

ABSTRACT

Mental Health Utilization Pathways During COVID: Results from a Private University

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The majority of people who experience symptoms of mental illness never receive treatment for their mental health and college students are no different. This thesis examines college students' mental health service utilization journeys. Analyzing data collected from a survey given to students at Baylor University in the spring of 2021, this study looks for connections between informal and formal mental health service utilization as well as past support and peer networks. This research examines the data from perspective of the network-episode model of mental health utilization. This thesis tries to better understand the illness career and the social support systems that best correlate to mental health service utilization. The findings suggest that current and past social support provided by friends and family are associated with higher rates of utilization. Analysis of religious support indicates that there is little association between utilization rates and receiving informal support from their religious community. The stress associated with the COVID-19 pandemic correlates with utilization rates and perceived need of help. The pathways to utilization are diverse. This thesis provides a closer understanding of utilization among students.

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Mental Health Utilization Pathways During COVID: Results from a Private University

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CHAPTER ONE

College Students and the Importance of Early Mental Health Intervention

Introduction

It is estimated that \$193 billion in economic productivity is lost annually to debilitating mental illnesses such as depression and anxiety (Kessler et al., 2008). The 2019 National Survey on Drug Use and Health found that most people in the United States who experience symptoms of mental illness do not receive any formal help or treatment for their symptoms (*2019 National Survey of Drug Use and Health (NSDUH) Releases | CBHSQ Data*, n.d.). For those who do seek help, there usually is a significant delay between the onset of symptoms and formal help seeking and diagnosis (Pescosolido & Boyer, 2009). Early and effective detection and treatment could be instrumental to managing the current mental health crisis. More to the point, earlier interventions may have larger payoffs by enabling more years lived without illness. Many mental health disorders have their onset by the age of 24 , so intervention at or around this age could be incredibly beneficial to the long-term mental health of these individuals. The average college student is between the ages of 18 and 24 making this an important population to target in addressing the mental health utilization crisis.

College Environment

College is a special atmosphere to look into because the students are experiencing a significant transition to adulthood, but often still reliant on their family. Colleges offer many resources to help students navigate this transition including formal and informal

mental health resources.

Mental illness rates on college campuses are on the rise in recent years (Hunt & Eisenberg, 2010). Much like the larger population, most college students with symptoms of mental illness do not receive any form of treatment. 32% of students have at least one mental illness (Eisenberg et al., 2013). 17.3% of students screen positive for depression and 9.8% of students screen positive for an anxiety disorder (Eisenberg et al., 2013). The high prevalence of mental illness in college students is not associated with high rates of utilization. The rate of mental health utilization for college students has been reported at 21.8% (Eisenberg et al., 2011), 15% (Eisenberg et al., 2007), and 20% (Hunt & Eisenberg, 2010). The disparity between the high rates of mental illness and the low rate of utilization is a cause for concern for university faculty and staff, and steps have been taken to try and provide resources to college students. The environment of a college campus provides unique intervention opportunities for addressing and treating this mental health crisis and looking into the factors that influence utilization can inform these program and policy decisions.

Mental Health Utilization Pathways

There are a few frameworks for understanding health-service utilization pathways. The sociobehavioral model is one of the first models that explains and outlines a process through which predisposing characteristics, enabling resources, and need impact the use of health services. The sociobehavioral model was designed by Dr. Ronald Andersen to explain the pathway to health care utilization from the perspective of public health policy. A newer sociological model is the network-episode model (NEM) which was created to further explain health services utilization pathways. The NEM views

utilization as a social process and takes social content, social support systems, and the illness career into account. The NEM addresses many of the critiques of the sociobehavioral model. Common complaints include the assumption of a rational independent help-seeking decision process and the lack of emphasis on the role of culture in establishing need.

The sociobehavioral model has been tested on its ability to predict mental health utilization in the college environment. However, the sociobehavioral model was only able to explain 22% of the students' use of mental health resources with the need component being the strongest predictor over predisposing and enabling characteristics (Pilar et al., 2019). Still, there is more happening beyond the variables that the sociobehavioral model targets. A strength of the SBM is the emphasis that this model places on the need for treatment which is the single greatest predictor of utilization (Pescosolido & Boyer, 2009). However, the SBM assumes that the decision to help seek is an individual rational choice. To address this critique, the network-episode model approaches the decision to utilize as a social process navigated through social networks.

The network-episode model (NEM) is an enhanced sociological framework that expands the scope of the sociobehavioral model beyond predisposing characteristics, enabling characteristics, and need. The NEM takes into account a larger domain of social support systems and focuses on the illness career with multiple entrances and exits not an isolated decision to utilize. The individual is treated as a member of a network rather than a single rational player making individual decisions. The NEM accounts for individuals making decisions about utilization with the help of their networks. The NEM addresses utilization through the social context rather than through the largely rational context of

the SBM. The network episode model presents need, and the subsequent utilization, as a function of an individual's support systems.

