

2018

# The evolution of mental health and mental health treatment

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BOSTON UNIVERSITY  
SCHOOL OF MEDICINE

Thesis

**THE EVOLUTION OF MENTAL HEALTH AND MENTAL HEALTH  
TREATMENT**

by

**AMBER COX**

B.S., University of Detroit Mercy, 2017

Submitted in partial fulfillment of the  
requirements for the degree of  
Master of Science

2018

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## **ACKNOWLEDGEMENTS**

Thank to my advisor, Dr. Davies for assistance in completing this thesis and Dr. Ritter for assisting with the completion of this thesis.

**THE EVOLUTION OF MENTAL HEALTH AND MENTAL HEALTH  
TREATMENT**

**AMBER S. COX**

**ABSTRACT**

Mental health generally refers to one's cognitive, emotional, and behavioral wellbeing. It describes and affects the way that one feels, behaves and thinks. Mental health can affect relationships (friends, family or romantic), daily life and physical health. In order to maintain a healthy mental status one must have a healthy balance between all of the events that can occur in one's daily life. Mental illness occurs when there are changes in one's cognitive, emotion and behavioral wellbeing. This can lead to distress in many areas of an individual's life which includes work, family or social activities. Mental illness does not discriminate on who it affects; it affects people of all ranges of gender, income, age, religion, race/ethnicity, social status, cultural identity, or sexual orientation. In fact, in the U.S. around 19%, or one in five adults, is currently suffering from some form of mental illness. While one can develop mental illness at any age, around three-fourths of all cases of mental illness begin after the age of 24. As of 2015, it was estimated that 9.8 million adults have some form of serious mental disorder - which represents about 4.8 percent of the American adult population. It is also not uncommon for people who have a mental disorder

to suffer from more than one. In developed countries like the U.S, mental illness or disorders are one of the lead causes of disability.

The aim of this study is to examine the evolution of mental health and treatment. In order to further examine this the history of mental health and illness will be examined using various research studies from a number of sources. Learning the origins and science behind mental illness has had a powerful impact on mental health. This awareness has evolved from the theory that mental illness is due to evil spirits and sin to there being a biological, genetic, and situational reason for mental illness. The original stigma of mental illness has had a lasting effect on patients receiving help and seeking treatment. Though the negative stigma of mental illness still exists, there have been major treatment gains. From ancient times when an individual would get their blood drained to treat their illness to burning people (women) on the stake for being “witches”, treatment has progressed to multiple forms of therapies that are available for the majority of the mental illnesses that exist. Examples include the myriad of medications and cognitive and behavioral therapies. Over many years of research, trials, and patient feedback, the conclusion has been reached that combination therapy in almost all mental illness cases results in the most positive, productive and long lasting treatment and recovery plans. There is a still enormous amount of work needed to fully understand the depths of mental illness. There are still new mental illnesses discovered to date, along with some mental illnesses being renamed and redefined. The understanding of mental illness and its treatment

will continue to evolve as the understanding of the human brain continues to develop and scientific technologies continue to improve.

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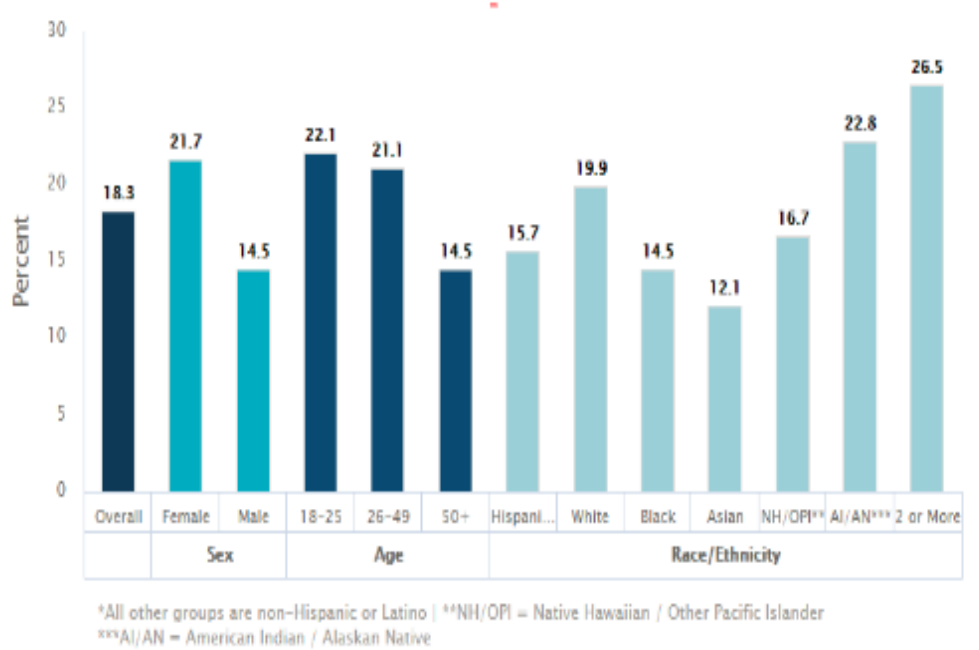
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## ABBREVIATIONS

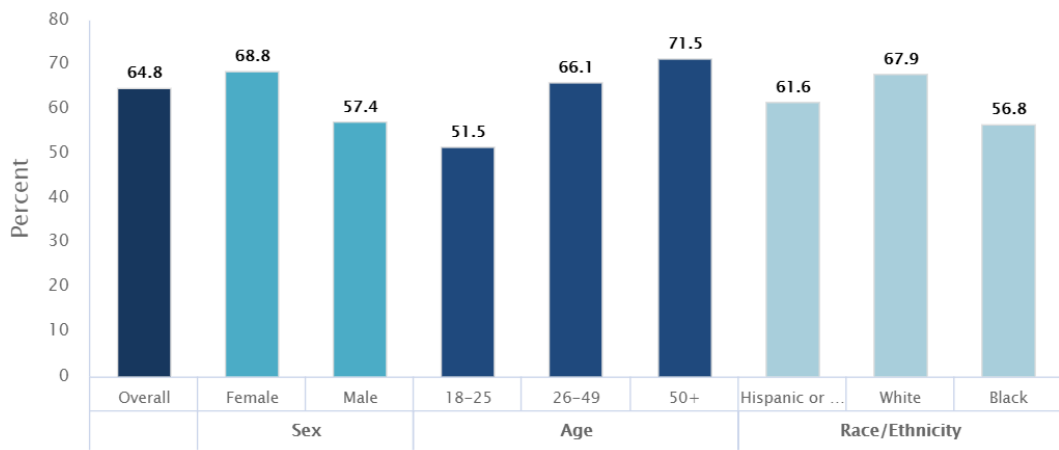
Any mental illness	AMI
Binge eating disorder	BED
Cognitive behavioral therapies	CBT
Eating disorder	ED
Electroconvulsive therapies	ECT
Generalized anxiety	GAD
National institutes of Mental health	NIMH
Obsessive compulsive disorder	OCD
Panic disorder	PD
Post-traumatic stress disorder	PTSD
Seasonal affective disorder	SAD
Selective norepinephrine reuptake inhibitors	SNRIs
Selective serotone reuptake inhibitors	SSRIs
Serious mental illness	SMI
Transcranial magnetic stimulation	TMS
World health organization	WHO

