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Individual Factors Influencing Mental Illness Stigma in the New York City Metropolitan Area

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Abstract

The study of individual factors influencing mental illness stigma among communities is not widely present in current mental health research. This study examined demographic variables that influence mental illness stigma. It also utilized the Attitudes Towards Mental Illness Scale, the Reported and Intended Behavior Scale, and the Mental Illness Microaggressions Scale – Perpetrator Version to determine the presence of mental illness stigma among individuals in various areas throughout the city of New York. Analysis found that higher levels of education predict fewer stigmatizing characteristics. Older respondents were found to have higher levels of stigma than younger respondents across all measures. Individuals who had lived or worked in the neighborhood for a longer period of time displayed more stigmatizing characteristics than those who had lived or worked there for a shorter period of time. Race, marital status, and sex were also found to be predictive factors of mental illness stigma. These results indicate that education about mental illness and contact with individuals with mental illness can decrease mental illness stigma.

Keywords: *Mental illness stigma, stigmatizing behaviors, contact with mental illness*

Defining stigma

Mental health stigma is a prevalent and damaging reality that exists in a vast number of individuals and communities worldwide (Link & Phelan, 2001) Stigma is essentially the process in which an undesirable label with negative stereotypes is attached to a group or individual and causes prejudice and discrimination (Goffman, 1963). The

process of stigma begins when a person is identified as “other” and then continues when negative stereotypes popularized by society are attached to the individual (Phelan & Link, 2004). The existence and continuation of this stigma is a tragedy that should be thoroughly researched and addressed so that it may be reduced or eliminated.

For centuries, individuals with mental illness have been mistreated and abused. Being diagnosed with a mental illness used to be a life-ending diagnosis that would result in being taken away from family and loved ones and placed into facilities that specialized in “treating” individuals with this condition (Houston, 2019). Many of these facilities were nothing more than housing and provided little to no positive care for the people who entrusted them with their lives. To be sent to an asylum or institution was often a shameful experience that would not only affect the individual being sent, but the family who was left behind. It was a point of gossip and ridicule that could last for a lifetime (Houston, 2019).

Because mental illness treatments were often barbaric and inhumane over the past few centuries, little to no help could be provided to affected individuals. The main form of treatment was isolation for the safety of others because the illnesses could not be “cured”. In many cases, the residents would be subjected to painful and horrifying medical procedures that would often destroy the patient’s mind (Gostin, 2007). Even today, there are very few “cures” for mental illness, but there are many more treatments. Unfortunately, it is still common for stereotypes and stigma to permeate the lives of individuals with mental illness (Gostin, 2007; Pescosolido et al., 2019).

The cruel separation of individuals with mental illness has continued to propagate the “us” versus “them” mindset between those with no mental health issues and individuals

who have them (Gostin, 2007). Mental illness is seen as something bad that only people with "real problems" suffer from. Just as the average person never thinks he or she will be involved in an auto accident; mental illness is also thought to be something that will always happen to someone else. This creates stigma that has lasted for centuries and ruined the lives of thousands of individuals (So-Young & Yin-Ling, 2017).

The negative ramifications of stigma can be easily identified in the lives of individuals with mental illness. From emotional to physical abuse and harassment, those who are classified as "different" are generally not allowed to thrive in society. To eliminate this stigma, society will have to come to terms with the current mistreatment that still exists for people with mental health issues today and address the motivations and actions that are behind stigma (Kobau et al., 2010). For many, the instillment of stigma begins at a very early age and continues throughout adolescence and adulthood (DeLuca, 2020).

Public Stigma

One aspect of mental health stigma that needs to be considered is how the public views mental health. There is ample evidence to suggest that the average individual in the general population has some level of stigma against those with mental illness (Gonzalez et al., 2017). For many individuals with mental illness, this stigma negatively affects their quality of life. Social interaction has been found to be one of the most important determining factors in whether a person with severe mental illness will have a positive quality of life (Yanos et al., 2001). This shows what an important part the general population plays in the understanding and treatment of mental disorders. An open and

understanding population is more likely to accept individuals with mental illnesses and provide adequate programs for them to receive the necessary treatment and medications they need to live successful, happy lives. Unfortunately, current society takes a more negative approach to severe mental illness, which has impacted all levels of help and treatment that individuals with mental illness have access to (Yanos et al., 2001). This stigma often hinders an individual's ability to seek and receive needed care for mental illness because of social, political, and geographical barriers (Corrigan et al., 2014). The presence of mental illness stigma among friends and loved ones of a person who needs treatment for a psychological illness drastically reduces that person's desire to get help because the very existence of the disease is judged by those closest to them. Addressing the factors that cause this stigma and finding ways to reduce it at an individual level can help remove roadblocks preventing thousands of people from getting the help they need (Corrigan et al., 2014).