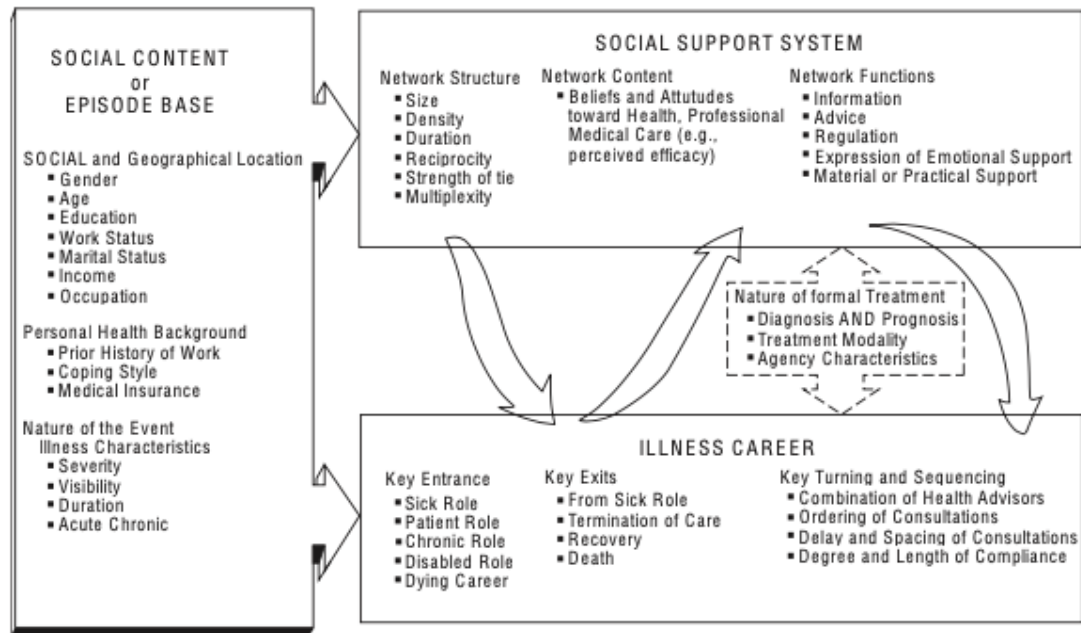


Figure 1. The network-episode model

The network-episode model can be used to examine how the interactions between an individual's social content, social support systems, and illness history impact mental health service utilization. This model looks at the journey of mental health service utilization as more than just a single decision rather as a career that encompasses the totality of the individual's experiences. Looking at mental health service utilization as an illness career allows one to see how people move into and out of the sick role and into and out of treatment.

The network-episode model to my knowledge has not been applied to understanding mental health utilization pathways on a college campus. The transition to

college disrupts an individual's networks which impacts their illness career and their social support systems. College students are often living away from their parents for the first time and are navigating their mental health struggles without their normal support systems. College provides a new social network to students through their relationships with organizations, peers, and institution faculty and staff. There is much to learn about the pathways to utilization in the college setting.

This thesis will focus on the pathways between social support systems and the illness career as depicted in Figure 1. Although research has investigated the role of networks in mental health services utilization (Beatie et al., 2020; Boydell et al., 2013; Perry & Pescosolido, 2015), this research has not addressed the particular circumstances of college life. For college students, family, peers, organizations, and mentors might figure prominently in the decision to utilize mental health services – that is, whether, how, and how often to receive guidance or treatment. Below, I propose several directions for investigating how contexts of social support among college students might relate to their evolving “illness careers” or experiences with the roles and consultations implied in mental health treatment. Although many college students may not be marked by a “sick role” in the sense of receiving a formal diagnosis, this itself may reflect their successful preventative or wellness care through talking with a counselor or other mental health provider. Therefore, I do not restrict this thesis to the investigation of those with a confirmed mental health diagnosis.

Family Relationships

There are many significant relationships in an individual's life that impact their likelihood to utilize mental health services. These relationships undergo a transition

period for college students, many of whom are living on their own for the first time. An individual's relationship with their family has been shown to impact rates of mental illness and mental health service utilization.

Through early and late adolescence, parents act as gatekeepers to mental health services. The quality of an adolescent's parent-child relationships will impact not only mental health service utilization but also an individual's mental health. For adolescents with an available parent figure in their life, the likelihood of seeking mental health resources is increased (Hassett et al., 2018). Similarly, having a strong parent-child relationship can impact a young adult's self-efficacy and independence which can have positive impacts on mental health (Mortimer et al., 2016). As a child grows up, the role of the parent is minimized, and once a child turns 18, the parental role is no longer mandated by the government. Because a college student is able to access mental health resources on their own, the role of the parent is in many ways less impactful than in adolescence, but the relationship between parents and children still affects many aspects of the college student's life. There is evidence that strong parent-child bonds can have a negative impact on a college student's academic performance as the student is more likely to feel lonely and miss their parents (Turley et al., 2010).

The relationship a child has with their parent has a significant impact on their mental health treatment utilization rates. How might past support of family members impact current utilization rates? Similarly, how does current support from family members impact rates of formal utilization? Furthermore, if the student is encouraged by their parents to seek treatment, how does parental encouragement impact utilization rates now that the parent is not gatekeeping mental health care for their child?

Friendships

Having support from your friends seems to offer mixed outcomes. Support is good for managing symptoms of mental health. However, experiencing mental health symptoms and talking to your peers about your experience can be alienating.

Experiencing symptoms of mental illness leads to isolation as many people want to distance themselves from mental illness (Martin et al., 2007). Because people distance themselves from mental illness, there is a hesitancy to help-seek and be labeled as a person with a mental illness. This remains true for individuals with less visible mental illnesses such as mild depression, anxiety, and panic disorders. For individuals with a serious mental illness that requires treatment, their support systems tend to be more supportive (Perry, 2011).

Peer relationships are important in the ways that an individual views mental illness. Stigma plays an important role in utilization rates, and two main types of stigma have been studied in college students' mental health use: personal stigma and perceived stigma. Personal stigma is the internalization of public stigmas and perceived stigma is how one thinks others see them. Both of these types of stigma rely on how we view the stigma of those around us. Higher levels of stigma are associated with lower levels of mental health utilization (Eisenberg et al., 2009).

