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Accessibility of Civil Legal Service Provision for Survivors of Sexual Assault in Illinois

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**Accessibility of Civil Legal Service Provision for Survivors of Sexual Assault in
Illinois**

A Dissertation Defense

Presented in

Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy

By

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August 2023

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Biography

The author was born in Rochester NY, on March 20th, 1992. Kayleigh graduated from Pasquotank County High School in Elizabeth City, North Carolina in 2010. She received her Bachelor of Science in Psychology from the University of North Carolina at Charlotte in 2017 and her Master of Arts in Community Psychology from DePaul University in 2021.

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Abstract

Informed by Kennedy and colleagues (2012) help-seeking framework, this two-part study assessed sexual assault survivors' experiences seeking services in the Illinois civil legal system. Extant research on survivors' experiences with formal helping systems has largely focused on help-seeking from medical or criminal legal systems. To-date, no studies have done an in-depth examination of civil legal system and civil legal service provider accessibility for survivors of sexual assault. To examine civil legal accessibility for sexual assault survivors in Illinois, data from focus groups conducted with legal advocates, and archival spatial data were analyzed. This community-based research study was conceptualized and informed by input from researchers, civil legal service providers, and legal advocates in Illinois. The study was designed to better understand how the five dimensions of accessibility (approachability, acceptability, availability and accommodation, affordability, and appropriateness) impact sexual assault survivors' civil legal help-seeking. There were two primary research questions: (1) What are the ways in which legal advocates believe survivors experience each dimension of accessibility (approachability, acceptability, availability and accommodation, affordability, and appropriateness) when attempting to engage in civil legal help seeking (study one); and (2) How geographically accessible are Illinois counties on the basis of civil legal services for sexual assault survivors (study two)? The first study utilized focus group data from legal advocates across Illinois. Advocates discussed accessibility facilitators and barriers survivors encounter when engaging in civil legal help-seeking across all five dimensions

of accessibility. Nine focus groups were conducted with a total of 44 participants from December 2021-April 2022. Data were open coded in NVivo software. Following open coding, an accessibility theory-based codebook was created and deductively applied to the data by two coders. Results indicated sexual assault survivors struggle with barriers related to accessing the civil legal system such as: misinformation and lack of awareness of civil legal options; fear, mistrust or past negative help-seeking experiences; issues with lack of legal aid service providers and requirements; costs of civil legal help-seeking; and issues with the civil legal help-seeking process. Conversely, facilitators of survivor civil legal engagement include: advocates and Rape Crisis Centers (RCCs); survivor mental/emotional support; low-cost legal aid options; and flexible service providers.

The second study focused on exploring the availability and accommodation dimension of accessibility. Using archival publicly available spatial data Geographic Information Systems (GIS) analyses were conducted in R to assess the geographic accessibility of civil legal service providers in Illinois by county. Location of civil legal service providers and public transportation were plotted, and two composite accessibility indices (statewide and urban) for the counties in Illinois were created reflecting their accessibility in relation to one another. GIS analyses of civil legal system accessibility revealed a limited number of service providers and limited legal aid options severely impact civil legal system geographic accessibility, especially in southeast and southern counties of the state. Further, findings indicate robust public transportation and living in an urban area (i.e., Cook and surrounding counties) increase geographic accessibility of the civil legal system. Results from these studies together indicate sexual assault survivors encounter a variety of barriers and facilitators when they attempt to engage

with the civil legal system. Together, these two studies suggest that use of mixed methods, particularly incorporating GIS, allows for in-depth contextual analyses of access in relation to formal helping systems. Further, results are intended to be used to both to inform rape crisis center service activities and distribution in Illinois (i.e., practice) and state allocation of funding for survivor civil services (i.e., policy).

Keywords: Sexual Assault Survivors, Civil Legal System, Accessibility, GIS, Deductive Qualitative Analysis

Accessibility of Civil Legal Service Provision for Survivors of Sexual Assault in Illinois

Background

According to the National Intimate Partner and Sexual Violence Survey Brief Report (2018), 43.6% of women and 24.7% of men experience some form of sexual violence in their lifetime. Further, 21.3% of women and 2.6% of men report experiencing completed or attempted rape, with 7.1% of men also reporting being forced to engage in penetration. While this study does not account for trans and/or non-binary individuals who experience sexual violence at drastically higher rates than the general population (Jordan et al., 2020; James et al, 2016), or individuals who do not feel comfortable reporting their experiences with sexual violence (Russell & Hand, 2017), it clearly indicates sexual victimization is a serious issue in the U.S. In Illinois specifically, approximately 36.6% of adult women report experiencing sexual violence, with 17.5% reporting attempted or completed rape, while 14.6% of male survivors report experiencing sexual violence (The National Intimate Partner and Sexual Violence Survey: 2010-2012 State Report, 2017). As such, ensuring safe and comprehensive service provision for survivors of sexual violence should be of utmost concern and focus for victim service providers and policymakers in Illinois.

After sexual assault, survivors often seek services from a variety of helping systems (Campbell, 1998). Help-seeking behaviors may take the form of obtaining emergency medical care, mental health services and supports, and legal services (Ahrens et al., 2009; Campbell, 1998; Campbell et al., 2001; Greeson & Campbell, 2011). Prior research has shown sexual assault survivors struggle to get their needs met when

engaging with formal helping systems (Campbell, 1998; Campbell et al., 2001). Barriers to need attainment include service inaccessibility, harmful behavior perpetrated by formal helping system service providers, and differential access to helpful services on the basis of survivor identity (Kennedy et al., 2012). While extant research has focused primarily on sexual assault survivors' interactions within the medical and criminal legal systems, survivors' experiences within the civil legal system remain largely unexamined.

Individuals often conflate the criminal and civil legal system (Greene, 2015), however the civil legal system exists to provide an alternative to the criminal legal system. The criminal legal system focuses on punishment. Via the civil legal system, survivors can pursue actions on their own volition to ensure protection of or restore their civil rights (e.g., economic restitution; orders of protection; family, immigration, workplace, school or housing supports and assistance; Bejinariu et al., 2019; Bouffard et al., 2017; Greene, 2015; Lee & Backes, 2018; Michener, 2020; Renner & Hartley, 2021).

Currently, there is a dearth of literature examining survivors' interactions with the civil legal system. In particular, there has been no research focused exclusively on civil legal system accessibility for sexual assault survivors. Existing help-seeking research on the civil legal system (i.e., legal remedies and options available to survivors via the civil legal system and civil legal service providers) that includes sexual assault survivors in the focal population typically focuses on domestic violence survivors, or victims of crime more broadly (e.g., Bejinariu et al., 2019; Bouffard et al., 2017; Lee & Backes, 2018). While civil legal options for sexual assault survivors exist, the extent to which the civil legal system and civil legal service providers (e.g., rape crisis center

advocates, legal aid attorneys etc.) are accessible to survivors of sexual assault is currently unclear.

Therefore, this two-part project assessed civil legal system and service provider accessibility for sexual assault survivors in Illinois. In the first study, I drew from the perspectives of legal advocates across Illinois who work with rape survivors. Legal advocates participated in focus groups where they shared their experiences working with sexual assault survivors pursuing civil legal services. In the focus groups, legal advocates discussed barriers and facilitators to survivors accessing the civil legal system and service providers. From the focus group data, I analyzed the ways in which legal advocates perceive survivors in Illinois experience the five dimensions of accessibility (approachability, acceptability, availability and accommodation, affordability, and appropriateness; Kurpas et al., 2018). Following focus group analysis, I conducted spatial analysis of archival geographic data to assess geographic accessibility of civil legal services for sexual assault survivors across counties in Illinois. This second study focuses specifically on the availability and accommodation dimension of accessibility (Kurpas et al., 2018). Geographic location of civil legal services is an understudied aspect of civil legal accessibility, and little is known about how geography and physical location of service providers influence sexual assault survivor civil legal help-seeking.

Survivors of sexual assault require specific services, and formal helping systems are notoriously difficult for survivors to navigate due to inaccessibility and lack of trauma-informed practices (Bouffard et al., 2017; Campbell et al., 2001). To improve service provision, it is essential to understand how accessible the civil legal system and civil legal service providers are for survivors. This information will allow us to identify

factors that promote accessibility and survivor engagement in civil legal options should they wish to do so. Results from this study will be used to inform: (1) organizational practices of rape crisis centers (RCCs) across Illinois, and (2) victim service funding decisions by the state funder, the Illinois Criminal Justice Information Authority (ICJIA). Illinois is an ideal state to conduct this study as population demographics by percentage are representative of the U.S. population (United States Census Bureau, 2022). Further, the Illinois Coalition Against Sexual Assault (ICASA) and ICJIA are interested in survivor civil legal service provision research. Thus, there is buy-in from two statewide victim service providers for this study.

Civil Legal Services for Victims of Crime

In the U.S., there is limited literature that explores needs and experiences of individuals seeking help from the civil legal system. Existing research has primarily focused on domestic violence survivors or victims of crime more broadly (e.g., Bejinariu et al., 2019; Bouffard et al., 2017; Lee & Backes, 2018). Victims of crime (including survivors of sexual assault) typically seek out civil legal remedies for safety concerns (i.e., protective orders), familial issues (e.g., divorce, custody etc.), housing issues, employment issues, immigration needs, or to seek financial assistance or compensation. However, very little is known specifically about the experiences of sexual assault survivors who navigate the civil legal system.

Civil Legal Services for Sexual Assault Survivors. According to Lorenz and colleagues (2019) in their qualitative analysis of survivors' post-sexual assault legal experiences, 62% of survivors interviewed reported interacting with either the criminal or the civil legal system. Survivors interviewed were a subsample from a larger, Chicago-

area longitudinal study. This suggests a substantial portion of survivors who seek post-assault legal services may interact with the civil legal system. Civil legal options are often pursued as a “last resort” for survivors of sexual assault (Lake et al., 2016) or as a second choice to criminal legal services (Greene, 2015; Michener, 2020). As civil legal options are less utilized, survivors may not always be aware they qualify for civil legal options (Lee & Backes, 2018), or services may not be available in their area (Bouffard et al., 2017). However, sexual assault survivors are entitled to specific rights via the civil legal system, depending on the laws in their state.