## INTRODUCTION

Mental disorders are among the leading cause of ill-health and disabilities. Worldwide, according to the World Health Organization (WHO), around 450 million people are currently suffering from a mental disorder. Mental health is described as one's emotional, psychological, and social well-being. One's mental health is important because it affects the way people feel, think, and act. It also deals with how stress is managed, how one develops relationships with others, and how one makes choices. Mental illness is a disorder that disrupts the emotions, behaviors or thinking. These disorders can affect how one functions every day and how they relate to others. Mental illness can be divided into two categories. Any Mental Illness (AMI) and Serious Mental Illness (SMI). AMI is simply defined as emotional, mental, or behavioral disorder, ranging in various impairment on one's life. SMI are emotional, mental, or behavioral disorders that result in serious functional impairments, that can limit or interfere in major life activities (Figures 1 and 2, National Institutes of Mental Health (NIMH), n.d).



**Figure 1: Prevalence of Mental Health in 2016.** Shown are the statistics broken down by demographics for 2016. Figure taken from National Institutes of Mental Health, n.d. provided by SAMSA.



\*All other groups are non-Hispanic or Latino

**Figure 2: Prevalence of Mental Health Treatment in 2016.** Shown are the statistics broken down by demographics for 2016 for serious conditions. Figure taken from National Institutes of Mental Health, n.d. provided by SAMSA.

## **History**

The concept of mental illness or disorder has been around for thousands of years. Throughout ancient Mesopotamia, Egypt, India, China, Greece, Rome, and Israel the issue was prescribed to evil and many of the treatments were through religious rituals (Farreras, 2018). The understanding and the treatment of mental health has evolved drastically from the belief that it was due to a spiritual imbalance or problem to understanding the biology and physiologically behind these disorders.

The understanding of mental illness can be separated into three categories throughout history: supernatural, somatogenic, and psychogenic. The earliest theories for mental illness were believed to be caused by the supernatural. People were believed to be cursed, displease gods, possessed by demonic or evil spirits, or sinned (Farreras, 2018). The somatogenic theory is based on the physical effects on a mental disorder can be due to genetics, illness, or brain damage or imbalance. Psychogenic theories focus on certain experiences that are stressful or traumatic, maladaptive learned association or distorted perceptions. Based on the theory of mental illness it affects the treatment(s) of an individual. For example, if the supernatural theory is believed to be the cause of someone mental illness treatments like exorcism or blood-letting might take place (Farreras, 2018).

In ancient China around 2700 BC the “yin and Yang” positive and negative bodily forces were ascribed to the cause of mental and physical illness. More specifically the imbalance of the “yin and yang” forces is what attributed to illness. Chinese medicine believed that having harmonious life would lead to the proper balance of yin and yang (Ferrerias, 2018). In Mesopotamia and Egypt one focus of mental illness dealt with women specifically. Women that were suffering from mental illness at the time were believed to have a wandering uterus- this will have been known as hysteria by the Greeks. The uterus would become dislodged and would be attached to other parts of the body like the chest cavity or the liver, which would prevent them from functioning properly or produce symptoms which could sometimes be painful. To treat this they would use strong smelling substances to guide the uterus back to its proper location. Both pleasant and unpleasant odors were used. The ancient Hebrews believed illness was a punishment from God. Their treatment was simply to confess on sins and repent (Ferrerias, 2018). The Greeks however believed that the supernatural theory was inadequate and took on more of a philosophical approach to mental illness. Hippocrates created a belief that illness (physical or mental) was based on an excess of four essential bodily fluids- blood, yellow bile, black bile, and phlegm. For instance, if someone was too temperamental they were suffering from excess blood and blood-letting would be the most appropriate treatment (Ferrerias, 2018). Hippocrates also had four classifications for mental illness: mania, epilepsy, melancholia, and brain fever. Hippocrates and many other physicians and philosophers of the time did to

believe that individuals with mental illness should not be held accountable for their behaviors, and the having a mental illness was not shameful (Ferrerias, 2018). Throughout the middle ages because of the turmoil that was occurring in Europe supernatural theories became popular again. Events like the plagues and famines that were going on at the time were believed to be caused by devil. The common forms of treatment during that time included prayer rites, confessions, relic touching, and atonement. Between the 13<sup>th</sup> and 17<sup>th</sup> centuries numerous mentally ill women were being accused of and persecuted as witches who were possessed. It is to be noted that this persecuted was mainly due to the influence of religion (Christianity) (Ferrerias, 2018). During this time Johann Weyer and Reginald Scott tried to convince people that mental illness was a disease that was not caused by demonic possession but due to faulty metabolism and other health issues. The witch-hunt started to decline around the 18<sup>th</sup> century, and it is presumed that 100,000 “witches” were burned at the stake (Ferrerias, 2018).

### **Categories of Mental Illness**

There are over 200 classified forms of mental illness. There are 5 major categories of mental illnesses: mood disorders, anxiety disorders, dementia, eating disorders, schizophrenia and psychotic disorders. Shown in Table 1 is the prevalence of any mental illness by state (Mental Health America, n.d.)

**Table 1: Prevalence of Any Mental Illness by State:** Table taken from Mental Health America, n.d.

Rank	State	%	#
1	Hawaii	15.91	168,000
2	Texas	15.98	3,127,000
3	Illinois	16.16	1,570,000
4	New Jersey	16.19	1,107,000
5	Maryland	16.62	756,000
6	Florida	16.77	2,630,000
7	North Dakota	16.78	94,000
8	California	17.04	4,997,000
9	Iowa	17.10	402,000
10	New York	17.22	2,638,000
11	Connecticut	17.42	483,000
12	Georgia	17.42	1,299,000
13	Kansas	17.52	372,000
14	South Carolina	17.52	644,000
15	South Dakota	17.57	110,000
16	Nevada	17.91	387,000
17	District of Columbia	17.95	97,000
18	Mississippi	17.95	394,000
19	Missouri	17.99	823,000
20	Arkansas	18.01	438,000
21	Michigan	18.07	1,373,000
22	Alaska	18.11	94,000
23	Nebraska	18.19	253,000
24	Pennsylvania	18.21	1,803,000
25	Arizona	18.32	925,000
26	Louisiana	18.42	634,000