The social networks on college campuses are unique because many of the students are away from home and their peer networks play a more substantial role in their decision making than their family network. Parents play a smaller role once an individual is away at college. The stigmas and perceptions around mental illness and mental health treatment impact rates of utilization and may deter individuals from talking about their mental

health with their friends. How does having current support from friends impact utilization rates? If a person had past support from their friends, they have a history of communication of mental health with their peers and would be less worried about the possible repercussions of seeking treatment impacting their friendships. How does past support from friend impact current mental health utilization?

Our friendships help us develop our perceptions of what it means to be in a “sick role.” If you have supportive friends, the sick role can be minimized to reduce the social barriers to utilization. Support from friends can encourage utilization if your friends hold positive beliefs about mental illness and treatment. In an environment where support from friends is not available, seeking treatment can present a complication to an individual’s support network.

Gender

There are significant differences in rates of mental illness such as depression and anxiety for men and women. There are higher rates of most mental illnesses among women. Women have higher rates of depression, panic disorder, and anxiety (Eisenberg et al., 2013). Women also have a higher likelihood of perceiving a need for mental health resources (Villatoro et al., 2018). Among those with symptoms of mental health disorders, men have lower rates of mental health service utilization than women experiencing the same symptoms. Men experience higher levels of personal stigma than women (Eisenberg et al., 2009).

There is evidence that women with mental health symptoms are more likely to be excluded from their social groups than men with symptoms of mental illness (Cheadle et al.,). Furthermore, women tend to expect more out of a relationship in terms of

emotional intimacy and trust than men expect (Felmlee et al., 2012). Men have larger peer networks than women, but women have emotionally stronger relationships than men (Bronkema & Bowman, 2018).

Differences between the friendships of men and women likely affect their rates of utilization. Knowing that men and women engage friendship differently, we expect the illness careers for men and women to be different. Because women tend to be less group oriented than men, they may be more impacted by their friend's encouragement or discouragement to seek help. Men might be less affected by an individual pushing him toward help, but the ideas of the community likely have a more significant impact on a man's mental health utilization. How do the levels of current and past support of friends compare for men and women?

Organizational Involvement

A community and culture is formed among college students of the same major or career path. This happens through the different pre-professional clubs and organizations that people are a part of as well as the courses that many people share. The culture in these groups can either support mental health service utilization or discourage it. Furthermore, on a college campus, the different clubs and organizations on the campus are a huge part of the social networks that individuals navigate in their illness career. The subcultures of these different groups can make individuals more or less likely to utilize mental health resources. The way that organizations function on a college campus is unique and presents a limitation of the current models for understanding utilization. Organizations are different from networks. Organizations are a mezzo level structure that

are not well captured in the NEM. How does involvement in various organizations impact stigma and utilization?

Religious Affiliation

Religion is an organization that impacts utilization. There is evidence that high rates of religiosity are associated with decreased mental health service utilization (Eisenberg et al., 2009). Stigma levels in religious populations are higher than in the general population (Eisenberg et al., 2009). There are perceptions in many religious communities that mental illness is a spiritual weakness, so some people will be hesitant to seek clinical treatment. These people will instead turn to prayer and their church community for support. How does religiosity impact rates of informal utilization?

On a Christian college campus, there are several spiritual resources in place to support students experiencing challenging times. Previous research looking into college students has revealed that higher levels of religiosity are associated with a decreased likelihood of using medication and therapy to treat mental health problems (Eisenberg et al., 2011). This data does not include informal help seeking which offers an alternative form of support. There are chaplains in the residence halls as well as campus wide spiritual leaders. These resources are provided as a help seeking option to students.

One potential path to mental health service utilization on Baylor's campus could involve the use of informal religious services in the place of formal medical treatment. Chaplains and other religious professionals are available to connect with students and listen to their problems. What role does religious support play in the utilization pathways of students on Christian college campuses? Are institutional religious resources an important part of college student's mental health pathways?

COVID-19 Pandemic

During the COVID-19 pandemic, there has been a significant emphasis on mental health. Because there is collective emotional distress from isolation and the rapidly changing world, many people are sharing their emotional distress and opening up about their mental health journeys. The pandemic and the subsequent shift to virtual care has increased accessibility to therapy through the widespread use of virtual sessions. How has the COVID-19 pandemic impacted utilization and the way that students perceive their need for treatment?

During this pandemic, there has been a rapid change in the cultural beliefs around mental health. This change will help people see their need for mental health support as a need rather than just normal life stress.

The NEM would be helpful to understanding the pathways of mental health service utilization on college campuses. Looking at a university, the illness history can follow many different pathways depending on the individual's social network and demographics. An individual navigates symptoms of mental illness through their support systems, so having informal support systems that are engaging with your mental health and even encouraging you to utilize can play an important role in the decision to utilize.

This research focuses on five main topics: (1) Utilization rates and history of family support, (2) Utilization rates and history of friend support with an emphasis on gendered differences in friend support, (3) The role of organizations on utilization, (4) The impact of religion on utilization, and (5) The impact of the COVID-19 pandemic on mental health utilization.