According to Lorenz and colleagues (2019) sexual assault survivors in Illinois may need financial support (to make up for medical costs or lost income), civil orders of protection and immigration assistance such as help with U or T-Visas (i.e., Visas for non-U. S citizen survivors of sexual assault and/or human trafficking). In cases of rape perpetrated by an intimate partner or spouse, assistance with custody, divorce, or name change proceedings may be pursued (Lee & Backes, 2018; Lorenz et al., 2019). Survivors may also have housing concerns (e.g., leave a lease in a home where they feel unsafe without penalty) or need help obtaining government benefits (Lee & Backes, 2018). Further, survivors also have the option to pursue civil lawsuits (i.e., survivor sues aggressor or workplace) and Title IX cases (for persons who were victimized at or by an educational institution; Bejinariu et al., 2019; Bouffard et al., 2017; Lee & Backes, 2018; Renner & Hartley, 2021). Across the U.S., the potential benefits of civil legal options for victims of crime, domestic violence, and sexual assault survivors are gaining recognition and services are expanding.

Requirements for civil legal services for sexual assault survivors vary. Some civil legal options require going through the court system (e.g., divorce/custody, protective orders, civil lawsuits). Motions or petitions are filed with the court, the survivor (and potentially the other party) appears in court, and a judge rules on the case. Other options may not initially require the court system, but survivors may need to involve lawyers and/or the courts if their rights are not respected (e.g., by a landlord who will not return money they are entitled to). In some instances (e.g., lawsuits) survivors need to have a lawyer, but in others (e.g., protective orders) they may opt to have a lawyer, or they may self-represent.

While pursuing civil legal options, survivors may go through the process on their own, or seek assistance from civil legal service providers such as advocates or lawyers (Bouffard et al., 2017) who help them navigate the civil legal system. Civil legal advocacy provided by rape crisis center legal advocates can help sexual assault survivors learn about and access civil legal options. Advocates and lawyers offer education around civil legal service options and assist sexual assault survivors navigating interactions with civil court staff (i.e., judges, circuit clerk) or the civil legal process more broadly (e.g., aid the survivor with filling out online forms). Additionally, unique to their individual roles, advocates offer emotional support for survivors and attorneys provide legal representation (Lee & Backes, 2018). Lawyers can be a helpful form of support for survivors attempting to pursue civil legal options, whether required or not (Bejinariu et al., 2019; Lee & Backes, 2018). Lawyers and advocates may make the civil legal system easier to navigate, however obtaining assistance from these service providers, particularly legal aid attorneys, is not always easy or even possible (Bouffard et al., 2017). However,

neither lawyers nor advocates are required for sexual assault survivors to pursue civil legal options, and the services of each of these providers may or may not be accessible to survivors.

Guiding Frameworks

Extant literature indicates formal helping-systems (e.g., criminal justice, medical) are frequently inaccessible (Campbell et al., 2001) which can lead to survivors having unmet needs. However, this has yet to be examined in the context of sexual assault survivors and the civil legal system. To evaluate how accessible civil legal services and service providers are to sexual assault survivors, this study is informed by Kennedy and colleagues' (2012) survivor help-attainment framework and extant accessibility literature (De Poli et al., 2020; Kurpas et al., 2018).

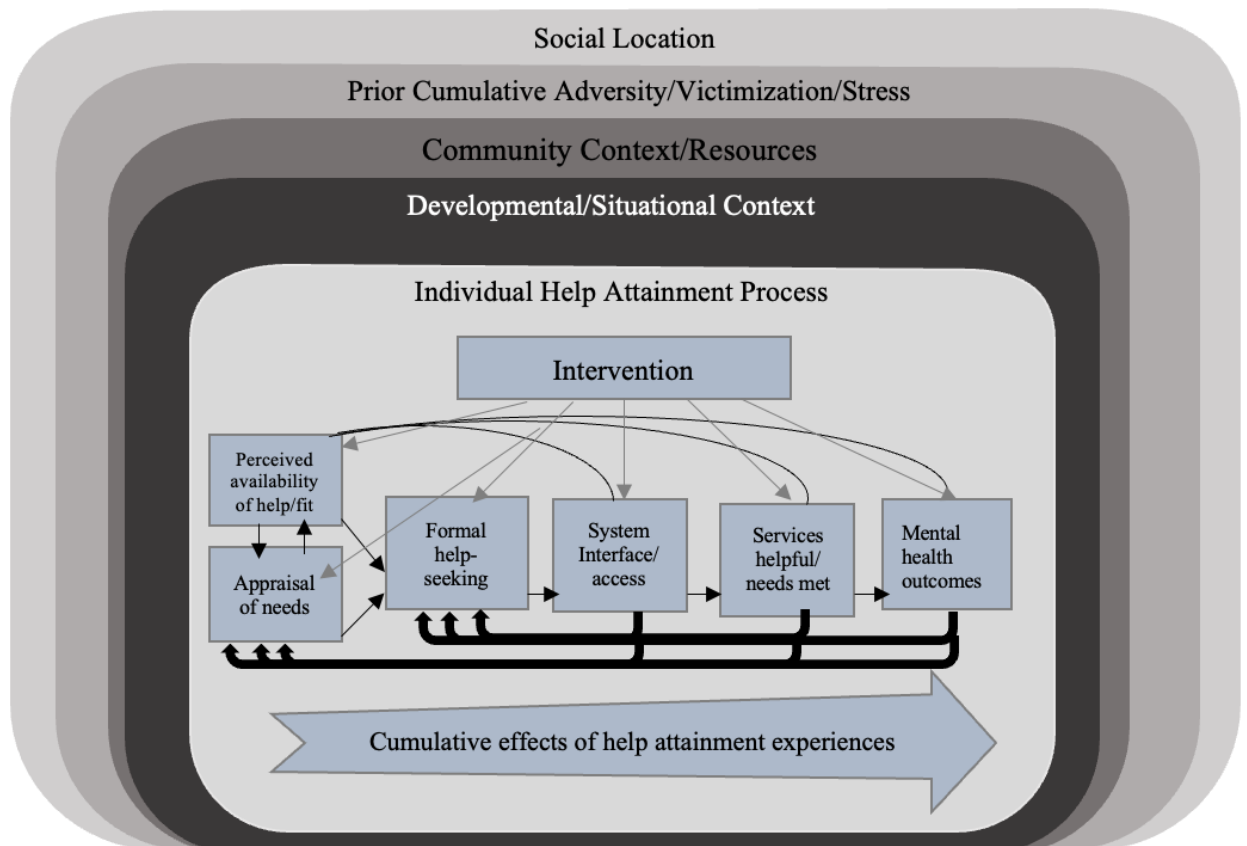
Help Seeking and Accessibility

This study utilizes Kennedy and colleagues (2012) survivor help-seeking framework to inform examination of survivors' help seeking from the civil legal system (see Figure 1). This framework is focused on survivor help-attainment from formal helping systems broadly (Kennedy et al., 2012), but for this study I use it to inform analysis of sexual assault survivor help-seeking specifically within the civil legal system. According to Kennedy and colleagues (2012), for survivors to experience positive outcomes from interacting with a formal helping system (e.g., criminal legal system, medical system, civil legal system), a complex process must occur. First, survivors engage in a "needs appraisal" or problem identification stage. They then seek help from resources they believe will meet their needs. Additionally, for survivors to choose to seek assistance from a formal helping system, they must believe the benefits are greater than

the costs. Survivors must also be able to get to the services offered. Finally, interacting with the system must be helpful and result in survivors' needs actually being met (i.e., help attainment; De Poli et al., 2020; Kennedy et al., 2012; Liang et al., 2005).

Figure 1

Kennedy and Colleagues 2012 Conceptual Model of Help Attainment Process



(Kennedy et al., 2012).

The help-seeking process is contextual and influenced by survivor characteristics, system/structural characteristics, and community factors (Kennedy et al., 2012). This study focuses on the accessibility components of formal help-seeking (i.e., the perceived availability of help/fit, formal help-seeking, and system interface/access components of the process). According to Kennedy and colleagues (2012), survivor characteristics,

social location, and past experiences affect sexual assault survivors' ability to move through these phases of help-seeking successfully. Accessibility is a key component of people getting their needs met, particularly for members of vulnerable groups (Kurpas et al., 2018; Lupo, 2016) including sexual assault survivors (Kennedy et al., 2012). Potential barriers to survivors accessing services include cultural beliefs, organizational set-up and eligibility requirements, affordability of services, and system interface (Kennedy et al., 2012). Advocates and lawyers may act as formal help-seeking intervening forces that improve civil legal system interface and help-attainment by using insider knowledge of the civil legal system to support survivors (Kennedy et al., 2012; Liang et al., 2005). However, their service provision is also subject to issues of accessibility. If service systems are inaccessible, they cannot provide necessary supports for people who do seek services (Kennedy et al., 2012). Thus, the civil legal system must first be accessible for survivors to receive help from the system.

Broader literature on service seeking suggests access is a multi-faceted concept influenced by factors across social-ecological levels (e.g., individual, organizational, and community; Bronfenbrenner, 1992, 1994; De Poli et al., 2020). Accessibility has five dimensions: (1) approachability, (2) acceptability, (3) availability and accommodation, (4) affordability, and (5) appropriateness (Jacobs et al., 2012; Kurpas et al., 2018; Levesque et al., 2013).

The Five Dimensions of Accessibility. *Approachability* refers to whether stakeholders or clients can identify a service to meet their needs or have knowledge that a service exists (De Poli et al., 2020; Kurpas et al., 2018; Levesque et al., 2013). Indeed, Kennedy and colleagues' (2012) framework suggest that a key barrier to attaining help is

survivors' lack of awareness of community resources. Indeed, victims of crime and/or domestic violence are often unaware their needs can be met via the civil legal system (Bouffard et al., 2017; Lee & Backes, 2018). This can be due to lack of community education around civil legal options, or lack of understanding of the civil legal process. In addition, poor communication between various service providers (e.g., law enforcement or criminal legal service providers, medical service providers, rape crisis center staff, and civil legal service providers etc.; Bouffard et al., 2017) may also result in survivors not being able to understand how to pursue civil legal services. While extant literature (e.g., Bouffard et al., 2017) provides some insight into approachability barriers survivors or other populations may face when seeking civil legal services, the occurrence of issues with civil legal system approachability for sexual assault survivors is not well understood. By examining legal advocates' perceptions of sexual assault survivors' experiences regarding approachability and awareness of the civil legal system, we can further contextualize and better understand what sexual assault survivors do, and do not know, about civil legal services when they engage in civil legal help-seeking.