Violence and mental illness have become synonymous in the general public's mind, which makes people disinclined to provide funding or support for rehabilitative treatment of severe mental disorders (Pescosolido, et al., 2019). A vast misunderstanding of the prevalence of violence among individuals with severe mental illness has led to restrictive and often punitive public policies that make it harder for these individuals to receive proper treatment (Misra et al., 2021). This creates a cycle wherein those with mental illness are not given proper treatment, the symptoms of their mental illness return or escalate, they break the law or garner negative social opinion, and they are forced into prisons or homeless shelters because they are not welcome in traditional society (Misra et al., 2021).

Forms of Mental Illness Stigma

The continuing misrepresentation and misunderstanding of how mental illness works and how it affects the individuals who have it has led to consistently negative community opinions and actions against people with this condition. Past research has uncovered five main types of discriminatory behaviors against people with mental illness: Microaggressions, social rejection, discrimination, verbal harassment/hate speech, and hate crimes (Yanos, 2018). Each type of behavior increases in aggression. Microaggressions are possibly the most common behaviors, but they are also the least severe. Microaggressions include demonstrations of discrimination on a subtle scale that occur towards individuals who are part of a marginalized group (Sue, 2010). This type of stigma can greatly affect the policies and tone of a neighborhood, often making it difficult for a person with mental illness to feel comfortable or accepted where he or she lives.

Commonly used microaggressions include assumptions of inferiority, patronization, and fear of mental illness expressed in the form of behavior (Gonzales et al., 2015a). These behaviors make it clear to a person with mental illness that the individual they are speaking with either does not want to be associated with them, speaks down to them, or believes that individuals with mental illness are dangerous and so seeks to distance themselves from them. This often leads to the second type of stigmatizing behavior, social rejection. Social rejection can happen in a myriad of ways, and it is often done by the people who are closest to an individual diagnosed with a mental illness (Yanos, 2018). This does not fit into the stereotypical idea of discrimination since it is commonly believed that strangers discriminate against a people or group without any knowledge regarding who

they are outside of mental illness. Instead, it is neighbors, friends, and coworkers who will often distance themselves from an individual once they have been diagnosed. A conscious effort is initiated to end a formerly healthy, growing relationship which sends an obvious message to the individual with mental illness that they are no longer wanted. Although this will not necessarily happen with everyone in the individual's life, it is common for several of these instances to occur throughout hospitalization and diagnosis (Yanos, 2018).

When communication between friends is cut off because one is not comfortable with the other's mental illness, that sends a signal to the rest of society that it is okay to cut them out as well. Since these individuals are not accepted by a large part of society, policies are created to limit their accessibility to everyday necessities such as housing, employment, and education (Yanos, 2018). This opens the door for discrimination in which people use someone's mental illness diagnosis to keep them from receiving equal treatment when looking for a place to live, work, or learn. A common theme in neighborhoods is the safety aspect of discrimination. People with mental illness are often forced out on the basis that they are dangerous and should not be allowed in the community using organized opposition. This "not in my backyard" mindset severely hinders the potential success and acceptance of people with mental illness because they are ostracized before being given a chance (Yanos, 2018).

Verbal harassment and hate speech are two high forms of mental illness stigma that can lead to violence and aggression. Insulting and threatening language is often used as a scare tactic to make people with mental illness feel like they are less than because of their diagnosis. It also perpetuates the stigma of mental illness and encourages others to

distance themselves from people with mental illness. The highest level of discriminatory behavior is hate crimes, in which crimes are committed against a person or property based entirely on an offender's bias against a victim because he or she is in a specific group (Teplin et al, 2005). Individuals with a mental illness are at a higher risk of experiencing a hate crime, and the total number of hate crimes perpetrated against these individuals is often underrepresented because many of these crimes go unreported (Yanos, 2018).

Individual Predictors of Mental Illness Stigma

This study focuses on the individual factors that influence mental illness stigma. Although stigma against those with mental illness has been documented on a community scale, little research has been completed to determine the individual differences that influence mental illness stigma from person to person. Various aspects of a person's upbringing, style of living, and background can impact potential mental illness stigma (Gonzalez et al, 2017).

One defining factor for such stigma is age. Although the younger generations have often been classified as more open-minded and accepting, studies have shown that younger people are more likely to believe that a person who acts out because of a mental illness should be punished for that violent behavior (Anglin et al., 2006). Past research has also found that adolescents and teens display stigma towards each other regarding mental illness stigma (DeLuca, 2020). However, overall stigma is lower among younger people and higher among older generations (DeLuca, 2020). This could be due in part to the budding mental health movement that has become popularized over the past couple of decades.

People are encouraged to seek mental health treatment far more often today than in any other time in history. Mental health issues are often more commonly discussed in the open and in society, so there is less shame attached to seeking help (Anglin et al., 2006). Older generations grew up during an era of "them" and "us", where mental health issues were never discussed in public and rarely discussed in private (Corrigan et al., 2014). This created a hostile environment for sharing any type of mental health issue, so it is natural for those feelings to continue as one ages, even though the environment around mental health has changed (Corrigan et al., 2014).