CHAPTER TWO

Survey Design, Distribution, and Analysis

Methods

With the help and supervision of Dr. Matthew A. Andersson, I created and conducted an online survey distributed to undergraduate students at Baylor University in Waco, TX. Baylor is a private Christian university with just over fourteen thousand students. The sample size was 251. The sample was gathered by distributing the survey to students in the Introduction to Sociology courses. Data was collected on respondent's year in school, religious background, religiosity, major, participation in student organizations, housing status, financial situation, gender, sexual orientation, and race/ethnicity

Baylor has a counseling center to support students' mental health. The Baylor University Counselling Center (BUCC) offers free services to all enrolled students. The BUCC offers a short-term model of therapy and treats personal issues, relationship issues, developmental issues, academic concerns, and other similar challenges. For problems beyond this scope, students are recommended to non-BUCC treatments. Baylor University provides access to these resources included in their tuition pricing, so all students have access to these free resources.

Key Measures

Overall mental health

Respondents were asked “how would you rate your overall mental health?” responses ranged from excellent (coded 1) to poor (coded 5). Anxiety and depression symptoms were measured using the Patient Health Questionnaire-4 (PHQ-4). The questions in that scale asked the frequency with which respondents were bothered by symptoms of mental illness in the past 2 weeks. Symptoms included little interest or pleasure in doing things, feeling down, depressed, or hopeless, feeling nervous, anxious or on edge, and not being able to stop or control worrying. The scores from this scale were used to classify the respondents as having mild to severe psychological distress.

Formal Utilization

To measure the respondent’s history of formal mental health service utilization, respondents were asked about past mental health service utilization. The response is used to establish their mental health illness career. Past utilization is described as the use of mental health services prior to attending university. Past utilization was measured by asking: “Prior to attending Baylor, had you received in person, virtual, or phone therapy or counseling for your mental or emotional health?”

Current mental health service utilization was measured by asking respondents “how often have you had in person, virtual, or phone visits in the past 12 months for therapy or counseling for your mental or emotional health?” The respondents who said they were utilizing formal mental health services were asked follow-up questions about where they were seeking treatment whether from the BUCC or an off-campus resource.

Support of Family and Friends

Levels of current and past informal support were measured. Respondents were asked, “in the past 12 months, have you received support for your mental or emotional health from any of the following sources? friends, family members, religious counselors or contacts, and non-clinical support groups” (Eisenberg et al., 2007, 2011). Past support was also measured. Respondents were also asked “prior to attending Baylor, did you receive counseling or support for your mental or emotional health from any of the following sources? friends, family members, religious counselors or contacts, and non-clinical support groups.” Stigma was measured by asking respondents “How embarrassed would you be if your friends knew that you were receiving professional help for an emotional problem?” with answer choices ranging from “Not at all” to “Very” (Thoits, 2011).

Encouragement

Respondents who were utilizing at least one mental health resource were asked questions about why they began using those services. Respondents were asked about how they were prompted to reach out for treatment whether they decided on their own, someone else thought they should get treatment, or they were ordered to get treatment (Alang & McAlpine, 2019; Thoits, 2011). All respondents were asked “has anyone encouraged you to get treatment or help for your mental or emotional health in the past 12 months?” with response categories for friends, parents, religious figures, and other.

Religion

Those who utilized religious resources were asked about their utilization of Baylor's resources: "Have you received support for your mental and emotional health from a religious leader at Baylor? (for example a chaplain)." Religiosity was measured by asking respondents "how religious are you?" with options from "very religious" to "not at all religious."

Organizations

Organizational involvement was measured by asking students about their organizations, housing status, and field of study. Organizations asked about include pre-professional designations and Greek life participation.

COVID-19

The impact of the COVID-19 pandemic was measured by asking the respondents about their pandemic-related stress. Respondents were asked "During the pandemic, compared to your life before, how often do you feel stressed?" with responses from less often to much more often.

Perceived Need

Respondents were asked "in the past 12 months, did you think you needed help for emotional or mental health problems such as feeling sad, blue, anxious, or nervous?" (Eisenberg et al., 2007, 2011; Golberstein et al., 2008). These responses were coded 1 for those who responded "yes" for a perceived need and 0 for those who responded "no" to perceiving a need for mental health help.

Analysis

To address the thesis' main topics, The following analysis were done. The role of the family on utilization was measured by looking at associations between past support and current utilization, current support and utilization, and parental encouragement and utilization. The impact of friendships was measured by looking at past support from friends and current utilization of mental health resources, current support from friends and current mental health utilization, and encouragement from friends and current utilization. Additionally, men and women's levels of support from friends were measured and compared for any associations. Organizational involvement's impact was measured by looking at rates of stigma across different campus organizations. The role of religion was measured through the respondent's religiosity, utilization of religious support systems, and their use of Baylor's religious resources. The impact of the COVID-19 pandemic was measured by looking at associations between perceived need of treatment and COVID related stress.

CHAPTER THREE

Presentation of Findings

Results

The sample was 251 students at Baylor University. Table 1 presents the demographic breakdown of the sample. Compared to the overall Baylor population the sample is comparable in racial background. The sample was 56.79% non-Hispanic white and the Baylor population is 60.43% non-Hispanic white. However, 17.53% of the survey respondents are Asian while only 6.88% of the Baylor population is Asian according to the university's 2020 Fall Facts. That category had the largest difference between the percentages in the sample and the percentages in the Baylor population. The sample was composed of 71.61% women which is larger than the 60.34% of the Baylor population. The average respondent was 18.91 years old. The sample was 85.3% Christian and 10.5% not religious. The Baylor population is 86.06% Christian and only 5.44% not religious.

Table 1 presents the mental health measures of the sample. 46% of respondents self-reported they had fair or poor mental health. 45.3% of respondents scored in the moderate to severe categories for the Patient Health Questionnaire-4 (PHQ-4) which measures frequency of symptoms of depression and anxiety.