Acceptability refers to whether the population that agencies intend to serve (i.e., survivors) chooses to seek services (i.e., civil legal services) and deems them suitable (Jacobs et al., 2012; Kurpas et al., 2018; Levesque et al., 2013). Survivors may fear engaging with formal helping systems due to past negative experiences, cultural disinclination, or immigration status (Amin, 2017; Bouffard et al., 2017; Greene, 2015; Kennedy et al., 2012; Messing et al., 2021; Prentice et al., 2017). Although this has not been studied, sexual assault survivors may also experience acceptability concerns when considering engaging with the civil legal system because they have a wide range of past

experiences and cultural backgrounds. Survivors may not feel inclined to pursue or approach formal services (e.g., civil legal services) or believe they will meet their needs in an acceptable way. Indeed, research suggests sexual assault survivors' help-seeking decisions are influenced by whether they believe the services offered will suitably meet their needs (Kennedy et al., 2012). Thus, it is important to explore sexual assault survivors' experiences with acceptability of civil legal service provision.

Availability and accommodation refer to whether stakeholders can physically access and meet with service providers (De Poli et al., 2020; Jacobs et al., 2012; Kurpas et al., 2018; Levesque et al., 2013). This refers to distance and location of service center or service provider from service seeker and their ability to get there (i.e., geographic accessibility) as well as availability of service providers (i.e., staffing, ability to get an appointment, scheduling, timing etc.; Levesque et al., 2013). In extant literature, community context's impact on formal help-seeking tends to focus on neighborhood and family violence as well as cultural aspects (Ahrens et al. 2009; Liang et al. 2005; Lindhorst & Tajima, 2008). However additional community-level factors--such as availability of resources (i.e., areas of concentrated poverty, limited formal service providers) and issues like geographic isolation or with transportation-- may result in limited or no options for survivors who do wish to engage with the civil legal system, particularly in low-income and rural areas (Bouffard et al., 2017; Campbell, 2013; Kennedy et al., 2012). Prior research has shown geographic accessibility is an access issue (Jacobs et al., 2012), as well as an equity issue, that often indicates a surfeit of under-served regions and populations or limited culturally appropriate service options (Hipp et al., 2010; Prentice et al., 2017; Shah et al., 2015).

Typically, in survivor help-seeking research, the availability and accommodation aspect of accessibility is measured by stakeholder or service recipient perception. However, community geographic components of accessibility can also be analyzed using spatial data. Extant research on survivor help-seeking notes that some communities lack resources (e.g., areas of poverty; Kennedy et al., 2012), but no studies have addressed or explored civil legal system geographic accessibility across varied community contexts for survivors of sexual assault.

Affordability refers to the cost of service seeking (i.e., time, resources, and money expended when engaging in formal help-seeking; Jacobs et al., 2012; Kurpas et al., 2018; Levesque et al., 2013). Within the civil legal system, this predominantly refers to the economic capacity of survivors to use civil legal services. Survivors who do attempt to seek help may have financial barriers that preclude them from pursuing civil legal options (e.g., make too little or too much money to obtain legal representation). In the U.S., lawyers can range from being free or low-cost/sliding scale depending on income (typically victim service providers, civil legal aid agencies, pro-bono attorneys), to fee-based legal service providers (Bouffard et al., 2017). Additionally, certain civil legal procedures may have filing fees associated with them. Relatedly, research indicates taking time off from work is another economic cost associated with civil legal help-seeking for victims of crime (Bouffard et al., 2017). Beyond economic costs, time and personal toll are also costs survivors' weigh when determining whether to pursue formal help-seeking (Kennedy et al., 2012). The civil legal process can be lengthy, difficult, and demanding and as such may turn help-seekers off from opting to pursue civil legal services (Bouffard et al., 2017; Lee & Backes, 2018). How sexual assault survivors

specifically are impacted by civil legal service affordability is currently under-explored, and survivors may have unique experiences compared to domestic violence survivors or other victims of crime.

The last dimension of accessibility is appropriateness. *Appropriateness* refers to whether the services provided fit the needs of the stakeholder (Kurpas et al., 2018; Levesque et al., 2013). For example, if a sexual assault survivor needs help with a short-term emergency protective order, but a service provider can only assist with a long-term (plenary) protective order- the services offered, while civil legal, are not useful for the needs of the survivor. Further, service providers may not provide culturally appropriate or effective services for populations with varied and diverse needs (e.g., clients may need translation services, but the provider does not offer these options; Ahrens et al., 2009; Gelberg et al., 2000; Kennedy et al., 2012; Prentice et al., 2017; Snowden & Yamada, 2005). Thus, the client may not be able to access the services offered by that provider. This dimension highlights the possible disconnect between actual client needs and the appropriateness of services offered to address perceived client need (Kurpus et al., 2018). As survivors' help seeking is impacted by adequacy of service provision (Kennedy et al., 2012), it is important to explore sexual assault survivors' experiences with appropriateness of civil legal service provision.

Thus, for survivors to engage in formal civil legal help-seeking, there are several levels of access to address. First, the survivor must be aware of civil legal services. Next, they must perceive them as acceptable, useful, and appropriate. Further, they must be available and able to reach them geographically. Lastly, survivors must have the resources to expend on civil legal service help-seeking.

To-date, the experiences of sexual assault survivors attempting to access civil legal services is under-explored, and it is unclear what issues survivors do or do not encounter when attempting to engage with formal help-seeking from the civil legal system. Across two studies, I examined each of the five dimensions of accessibility (i.e., approachability, acceptability, availability and accommodation, affordability, and appropriateness). In the first study, I explored all five aspects of accessibility, by examining focus group data on legal advocates' perspectives of survivors' experiences engaging in civil legal help-seeking. For the second study, I conducted an in-depth spatial analysis of the *availability and accommodation* dimension of accessibility, focusing on the under explored geographic accessibility component of the dimension.

Current Study

The current body of research on sexual assault survivor civil legal help-seeking is extremely limited. The few studies that explore civil legal help-seeking experiences of sexual assault survivors do so by aggregating their information with other victimized populations (Bouffard et al., 2017; Lee & Backs, 2018). Further, literature focused specifically on sexual assault survivors' formal help-seeking experiences and post-assault response has, to-date, been concentrated within the medical and criminal legal systems. As such, the unique civil legal needs of sexual assault survivors, and their experiences accessing services to meet those needs, are not well documented or understood. While we know sexual assault survivors interact with the civil legal system (Bouffard, et al., 2017; Lorenz et al., 2019), very little is known about how survivors navigate the civil legal system and the unique barriers they face when attempting to attain services from civil legal service providers. Additionally, we know accessibility is a key component of sexual

assault survivor formal help-seeking broadly (Kennedy et al., 2012); however, we are currently unaware how the dimensions of civil legal system and provider accessibility (i.e., approachability, acceptability, affordability, availability and accommodation, and appropriateness) impact sexual assault survivors' civil legal help-seeking behaviors and experiences.

It is essential sexual assault survivors have access to safe and effective formal services to meet their post-assault needs. Access to services improves sexual assault survivor physical, mental, and social outcomes (Campbell et al., 2001). Civil legal remedies are a key component to ensuring improved outcomes for victims of crime (Bouffard et al., 2017), including sexual assault survivors. Service accessibility is imperative for survivors to engage in help-seeking (Kennedy et al., 2012). As such, it is necessary to explore the accessibility of the civil legal system to better understand sexual assault survivors' civil legal help-seeking experiences and identify areas for improvement in civil legal service provision. There is currently a dearth of literature on the topic, which is a significant gap in understanding and improving survivor help-seeking experience.

To address these important gaps, this two-part study uses both legal advocate perceptions and spatial data to evaluate the dimensions of accessibility as they relate to sexual assault survivors civil legal help-seeking experiences. Specifically, data from focus groups with legal advocates are used to examine the five dimensions of accessibility (i.e., approachability, acceptability, availability and accommodation, affordability, and appropriateness). Legal advocates are useful sources of data on survivors' civil legal help-seeking experiences as they work with survivors throughout

the help-seeking process. By collecting data from legal advocates who work with multiple survivors over time, we are able to capture patterns of sexual assault survivor experiences with civil legal help-seeking. Extant literature has also found past studies which use survivor proxies (e.g., SANEs or advocates) provide high interrater reliability with sexual assault survivors on reports of survivor help-seeking experiences (e.g., Campbell, 2005; Campbell et al., 2021). Thus, legal advocate focus group data on survivor civil legal help-seeking is expected to reliably reflect survivor experience.

Spatial analysis methodology is used in study two. Spatial analysis is an emergent, and relatively underutilized methodology in community psychology. In using spatial analysis, I explored *availability and accommodation* of the civil legal system from a unique geographic and structural lens, not typically utilized in psychological studies.

Research Questions

The current two-part study examined two questions. Study One explored the research question: What are the ways in which legal advocates believe survivors experience each of the dimensions of accessibility (i.e., approachability, acceptability, affordability, availability and accommodation, and appropriateness) when attempting to seek help from the civil legal system? This study incorporates narrative, thematic qualitative analysis (Saldana, 2009) of focus groups to identify patterns that exist around legal advocates' experiences assisting survivors as they navigate the civil legal system, specifically in relation to accessibility.

Study two focused specifically on the *availability and accommodation* aspect of accessibility and seeks to answer the research question: How geographically accessible are Illinois counties on the basis of civil legal services for sexual assault survivors? Study

Two also explored which counties are most and least accessible geographically. This study employs Geographic Information Systems (GIS) mapping to determine civil legal system and service provider physical accessibility in each county across Illinois. This analysis was conducted in R using archival and publicly available data (e.g., census, public transit route, and civil legal system and service provider locations) acquired from the Illinois state government and our community partner, ICASA.