Another factor which can influence stigma is an individual's sex. Several studies suggest that women are less likely to think harshly of someone with mental illness. They are more likely to believe that mental illness is not the result of a person's actions or lifestyle (Holzinger et al., 2012). Men are more likely to blame the person with mental illness and believe that they should be punished or retained more authoritatively (Holzinger et al., 2012). Women have been found to be more open to various forms of treatment, such as therapy and alternative treatments, while men have been reported to favor medication and restriction of freedom for those with severe mental illness (Holzinger et al., 2012). However, in many of the studies conducted involving gender differences and mental illness stigma, any differences that were found were small.

Level of education has been cited as a predictor of mental illness stigma within individuals. Persons with lower levels of education have been found to be less tolerant of those with mental illness and to show avoidant tendencies towards them (Angermeyer & Dietrich, 2006). However, the type of mental illness plays a role in an individual's reaction

to it. Schizophrenia and alcoholism generate more feelings of unease and approbation than anxiety and depression regardless of education level. However, individuals with higher levels of education are more likely to advocate for psychosocial interventions for treatment (Angermeyer & Dietrich, 2006).

Past studies have found that race can play a role in mental illness stigma. A 2020 study showed a difference between African Americans and European-Americans regarding stigma (Eylem et al., 2020). African Americans were more likely to believe that people with severe mental illness would be more violent. However, they were less likely to believe that these individuals should be punished or blamed because of their mental illness (Anglin et al., 2006). Previous studies have found that cultural influences play a role in mental illness stigma among African Americans and Asian Americans. These influences can have huge sway over an individual and how he or she responds to mental illness (Abdullah & Brown, 2011). In the general definition of mental illness stigma, African Americans have less stigma than European Americans when it comes to blaming those with mental illness for their actions and behaviors, but that they display more stigma in regard to believing the misconception that people with mental illness are violent (Angermeyer & Dietrich, 2006). Previous research has found that minority populations have higher levels of stigma than majority populations. However, minority populations are also more likely to experience mental illness stigma than individuals with mental illness from the majority population (Eylem et al., 2020)

Contact with someone with mental illness can be another predictor of mental illness stigma. Individuals who have had little to no contact with the mentally ill often have

misconceptions about mental illness, leading them to believe that people with mental illness are violent or 'unhinged' (Angermeyer & Dietrich, 2006). However, having a high level of contact with individuals who have mental illness does not mean that there is no chance of stigma. One of the most common forms of stigma is purposely distancing oneself from someone with a mental illness. This often means ceasing contact with a friend or acquaintance once they have been diagnosed or once they discuss getting treatment. It can also mean separating oneself from a neighbor or a colleague in the workplace. (Angermeyer & Dietrich, 2006).

According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013), severe mental illnesses have been named from the spectrum of schizophrenia, anxiety and affective disorders, eating disorders, and personality disorders. Research has shown that structure is an important aspect of treatment for individuals with severe mental illness. Unfortunately, many communities lack the necessary programs that provide this critical structure, so individuals who have severe mental illness cannot get the help they need and they end up living on the streets or in prison (Lamb et al., 2014). Research has shown that the type of mental illness that an individual is diagnosed with changes the severity and type of stigma that they will experience. Severe mental illnesses such as schizophrenia are often met with more frequent and severe forms of stigma (DeLuca et al., 2018).

This cycle perpetuates the stigma that people with mental illness are violent and shouldn't be allowed to reside with the general population. This often means that those individuals are pushed into neighborhoods with lower economic wealth and stability. In these areas, crime and unemployment are often high and they are already considered

"high-risk" areas by those in the middle and upper strata of society (Topor et al., 2016). The fear that is often associated with mental illness stigma perpetuates the belief that relegating individuals with severe mental illness to certain areas will create a safer world for everyone else, so it is often encouraged in community policy making (DeLuca et al., 2018). Cities have been particularly impacted by deinstitutionalization because many individuals that are displaced find their way to cities, but are met with insufficient housing, low wages, and little opportunity, which does not breed success and only intensifies the stereotypes about mental illness (Gostin, 2007). Areas with higher levels of neighborhood disadvantage and higher crime rates tend to show higher levels of stigma against individuals with mental illness (Corrigan & Shapiro, 2010). However, since people diagnosed with a severe mental illness are typically forced to live in these areas due to discrimination in housing and employment, there are a disproportionate number of individuals with mental illness living in these areas, increasing the risk for negative interactions with the community.

Current Study

Research on mental illness stigma is not nearly as expansive as it should be, and there are still many gaps in the literature that need to be addressed. To implement positive social change and create policies that could assist this endeavor, it is necessary to study stigma in the general population to determine why and in what manner it still exists.