Table 1. Basic Characteristics of the Sample

		%		%
Sex			Self-rated Mental Health	
	Female	71.61	Excellent	4.88
Race			Very Good	18.29
	Non-Hispanic White	59.76	Good	30.89
	Hispanic	15.54	Fair	35.37
	Black	5.18	Poor	10.57
	Asian	17.53	PHQ-4	
	Other	1.59	None	33.2
Religion			Mild	31.5
	Christian	85.3	Moderate	34.9
	Muslim	2.1	Severe	10.4
	Buddhist	2.1	Perceived Need	
	Non-Religious	10.5	Yes	50.6
Religiosity			No	49.4
	Very religious	21.01	Utilization	
	Fairly religious	48.32	None	74.9
	Not too religious	20.59	Once	7.95
	Not at all Religious	10.08	Once a month	5.77
Current Financial Situation			2-3 times a month	6.69
	It's a financial struggle	12.71	Weekly	5.02
	It's tight, but I'm doing fine	35.17	First Generation	19.92
	Finances aren't really a problem	52.12		

Utilization

For our analyses, we recoded the utilization variable so that anyone who utilized once or more was coded as “yes” and anyone without any utilization was coded as “no.” After that coding, 25.1% of the sample utilized formal mental health resources at least once in the past year. Of those who utilized mental health resources, 36.7% went to the Baylor University Counseling Center. The rates of utilization of informal resources for mental health support were much higher than the rates of formal utilization. 73.3% of the sample utilized at least one informal resource. Table 2 shows the percentage of respondents that utilized each informal support for their mental health, and the most

common informal resource is friends at 59.4%, at 50.1% family support is immediately following, and religious resources is third at 19.9%.

Table 2. Informal Support

		%
Family	127	50.1
Friends	149	59.4
Religious	50	19.9
Other	37	14.7
None	67	26.7

Perceived Need and Stigma

Perceived need is the strongest predictor of utilization of mental health services. Perceived need for help was measured, and as presented in Table 1, 50.6% of respondents thought they needed help for their mental health in the past year. In this study we found that perceived need is associated with utilization. 41.8% of people who perceived a need for treatment utilized mental health services compared to 7.7% of people who did not perceive a need for treatment.

Table 3. Perceived Need and Mental Health Services Utilization

			Perceived Need		Total
			No	Yes	
Any Mental Health Utilization in past 12 months	No	Count	108	71	179
		% within Perceived Need	92.3%	58.2%	74.9%
	Yes	Count	9	51	60
		% within Perceived Need	7.7%	41.8%	25.1%
	Total	Count	117	122	239
		% within Perceived Need	100.0%	100.0%	100.0%
Pearson Chi-Square		36.960	p	.000	

Surprisingly, our study did not find a significant association between stigma and utilization in the overall population. Of people with stigma, 27.2% utilized which is very comparable to 23.4% utilization among those without a stigma. There is no significant correlation here. We then looked at the association between stigma and perceived need and we found a significant association. 57.9% of people with stigma also perceived a need for treatment and 45.2% of people without stigma perceived a need for treatment.

Table 4. Stigma and Mental Health Services Utilization

			Stigma		Total
			No	Yes	
Any Mental Health Utilization in past 12 months	No	Count	95	83	178
		% within Stigma	76.6%	72.8%	74.8%
	Yes	Count	29	31	60
		% within Stigma	23.4%	27.2%	25.2%
	Total	Count	124	114	238
		% within Stigma	100.0%	100.0%	100.0%
Pearson Chi Square		0.456	p	0.499	

Family Support

Looking at the association between current support from family members and any utilization of mental health resources, Table 5 shows a significant association with formal utilization rates. Utilization rates nearly double from 17% for those who do not have family support to 32.3% for those who have current family support. This association is significant at ($p < .05$). For past family support, there is a smaller increase from 21.5% to 31.5%, and the association is not significant as seen in Table 6. There is a significant association between being encouraged by a parent to seek help and mental health utilization. 53% of respondents whose parents encouraged them to seek help did so. This

association is significant at ($p < .05$). Even when most of the respondents no longer live with their parents and families, the impact of family is still significant.

Table 5 Current Family Support and Current Utilization

			Family Support		Total
			No	Yes	
Any Mental Health Utilization in past 12 Months	No	Count	93	86	179
		% within Family Support	83.0%	67.7%	74.9%
	Yes	Count	19	41	60
		% within Family Support	17.0%	32.3%	25.1%
Total	Count		112	127	239
	% within Family Support		100.0%	100.0%	100.0%
Pearson Chi-Square		7.428	p	0.006	

42.7% of respondents with past support from a family member reported encouragement from a parent compared to 16.1% of respondents without past support from family members. This association is significant at ($p < .05$). This association is also present for current family support and encouragement. 41.7% of respondents with current family support were encouraged by a parent to seek help while only 8.8% of people without family support were encouraged by a parent.

Table 6. Past Family Support

		Past Family Support		Total
		No	Yes	
Any Mental Health Utilization in past 12 Months	No	Count	117	61
		% within Past Family Support	78.5%	68.5%
	Yes	Count	32	28
		% within Past Family Support	21.5%	31.5%
Total		Count	149	89
		% within Past Family Support	100.0%	100.0%
Pearson Chi-Square 2.946		p .086		

Support from Friends

For those who have current support from their friends, there is a significant association between having support from friends and utilization rates. Table 7 shows that 34.2% of people who use friends as an emotional support currently utilize formal mental health services compared to 10.0% of people who did not receive emotional support from their friends. This association is significant at ($p < .05$). Table 8 shows the association between past friend support and current utilization. 34.3% of people with past support from friends reported current utilization compared to only 18% of those who did not have past support from a friend.