Study One: Legal Advocates' Perceptions of Civil Legal System Accessibility for Survivors

Research Question

Study one addressed research question one: What are the ways in which legal advocates believe survivors experience each of the dimensions of accessibility (i.e., approachability, acceptability, affordability, availability and accommodation, and appropriateness) when attempting to seek help from the civil legal system?

Method

Sample

Nine focus groups were conducted with 44 rape crisis center (RCC) representatives¹ from across Illinois. Participants were eligible for the study if they were legal advocacy staff at a RCC in Illinois and over the age of 18. Focus groups took place in-person ($n = 4$) and via zoom ($n = 5$) and ranged in size from four to seven participants ($M = 4.89$). Of participants who filled out the closing demographic questionnaire ($n = 38$), the majority identified as White women between the ages of 18 and 35. Advocates in this study ranged from less to a year up to 30 years of experience, with a median of two years of experience in their current role. See Table 1 for complete demographic information.

¹ The study had 45 people complete the consent process, however one participant left a virtual focus group prior to the focus group beginning.

Table 1*Focus Group Participant Demographic Data*

Participant Demographics	<i>n</i> = 38	Percent	<i>M</i>	<i>Mdn</i>	<i>SD</i>
Gender					
Identified as other than Woman ²	3	7.89			
Woman	35	92.11			
LGBTQ+					
No	30	78.95			
Yes	8	21.05			
Race/Ethnicity					
Black	7	18.42			
Hispanic/Latino(a)(x)	7	18.42			
Native American/Pacific Islander	1	2.63			
White	25	65.79			
Years					
Age (years)					
18-34	25	65.79			
35-51	7	18.42			
52-65	4	10.52			
66+	2	5.26			
Experience (years)			4.63	2.00	6.65
0-4	25	65.79			
5-9	8	21.05			
10+	5	13.16			

Measure

In collaboration with the ICASA, the research team created a semi-structured qualitative interview guide based on Kennedy and colleagues' (2012) model of survivors' formal help-seeking processes. The interview guide was devised as part of a broader study of legal advocates' perceptions of survivors' civil legal needs and their experiences

² Participants are grouped into this category to avoid providing potentially identifying information.

engaging in civil legal help-seeking in Illinois. For the purposes of this study, legal advocates were asked about survivors' existing knowledge of civil legal options, barriers and facilitators to obtaining legal representation, and barriers and facilitators to connecting to the civil legal system. The salient questions from the measure for this study include: (see Appendix A for full interview guide):

1. How do clients you work with learn about the civil legal system and civil legal options?
 - a. What options³, if any are clients aware of before connecting to your agency?
 - b. What options, if any, are clients generally not aware of?
2. What are barriers to clients obtaining legal representation?
3. What helps clients obtain legal representation?
4. What are barriers to survivors connecting to the civil legal system?
5. What helps survivors connect to the civil legal system?

Procedure

The study was approved by DePaul University Institutional Review Board (IRB) in Fall of 2021. Following IRB approval, participants were recruited in collaboration with the community partner (ICASA). ICASA sent e-mails to advocates from their network to inform them of focus group date, time, and location.

³ Participants were provided with a list of civil legal options, which were discussed at length during focus groups

Focus groups were incorporated into five pre-existing regional ICASA meetings for the convenience of participants. At the end of the meeting, focus groups were conducted with RCC representatives willing to share their expertise. Participation in the focus groups was optional for RCC personnel, and their participation was not shared with the community partner. Following all regional meetings, four statewide online focus groups were conducted via zoom for RCC legal advocates and staff who were interested in participating in the study but could not attend their regional meeting. Data collection took place from December 2021 through April 2022. Focus groups were recorded with participants' permission. Focus groups lasted approximately two and a half hours and were conducted by three trained doctoral students and the study's principal investigator (PI). Weekly team meetings with focus group facilitators and notetakers were held to review focus group recordings, provide feedback on facilitation, and identify areas to probe for future focus groups. Following data collection, all focus group recordings were transcribed by trained research assistants. Once a focus group was transcribed, it was reread for errors and adjusted as needed by another member of the research team uninvolved in the original transcription process. The focus group transcript was then reviewed for accuracy and uploaded into Nvivo 12 for coding and analysis. This process was done for each of the nine focus groups.

Coding and Analysis

Coding and analysis for the present study was part of a broader study analyzing legal advocates' perceptions of survivors' experiences with civil legal help-seeking. The research team (five coders) engaged in open coding (i.e., first cycle, initial coding during the beginning stages of data analysis; Saldana, 2009) of the focus group transcripts to

ascertain preliminary, salient themes. These initial themes were then transformed into a codebook by the coding team. The primary codes in this codebook organized the focus group data into key aspects of survivors' help-seeking experiences (e.g., awareness of civil legal services, impact of civil legal services, etc.). Following codebook development and revisions, two trained doctoral students applied the codebook independently to all focus group transcripts. Once each coder applied the codebook independently for each transcript, they met to discuss the application process, discrepancies, and establish consensus (Creswell, 2013). After reviewing the codebook, I identified three primary codes that pertain to the focus of this study: (1) Awareness and Learning about Civil Legal Options, (2) Obtaining Legal Representation, and (3) Connecting to the Civil Legal System (see Appendix B). The data extracted from these codes formed the accessibility dataset for this study.

I then created a new draft theory-based codebook (Bingham & Witkowsky, 2022) to examine how legal advocates perceive sexual assault survivors' experience each dimension of accessibility (see Appendix C). Overarching categories (i.e., primary codes) were reflective of the five dimensions of accessibility outlined in existing literature (i.e., approachability, affordability, availability and accommodation, acceptability, and appropriateness; Kurpas et al., 2018). Each primary code had two secondary codes: (1) facilitators and (2) barriers.

Next, I and another trained doctoral student deductively applied this codebook to a third of the accessibility dataset (Bingham & Witkowsky, 2022). Once completed, we met to discuss the coding process and any issues with ambiguity on when or how to apply codes. After achieving consensus on the first third of the coded data, we added notes to

the codebook to address discrepancies and how they were resolved. Once codebook notes were added, reviewed, and agreed upon, we then independently applied the codebook to a second third of the dataset. We then met to achieve coding consensus, discuss our process of codebook application, and take notes on the coding process. This process was repeated for the final third of the data and together achieved consensus on the coding of the entire dataset (Creswell, 2013). In our last meeting we also discussed themes that we noticed for each code. I then re-reviewed all of the data under each code, identified themes for each code, (including those discussed in our final consensus meeting) and refined themes to ensure conceptual clarity and coverage of all the coded data.

Results

Study one was designed to answer the following question: *What are the ways in which legal advocates believe survivors experience each of the dimensions of accessibility (i.e., approachability, acceptability, affordability, availability and accommodation, and appropriateness) when attempting to seek help from the civil legal system?* While each dimension was not specifically asked about during focus groups, advocates organically discussed components of each of the different dimensions of accessibility (approachability, acceptability, availability and accommodation, affordability and appropriateness) in relation to their experiences working with sexual assault survivors who engaged in civil legal help-seeking. Advocates specifically discussed things that helped (i.e., facilitators) or discouraged (i.e., barriers) sexual assault survivors in accessing civil legal help (Table 2).

Table 2

Accessibility Codes and Themes

Code	Definition	Theme(s)
		Approachability
F	When stakeholders or clients (i.e., survivors) can identify a service to meet their needs or have knowledge that a service exists.	<ul style="list-style-type: none"> • Advocate/RCC education of survivor • Survivor interactions with other service providers or previous help-seeking experience • Survivor learns from peers, community or media. • Advocate/RCC education of community
B	When stakeholders or clients (i.e., survivors) are unable or struggle to accurately identify a service to meet their needs, have inaccurate information pertaining to the civil legal help-seeking process, or do not have knowledge that a service exists.	<ul style="list-style-type: none"> • Misinformation • Limited awareness • Do not understand civil legal system
		Acceptability
F	When advocates discuss what helps survivors choose to seek civil legal services and finds them suitable for their needs.	<ul style="list-style-type: none"> • Mental/emotional support for survivors • Civil legal process navigation facilitators • Empowerment
B	When advocates discuss issues where the population that agencies intend to serve (i.e., survivors) does not choose to seek services (i.e., civil legal services)/or feels disinclined to pursue them due to poor suitability.	<ul style="list-style-type: none"> • Fear/mistrust of service providers • Process is a deterrent. • Trauma • Past negative formal help-seeking experience • Rape-culture
		Availability and Accommodation
F	When advocates report stakeholders can get to and/or meet with service providers and what enables those meetings to occur.	<ul style="list-style-type: none"> • RCC/service provider facilitators to obtaining other civil legal services. • Prevalence of service providers • Reduction in barriers to get to and stay in court.
B	When advocates report stakeholders (i.e., survivors) struggle to or are unable get to and/or meet with service providers and what contributes to that struggle.	<ul style="list-style-type: none"> • Limited service providers • Transportation • Conflict of interest • Geographic location
		Affordability
F	When advocates discuss what helps survivors with the cost of service seeking (i.e., time, resources, and money expended when engaging in formal civil legal help-seeking).	<ul style="list-style-type: none"> • Low/no cost legal aid options • Survivor financial means • Systemic or organizational resources or connections
B	When advocates discuss specific costs of service seeking (i.e., time, resources, and money expended when engaging in formal civil legal help-seeking) as an impediment to help seeking	<ul style="list-style-type: none"> • Monetary costs • Emotional costs
		Appropriateness
F	Refers to whether the services provided fit the needs of the stakeholder (i.e., survivor).	<ul style="list-style-type: none"> • No issues with service provision criteria • Survivor-friendly and appropriate services • Advocates ensuring survivors receive necessary supports throughout the civil legal process.
B	When advocates discuss how the services provided do not adequately fit the needs of the stakeholder (i.e., survivor).	<ul style="list-style-type: none"> • Case/survivor attributes • Civil legal services may cause harm. • Civil legal assistance not always guaranteed. • Unstandardized civil legal processes • Survivors believe civil legal remedies to be ineffectual.

Note. F = Facilitator, B = Barrier, RCC = Rape Crisis Center

Approachability

Approachability in this study refers to how advocates report whether clients (i.e., sexual assault survivors) can or do identify a service to meet their needs or have knowledge that a service exists. This primary code had two secondary codes: (1) approachability facilitators and (2) approachability barriers.