Rank	State	%	#
27	Delaware	18.51	133,000
28	Wisconsin	18.75	824,000
29	Minnesota	18.78	777,000
30	Alabama	18.85	691,000
31	Massachusetts	18.99	1,008,000
32	Maine	19.16	203,000
33	Oklahoma	19.18	548,000
34	Virginia	19.18	1,203,000
35	North Carolina	19.48	1,459,000
36	Wyoming	19.51	85,000
37	Colorado	19.55	794,000
38	Washington	19.68	1,062,000
39	Tennessee	19.85	988,000
40	New Mexico	19.93	309,000
41	Montana	19.97	157,000
42	Ohio	20.20	1,778,000
43	Vermont	20.27	101,000
44	Idaho	20.41	243,000
45	Utah	20.48	417,000
46	Rhode Island	20.50	170,000
47	Indiana	20.56	1,014,000
48	West Virginia	20.89	301,000
49	Kentucky	21.30	707,000
50	Oregon	21.47	666,000
51	New Hampshire	21.67	227,000
	National	18.01	43,486,000

## **Mood disorders**

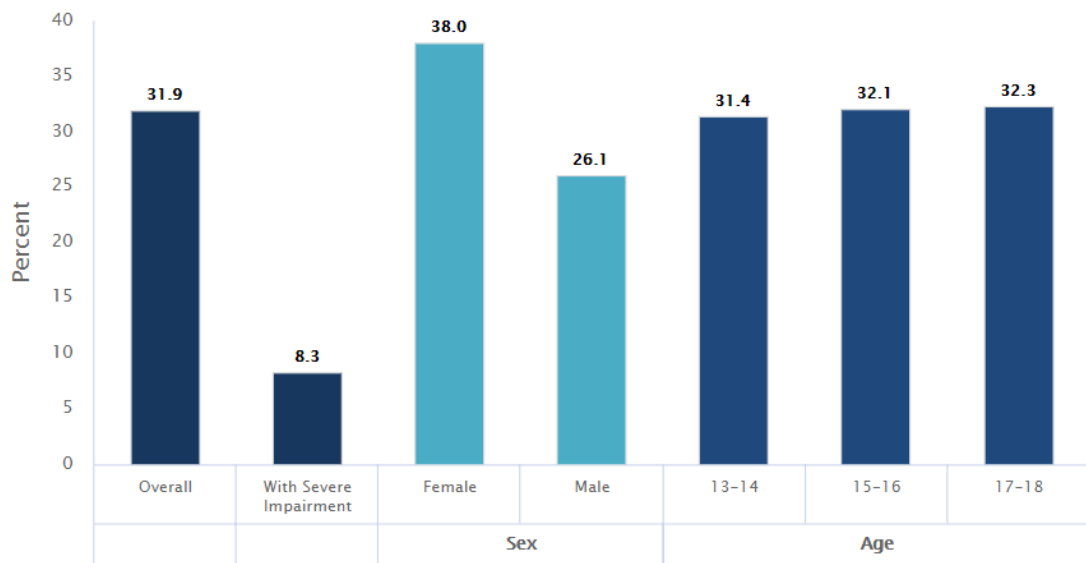
Under the category mood disorder falls: major depressive disorder, bipolar disorder, seasonal affective disorder (SAD), cyclothymic disorder, premenstrual dysphoric disorder, persistent depressive disorder (dysthymia), disruptive mood dysregulation disorder, depression related to medical illness, and depression induced by substance use or medication (Mayo Clinic). Mood disorders affect one's emotional state or mood is distorted or inconsistent with your circumstances and interferes with your ability to function. One could feel extremely sad, empty or irritable and they can also have periods of depression alternating with being excessively happy. There are many factors that can contribute to a mood disorder, but the most likely cause is an imbalance of brain chemicals. Certain life events such as stress or a big change can contribute to a depressed mood. Mood disorder can also be hereditary or run in the family. People that have a parent that suffers with a mood disorder have a greater chance of having a mood disorder (Gershon et al., 2018). Women are two times more likely to have a mood disorder than a man. What makes mood disorders different from every day sadness or depression is that these emotions are significantly intensified (Gershon et al., 2018). Symptoms for mood disorders depend on a number of things especially on the type of mood disorders that one has. However, there are some common symptoms of mood disorders: feeling inadequate or worthless, change in appetite or weight, irritability, decreased energy, trouble sleeping or sleeping too much, feeling hopeless or

helpless, thoughts of suicide or death, attempting suicide, and loss of interest usual activates or activities that were once enjoyed (Gershon et al, 2018).

### **Anxiety Disorders**

Having anxiety every now and then can be a normal part of life. Having anxiety or being nervous before you start a new job or before you take a test is normal because these feeling are only temporary. However, for someone with anxiety these feeling do not go away (National Alliance of Mental Health, n.d.).

There are several types of anxiety disorders. Shown in Figure 3 is the prevalence for any anxiety disorder among adolescents.

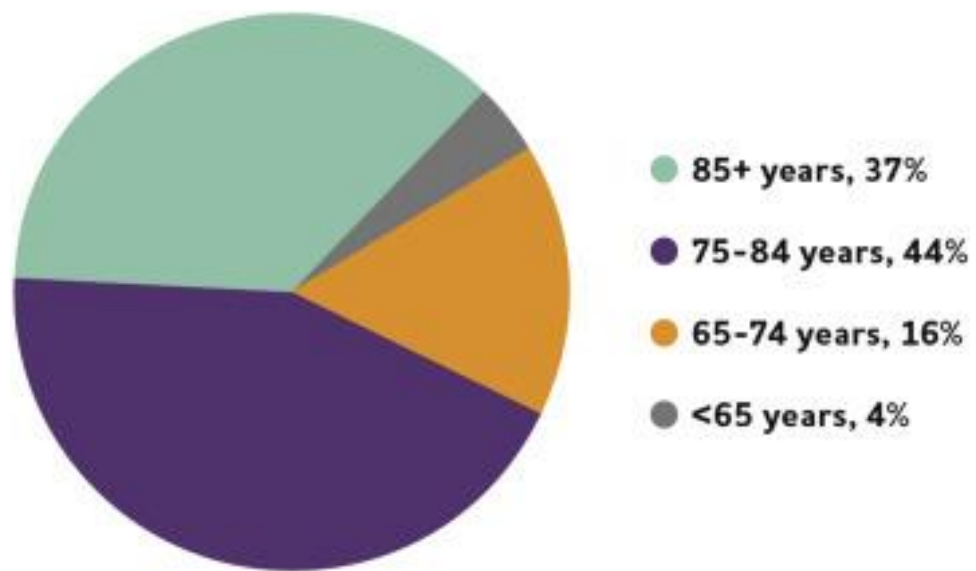


**Figure 3: Prevalence of Any Anxiety Disorder in Adolescents from 2001-2004.** Figure taken from National Institute of Mental Health, n.d.