Table 7. Friend Support and Current Utilization

			Friend Support		
			No	Yes	Total
Any Mental Health Utilization in past 12 Months	No	Count	81	98	179
		% within Friend Support	90.0%	65.8%	74.9%
	Yes	Count	9	51	60
		% within Friend Support	10.0%	34.2%	25.1%
Total		Count	90	149	239
		% within Friend Support	100.0%	100.0%	100.0%
Pearson Chi-Square		17.517	p	0.000	

Table 8. Past Friend Support and Current Utilization

			Past Friend Support		
			No	Yes	Total
Any Mental Health Utilization in past 12 Months	No	Count	109	69	178
		% within Past Friend Support	82.0%	65.7%	74.8%
	Yes	Count	24	36	60
		% within Past Friend Support	18.0%	34.3%	25.2%
Total	Count		133	105	238
	% within Past Friend Support		100.0%	100.0%	100.0%
Pearson Chi-Square 8.208			p	.004	

Encouragement from a friend has a significant association with utilization 38.9% of people who were encouraged by their friend utilized compared to 16.8% without friend encouragement. This association is significant at ($p < .05$). Having past support from a friend was significantly associated with being encouraged by a friend. 59.0% of respondents with past support from a friend reported encouragement from a friend compared to 21.1% of respondents without past support from friends. This association is significant at ($p < .05$). This association is also present for current friend support and encouragement. 54.4% of respondents with current friend support were encouraged by a

friend to seek help while only 9.8% of people without friend support were encouraged by a friend. This association is significant at ($p < .05$).

Gender

Friend support looks different for men and women as seen in Table 9. 71.6% of women report having received support from their friends while only 40.3% of men report having support from their friends. This association is significant at ($p < .05$). Men and women in the sample also utilized at different rates. Only 14.5% of men utilized mental health services compared to 29.6% of women. This association is significant at ($p < .05$).

Table 9. Gender and Friend Support

			Gender		Total
			Women	Men	
Friend Support	No	Count	48	37	85
		% within Gender	28.4%	59.7%	36.8%
	Yes	Count	121	25	146
		% within Gender	71.6%	40.3%	63.2%
Total	Count		169	62	231
	% within Gender		100.0%	100.0%	100.0%
Pearson Chi-Square		19.077	p		.000

Organizations

Table 10 shows the involvement of the sample in different organizations and cultures on campus. The breakdown for major is fairly comparable to the universities rates. The largest differences are in the arts and sciences and nursing. The sample has a lower percentage of students in the college of arts and sciences and a higher rate of students in nursing than the Baylor population. Sending this survey out in an intro class means that majority of the respondents are underclassmen, so having a high rate of on campus housing is expected and observed.

Organizational involvement has a significant impact on stigma. Stigma in the overall population was not significantly associated with utilization of mental health resources. 47.9% of the population reported a level of stigma toward mental illness. Table 11 shows the rates of stigma for different campus organizations. Involvement in Greek life has a significant association with stigma. The Pearson Chi-Square value is 8.433 and the association is significant at $p < .01$. Housing also has a significant association with stigma. The Pearson Chi-Square value is 16.69 and the association is significant at $p < .01$.

Table 10. Organizational Involvement

	%		%
Major/Field of Study		Housing	
Arts and Sciences	36.19	On Campus	67.37
Nursing	10.92	Off Campus	19.07
Education	1.26	With Parents	12.71
Health and Human Sciences	25.63	Academic Year	
Business	24.79	Freshman	52.57
Engineering and Computer Science	1.26	Sophomore	18.14
Greek Life		Junior	5.49
Yes	28.27	Senior	3.80
No	71.73		
Pre-Professional			
Pre-Medicine	8.73		
Pre-Law	2.78		
Other	10.71		
Honors	8.73		

Table 11, Stigma and Organizational Involvement

Organization		Stigma
		%
Greek Life	Yes	62.7
	No	41.8
Major	Arts and Sciences	45.3
	Nursing	53.8
	Health and Human Sciences	42.6
	Business	57.6
Honors	Yes	50
	No	47.2
Housing	On Campus	56.6
	Off campus	35.6
	With parents	23.3
Religion	Christian	51.7
	Not religious	28.0

Religious Resources

The data show little evidence of the importance of support from religious communities on and off campus and mental health utilization. Only 19% of the population utilized religious resources for their mental health, and of that 19%, 12% of them, 6, said that they utilized a Baylor religious resource such as chapel or the chaplains. Table 12 shows the association between religious support and utilization. The utilization rate for those who have current religious support is 26.0% compared to 24.9% for those without religious support. There is no significant association between current religious support and utilization. Rates of utilization are nearly the same for the two populations. For those with past religious support, the utilization rate is 23.5% compared to 25.3% for those without past religious support.

Table 12. Current Religious Support and Utilization

			Religious Support		
			No	Yes	Total
Any Mental Health Utilization in past 12 Months	No	Count	142	37	179
		% within Religious Support	75.10%	74.00%	74.90%
	Yes	Count	47	13	60
		% within Religious Support	24.90%	26.00%	25.10%
Total	Count		189	50	239
	% within Religious Support		100.00%	100.00%	100.00%
Pearson Chi-Square		.027	p 0.87		

Religiosity is associated with levels of religious support. As seen in Table 13, 50% of the very religious and 21.7% of the fairly religious have informal religious support. This association is not present for other types of informal support.