Facilitators. In this study, *approachability facilitators* are factors advocates discussed as helping survivors identify civil legal services or increase their awareness of the civil legal system. Several salient themes were identified in this dataset: (a) advocate education of survivor, (b) other service provider education, referral, or previous formal help-seeking experience, (c) survivor learning from peers, community members, or media, and (d) RCC outreach or education in the community.

In this sample, advocates often discussed their role *educating survivors* on civil legal processes and options, either when the survivor began civil legal help-seeking via the RCC hotline, or in the hospital via medical advocates. For example, one participant (MG2CC) shared:

I think a lot, a lot of my clients come in already knowing that, you know, they want—and of course, most of my clients are refer to it as a restraining order, um so we'll go through all that. And I've had several clients come in tell me they want to sue for pain and suffering. So, then we have to have those conversations about, well, "What does that look like?"; "How do we prove that?"; "How do we connect you to an attorney?" like um so... Usually they have some idea- even if it's not necessarily an idea we can realize. But we kind of work with them where they're at and say, "okay here's what you want, here are some options that we can

do you know, perhaps in place of, you know, of suing if that is not going to be an option. Here is what we can do instead,” and see how they wanna proceed with the options that we are able to give them.

This advocate reported clients may have a general idea of what they want or would like to do. The role of the advocate is to then meet the client where they are in their level of understanding of the civil legal process and explain what options are available to meet their civil legal needs.

Participants also reported clients may learn about civil legal services and options *via other service providers*, either as a referral or from past formal help-seeking experience. One participant (EH3SB) discussed how sexual assault survivors may learn about civil legal options from more than one service provider, stating that in their area, survivors “are hearing [civil legal options] if they, if they choose to interact with all three [service providers] during a hospital call. They're hearing it from the advocate, the nurse, and the law enforcement officer.” Advocates in this study often shared that their clients were referred to them for civil legal assistance from law enforcement.

The third approachability facilitator theme endorsed by participants was that sexual assault survivors may learn about civil legal services or civil legal options from *community, peers, and/or media*. Advocates in this study reported survivors may have an idea about civil legal options or lawsuits from watching TV. Others endorsed “word-of-mouth” as a way survivors learn about civil legal options. One participant (MG2CC) shared survivors learn about civil legal options a variety of ways such as “community members, peers-- some of the events that we do.”

Lastly, advocates also discussed *community education* as an approachability

facilitator. These advocates shared how their work educating community members and other service providers fosters survivor knowledge of RCC services broadly as a resource, as well as civil legal options specifically. One advocate (EH1CSA) shared advocates at their center regularly share their business cards with local businesses and:

do a lot of work connecting with our community. We're in the schools, we're talking. We are at every agency that we can think of—just everywhere. Our faces are everywhere... We're just connecting the people, so that if someone in our community hears, uh, somebody has been sexually assaulted they can say, "Go to [agency name]."

This advocate, and others in the study, shared the importance of community education in fostering civil legal system accessibility, and how "education... itself is huge... just like, the education in and of itself everything that's, um, encompassed under sexual assault, like education I think is huge. ... And the remedies that exist... There are things available that may assist you in the civil legal system (Participant MG3NWWD)."

Barriers. *Approachability barriers* in this study included when survivors are unable or struggle to accurately identify a service to meet their civil legal need(s), have inaccurate information pertaining to the civil legal help-seeking process, or do not know that a service exists. Participants in this study endorsed three *approachability barrier* themes. Themes include when survivors (a) misunderstand or are misinformed about civil legal options, (b) are unaware of or have limited understanding of options, and (c) do not understand how the civil legal system works.

In multiple focus groups, advocates discussed instances where a survivor arrived at the RCC thinking they already *had* a civil protective order after *only receiving*

information on protective orders from another service provider. They also recounted instances where survivors had received inaccurate information from other service providers with whom they interacted. One advocate (MG2CA) shared an example of *misinformation or misunderstanding* as an approachability barrier in their focus group:

I think a lot of officers in my area too, like... I don't know how it gets misconstrued or if it's just a misunderstanding but like my clients often come in thinking they already have a protective order, so then we have to like "where is the paper work" and they are like "well I don't have paper work, I just have this report and it says that I have one". And it's like "no, this is explaining how you get one, but we can do that for you absolutely. It is not a problem," but it is heartbreaking sometimes to tell them, "You actually aren't protected right now, let's get you protected."

Another participant (MG2CD) in the same focus group agreed, reporting "there is just a lot of miscommunication or confusion around it when they are handed the piece of paper."

Another approachability barrier advocates reported survivors navigate is a *lack of awareness or understanding* of civil legal options and/or civil service providers. One legal advocate (EH1CSA) shared "a lot of the time [clients] have no idea what we do." In another focus group advocates discussed how they felt limited awareness was a barrier to clients requesting or pursuing civil legal options after experiencing sexual assault.

The third salient approachability barrier was that sexual assault survivors often *do not understand how the civil legal system works*. This includes survivors not having any familiarity with the legal system or legal processes, survivors conflating the criminal and

civil court systems, and confusion or misunderstanding around specific civil legal options and the process or requirements affiliated with them. One advocate (KZ1SB) shared how “people don't always understand the legal services and the legal everything, how it all works.” While another participant (MG1CSB) reflected:

Well, a lot of times people, clients don't realize that there's two different court systems. There is a civil and a criminal. They think if something gets dismissed criminal then that means they can't get a civil order or vice versa. So they think like, “My case is done with if I get denied a protection order.” You have to explain to them the difference between the two systems, and that they kinda don't float back and in-between each other.

This participant shared how clients may get confused if they are engaged with both the civil and criminal legal systems on the processes and differences between the two. Across these themes and focus group discussions, legal advocates shared how often, sexual assault survivors are unfamiliar with and have limited awareness of the civil legal system. This often translated to survivors not engaging in civil help-seeking to begin with. They also shared that for survivors connected with RCCs and advocates, advocates believed it was their role to provide education around the civil process and how it works because clients were often ill informed on the topic.

Acceptability

Acceptability in this study refers to how advocates discussed whether the population that agencies intend to service (i.e., sexual assault survivors) chooses to seek civil legal services and deems them suitable.

Facilitators. *Acceptability facilitators* were identified when advocates discussed

what helps survivors choose to seek civil legal services and find them suitable to meet their needs. These were generally factors that increase survivors' likelihood of finding civil legal services fitting, thus making them more willing to engage in or continue to engage in the civil legal help-seeking process. There were three *acceptability facilitator* themes reported by participants: (a) process navigation facilitators, (b) survivor support system, and (c) empowering behaviors from advocates.

The most salient acceptability facilitator theme reported by study participants was anything that made the *civil legal process easier to navigate* for the survivor. This included advocates or service providers making services less overwhelming or daunting and more streamlined, survivors receiving assistance with paperwork, the existence of e-forms, and service provider characteristics. As an example, one advocate (EH1CSA) shared "We have...attorneys that are females and our clients are wonderful with them—not saying that our male state's attorney is not because he's fantastic. Um, but they just open up a lot more. They're a lot more comfortable." This advocate reported how clients were more likely to be comfortable with engaging in the legal process when they interacted with lawyers who were women.

Advocates also discussed when survivors had *mental and/or emotional support persons or support systems* as an acceptability facilitator. When asked about what helps connect survivors to the civil legal system, one advocate (SC1SE) shared, "maybe having a support system like family that want to support you throughout the process." Participants noted advocates, friends, family, and community groups as mental or emotional supports that increase survivor acceptability of engaging in civil legal processes.

The third acceptability facilitator theme advocates discussed was *empowering behaviors* from service providers. Advocates discussed that providing survivors with civil legal information, then allowing survivors to make informed decisions around their civil legal help-seeking them and supporting their choices in their role as civil legal advocates facilitated survivors accessing and connecting to the civil legal system. One advocate (KZ1SB) discussed how their role as a support person who believes survivors and works with them to achieve their civil legal goals “is huge in giving them the courage and empowering them to feel like, ‘OK, I can, I can do this’.” This advocate noted these empowering behaviors increase the likelihood that survivors feel they are able to engage with the civil system.

Barriers. In this study, acceptability barriers included when advocates discussed issues where the population that agencies intend to serve (i.e., survivors) do not choose to seek services (i.e., civil legal services)/or feels disinclined to pursue them due to poor suitability. Advocates shared five acceptability barrier themes in this study: (a) survivor fear or mistrust of service providers, (b) the civil legal process as a deterrent, (c) survivor experience of trauma and fear of their offender, (d) past negative formal help-seeking experience, and (e) rape culture or survivor feelings of shame around their experiences.

The first acceptability barrier theme discussed by civil legal advocates was *survivor fear or mistrust of civil legal service providers or civil legal process*. This theme captured when advocates shared their clients were uncomfortable or hesitant to pursue civil legal services due to feelings of fear of the civil legal process, what is expected of them in court, distrust or fear of formal helping systems broadly, as well as fear or distrust of specific service providers. One advocate (KZ1SC) shared:

Uh, just a lot of fear of the court system.... Um, fear that the case will go criminal rather than remaining civil. Um, I have a lot of clients who are afraid to testify. And so they're worried that if they do a civil no contact order, that they will eventually have to testify. Um, so there's, there's a lot of fear um that goes into it.

This participant shared how they had clients who feared the potential of having to go to court, which acted as a barrier to them finding further engagement with the civil legal system acceptable.

Another acceptability barrier theme reported was when survivors find the *civil legal process as a deterrent* to further civil legal engagement. This includes when advocates discussed issues with the timeline related to pursuing civil legal services, bureaucracy, paperwork, not seeing the process as worth the potential outcome, and the survivor being unwilling to engage with the civil legal process without a lawyer. When asked what stops survivors from connecting with the civil legal system, one advocate (MG4SA) reported:

I mean I just think some of the barriers aren't things that we can necessarily help. But just, long timelines bureaucracy behind the scenes... And so I want to be upfront [with the survivor] about what to expect moving forward, you know, but at times that's also discouraging information to have at times...So just those long waits. Those long um uncertainties. You know just a lot of times people fall off during the process or don't even want to pursue.