The different anxiety disorders include, generalized anxiety disorder (GAD), obsessive-compulsive disorder (OCD) panic disorder (PD), Post-traumatic stress disorder (PTSD), social anxiety disorder. GAD is commonly presented with excessive anxiety about ordinary day-to-day situations. The anxiety is invasive and can impaired multiply faucets of one life as work, health, finances etc. There are also a number of physical symptoms that can occur as muscle tension, sleep disturbance, gastrointestinal symptoms, chronic headaches, and restlessness (Locke et al., 2015). There is diagnostic criteria for GAD. The first is that the anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months): 1. Restlessness of feeling keyed up or on edge. 2. Being easily fatigued. 3. Difficulty concentrating or mind going blank. 4. Irritability. 5. Muscle tension. 6. Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep). PD is when one has recurrent unexpected panic attacks. These attacks are usually sudden periods of intense fear that can cause accelerated heart rate, palpitations, or pounding heart. One can also have sweats, shake or tremble, feel like they are short of breath, and feel like they are being smother or choked. It is also common to have a feeling of impending doom (Locke et al., 2015). PTSD can develop in some one that has experience a shocking, scary, or dangerous event. After experience a traumatic event it is normal to be afraid (Locke et al., 2015).

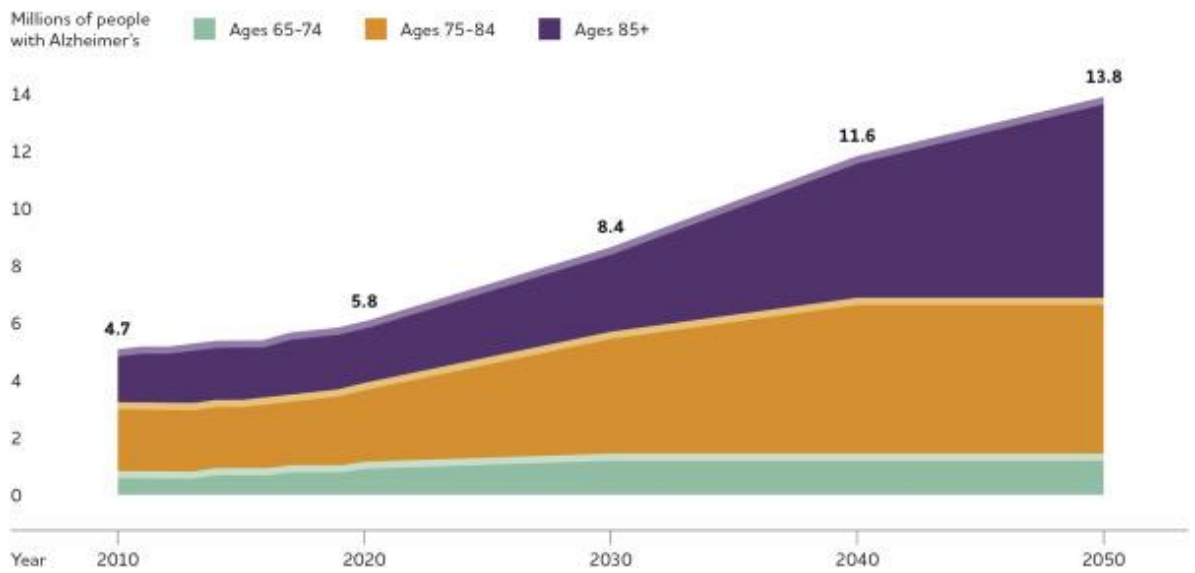
## **Dementia**

According to the National Institute on Aging, dementia is the loss of cognitive functioning - thinking, remembering, and reasoning - and behavioral abilities to such an extent that it interferes with a person's daily life and activities. Some of the loss of functions of abilities includes problem solving, memory, self-management, visual perception, language skills, and the ability to focus and pay attention. These symptoms are a result of healthy neuron that stop working, lose connections with other brain cells, and dies. It is common for people neurons as they age, however with dementia the loss is greater (National Institute of Aging, n.d.). As state before dementia is not a normal part of aging moreover, around 50% of people over the age of 85 suffer from some form of dementia. There are myriad causes of dementia and the most common is Alzheimer's disease especially in older adults. Figure 4 shows the ages of individuals with Alzheimer's disease (Alzheimers & Dementia, n.d.).



**Figure 4: Ages of Individuals with Alzheimer's Dementia in the US in 2018.**

Figure from Alzheimers & Dementia, n.d.



**Figure 5: Projected numbers of individuals with Alzheimer's disease from 2010-2050.** Figure from Alzheimers & Dementia, n.d.

Other forms of dementia encompass frontotemporal disorder (more common in middle-aged than older adults), Lewy body dementia, and vascular dementia. Table 2 shows the prevalence of all forms of dementia as well as Alzheimer's disease and vascular dementia (Plassman et al., 2007).

**Table 2: Prevalence of all dementia and by subcategories of Alzheimer’s disease and vascular dementia by age.** Table amended from Plassman et al., 2007.

Age	All dementia		
	combined	male	female
71–79 years	4.97 (2.61–7.32)	5.25 (1.25–9.25)	4.76 (1.82–7.70)
80–89 years	24.19 (19.28–29.11)	17.68 (11.66–23.70)	27.84 (20.41–35.28)
≥90 years	37.36 (25.45–49.27)	44.59 (21.70–67.47)	34.69 (23.36–46.02)
Total	13.93 (11.42–16.44)	11.14 (7.78–14.50)	15.74 (12.39–19.08)

Age	AD		
	combined	male	female
71–79 years	2.32 (1.26–3.37)	2.30 (0.80–3.81)	2.33 (0.95–3.70)
80–89 years	18.10 (13.47–22.74)	12.33 (5.82–18.84)	21.34 (14.44–28.24)
≥90 years	29.70 (18.60–40.80)	33.89 (10.00–57.77)	28.15 (17.61–38.69)
Total	9.74 (7.56–11.91)	7.05 (4.25–9.85)	11.48 (8.50–14.46)

Age	VaD		
	combined	male	female
71–79 years	0.98 (0.07–1.89)	1.27 (0.00–3.19)	0.76 (0.18–1.35)
80–89 years	4.09 (1.52–6.67)	3.58 (1.37–5.79)	4.38 (0.71–8.05)
≥90 years	6.19 (2.14–10.23)	8.14 (0.0–16.76)	5.46 (1.49–9.44)
Total	2.43 (1.36–3.50)	2.34 (0.74–3.94)	2.48 (1.11–3.86)

It is quite common for patients to have mixed dementia; this is a combination of two or more types of dementia (National Institute of Aging, n.d.). For instance, someone can have both Alzheimer's disease and vascular dementia. Dementia also has a range in its severity. From the mildest stage that affects a person's functioning to where a person must depend completely on others for basic activities of living.