When identifying and analyzing stigma, where and how the individuals being stigmatized live can be important predictive factors. Different parts of the country and even

different parts of a community will vary widely in the level of stigma that is present. Stigma has been found to be higher in individuals with less education and more conservative views (Angermeyer & Dietrich, 2006). Another salient predictor is an individuals' past interaction with someone with mental illness. Because a disproportionate number of people with mental illness live in areas with neighborhood disadvantage, it is necessary to include an analysis of neighborhoods when assessing stigma (Gostin, 2007).

This study hopes to build on previous research conducted on communities and mental health stigma by focusing on individuals who live in these communities and the level of stigma they possess (Gonzales et al., 2017). A vast array of people live in a community, all with different outlooks and opinions on life. It is important to break down communities to individuals to clarify exactly who possesses high levels of mental health stigma and how we can reduce this stigma. Using the information that is currently available on this subject, this study hypothesizes that individuals who have spent little to no time with someone with a mental illness will have higher levels of mental illness stigma. It is also hypothesized that individuals who have lived in the neighborhood longer will have higher levels of mental illness stigma.

Method

Procedure

Approval from the institutional review board was received from all participating institutions. The dataset utilized for this project was collected between March 2014 and December 2015 from participants in the New York City metropolitan area. Approximately

200 individuals were interviewed from one of three areas (Central Brooklyn, Harlem, and Southern Westchester), and a minimum of 50 participants were included for each zip-code. However, due to safety concerns in one area, less than 50 participants for that zip code were included in the survey. This information was collected by distributing flyers throughout public locations, and participants were surveyed by trained research assistants. Once informed consent was acquired, participants were asked about personal information and given the RIBS, AMIS, and MIMS-P questionnaires to assess various mental illness stigmas. They were also asked demographic questions about the neighborhood where they lived. This information was collected independently by the participant filling out the questionnaires, or by research assistants filling out the questionnaires based upon participants' oral responses.

Participants

A total of 608 participants over the age of eighteen were eligible to participate in this research. Participants were required to be at least 18 years of age and speak English fluently enough to complete the interviews. They must also have lived or worked in the area at the time of the interviews. Each interview lasted approximately 5 to 10 minutes, and each participant was compensated $10. Information was collected from three neighborhoods in the New York City metropolitan area: East/Central Harlem in Manhattan (zip codes 10027, 10029, 10030, and 10035), Crown Heights/East Flatbush in Brooklyn (11212, 11213, 11225, and 11226), and Yonkers/Mount Vernon in Westchester (10550, 10701, and 10705). These neighborhoods were chosen because of their large range of

socioeconomic characteristics and their high volume of people with psychiatric disabilities. This high concentration was due to the large number of scattered-site and congregate housing available for these individuals, as determined by a prior feasibility study.

Measures

Demographic questions

Respondents were asked to answer questions focusing on their demographic information. This included questions about what neighborhood the respondent lived or worked in, the age of the respondent, the education level of the respondent, how long the respondent lived or worked in the neighborhood, the respondent's marital status, the respondent's sex, and the respondent's race.

The Reported and Intended Behavior Scale

The 8-item Reported and Intended Behavior Scale (RIBS) was utilized for the study to determine the degree of close contact that each individual had experienced with a person with mental illness and their openness to future close contact with these individuals (Evans-Lacko et al., 2011). Items one through four assessed the amount of close contact that an individual had with someone with mental illness and asked questions such as “Are you currently working with, or have you ever worked with, someone with a mental health problem?” Items five through eight assessed an individual’s openness to having a close relationship with someone with mental illness and asked questions such as “In the future, I

would be willing to continue a relationship with a friend who developed a mental health problem". Items one through four were scored using a multiple-choice option of "Yes", "No", or "Don't Know", with "Yes" answers indicating more contact. Items five through eight were scored using a 5-point Likert Scale ranging from "Strongly Disagree", which was scored as 5, and "Strongly Agree", which was scored as 1. Higher total scores indicate more mental illness stigma (i.e. more intended social distance). For this study, only items 5-8 were included in the analyses because these items focus on future close contact and intended social distance that each individual is predicted to have in the future. Items 5-8 were converted into the RIBS Intended Scale meant to assess an individual's future intention of social distance from a person with mental illness. individual's overall contact with someone with mental illness. This scale's internal consistency is acceptable, with Cronbach's alpha = .74

Attitudes Toward Mental Illness Scale

Several questions from the Attitudes Toward Mental Illness Scale (AMIS) (Kobau et al., 2010) were included in this study to determine each individual's stigmatizing tendencies in regard to mental illness. Eleven questions from the 22-item scale were utilized for this study. Positive statements such as "I believe a person with mental illness would improve if given treatment and support", and negative statements such as "I believe a person with mental illness is a danger to others" were included. These statements can be broken down into subcategories within AMIS, such as the AMIS Recovery Subscale and the AMIS Negative Subscale. Each question was answered using a 5-point Likert Scale ranging

from “Strongly Disagree” as 1 to “Strongly Agree” as 5, and positive statements were reverse scored. Higher scores indicated a smaller amount of stigmatizing attitudes towards individuals with mental illness. AMIS demonstrated a moderate internal consistency, with Cronbach’s alpha = .60.