This participant shared how the bureaucracy and timeline attached to the civil legal process may cause survivors to stop engaging with the civil legal system. Advocates also relayed across focus groups that without a lawyer, survivors saw the bureaucracy and the

civil legal process as too overwhelming, and they were less likely to move forward.

The third acceptability barrier theme discussed in focus groups were survivors' *experiences with trauma* and/or the potential trauma from interacting with their offender again. Advocates shared concerns around survivors having to relive their experience, survivors being afraid of their offender, and civil legal services not being trauma informed. When discussing barriers to connecting to the civil legal system, one participant (SC1SD) shared:

I would say also having to go through this process means they may have to relive the trauma that occurred to them, and that may be too overwhelming for a survivor to have to go through. So sometimes that can be a barrier in and of itself ...especially if... they may have to see that offender in court with them, and that may be too much as well.

This participant discussed how fear of reliving a traumatic experience may be a reason why survivors may decide not to go through with the civil legal process.

Participants in this study also discussed *past negative formal help-seeking experience* as an acceptability barrier for survivors considering engaging with the civil legal system. This included survivors' past negative experiences, peer or family members past negative experiences, or survivors' communities' past negative experiences with formal help-seeking. In one focus group, advocates discussed how past experiences with service providers may negatively impact a survivor's willingness to pursue civil legal services:

(Participant MG1CSG): I think it's important that if they [survivors] do end up going to the hospital that there's a very, uh, trained SANE nurse there for them.

Um, it's been- I've heard stories that, um, and I don't know all the details ... but the general- what I have learned- um, you know...A lot of things were mishandled when they came to that, to that person there under the care of SANE nurse...So, you know, if they are there for a kit, um, they should know everything there is to know about how to start it and how it ends. And sometimes that is mishandled.

Moderator: Is that like, a general piece of feedback or does that lead back to the civil legal system?

(Participant MG1CSG): Well, you know, um. You know, I, I think— 'cause a lot of our hospital calls, um, they end up...sometimes, they come to us like, "Okay." And we offer the— "Would you like to fill out a protective order?" And you know? And so all of that kind of plays into, um, that order and you know? The details of, you know, what happened or whatever. So, yeah. Um, I was thinking about that, that kit that they have to fill out. That's, that could be a barrier, you know? Especially if they feel like, you know, that the SANE nurse not-

(Participant MG1CSF): The treatment.

(Participant MG1CSG): They treatment, yeah.

(Participant MG1CSF): Really determines if they follow up with services...Um, if they come to us to even discuss civil issues.

These advocates emphasized how if other formal helping systems (e.g., the medical system) had failed clients in the past or treated them poorly, they were less likely to attempt to access services from the civil system, regardless of whether these services may be of use to the client.

The final acceptability barrier theme shared by study participants *was rape-culture, victim-blaming, and shame* around survivors' sexual assault experience when they attempt to access the civil legal system. This included when advocates discussed survivors being hesitant to pursue civil legal services due to their own feelings of shame, or due to other people (such as civil legal service providers) endorsing rape-culture and/or engaging in victim-blaming. One legal advocate (SC1SB) stated:

As a general rule, just for sexual assault, um, not many people follow through. Um, when they have called attorneys the- um, to even find out or broach the subject, they've received some very, um...uh, uncalled for words from the attorneys, um, that we've had to kind of work through. Um, and a lot of times that is a deterrent for them [something falls] to try to go someplace else, because they don't want to hear what they have to say because it's very victim blaming. That kind of thing...So it has prevented them from going any further.

This advocate shared that when survivors attempt to interact with civil service providers who engage in victim-blaming behavior, they are unlikely to continue with civil legal help-seeking.

Availability and Accommodation

Availability and accommodation in this study refers to how advocates discussed whether clients (i.e., sexual assault survivors) can get to or meet with civil legal service providers. This primary code had two secondary codes, (1) availability and accommodation facilitators, and (2) availability and accommodation barriers.

Facilitators. *Availability and accommodation facilitators* referred to factors advocates reported that enable sexual assault survivors to get to and/or meet with civil

legal service providers. This code had three salient themes: (a) RCC/service provider facilitators to obtaining other civil legal services, (b) prevalence of service providers, and (c) reduction in barriers to get to and stay in court.

The most reported availability and accommodation facilitator theme in these data were *RCC/service provider facilitators to engaging with other service providers*. This theme captures how RCC and/or advocate connections or relationships and inter-organizational collaborations facilitated survivors' connection to and interaction with other service providers (most often legal representation). Examples included advocates ensuring survivors are connected with the service provider most likely to be able to meet their needs, judge appointed legal representation, service providers having virtual consultation options, and when advocate presence increases likelihood of survivor obtaining legal representation. One participant (KZ1SB) discussed how advocates facilitate survivors' ability to get needed civil legal services:

I think one of the, I've noticed that, um, you know, being involved at least the way our system is structured, being involved with, with one of us. Being involved with an advocate can help... if we're already in touch with that victim and that victim's going to go to the courthouse tomorrow and we can give [legal aid agency] ... a heads up that, "hey, we're coming", they're going to know. So they're going to be ready for that person when they walk in. Versus the person who just shows up at the courthouse. That person is gonna likely have to wait and, and depending on how many other people there are and how long they can stay at the courthouse because they have to get back to their job. So being connected with an advocate can, can smooth that process over sometimes and make it a little bit easier for

them to just kind of get in and get access to services.

Another civil legal advocate (EH2NWWA) shared how helpful it can be for clients who received judge-appointed legal representation compared to those who do not have representation:

That is very, very hard to get... representation on that. And we've had people who dismissed orders because they couldn't be represented, and the respondent had [a lawyer]. And what's good in our Civil No Contact Order law is being able to play the card to the judge. Well, in the civil no contact order law it does say the judge may appoint counsel...and so some judges do.

These participants identified how helpful civil legal service providers can be in facilitating survivors' access to the civil legal system more broadly.

The second salient availability and accommodation facilitator theme was *prevalence of civil legal service providers* in the area. This included when advocates discussed being located somewhere with multiple civil legal agencies that can support diverse survivor needs, being in an urban area, being somewhere with legal aid or other pro-bono legal representation options. One advocate (KZ1SA) discussed their proximity to Chicago as a facilitator to survivors obtaining civil legal services:

I think also in Chicago, we have access to um, a other like legal agencies that really help us with the civil and I think that makes a big difference. Um, also of like what you're working with. When you have just more of a support system, or more resources around you because we have like staff out in DuPage County where it's not that far, but you go to a different county and, and, getting a pro bono lawyer in DuPage, It's really hard And so the amount of civil that you would

do, I feel like is um, it's in direct correlation with um the resources you have to make that happen... So I feel like having just, even lawyers that you can talk to is always such a big help. Um, even like, CA- we work with this agency called CAASE, so they do a lot of Title, like they've sued schools. So like, if I have Title IX, I have someone to call.

This advocate discussed how their urban location resulted in the presence of multiple civil legal service options to connect survivors to so that they can further engage in help-seeking, whereas in a different area in the state it most difficult to connect survivors to legal services such as legal representation. They noted location is directly correlated to how much civil legal help can be pursued by survivors in the state.

The third and final availability and accommodation facilitator theme shared during focus groups were *supports that reduce barriers for survivors to both get to and stay in court*. This theme encompassed virtual options (e.g., zoom court hearings), and transportation assistance provided by RCCs for survivors (e.g., bus tokens or passes, gas cards, transportation services). One legal advocate (EH1CSC) discussed how they do not let transportation get in the way of survivors obtaining civil legal services:

For us, if it were at least our agency, if it was a barrier for transportation--no, that's where our case management comes in, no. We're going to make sure you can get where you need to go or if you need this resource. Um, so for us transportation isn't...we provide that service for them or that resource to get them where they need to go.

These facilitators discussed by advocates allow survivors to continue engaging with, and accessing, the civil legal system.

Barriers. *Availability and accommodation barriers* in this study refer to when advocates reported clients (i.e., sexual assault survivors) struggled with or were unable to get to and/or meet with civil legal service providers, and what contributed to that struggle. There were four primary *availability and accommodation barriers* shared by participants: (a) number of service providers/service provider availability, (b) transportation concerns, (c) conflict of interest, and (d) geographic location.

When advocates shared issues with the *numbers of service providers* or service provider availability, they generally discussed the limited number of attorneys or legal aid agencies available or willing to take on sexual assault survivors' civil legal cases. This theme encapsulated when advocates discussed issues such as too few legal aid agencies and legal aid agencies being short-staffed, closing their intake, having too many cases, or serving too large of an area. It also covered when advocates discussed there being too few pro-bono alternatives to legal aid agencies or too few service providers who serve specific groups or communities. For example, one advocate (MG3NWWC) shared they only knew of *one*⁴ legal aid agency in the *entire state of Illinois* that “would represent victims of violence for free.” Another participant (MG2CA) reflected on civil legal representation options during their focus group, reporting:

I think just even having more places to refer them in general as our area just, just has [agency name] for pro-bono. Yeah, that's, that's all that we got and, if we had

⁴ While this advocate noted they only knew of one civil legal aid agency to refer clients to in Illinois, there are in actuality more than that. However, this highlights the information that survivors are getting on civil legal options from service providers.

other, other organizations or offices that could help, like that would help so much with our clients because there are times where like [agency name] can't help ...

And if we just had more availability of them, then more clients would be able to have legal representation.

These advocates both noted issues with limited numbers of legal aid providers in the region that negatively impacted the ability of survivors to attain civil legal representation, and services.

Transportation concerns were also discussed as availability and accommodation barriers to sexual assault survivor civil legal help-seeking. This theme includes when focus group participants discussed survivors having issues getting to civil legal service providers or court dates due to poor or limited public transit options, not having their own form of transportation, or lack of remote or virtual options for clients unable to get to appointments or court dates. One advocate (EH1CSA) shared during their focus group:

Well, um for us... We don't have bus services, um--I mean we do. We have this one that it runs, like uh, not--I mean, it's, like, goes all the way three towns like twice a day. So it takes hours and hours, so not real bus services. So, um yes. Uh, transportation is a barrier I would say, for [our clients].