### **Eating Disorders**

Eating disorders are often seen as a choice of not eating to fit certain societal standards. Nevertheless, eating disorders are a mental health issue and unfortunately one of the deadliest mental disorders (National Institute of Mental Health, n.d.). Warning signs for an eating disorder are extreme obsessions with body weight and food. There are numerous eating disorders, but the most common are anorexia nervosa, bulimia nervosa, and binge-eating disorders (Table 3, Harrington, et al. 2015)

**Table 3: Initial signs and symptoms of Anorexia and Bulimia Nervosa.** Table

taken from Harrington et al., 2015.

**Anorexia nervosa**

Amenorrhea	Hypothalamic dysfunction, low fat stores, malnutrition
Arrhythmia	Electrolyte disorders, heart failure, prolonged corrected QT interval
Bradycardia	Heart muscle wasting, associated with arrhythmias and sudden death (common in anorexia nervosa)
Brittle hair and nails	Malnutrition
Edema	Heart muscle wasting, associated with arrhythmias and sudden death (common in anorexia nervosa)
Hyperkeratosis	Malnutrition, vitamin and mineral deficiencies
Hypotension	Malnutrition, dehydration
Hypothermia	Thermoregulatory dysfunction, hypoglycemia, reduced fat tissue
Lanugo (fine, white hairs on the body)	Response to fat loss and hypothermia
Marked weight loss	Self starvation, low caloric intake
Osteoporosis at a young age	Malnutrition

**Bulimia nervosa**


Dental enamel erosions and gum disease	Recurrent vomiting washes mouth with acid and stomach enzymes; mineral deficiencies
Edema	Laxative abuse, hypoproteinuria, electrolyte imbalances
Parotid gland enlargement	Gastric acid and enzymes from vomiting cause parotid inflammation
Scars or calluses on fingers or hands (Russell sign [knuckle calluses])	Self-induced vomiting
Weight fluctuations: not underweight	Alternating between bingeing and purging

As reported by the Mayo clinic, anorexia nervosa is a ED that is characterized by an abnormally low body weight, an intense fear of gaining weight and a distorted perception of weight. A person with anorexia values controlling their weight and shape, usually by extreme efforts which can significantly interfere with their lives. Anorexia nervosa has the highest mortality rate of any mental disorder and also is comorbid with other illnesses (Table 4, National Institutes of Mental Health, n.d.). This high mortality rate is not only a result of starvation, but it is due to suicide. Even though anorexia is a disease that is mainly seen in women it does effect men in a significant way (Mayo clinic, n.d.) The symptoms of anorexia can include: extreme restriction of food, emaciation, excessive fear of gaining weight, relentless pursuit of thinness and unwillingness to maintain a normal healthy weight, distorted body image, denial of their low body weight. A number of symptoms can develop over time: Osteopenia or osteoporosis (thinning of the bones), brittle nails and hair, lanugo (the growth of fine hair all over the body (lanugo), infertility, multiorgan failure, brain damage, dry and yellowish skin, severe constipation, lethargy, mild anemia, and drop in internal body temperature, resulting in being cold all the time. Bulimia nervosa usually occurs when a person secretly binges, eat large amounts of food associated with a loss of control over the food they are eating, and then purge, which is a way to get of the excessive calories that were consumed in an unhealthy way. They are a number of ways that a person could purge the food that they consumed and this includes forced vomiting, fasting, excessive use of

laxatives or diuretics, excessive exercise or a combination of these behaviors (Mayo Clinic, n.d.). People with bulimia normally can maintain a healthy or their normal body weight. Symptoms for bulimia include: chronically inflamed and sore throat, severe dehydration, acid reflux and other GI problems, electrolyte imbalance which can lead to stroke or heart attack, swollen salivary glands in the neck and jaw area, worn tooth enamel, and increased tooth sensitivity and decay due to the exposure to stomach acid. Finally binge-eating disorder is the loss of control over one's eating. There, binges are not followed by purging, fasting or excessive exercise which makes it different from bulimia. This leads to people with BED to often be obese or overweight. BED involves eating enormous amounts of food in a short time period, eating even when one is full or not hungry, eating fast during binge episodes, and eating alone or in secret to avoid embarrassment. In the United States BED is the most common ED (National Institute of Mental Health, n.d.).

**Table 4: The Co-Morbidity of Eating Disorders and other Mental Illness**

Shown are the statistics of the prevalence of certain mental illness that coexist with EDs. Table taken from the National Institutes of Mental Health, n.d.

<b>Lifetime Co-morbidity of Eating Disorders with Other Core Disorders Among U.S. Adults</b> 			
<b>Data from National Comorbidity Survey Replication (NCS-R)</b>			
	<b>Anorexia Nervosa (%)</b>	<b>Bulimia Nervosa (%)</b>	<b>Binge-Eating Disorder (%)</b>
<b>Any Anxiety Disorder</b>	47.9	80.6	65.1
<b>Any Mood Disorder</b>	42.1	70.7	46.4
<b>Any Impulse Control Disorder</b>	30.8	63.8	43.3
<b>Any Substance Use Disorder</b>	27.0	36.8	23.3
<b>Any Disorder</b>	56.2	94.5	78.9

## **Schizophrenia**

Schizophrenia is a mental disorder that interferes with one's ability to think clearly, manage emotions, make decisions and relate to others. Schizophrenia can occur at any age. It typically starts to effects men in their early 20s and women in their late 20s and 30s (National Alliance on Mental Illness, n.d). It is not very common for schizophrenia to be diagnosed in someone younger than 12 and older than 40 (National Alliance on Mental Illness, n.d.). It can be hard to diagnose schizophrenia initially because many of the first signs are common with other disorders and issues. There are several factors that lead to developing schizophrenia. Scientist believe that the main factors are genes, environment and brain chemistry and structure (National Alliance on Mental Illness, n.d.). Shown in Table 5 are the many symptoms of the disease (Hui et al., 2017).

**Table 5: Demographics of Patients with Schizophrenia (n=100).** Table amended from Nature.com, n.d.

	Schizophrenia
	n = 100
Gender (male/female)	46/54
Age (years)	27.1 ± 10.8
Education (years)	9.4 ± 2.7
Age of illness onset (years)	25.7 ± 10.3
Duration of illness (months)	16.7 ± 6.6
SAPS score	14.8 ± 13.4
SANS score	35.0 ± 20.4

There is not one single gene that leads schizophrenia, but having certain genes can increase the likelihood of having schizophrenia. Some environmental factors that affect schizophrenia are: psychosocial factors, malnutrition before birth, exposures to viruses, and problems during birth (National Alliance on Mental Health, n.d.). People that are affected by schizophrenia are known to have a chemical imbalance in their brain. This imbalance is complex and very interconnected, but the neurotransmitters dopamine and glutamate play an important role (National Alliance on Mental Health, n.d.). There are three categories for the symptoms of schizophrenia: positive, negative, and cognitive. Positive symptoms are usually when people lose touch with certain aspects of reality. With positive symptoms one can hallucinate, delusions, thought disorders (unusual or dysfunctional ways of thinking), and movement disorders (agitated body movements). Negative symptoms are usually associated with disruptions to normal emotions and behaviors. These symptoms can include “flat affect”, reduced speaking, reduced feelings of pleasure in everyday life, and difficulty beginning and sustaining activities. And finally, cognitive symptoms can be mild or severe in patients with schizophrenia. In patients where it is more severe it can change their memory or other aspects of thinking. These symptoms include: trouble focusing or paying attention, problems with working memory, and poor executive functioning- this is the ability to comprehend information and use it to make decisions (National Alliance on Mental Illness, n.d).