Mental Illness Microaggressions Scale – Perpetrator Version

Fourteen items were used from the Mental Illness Microaggressions Scale – Perpetrator Version (MIMS-P) to assess various forms of microaggressions against individuals with mental illness (Gonzales et al., 2015). Statements such as “If someone I’m close to told me that they had a mental illness diagnosis, I would avoid asking them for favors because it would be hard for them to help someone else”, and “If someone I’m close to told me that they had a mental illness diagnosis, I would be careful in case they “snap”” were included in the survey. These statements can be broken down into subcategories within the MIMS-P: the MIMS-P Fear of Mental Illness Subscale, the MIMS-P Patronization Subscale, and the MIMS-P Assumption of Inability Subscale. Each statement was answered using a 5-point Likert Scale ranging from 1: Strongly Disagree to 4: Strongly Agree. Higher scores indicated higher levels of mental illness stigma and behaviors indicating microaggression. The MIMS-P internal consistency is good, with Cronbach’s alpha = .85.

Results

A total of 608 participants were included for these analyses. Several items were dichotomized to run analyses: Race, Age, Sex, Education, Marital Status, and Sex, Marital

Status and Race were dichotomized for these analyses. Race was coded so that 0= African American/Black and 1= All Other Races. The percentile breakdown for race showed that more than half of the respondents (58.6%) identified as African American/Black, while 18.5% of respondents identified as Latino/Hispanic and 9.9% identified as European/White. A total of 41.4% respondents listed their ethnicity as something other than African American/Black, so they were all included in the All Other Races category of the dichotomized variable. Sex was coded so that 0= Male and 1= Female. Marital Status was coded so that 0= Single and 1= Married or Living with Partner. A large majority of respondents listed marital status as single (69.5%). Age, Education, and Years Lived or Worked in Neighborhood are continuous variables, so they were not dichotomized.

In addition to dichotomizing these variables, they were also split into the three separate geographical locations used in this study: South Westchester, Brooklyn, and Harlem. This categorization was used because respondents were chosen from these three areas for the survey and each different geographical location had its own individual findings of various significance when compared to the demographic characteristics.

The first stage of analysis focused on frequency tables in which the demographic variables are compared and analyzed based on the respondent's geographic location. Correlations were then used to compare demographic variables, mental health background, and stigma-related variables. Next, multiple regression was executed using SPSS to determine the relationship between community stigma and the demographic variables of respondents.

Demographic variables for this study can be found in Table 1. Age ranged from a minimum of 18 years and a maximum of 90 years old (M=41.97, SD=15.71) with an N of 591. A majority of respondents self-identified as African American/Black, with the remaining respondents identifying as European/White, Latino/Hispanic, Asian-American/Pacific Islander, Arab/Middle Eastern, Native American, and Other. There were more respondents who identified as male rather than female. and the survey participants varied widely in age, race, education level, and years that they lived in each neighborhood.

Every subscale within the MIMS-P had a significant correlation with at least one demographic variable being tested and most had a significant correlation with multiple variables. Both subscales within the AMIS had significant correlations with the demographic variables, and the AMIS Total 7-Item survey had significant correlations with three demographic variables: Age, Marital Status, and Education. These correlations can be found in Table 2. There was one significant correlation between the RIBS Intended Scale and age at $r(573)= -.095$, $p= .023$.

The correlation between Age and the MIMS-P Total 14-Item was significant at $r(586)= .185$, $p< .001$, the correlation between Race and the MIMS-P Total 14-Item was significant at $r(589)= -.135$, $p < .001$, the correlation between Education and the MIMS-P Total 14-Item was significant at $r(580)= -.214$, $p < .001$, and the correlation between Years Lived in or Worked in Neighborhood and the MIMS-P Total 14-Item was significant at $r(604)= .111$, $p= .006$. Three variables were significantly correlated with the AMIS Total 7-item scale. The correlation between Age and AMIS Total 7-Item was significant at $r(586)= .147$, $p< .001$, between Years Lived or Worked in Neighborhood and AMIS Total 7-Item at

r(604)= .091, p= .025, and the correlation between Education and AMIS Total 7-Item was significant at r(580)= -.118, p= .004.

A correlational analysis showed a significant relationship between total community stigma and Age at r(589)= .122, p <.001. Controlling for all other variables, age was found to have a significantly positive relationship with community stigma. A significant relationship was also found between community stigma and Race at r(592)= -.125, p= .002. A significant relationship exists between community stigma and Marital status at r(594)= .082, p= .045. A significant relationship was also found between Years Lived or Worked in Neighborhood at r(607)= .095, p= .019 and also for Years of Education at r(583)= -.101, p< .015.