Table 13. Religiosity and Religious Support

			Religiosity				Total
			Very religious	Fairly religious	Not too religious	Not at all religious	
Religious Support	No	Count	25	90	49	24	188
		% within religiosity	50.0%	78.3%	100.0%	100.0%	79.0%
	Yes	Count	25	25	0	0	50
		% within religiosity	50.0%	21.7%	0.0%	0.0%	21.0%
Total	Count		50	115	49	24	238
	% within religiosity		100.0%	100.0%	100.0%	100.0%	100.0%
Pearson Chi-Square		44.776	p .000				

COVID-19

This data was collected during the COVID-19 pandemic, so we looked at the impact that pandemic related stress has on utilization. Table 14 shows the pandemic

stress levels. 73.7% of the sample reported feeling stressed a little bit more often or much more often than before the pandemic. There is a significant association between increased levels of stress during the pandemic and utilization of mental health resources as shown in Table 15. Additionally, Table 16 shows how the pandemic stress levels are associated with the perceived need of help for mental health treatment.

Table 14. Pandemic Stress

	Frequency	Percent
Less Often	14	5.7
About the Same	61	24.8
A Little More Often	117	47.6
Much More Often	54	22.0

Table 15. Pandemic stress and Utilization

			Pandemic Stress				
			Less Often	A Little More Often	About the Same	Much More Often	Total
Any Mental Health Utilization in past 12 Months	No	Count	10	90	50	29	179
		% within Pandemic Stress	76.9%	78.9%	86.2%	53.7%	74.9%
	Yes	Count	3	24	8	25	60
		% within Pandemic Stress	23.1%	21.1%	13.8%	46.3%	25.1%
	Total	Count	13	114	58	54	239
		% within Pandemic Stress	100%	100%	100%	100%	100%
Pearson Chi-Square 17.869			p .000				

Table 16. Pandemic Stress and Perceived Need

			Pandemic Stress				Total
			Less Often	About the Same	A Little More Often	Much More Often	
Perceived Need	No	Count	8	38	60	13	119
		% within Pandemic Stress	61.5%	64.4%	52.2%	24.1%	49.4%
	Yes	Count	5	21	55	41	122
		% within Pandemic Stress	38.5%	35.6%	47.8%	75.9%	50.6%
Total		Count	13	59	115	54	241
		% within Pandemic Stress	100.0%	100.0%	100.0%	100.0%	100.0%
Pearson Chi-Square		20.292	p	.000			

CHAPTER FOUR

Pathways to Utilization in the College Environment

Discussion

This study looked into the mental health utilization pathways of college students. The focus of the study was on the ways that family, friends, religious networks, organizations, and the COVID-19 pandemic impact the utilization of mental health services. The network-episode model is a sociological framework that works to explain the process behind an individual's decision to utilize mental health resources. The network-episode model focuses on how an individual's social support systems impact their illness career. In the context of mental health, an important role of the social support system is helping individuals interpret their symptoms. Need is the greatest predictor of mental health utilization. However, need is not the only factor that goes into the decision to seek treatment. Plenty of people experience symptoms but do not utilize. This is where networks come in. Our social networks help us interpret our symptoms. If an individual notices any symptoms of a mental illness, they will most often discuss this with their social network before deciding what steps to take moving forward. The role of social networks in establishing beliefs surrounding the "sick role" and what treatment is appropriate for a person experiencing a mental illness is significant.

This study applies this model to understand the utilization pathways of college students at a private Christian university. We found that at 25.1% the utilization rate of students in our sample was slightly higher than utilization rates of college students in past studies which have been reported at 21.8% (Eisenberg et al., 2011), 15% (Eisenberg et

al., 2007), and 20% (Hunt & Eisenberg, 2010). The high utilization rate is surprising. However, the overall mental health rating and PHQ scores both indicated that there are more people experiencing symptoms of mental illness than are utilizing. The overall mental health placed 46% of respondents in the fair to poor mental health categories, and the PHQ-4 scores indicate that 45.3% of respondents have moderate to severe symptoms of depression and anxiety. Both of these estimates of the mental health of the sample place the utilization rate much lower than the need. Thus, highlighting the need to look into why some people experiencing symptoms of mental illness utilize mental health resources and others do not.

Family Support

This study looked into the way that social support systems impact utilization rates. I looked at the associations between past support from family members and current utilization. There was not a significant association between past family support and current utilization. There is a significant association between utilization rates of individuals with current support from their family. These associations here indicate that support of your family will increase utilization rates even after the child has moved out of the home and is seeking this treatment independently. The absence of a past association supports the idea that the changing relationship between parents and children in the transition to college impacts the utilization pathways. This further supports the continued importance of the family in the development of health beliefs. These students are sharing their mental and emotional health with their parents and receiving feedback that is then associated with higher rates of utilization for students who have this kind of relationship with their family.

Furthermore, there is a component of parental relationships that involves the parent encouraging the student to utilize mental health resources. 53% of students who are encouraged to utilize mental health resources by their parents go on to utilize mental health resources. So even after entering college, many students still trust and follow their parent's guidance. Looking further into this association, we see that of the students who were encouraged to seek help, 61.3% of those individuals had past support from their family. This connection between past support from family members and encouragement from parents suggests the importance of family support in the decision to help seek.