This participant endorsed poor public transit options in their region as a barrier experienced by clients their center serves.

Advocates in this study also reported instances where clients were unable to attain legal representation due to *legal service providers having a conflict of interest* with the case. This was typically discussed in relation to the same organization the survivor attempted to seek representation from being enlisted to represent their offender. One

participant (EH2NWWB) indicated this has happened to them on multiple occasions:

We do have clients where their offender, and we have caught this a few times where the offender will just basically, just like if you're using [agency name], for example, the offender will actually, even if he doesn't need one, he'll refer himself to [agency name], because then that becomes a conflict for our client, because they can't serve both.

This becomes an issue for survivors, particularly when there is only one legal aid agency in the region, and they are unable to enroll in their services. This means that survivors either have to self-represent in civil court or hire private attorneys.

The final salient availability and accommodation barrier reported by legal advocates was *geographic location*. Participants typically discussed geographic location in relation to limited civil legal resource availability or being in a rural area which contributed to limited civil legal service options or accessibility. One participant (KZ1SC) reported:

Um, I think for us, it's a matter of accessibility. Um, we don't really have that many resources around us. Uh, just kind of where we are. And so really the only options we have are in [County Name]. Um, so it's not always likely that they're going to be available because they are overseeing more than just our county.

This advocate reflected on having limited civil legal resources and legal aid options in their region of the state as an accessibility barrier to sexual assault survivors' civil legal help-seeking.

Affordability

Affordability in this study referred to the cost of service seeking that is expended by sexual assault survivors when they engage in formal civil legal help-seeking. This primary code had two secondary codes, (1) affordability facilitators, and (2) affordability barriers.

Facilitators. *Affordability facilitators* included when advocates discussed what helped sexual assault survivors with the costs of civil legal service seeking. Advocates shared three primary factors that increased civil legal affordability for sexual assault survivors. Participants described (a) availability of low or no cost legal aid options, (b) systemic and/or organizational (RCC) resources, connections, and options, and (c) survivor financial means.

Advocates shared *low-cost legal representation options* as an affordability facilitator of civil legal system accessibility. They described legal aid, pro-bono attorneys, judge-appointed representation, lawyers who offer payment plans or reduced fee options, legal aid clinics, lawyers who waive finance related eligibility criteria, and lawyers who will coach survivors on how to self-represent in court as affordable representation options for clients. Most participants indicated they referred clients to legal aid agencies as a first step in attempting to ensure clients have low or no-cost legal representation. One participant (MG3NWD) shared:

We also try to refer to [legal aid agency] a lot. But we find that they don't take many cases. Um, so recently, after like meeting with like a lot of the local judges, we've recently learned...that if a respondent has an attorney, the court will appoint one to the petitioner...we actually have an agreement with the judge that if we can find, like a private attorney that is willing to represent the petitioner,

that they will appoint that. And pay them out of the county's funds. So that's been extremely beneficial.

This advocate shared how their initial client referral is always to legal aid, but if the client is unable to obtain representation through them, the judge in their area is willing to appoint representation for survivors at no cost.

The second affordability facilitator advocates discussed were *systemic or organizational supports, resources, or connections*. These facilitators typically reduced the overall costs associated with civil legal help-seeking for survivors (i.e., time, money, taking off work, transit, etc.). This theme included organizational resources for survivors, RCC connections to other services providers that facilitated more affordable civil legal help-seeking, and systemic processes that saved time (such as virtual options). For example, advocates discussed providing bus tokens to help alleviate transit costs, while another advocate (MG4SC) shared:

Currently, we have a bar grant. So we can, I believe it's, it's not a lot but it's something I think it's up to \$400 for retainer fee only. But it's something. Because you know, most of the survivors that we work with, they don't, they don't have those resources, the financial resources to pay for, for that. So this is the little extra something that we have there. Um, but I wish it was more. I wish we could do more.

This example highlights how a RCC assists clients with paying legal fees associated with civil legal help-seeking to lower the overall cost of the civil legal process for sexual assault survivors.

The last affordability facilitator participants reported during this study is survivors with *personal financial resources*. This typically encompassed advocates discussing survivors having the funds themselves to hire attorneys, but also included when participants noted survivors may have family or friends who can assist with the financial costs of civil legal help-seeking (namely acquiring legal representation). One advocate (KZ1SA) shared:

We have a list [of lawyers]. And they, like, and again, right, that's so dependent on the survivor and their financial means. Really, that's what it's dependent on. Yeah. So, like if, if they can afford it and they want it, we can connect them to lawyers that can do that work. But it's just, it depends.

This is an example of how advocates believed access to legal representation is variable, and having financial means makes it more likely that survivors are connected to civil legal representation as they pursue civil legal options.

Barriers. In addition to facilitators, advocates also described barriers to affordability that survivors seeking civil legal services experience. *Affordability barriers* refer to when advocates discussed specific costs of service seeking as an impediment to civil legal help-seeking for sexual assault survivors. Study participants shared two primary affordability barriers: (a) monetary costs, and (b) emotional and energy costs.

According to advocates, monetary costs associated with pursuing civil legal services survivors navigate were the cost of legal representation, work related costs, such as having to take unpaid time off work, pay being docked, and other financial concerns. For example, one advocate (MG4SD) shared the story of a client who struggled accessing services because they were unable to take time off from work:

it just makes me think of another person that um, we helped ... another barrier was like her time off. Like, she's an undocumented person her only daytime, her only day off was a Sunday. Like she was not able to get anything done or reach out to any help because her employer would like dock her pay if she had to take days off. And because she's only getting paid cash, then she knows that if she like, you know tries to get another day off or like stand up for herself...hat employer is going to immediately fire her and just find someone else. So like, the fact that she, you know they don't even have the time sometimes too. Depending on their work availability because they're just working and working trying to survive. So I think yeah like, that's a yeah, huge.

This advocate describes an incident where their client was unfairly penalized by their employer for trying to pursue civil legal options, and how that impeded their ability to “reach out to any” civil legal help.

Legal advocates also discussed *emotional and energy costs* associated with the civil legal system. These include survivors having to see or interact with the offender, ask for help, and endure the civil legal process. One advocate (EH3SA) described the toll the legal process takes on survivors:

So that could be a huge barrier [to continued engagement with the civil system]. The whole court process and how it goes because um you know...it's a process. And um, and I know sometimes some of my clients feel like this may be a game. It seems like a game. But no, it's not a game, it's a process. You know I have to explain that, “no it's a process that you have to go through.” And it's like “I don't understand why we have to keep going back and forth.”... I know that's a barrier

within, with my clients.

Another advocate (MG4SD) described how draining and time-consuming attempting to access civil legal help can be for survivors:

I would say... The full length of time. Time and the energy...because it's like, yeah they got to think about "is it worth it for me to try to sue this person and then have this you know go on for another two years? Or, should I just drop it and move on with my life?"

These financial and/or emotional barriers described by advocates caused survivors to reconsider engaging or going through with the civil legal process.

Appropriateness

For this study, appropriateness refers to when advocates reported how civil legal services did or did not fit the needs of their clients; and how this related to survivors' ability to connect with, and continue in, the civil legal system. This primary code had two secondary codes: (1) appropriateness facilitators, and (2) appropriateness barriers.

Facilitators. *Appropriateness facilitators* included when civil legal services were flexible to fit the specific needs of clients, thus making survivors more likely to engage with services and continue in the help-seeking process. Three themes were identified related to factors that facilitated civil legal service appropriateness for survivors: (a) no issues with service provision criteria, (b) survivor-friendly and appropriate services, and (c) advocates ensuring survivors receive necessary supports throughout the civil legal process.

The most reported appropriateness facilitator discussed by advocates was when their clients were not negatively impacted by *civil legal service provider assistance*

criteria. This was typically discussed in relation to legal aid options, which often have case and/or client criteria requirements that need to be met in order for them to provide legal representation. As advocates discussed throughout the focus groups, presence of legal representation often determined whether a survivor opted to continue engaging with the civil legal system or not. Advocates' discussion of criteria as a non-issue for survivors was in relation to survivors meeting the service providers' eligibility requirements, service providers having no criteria for taking cases, or service providers making exceptions or waiving requirements to provide legal representation for a client. When discussing whom they refer survivors to for legal representation and when, one advocate (MG4SA), shared: "We have [legal aid agency]. Which offers legal representation based off of income. So that's typically two and a half times the poverty level, I believe? But some exceptions can be made." This advocate shared how, in their experience, this particular agency has occasionally been flexible around income requirements in the past to ensure survivors have legal representation. Often, advocates in this study discussed how clients who were over the income eligibility level, were still unable to afford legal representation. This flexibility allows clients who otherwise may be unable to obtain legal representation, but want lawyers, the opportunity to still connect with civil legal representation to continue their civil legal help-seeking.

The second theme discussed as a facilitator by advocates was civil legal service providers offering *survivor-friendly services*. This theme encompassed the presence of culturally appropriate services, trauma informed services, services to meet the specific civil legal need of their clients, and accessible services for those who do not speak English. Without these survivor-friendly options, the survivor may not be able to engage

with the provider or access the civil legal system more broadly. One advocate (EH2NWWA) discussed how their RCC (and other service providers) navigate ensuring survivors who need language assistance are able to participate in the civil legal process:

And then [the courts] refer them to the legal advocate of the center, which is me...to then do follow up and provide the legal advocacy... So that...office would contact the interpreter's office...the judge's lady that does it. And then they make sure that that's done. So the county pays for it. But if they get counseling for us-- through us, we have to provide the interpreter.

This advocate shared the logistics behind how the court ensures survivors' language needs are met, while the RCC ensures the survivor has access to language services at their center. Without these services, the survivor would have been unable to interact with civil legal service providers or continue in the help-seeking process.