The regression of demographic characteristics and total community stigma had an adjusted R Square of .035, meaning that 3.5% of the variance in the dependent variable can be explained by the independent variable. Controlling for all other variables, age was shown to have a significant relationship with community stigma indicating that age plays a factor in the amount of stigma a person in the community is likely to possess. Education also had a significant relationship when all other factors were controlled, showing that it also has a separate influence on whether a person will display stigmatizing thoughts or behaviors. Sex was also shown to be a predictor of stigma when controlling for all other variables. This analyses also revealed that Race plays a role in the amount of mental illness stigma in an individual. Controlling for all other factors, a person's race will be a predictor as to the level of stigma that he or she may possess with African American/Black respondents displaying higher levels of stigma than other races in this study. Marital status

was also shown to have a significant relationship with community stigma. Whether an individual is single or married/living with a partner is a predictor of the amount of stigma they may have against individuals with mental illness.

Discussion

The analyses completed for this study do show that individuals who have had more education display fewer stigmatizing attitudes towards people with mental illness. In examining the various scales used for this study, education had a negative correlation for every scale, except the Reported and Intended Behavior Scale, which had a positive correlation. Regression analysis also found a significant negative relationship between education and the MIMS-P and AMIS scales. Participants who had more educational years were less likely to display stigmatizing attitudes and more likely to have a close relationship with someone who has a mental illness. This is consistent with previous research conducted on this topic (Angermeyer, M. C., & Dietrich, S.,2006). Having higher levels of education means that people were exposed to more research and education on the topic of mental illness, which is often not discussed until entering a higher level of education, such as college or the last few years of high school. Being exposed to discussions and information about mental illness through the educational system could give someone a better understanding of what mental illness is like and help break down the stereotypes that continue to exist in today's society.

Age was positively correlated with the MIMS-P and AMIS, showing that older respondents had a higher level of stigma than younger respondents. However, age had a

negative correlation with the RIBS scale, indicating that older respondents are less likely to engage in contact with individuals with mental illness than younger respondents. The regression analysis also showed significant relationships between age and all assessments across the board. This is consistent with the hypothesis that individuals with less contact with mental illness will have more stigmatizing attitudes towards people with mental illness. Because the data collected for this survey was completed in person on the street, we were able to obtain a vast sample with people of all ages. This is not always the case in studies conducted through other methods and could explain why age was such a dominant predictor of individual mental illness stigma in the current study. Also, in the age of modern technology, younger generations have access to technology like never before. This means that knowledge and education is infinitely easier to obtain than it was a few decades ago. Since younger generations tend to have a better understanding of technology, they can use it more frequently and successfully than the older generations. This allows them to access information about mental illness and have more interaction with individuals who have mental illness using public platforms. The recent increase in mental health positivity and outreach has also been a new development that has only gained in popularity in the last several decades. Older generations were taught to bottle up emotions and distance themselves from anyone with a mental health issue because they were potentially dangerous (Angermeyer, M. C., & Dietrich, S.,2006). These stereotypes and stigmatizing behaviors were so common that it could be difficult to cut ties with these beliefs even in the current, more accepting climate that we live in today.

Overall, Sex had a negative correlation to the MIMS-P, indicating that females have fewer stigmatizing views than males. Sex had a negative correlation for the MIMS-P

Patronization Subscale and the MIMS-P Assumption of Inability Subscale, indicating that women have fewer stigmatizing attitudes regarding believing that individuals with a mental illness are less capable of functioning in the world. They also have less stigma towards classifying a condition as a mental illness and seeking professional treatment for it. A negative significant relationship between the MIMS- Patronization scale and sex was discovered using regression analysis, indicating that men display higher levels of patronization towards people with mental illness. This has been consistent with previous research conducted on gender and mental health stigma (Holzinger et al., 2012). However, males had fewer stigmatizing attitudes regarding fear of mental illness. This may indicate that males display less fear of mental illness when encountering individuals in everyday life.

Females show more fear of mental illness when in closer contact with individuals displaying aggressive symptoms of mental illness. The Attitudes Toward Mental Illness Scale was positively correlated with Sex, indicating that females have fewer stigmatizing attitudes towards mental illness. It is interesting and contradictory that even though males indicated that they had more contact with people with mental illness, they displayed higher levels of stigma against them.

Race was negatively correlated with the Mental Illness Micro-Aggressions Scale Perpetrator edition and positively correlated with the Attitudes Towards Mental Illness Scale. Regression analysis showed a negative significant relationship between race and the MIMS-P total 14-item assessment. This indicates that respondents who identified as African American/Black had higher levels of stigma than respondents who identified as any other

race. There was also a negative correlation with the Reported and Intended Behavior Scale, indicating that African American/Black respondents were more likely to engage with individuals who have mental illness but they still have higher levels of mental illness stigma. This does not agree with the current study's hypothesis that respondents who have had less contact with individuals with mental illness will display more stigmatizing views and behaviors.