## **Treatments**

Once one is diagnosed with a mental illness receiving treatment most of the time leads to the most favorable outcomes. There are various options available for mental health treatments. There is not one treatment that works for all mental illness. Furthermore, there is also not one treatment that specially works for everybody. There are several people that are qualified to treatment mental illness in some capacity. Mental health professionals that can prescribe medication but most often no counsel to patients are psychiatrist. They are medical doctors that train specifically to diagnosis and treat mental and emotional illnesses. As previously stated some psychiatrist can provide therapy for some patients, but most just focus on prescribing medications. Psychiatrist can also be trained to work with child/adolescents only. Mental health or psychiatric nurse practitioners can diagnosis and treat mental and emotional illness. Generally clinical psychologists are trained to make diagnoses and provide group and individual therapy. In most states they are not allowed to prescribe medication. There psychologist require a doctoral degree in psychology. School psychologist work in a school setting to make diagnoses, provide group and individual therapy, and work with school staff to increase efficiency. There are a myriad of mental health professionals that can provide therapy and counseling but cannot prescribe medication: clinical social worker, mental health counselor, nurse psychotherapist, licensed professional counselor, pastoral counselor, martial and family therapist, peer specialist, and certified alcohol and drug abuse counselor.

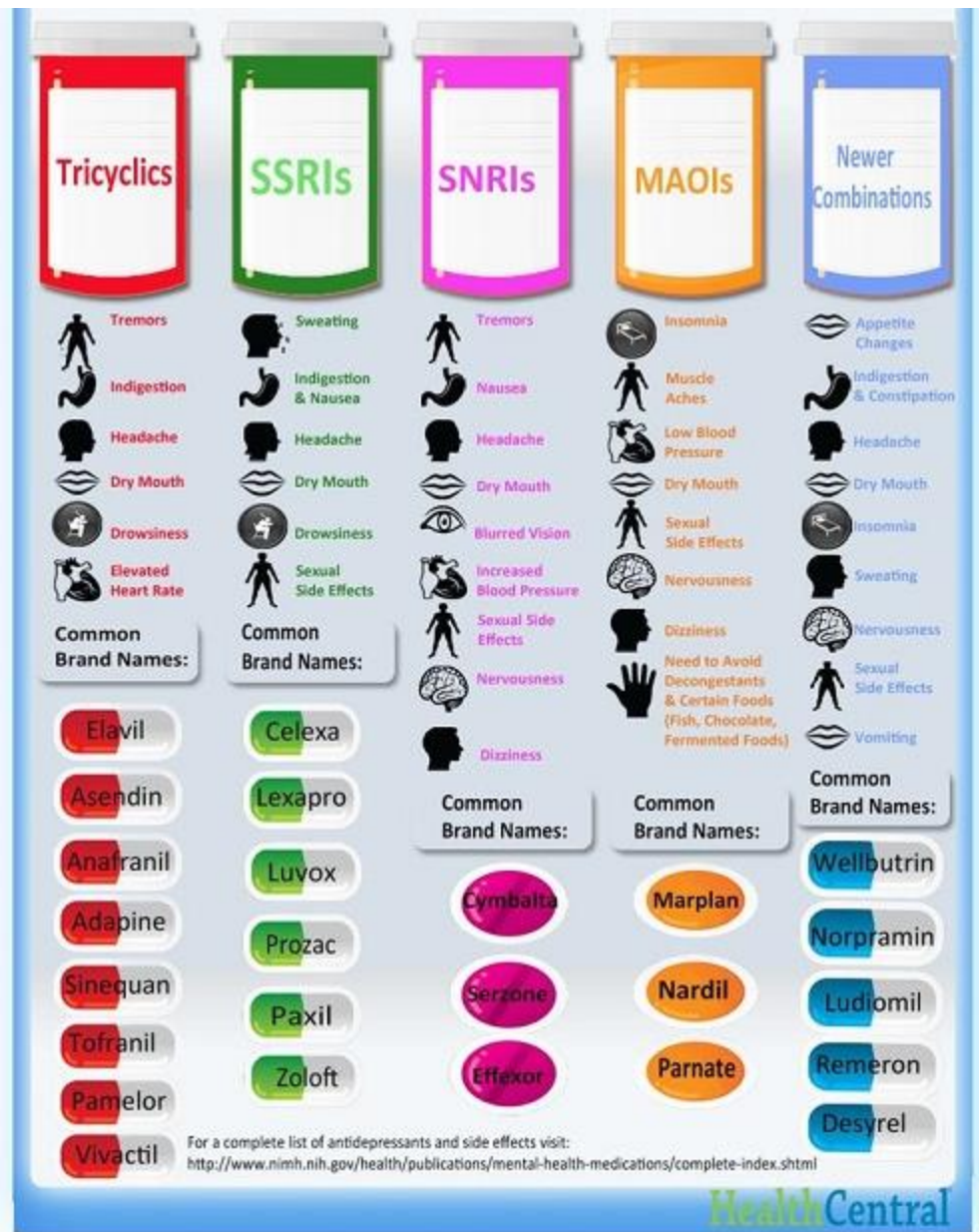
Most of these positions require a master degree or a certificate in one field. They work to diagnose and provided individual and group counseling or therapy (Substance Abuse and Mental Health Services Administration, n.d.).

One of the most common forms of treatments is psychotherapy. Psychotherapy analyzes the behaviors, thoughts, and feelings, and seek to enhance an individual well-being. The most effective way that psychotherapy is practice is in conjunction with medication. There is various medication that can be used to treat a mental illness. Medication is a not an absolute cure for mental illness. As stated previously patients are usually not just treated with medicine. Some times in more serious cases a patient will need to be hospitalized. This is due to them needed to be closely monitored. Another form of treatment is a self-help planning. This is a unique approach where one assesses their mental health by implementing strategies to promote wellness. These plans can include addressing, triggers or warning signs, wellness, and recovery. Support groups are a way for individuals who might suffer from similar experiences to work together for a common goal of recovery. In adjunct to group support peer support can also be used. Like many areas of medicine alternative medicine can me a positive treatment plan. Alternative medicine usually entails treatment and practices that go against the norm. It can be used in addition to standard health practices or in place of it. Electroconvulsive therapy is a procedure where electric stimulus is applied to the brain to induce a generalized seizure. This form

of therapy is not commonly used anymore and if it is used it is mostly seen in patients that have a severe mental illness. There are other forms of therapy such as art therapy or laughing therapy that have been seen to help patients (Substance Abuse and Mental Health Services Administration, n.d).

