8**(4), 565-571
- McNeilly, D.P. & Wengel, S.P. (2001). The "ER" seminar: teaching psychotherapeutic techniques to medical students. *Academic Psychiatry*, **25**(4), 193-200
- Mukherjee, R., Fialho, A., Wijetunge, A., Checinski, K. & Surgenor, T. (2002). The stigmatisation of psychiatric illness: the attitudes of medical students and doctors in a London teaching hospital. *Psychiatric Bulletin*, **26**(5), 178-181
- Nguyen, E., Chen, T.F. & O'Reilly, C.L. (2012). Evaluating the impact of direct and indirect contact on the mental health stigma of pharmacy students. *Social Psychiatry and Psychiatric Epidemiology*, **47**(7), 1087-1098
- O'Reilly, C.L., Bell, J.S. & Chen, T.F. (2010). Consumer-led mental health education for pharmacy students. *American Journal of Pharmaceutical Education*, **74**(9), Article 167
- Patten, S.B., Remillard, A., Phillips, L., Modgill, G., Szeto, A.C.H., Kassam, A. & Gardner, D.M. (2012). Effectiveness of contact-based education for reducing mental illness-related stigma in pharmacy students. *BMC Medical Education*, **12**, Article 120
- Penn, D.L., Guynan, K., Daily, T., Spaulding, W.D., Garbin, C.P. & Sullivan, M. (1994). Dispelling the stigma of schizophrenia: what sort of information is best? *Schizophrenia Bulletin*, **20**(3), 567-578
- Ramchandani, D. (2012). The downside of teaching psychopathology with film. *Academic Psychiatry*, **36**(2), 154-155
- Retamero, C., Walsh, L. & Otero-Perez G. (2014) Use of the film *The Bridge* to augment the suicide curriculum in undergraduate medical education. *Academic Psychiatry*, **38**(5), 605-610
- Tarsitani, L., Brugnoli, R. & Pancheri, P. (2004). Cinematic clinical psychiatric cases in graduate medical education. *Medical Education*, **38**(11), 1187
- Wedding, D. & Niemiec, R.M. (2014). *Movies and mental illness: using films to understand psychopathology* (4th ed.). Boston, MA: Hogrefe Publishing.
- Welsh, C.J. (2003). OD's and DT's: using movies to teach intoxication and withdrawal syndromes to medical students. *Academic Psychiatry*, **27**(3), 182-186
- Xavier University Library. (2014). Fair use guidelines for using films and videos (online). Available at: https://www.xavier.edu/library/students/documents/copyright_video.pdf. Accessed 24th June, 2018