One possible reason for why African American/Black respondents could have a higher level of mental illness stigma is because the neighborhoods that were studied have a disproportionately high African American/Black population. Urban neighborhoods with high neighborhood disadvantage often have high populations of African American/Black families that reside there. This could be attributed to racial stigma that exists in housing that is similar to the types of mental illness stigma that is experienced by people with mental illness (Anglin et al., 2006). These families are often forced into highly populated neighborhoods and housing because they are priced out of wealthier neighborhoods. Because these individuals live in a neighborhood that also has a disproportionate population with mental illness, there is a higher likelihood that African American/Black populations will have a negative interaction with someone who has a mental illness.

Marital Status had a positive relationship with the MIMS-P, the AMIS, and the RIBS, showing that respondents who are married or living with a partner have a higher level of stigma. This could partially be explained because individuals who are older will be more likely to be married or living with a partner than younger individuals, and age is also a factor in determining stigma of mental illness.

The number of years that a respondent lived in their neighborhood also had a positive relationship with the MIMS-P, the AMIS, and the RIBS, indicating that the longer an individual has lived in an area, the more stigma they are likely to possess. Regression analysis showed a significant positive relationship between the MIMS Assumption of Inability Subscale and years that a respondent has lived or worked in their neighborhood. This indicates that respondents who have lived in the neighborhood for longer have higher levels of stigma regarding an individual with mental illness and his or her ability to take care of themselves without assistance. The positive relationship that Years Lived in Neighborhood have with the Reported and Intended Behavior scale means that even though these respondents are more likely to have interactions with individuals with mental illness, they have higher levels of mental illness stigma. This contradicts the hypothesis that individuals who have had more contact with people with mental illness would have fewer stigmatizing tendencies.

This study set out to determine the individual factors that affect mental illness stigma throughout various neighborhoods in the city of New York. Despite some interesting outliers in regard to gender, age, and race and the relationship to mental illness stigma, the original hypotheses for this study were confirmed. Individuals who are open to having more interactions with individuals with mental illness do show fewer stigmatizing attitudes and individuals who have lived in their neighborhood for a longer period of time do show higher stigmatizing attitudes. This may be because many of these neighborhoods are socioeconomically disadvantaged communities. They were selected because there is a high concentration of housing for people with mental illness in this area, so there is also a high concentration of individuals with mental illness. Marginalized people and individuals

with mental illness often cannot find affordable housing, so they are forced into economically disadvantaged communities. Other individuals who live in these communities will therefore have a higher level of contact with people with mental illness. This could explain the higher amount of stigma in individuals who have lived in these neighborhoods for longer periods because they have come into contact with a disproportionately high number of individuals with mental illness and have a higher likelihood of having a negative interaction with someone with mental illness.

This sample was recruited through street outreach by asking people if they lived or worked in specific communities, which allowed connection with a different segment of the population than you would get using a phone-based survey or an internet survey. Previous research that has been conducted on this topic has always been through phone or electronic canvassing and survey taking. This could explain why the findings in previous studies may be different than the findings found in this research. However, there are several limitations to this study. This data was collected between 2014 and 2015. Public policy and political climates have changed drastically since then, so data collected currently could be in juxtaposition to the findings in this study. Also, a history of personal mental illness was not collected for this study. Participants who completed this survey who have a history of mental illness could have influenced the data. Future research could include this as a focus of study to indicate levels of mental illness stigma among individuals who previously or currently have a mental illness. This study contributes to our current understanding of mental illness stigma on an individual level and how those individual stigmas affect a community. The findings could help further the field of study focused on

mental illness stigma and contribute findings to help reduce mental illness stigma in the city of New York and beyond.