Friend Support

The associations between support of friends and utilization show the importance of friendships. There were significant associations between past support from friends and current mental health utilization. If an individual has in the past communicated with their peers about their mental health, the beliefs around mental health that they learned from utilizing in the past has a lasting association with utilization. The presence of past support from friends predicts current support from friends. The association between current friend support and utilization is also significant. This supports the idea that we use our support systems to formulate our ideas about our need for mental health resources. By reaching out to friends both in the past and currently, students are getting support and information on mental health. This information can be both positive and negative, but if an individual is able to open up to their friends about their mental health, there are likely not high levels of perceived stigma between the friends. This allows for these individuals to benefit from the support of their friends.

Gender

The sample was only 26.27% men. This is much lower than the Baylor population's gender breakdown. This indicates a selection effect into the survey from men. Because of the skewed sample demographics, analysis on gender were difficult. There were only 9 men in our sample who utilized mental health resources. The utilization rate was 14.5% for men and 29.6% for women.

The rates of peer support for men and women were very different. 71.6% of women had support from their friends while only 40.3% of men reported support for their mental health from their friends. In the context of the differences between men and women's friendships, this makes sense. Women are communicating about their mental health with their friends more, and this allows for the women to get support in their understandings about the symptoms of mental illness they are experiencing. Gender impacts utilization by influencing levels of friend support.

Organizational Involvement

Organizations function at a higher level than family and peer networks. Organizations are clusters of individuals that have previously established norms and practices. This can lead organizations to have their own cultures that are harder to change and avoid than peer networks. The importance that organizational involvement has on utilization is seen through the data on Greek life, housing, and religion. One interesting component of organizations is the voluntary component of involvement. People choose to enter these organizations, so there is a selection effect that could explain some of the associations that we see. Additionally, there could be something specific happening within these organizations that creates a culture of stigma around mental health.

Involvement in Greek life is associated with higher levels of stigma. This indicates that a component of these social organizations impacts belief around mental illness. Living on campus is associated with higher rates of stigma than those living in off-campus housing or with their parents. These higher rates of stigma for people on campus was surprising. There is likely a degree of a selection effect for those who are not required to live in on campus housing choosing to live somewhere away from the stigmas of the residence hall. It is also possible that the support systems in the residence halls are somehow reinforcing negative stigmas on mental health. One possible explanation is that when you are living in the residence halls, you have less privacy, so the sick role is more public. This could introduce stigma as well as activate the desire to distance oneself from those experiencing mental illness.

Religious Support

Stigma and religion were found to be associated which supports past findings. The rate of stigma for Christians was 51.7% compared to just 28.0% of the non-religious students. This increase in stigma for Christian populations shows that some aspect of the Christian faith and organization is impacting beliefs about mental health. These beliefs impact the way that Christians utilize mental health resources.

I expected that the role of religious support at this Christian university would be significant, but the data showed a limited impact. Supporting past research, we found that high levels of religiosity were associated with utilization of religious resources. However, we did not find a significant association between either current or past religious support and current utilization. Utilization of religious resources was low at 19.9%. The low use of religious resources and the association of the use of religious resources with religiosity

could suggest that these religious resources on the campus are seen as inaccessible or unnecessary to the less religious students. The Baylor religious resources do not appear to play a significant role in the mental health utilization careers of the students. A possible explanation for this lack of association is the high rates of religious individuals in the sample, did not provide enough variation in the sample for these analyses. Further research into how these associations look at non-religious schools would be interesting.

COVID-19 Pandemic

Over 70% of the sample reported feeling more stress during this pandemic as compared to their life before the pandemic. This increase in stress was also associated with an increase in perceived need. This indicates that pandemic related stress is seen as a legitimate stressor and not a natural status of the pandemic. This might be through the increased awareness of the mental health struggles people are facing right now has made people more aware that they have problems and need help. Another possible explanation is that the increased awareness and shared stress of the population has decreased the stigma around seeking help. The effect of the COVID-19 pandemic on mental health service utilization appears to be significant. Future research will need to be done to see if these changes will be long lasting.

Limitations

The sample was a convenient sample of students in Introduction to Sociology courses. This causes the sample to be largely first year students. Introduction to Sociology is a degree requirement for many degrees, so that helps make the sample more representative, but there is no sociology requirement for many majors. The sample is 251

students. A larger sample would have provided larger populations for the analyses and greater confidence in the results. In view of these sample limitations, a few of the original research questions were modified or not examined due to the small number of respondents.

The measures for quality of mental health are not clinical diagnoses. These measures are associated with diagnoses but are not equivalent to a diagnosis. Part of the survey asks respondents to recall past utilization and past support. These responses are subject to recall bias and could have been misremembered. Additionally, this is cross-sectional data, so causation cannot be determined. The results presented discuss associations not causal pathways,

Conclusion

The results of this study highlight the importance of understanding the pathways that individuals follow along their journey to mental health services utilization. There is much to learn about the pathways that college students follow in seeking treatment for their mental health. The results of this study provide evidence that these pathways are diverse and interconnected. The study found evidence for a path involving support from friends and family as well as a path involving encouragement from friends and family. The same network tie can impact the utilization pathway through direct encouragement and/or passive support thus creating different possible outcomes. The evidence for past support impacting current utilization and support provides evidence for the illness career as described in the network-episode model and indicates a pathway from past support to current utilization. Involvement in organizations is another factor in the utilization pathway. The associations found involving organizations suggest that there are

organizational components to mental health utilization on college campuses that are not covered in the network episode model of mental health utilization. Each of these factors can change the journey that an individual follows in their journey. With this many factors involved, help seeking is a complex and diverse process. It is important that we learn more about these pathways to address the gap between experiencing symptoms of mental illness and utilizing mental health services for college students.

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