The number one treatment for someone that suffers from a mood disorder is antidepressant medications (Gershon et al., 2018). These antidepressants target one or more neurotransmitters that are affected in depression. The original antidepressant medication was monoamine oxidase inhibitors (MAOIS), which inhibited monoamine oxidase. This is an enzyme that is involved in deactivating, norepinephrine, dopamine, and serotonin (American Psychiatry Association, n.d.). They were originally very effective in treating depression however they had very serious side effects (Gershon et al., 2018). If MAOIS is taken with drug like antihistamines or with food that contained the amino acid tyramine, which can be commonly found in foods like soy sauce, wine, and aged cheeses, a patient could develop dangerously high blood pressure. The next class of antidepressants that were developed are tricyclics. These work by blocking the reabsorption of serotonin, norepinephrine, or dopamine at synapses that lead to the increase of their availability (Gershon et al., 2018). They also have fairly severe and serious side effects. Next the selective serotonin reuptake inhibitors (SSRIs) and the serotonin and norepinephrine reuptake inhibitors (SNRIs) were introduced. SSRIs work to block the reabsorption of serotonin, and SNRIs work

to block the reabsorption of serotonin and norepinephrine (American Psychiatry Association, n.d.). These two drugs have fewer side effects than tricyclics and MAOIs do. They are less lethal in overdose, less cardiotoxic, and produce fewer cognitive impairments. There are still side effects to SSRIs and SNRIs which included, insomnia, gastrointestinal issues, and difficulty having orgasms (American Psychiatry Association, n.d.). A summary of the effects of many of these medications are shown in Figure 6.



**Figure 6: Types of Antidepressants and their side effects.** Figure taken from Nurse Buff, n.d..

There are other forms of treatment for people with mood disorders. This involves electroconvulsive therapies (ECT), deep brain stimulation, and transcranial magnetic stimulation (TMS). As stated previously ECT induces a seizure when a patient is under general anesthesia and they take a muscle relaxant. It is usually applied for patients that have severe depression or for some reason show resistance to antidepressants. The most common side effects are memory loss and confusion, but these are usually short term (Mental Health America, n.d.). ECT was commonly given to patients in the 1940s and 50s, however back then the effects were not known. Around 100,000 patients yearly in the U.S. receive ECT (Mental Health of America, n.d.). They are usually patients that are in psychiatric units in hospitals. ECT is one of the most controversial treatments for mental illness. This was due to the history of this treatment. In the past it was used as a long-term solution which led to permanent memory loss and confusion. Now treatment is usually limited to a month at a time and maximum use of three times per week. And to reduce relapse after the treatment a patient is advised to restart medications that were used prior to the ECT treatment. TMS is given while a patient is awake and is noninvasive (Gershon et al., 2018). The goal is to induce electrical activity by pulsating magnetic fields to the cortex. TMS has been known to have fewer side effects than ECT, and is showing promise as an alternative therapy. Deep brain stimulation which is a newer technique that involves implanting an electrode into one's brain. This electrode will electrically stimulate certain regions of the brain,

by being connected to an implanted neurostimulator. There is more research that needs to be done to see the effectiveness of this treatment (Mental Health of America, n.d).

Along with antidepressant medication and treatments like ECT and TMS psychosocial treatments are also highly effective (Gershon et al., 2018). Some popular forms for treatment are interpersonal therapy, behavioral therapy, and cognitive therapies. Interpersonal therapy focuses on improving interpersonal relationships. This is done by targeting problem areas, like interpersonal deficits, unresolved grief, role transitions, and interpersonal role disputes. Behavioral therapies focus on increasing the frequency of pleasurable experiences. Cognitive therapies work to help patients identify and change their distorted thoughts and assumptions.

There are similarities that can be found in the treatment for mood disorders and the treatment for anxiety and related disorders. The most successful treatment is with medications anti-anxiety and antidepressants (Barlow et al., 2018). However once someone stops their provided medication incidence of relapse is very high. Effective psychosocial treatments for anxiety disorders are cognitive behavioral therapies (CBT) (Barlow et al., 2018). These therapies can also be more effective in the long term to certain medications that are prescribed. With CBT patients learn skills to identify and change detrimental

thought behaviors, thought processes, and beliefs that tend to worsen symptoms of anxiety. These skills are practiced to apply to one's life in simulation situations through exposure exercises. One of the main skills that one should learn from CBT is to approach situations that they find distressing or fearful, to challenge their beliefs and learn new ones, and to have less fearful association with these situations. Around 50-80% of patients that receive CBT or drug treatment initially show a good response, and CBT shows a more positive long lasting effect (Barlow et al., 2018). As of now there are several new treatments that are being developed to help treat patients with anxiety and related disorders (Johns Hopkins Medicine Health Library, n.d.).

It is imperative that treatments for EDs are started early. This is due to the medical complications and high rates of suicides in individuals with EDs. Also, many individuals with EDs deal with other mental health issues as anxiety and depression or struggle with substance abuse (National Institute of Mental health, n.d.). Normally a combination of therapies are used to treat a patient with an ED. This can include medical care and monitoring, psychotherapy, medications, and nutritional counseling. The main goals of treatment are to first restore adequate nutrition and bring patient back to health weight, stop the binge-purge cycle in bulimic patients, the binge-eating behaviors in patients that have BED and reduce excessive exercise in anorexic patients (National Eating Disorder Association, n.d.). Next or alongside the previous stated treatments

psychotherapy such as talk therapy and cognitive behavioral approaches are implemented. These therapies are effective in patients to get the root cause of their ED, which usually are due to past traumas or fears of growing up (National Institute on Mental health, n.d.). Combining anti-anxiety and anti-depressants have also been shown very effective in treating EDs (National Eating Disorder Association, n.d).

## **SPECIFIC AIMS**

It has been well documented that mental health and mental illness is associated with a stigma. This dates back to the assumptions that sin and evil spirits cause mental health problems. Even though the understanding of mental illness has improved vastly there is still a negative stigma about it. In order to improve one's mental health or be treated for a mental illness an individual must be able to reach out for help. This often can be affected by the stigma that surrounds mental illness. This stigmatization intensity often depends on one's environment or culture. Not receiving treatment for a mental illness can be detrimental and leads to an individual's demise.

The goal of the current study is to review the published literature if there is evidence that the stigma around mental illness affects availability to treatment, treatment and treatment outcomes. Specifically, how medial professional are currently working on combating this. Following the review, hopefully the reasons for stigma around mental health issues can be more understood and that there are systems being put in place to overcome this stigma that has been in place as long as the ideas of mental health has been. Further studies will also be proposed dealing with and essentially tearing down the negative stigma around mental illness.