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Tables

Table 1. Demographic Characteristics of Sample

	Brooklyn	**Harlem**	**South Westchester**		**Total**
Variables	n (%)	n (%)	n (%)	p-value	n (%)
Gender					
Male	126 (21.1)	107 (17.9)	118 (19.8)	<.001	351 (58.8)
Female	77 (12.9)	92 (15.4)	77 (12.9)		246 (41.2)
Race/Ethnicity					
African American/ Black	147 (24.7)	104 (17.5)	97 (16.4)	<.001	348 (58.6)
European/White	18 (7.3)	13 (5.3)	28 (11.4)		59 (24)
Latino/Hispanic	16 (6.5)	48 (19.5)	46 (18.7)		110 (44.7)
Asian-American/ Pacific Islander	2 (,8)	10 (4.1)	2 (.8)		14 (5.7)
Arab/Middle Eastern	0 (0)	1 (.4)	3 (1.2)		4 (1.6)
Native American	2 (.8)	3 (1.2)	2 (.8)		7 (2.8)
Other	18 (7.3)	19 (7.7)	15 (6.2)		52 (21.2)
Age					
18-25	32 (5.4)	54 (9.1)	37 (6.3)		123 (20.8)
26-35	40 (6.8)	42 (7.1)	33 (5.6)		115 (19.4)
36-45	28 (4.7)	30 (5.1)	31 (5.2)	<.001	89 (15.1)
46-55	54 (9.1)	26 (4.4)	47 (8.0)		127 (21.5)
56-65	38 (6.4)	31 (5.3)	32 (5.4)		101 (17.1)
66-75	10 (1.7)	11 (1.9)	9 (1.5)		30 (5.1)
76-85	2 (.34)	2 (.34)	1 (.16)		5 (.84)

86-90	0 (0)	0 (0)	1 (.16)		1 (.16)
Education					
0-8 years	5 (.90)	4 (.6)	8 (1.4)		17 (2.9)
9-12.5 years	113 (19.3)	97 (16.6)	102 (17.4)	.000	312 (53.3)
13-18 years	74 (12.6)	87 (14.9)	72 (12.3)		233 (39.8)
19-24 years	9 (1.5)	6 (1.1)	8 (1.4)		23 (4.0)
Marital Status596					
Married	51 (8.6)	38 (6.4)	42 (7.0)		131 (22.0)
Single	131 (22.0)	142 (23.8)	141 (23.7)	.000	414 (69.5)
Living with Partner	23 (3.8)	18 (3.0)	10 (1.7)		51 (8.5)
Number of years participant has lived or worked in the community 609					
0-5 years	78 (12.8)	15 (18.9)	113 (18.5)		306 (50.2)
6-10 years	42 (6.9)	26 (4.3)	33 (5.4)		101 (16.6)
11-15 years	28 (4.6)	17 (2.8)	14 (2.3)		59 (9.7)
16-20 years	11 (1.8)	12 (2.0)	9 (1.5)		32 (5.3)
21-30 years	22 (3.6)	13 (2.1)	14 (2.3)		49 (8.0)
31-40 years	14 (2.3)	9 (1.5)	9 (1.5)	<.001	32 (5.3)
41-50 years	4 (.66)	5 (.82)	5 (.82)		14 (2.3)
51-60 years	8 (1.3)	3 (.49)	0 (0)		11 (1.8)
61-70 years	1 (.16)	1 (.16)	0 (0)		2 (.32)
71-80 years	0 (0)	0 (0)	0 (0)		0 (0.0)
81-90 years	0 (0)	3 (.48)	0 (0)		3 (.48)

Table 2: Correlation Between Demographic Variables and Stigma-Related Variables

	Demographic Variables					
	Age	Sex 0 = Male 1= Female	Race 0 = African American/Black 1 = All other races	Marital Status 0 = Single 1 = Married/living with partner	Education	Years in Neighborhood
RIBS Intended Scale	-.095*	.008	-.018	.013	-.044	-.030
Stigma-Related Variables						
AMIS Total 7-Item	.147**	.009	-.010	.066	-.118**	.091*
AMIS Negative Stereotypes Subscale	.138**	.000	.003	.016	-.046	.078
AMIS Recovery Subscale	.084*	.010	-.021	.075	-.123**	.057
MIMS-P Total 14-Item	.185**	-.074	-.135**	.010	-.214**	.111**
MIMS-P Assumption of Inability Subscale	.245**	-.067	-.155**	.053	-.230**	.158**
MIMS-P Patronization Subscale	.052	-.128**	-.107**	-.040	-.222**	.037
MIMS-P Fear of Mental Illness Subscale	.144**	.049	-.044	.010	-.022	.072

Table 3: Regression Analysis Comparing Demographic Variables, Mental Health Background, and Stigma Related Variables

	MIMS-P Patronization Subscale		MIMS-P Assumption of Inability Subscale		MIMS-P Fear of Mental Illness Subscale		MIMS-P Total 14-Item scale		AMIS Recovery Subscale		AMIS Negative Stereotypes Subscale		AMIS Total 7-Item Scale		RIBS Intended Scale	
	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2
Age	.002	.070***	.009***	.133***	.005**	.027**	.005***	.092***	.004	.028**	.009**	.025*	.006**	.043***	-.025*	.012
Sex	-.126**		-.045		.063		-.044		.017		..039		.030		.063	
Race	-.101		-.163**		-.045		-.108**		-.023		.053		.014		-.304	
Marital Status	-.046		.072		.005		.010		.118		.048		.091		.161	
Years of Education	-.044***		-.050***		-.003		-.034***		-.035**		-.016		-027**		.056	
Years Lived in Neighborhood	.000		.004*		.002		.002		.003		.003		.003		.004	