## **PRESENTATION OF PUBLISHED RESULTS**

With the stigmatization of mental illness it is usually viewed in two different avenues that complement each other: one is public stereotypes and the other is one's individual internalization of negative stereotypes and experiences. From the history of mental health various cultures affected the perception of mental illness and its treatment. Till this day culture still has a grave effect on mental health (Stuart, 2012).

### Worldwide stigma

In 2013 there was a small study that entailed taking a world survey of mental health stigma (Seemen et al., 2013) This study was conducted over a time period of 1.7 years. This study was done through an online survey. The reason it was done as an online survey was to get rapid and reproducible opinions. There was 596,712 respondents from 229 countries in involved in the survey. China has the largest pool of respondents that were in daily contact with a person with mental illness. One of the questions that was ask was about the violent tendencies of individuals with mental illness. In developing countries 16% of individuals with mental illness were more violent than others, whereas the respondents from developed countries only 8% had this belief (Seemen et al., 2013). In this study it was also found that the 45% to 51% of respondents from the developed countries felt that mental illness was similar to physical illness. Correlating with this information only 7% felt that mental illness could be

overcome. While these results are comparable to other studies on this topic it should be noted that some bias and limitations come from the pool of respondents (Seemen et al., 2013). This survey only enrolled English speakers, and the majority of them were young educated males. However, the conclusion of the surveys showed that there is a contrast between the stigma of mental illness in developed countries and developing countries (Seemen et al., 2013 ).

## **DISCUSSION**

It is tremendously beneficial to understand the history and origins of mental health. This understanding lays the foundation for stigmatization of mental health. According to the Mariam Webster dictionary Stigma is a set of negative and often unfair beliefs that a society group of people have about something (Mariam Webster Dictionary). Per the work of Goffman (1963), the idea of stigma was broken down into three categories. The first is “abominations of the body,” this is likely a physical deformity. Second is “tribal stigma,” this stems from gender, religion or ethnicity. And finally “blemishes of individual character,” example of this is criminality, unemployment or mental illness. Any of these factors have the ability to spoil one’s social identity (Goffman, 1963). Although Goffman ideas discuss some very important point about stigma, they lack and underemphasize the complex power of relationships and how they affect stigma. More contemporary ideas focus on the link between labelling, stereotyped

attribution, discriminatory behaviors, and emotional or prejudicial reactions. People with mental illness, if stigmatized can be marginalized, excluded, and denied basic human rights and social entitlements (Arboleda-Florez et al., 2012).

The process of stigmatization generally leads to an individual having less social value. Many times mental illness is associated with violence, danger, and unpredictability. This can be seen perpetuated through social media or the news. Often when there are stories about serial killers or psychopaths, mental illness is almost always brought in the discussion. These can lead to a negative perception about someone who has a mental illness. The stereotype for mental illness did not happen overnight. It has been brought about because of thousands of years of marginalization for individualizes with mental illness. The stigma of mental illness has evolved however there still this connotation that people who have a mental illness are second class citizens. There are often associated with people that are unemployed, criminals, and general social nuisances. With the understanding that there biological, genetic, and heredity explanations for mental illness sometimes these people are seen as genetically compromised and consequently can never fully recover (Arboleda-Florez et al., 2012 ).

One group of people that are often seen as contributors to the stigmatization of mental illness are mental health professionals. In some cases

individual believe that they the most stigmatizing of all groups. There is not much literature and data on this topics however what is available has a few common themes. There themes include feeling of humiliation, punishment, patronization, being spoken down to, excluded form treatment decisions, and assumptions that an individual cannot manage one's life. Patients have also expressed a lack of sufficient information about one's illness and treatment (Arboleda-Florez et al., 2012). Through focus groups it has been seen that many patients and their family members feel as if they are receiving a terminal prognosis. People felt that when they were given a diagnosis from their health care provider they were reduced only to their illness. Numerous patients and family members were told essentially that they will be ill for the rest of their life or might commit suicide (Arboleda-Florez et al., 2012).

To combat this stigmatization in a number of areas of life antistigma practices have been explores, Table explains the six approaches that have been successfully used to disrupt the stigmatization process. The approaches focus on replacing the myth and misinformation associated with mental illness. This can be done through first aid course on mental health (Arboleda-Florez et al., 2012). The second approach is to suppress negative representation that is often portrayed for people with mental illness. This can be achi my positive media representation from advocacy organizations (Arboleda-Florez et al., 2012). The third approach focuses on individuals hat are managing a mental illness and to

connect them with the public. This approach has been deemed one of the most promising practices, but it is not used a lot (Arboleda-Florez et al., 2012). The fourth strategy is to create legislation to protect and offer accommodations- education, employment, and housing- for people with mental illness. the fifth strategy is designed to increase advocacy for people with mental illness. This is important to keep mental health on the national agenda of many governments (Arboleda-Florez et al., 2012). The final strategy focuses on offering services and support that empower individual with mental illness to find identity outside of their illness. These services are not currently offered in a coordinated manner (Arboleda-Florez et al., 2012).

It can be concluded that the stigma around mental illness has an enormous impact on how one with a mental illness perceives them self, how others perceive and treat them, and how unconscious bias from health care professional effects numerous areas of mental health. To undo this stigma education about mental illness is key. Mental illness does not need to be associated with negative ideals and thoughts. Through this stigma has deep roots, there are various systems and practices that can be put in place to greatly reduces this.

**Table 6: Six approaches that have been used to disrupt the process of stigmatization.** Table is from the Canadian Journal of Psychiatry.

Strategy	Mechanism	Targets	Desired outcome
1. Education	Replace myths and misinformation with accurate information	General public or selected subgroups	Improved knowledge; improved mental health literacy; better recognition of symptoms; early help seeking
2. Protest	Formal (often written) objection to negative representations	Opinion leaders or stigmatizers (for example, politicians, journalists, and manufacturers)	Suppress negative attitudes; remove negative representations and content
3. Contact-based education	Contact with people who are successfully managing a mental illness, usually including opportunities for active discussion and learning	General public or selected subgroups, usually high school or university students	Reduce stereotypes; improved attitudes; reduce desire for interpersonal distance
4. Legislative reform	Development and enactment of protective legislations	Legal system; legislators	Improved protections for rights and freedoms; improved access to social entitlements; reduced social inequities
5. Advocacy	Use of multiple approaches to increase priority of mental health on agendas of decision makers	Politicians and decision makers	Greater policy recognition; improved services; reduced social inequities; improved avenues of redress
6. Stigma self-management	Peer-supported self-learning; recovery-oriented supports and services	People who have a mental illness or have family members with mental illnesses	Reduced personal impact of stigmatization; reduced self-stigma; improved self-esteem; empowerment

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## VITA