The last appropriateness facilitator theme shared by clients is *advocate presence*. Advocates often discussed their role in connecting survivors to specific civil legal providers and the system more broadly. In one focus group, when the moderator asked what makes it more likely for survivors to get legal representation, the advocates responded "us." Advocates' role as accessibility facilitators as discussed by participants incorporated their presence making other service providers (i.e., legal aid) more likely to say yes to helping clients pursue civil options, preparing survivors for court, and helping clients navigate their complex civil cases after having been turned down by legal aid to ensure they remain engaged in the civil legal process. One advocate (KZ1SB), when sharing their frustration with legal aid not taking cases, discussed how they continue to work with clients on their civil legal help-seeking even after being turned down, stating:

“then we’ll of course, we go ahead with them anyway, even if the lawyers say, ‘Well, we don't think you'll be able to get the orders so we're not going to help you.’” This quote reflects how advocates provide supports which allow survivors to continue accessing civil legal services, even after legal aid opted not to assist them.

Barriers. In this study, *appropriateness barriers* included when legal advocates reported how the civil legal services did not adequately fit the needs of sexual assault survivors and which decreased the likelihood of continued civil legal system engagement. This code had five themes: (a) case/survivor attributes, (b) civil legal services may cause harm, (c) civil legal assistance not always guaranteed, (d) unstandardized civil legal processes, and (e) survivors believe civil legal remedies to be ineffectual.

The most often discussed appropriateness barrier was *survivor and/or case attributes*. This usually referred to survivor or case attributes that cause legal aid to deny survivors help. According to advocates, this could mean the case or survivor does not meet legal aid eligibility criteria. For instance, the survivor or case may be outside the service area of the legal service provider; a legal aid attorney thinks the case is unwinnable, there is not enough evidence, or the sexual assault took place too long ago and they decided not to help the survivor; or the attorney may think the survivor’s background is a deterrent and opt not to aid them in the civil legal help-seeking process. This was a barrier to survivor continued civil legal engagement because, without legal representation, survivors were less likely to continue attempting to access civil legal supports. For example, one advocate (KZ1SA) shared several reasons why a legal aid agency may decide not to assist a survivor pursuing civil legal remedies:

Yeah, I would echo the same thing. Just, it the only reason, so it's just it doesn't fit

neatly into. It's just out of the scope of what [legal aid agency] or [legal aid agency] is doing. And sometimes just people like their cases are just not as, you know, as neatly or. Yeah. It, it could also be maybe a time frame issue? They might have, it, it might have been too, too long ago.

This advocate discussed time frame issues, case criteria, and cases not being “neat” as reasons some legal aid agencies may deny assisting survivors in the process of attempting to access civil remedies.

Advocates in this study also discussed the potential for civil legal help-seeking to *cause harm*-- either to the survivor or the survivor's criminal case-- and that this harm affected their willingness to continue engaging in the civil legal system. This theme encapsulated when advocates shared problems with civil and criminal legal system interactions. It also included when advocates reported service providers were not trauma informed and/or caused emotional harm to survivors, or how the civil court process may be traumatizing experience. Advocates noted specifically how harmful it can be when a survivor must repeatedly prove to others they were assaulted during the help-seeking process, and the onus is on survivors to rearrange their life and schedule to try to feel safe.

Advocates shared several examples of how civil and criminal legal system interactions may make survivors unwilling to continue engaging with the civil process. Some advocates discussed how survivors who are interested in civil legal options, such as protective orders, are put off by the idea once they learn that the police are involved if a protective order is violated. Others shared how a civil case may potentially influence a criminal case, and how survivors may be dissuaded by their criminal lawyers to engage

with the civil system while criminal proceedings are on-going. In one focus group where advocates discussed how survivors are less likely to continue engaging with the civil system for this reason, participants shared:

(Participant MG1CSF): So we have someone going through legal right now, um, who is wanting to get a protective order and the attorney is saying “don’t do that, because it’s going to muddy up the waters for the [criminal] legal case.” Like they’re actually telling them not to do it. Not to get that protective order.

Moderator: Okay. Have other people experienced that?

(Participant MG1CSB): State’s attorneys sometimes don’t like that because if there’s other testimony out there that might help or hurt their case.

[Multiple participants: agreement]

(Participant MG1CSD): Or I’ve had a state’s attorney be like, “Hey, can I read that addendum before”—because everything in civil court can always be brought into the criminal...So like, “What all did you allege in there? Can I read that beforehand?”

(Participant MG1CSF): And I think that’s why it might be why they kind of look at that as like a second option because if you do it together then it’s going to affect each other.

These participants shared how criminal and civil legal cases can impact one another, which makes survivors less inclined to continue pursuing civil legal options, particularly if they have other criminal legal service providers telling them not to engage with the civil system.

Participants also discussed the civil process or civil legal providers as harmful to

the survivor. When advocates shared how providers were not trauma-informed, or issues with the civil process being re-traumatizing, they often discussed how survivors were set back in the help-seeking process by these negative interactions, or that they “fell off” at some point during the civil process due to the burden placed on them. In one focus group, advocates commiserated over how other service providers can negatively impact survivors’ willingness to engage with the civil legal system due to experience of, or fear of experiencing negative repercussions, recalling:

Participant MG4SC: I think, it takes so much courage for a survivor to talk to anybody about their situation. And when it's a lawyer it's all out there...I had a survivor who, it was immigration, marriage fraud, etc, and so going to this particular lawyer who ended up retaliating in terms of reporting them for fraud. Because, victim blaming, not being trauma informed... that was probably the 20th person that we've tried talking to and then that was the response. And it set that individual back so much...

Participant MG4SB: Absolutely. I was going to say that I have seen instances, especially with you know undocumented clients, that they are so scared to seek legal help because they're afraid of just like, you know, the institution itself going after them. ...Um, cause it's... Yeah there have been cases where they go in... expecting to get help, but then come out, you know, having to be interviewed by ICE.

These advocates shared how, in the process of civil legal help-seeking, survivors were penalized by a civil legal service provider. This makes clients wary of engaging with civil legal service providers, sets them back in their journey for civil legal assistance and

makes them less likely to continue engagement with the process.

The third appropriateness barrier theme *civil legal assistance not guaranteed*, encapsulated when advocates reported survivors may or may not get what they are seeking from the civil legal system (most often a protective order), and it discourages them from continuing on with civil legal help-seeking the process. One participant (MG3NWWE) discussed survivors attempting to get emergency short-term protective orders, which is often the first step in trying to obtain a long-term protective order:

Emergencies in our county are usually always granted. So I think in our county [the civil system is] pretty supportive. But then we also have another county, in [county], and it's not—they don't get the emergency orders. It feels like you're just jumping through hoops to try to do what you can for the survivors. And then they get discouraged and—and then they end up straying away. So then they don't continue. And I don't think it's—I don't think it's set up to help them succeed at all.

This advocate recounted how, in some areas, it is more difficult to get an emergency order of protection, which makes survivors less likely to continue attempting to obtain other civil legal remedies, like a long-term protective order, after being denied.

Another appropriateness barrier theme advocates discussed were the *unstandardized and complex processes* associated with civil legal help-seeking. Advocates reported how variability in procedures across areas and individual service providers makes the process confusing to survivors, and service providers struggle with knowing how to best maximize civil legal accessibility for their clients. One civil legal advocate (EH1CSC) shared their frustration around trying to connect survivors to the

appropriate services in different counties, relaying:

The procedures of doing things differently... We are in the 5th circuit judiciary, you know, in the court systems. But... Coles [county] does it different than Clark [county]. Clark does it different from Edgar [county]. Edgar does it different from Vermilion [county]. None of them are on the same page. So where you go up to Vermilion and they've got their own documentations that are "approved," you go to Edgar and they're like, "What? I don't even know what that form is."

By not knowing what forms to fill out to ensure survivors are petitioning for the right services due to county-level and judge-level differences in civil court service provision, advocates felt their ability to connect survivors to the civil system was encumbered.

The final appropriateness barrier discussed by advocates as civil legal system accessibility issue of *civil legal services being ineffectual*. This theme covers when participants shared that some civil legal options should have been useful, but in actual practice, they were not beneficial or did not guarantee survivor needs would be met, even if they did acquire the civil legal option they were seeking (i.e., protective orders, VESSA, Title IX).

I could piggyback off the rape culture barrier and just kind of expand on that more. Is um, to just... if we, you know, we understand, you know, why survivors go through um maybe waiting to report or waiting to get an order of protection... another barrier could be they just still don't feel safe. I've had a lot of survivors that tell me that "it's just a piece of paper. Like, what are the police going to do if they showed up to my house? It's just this piece of paper."

This advocate (EH3SB) shared how clients doubting the efficacy of an order of

protection to ensure their safety may cause survivors to wait to get a protective order or engage with the civil legal system.

Summary

In focus groups, legal advocates discussed facilitators and barriers that sexual assault survivors encounter when attempting to access post-assault civil legal remedies. Factors impacting the accessibility of the civil legal help-seeking process spanned all five accessibility dimensions. Overall, across dimensions, the most frequently discussed facilitators were: advocate and RCC education, supports and connections, willingness of legal aid to take on clients, and low cost and streamlined civil legal options. The most frequently discussed barriers reported by legal advocates were: survivor-level factors such as lack of knowledge or awareness, issues around fear or mistrust, lack of service provider availability or appropriateness, and costs associated with civil legal service seeking.

Discussion

Overall, advocates in this study shared an array of facilitators and barriers that impact Illinois sexual assault survivors' ability to access and stay involved in the civil legal system. Most extant literature on civil legal help-seeking has focused on barriers experienced by victims of crime or domestic violence survivors attempting to navigate the civil system. This study is unique in that it identified barriers specific to sexual assault survivors. Further this study identified facilitators to accessibility, in addition to barriers. These novel insights allow us to better understand the experience of survivors attempting to access civil legal help. They also allow us to identify ways to improve civil legal service provision and the civil legal process in Illinois overall to make it more accessible,

and, ultimately, more useful to sexual assault survivors.

Dimensions of Accessibility

Approachability. Advocates in this study discussed knowledge of civil legal options as both a barrier and facilitator to survivor civil legal help-seeking. Extant research suggests awareness of and ability to identify post-assault services is a barrier for survivors who engage in formal help-seeking (Kennedy et al., 2012). Lack of awareness has also been cited as barrier for victims of crime and/or domestic violence in need of civil legal services (Bouffard et al., 2017; Lee & Backes, 2018). Similarly, findings from this study indicate limited knowledge and awareness of civil legal options and providers are also barriers specifically for sexual assault survivors. However, the current study provides new insights by demonstrating how advocates and RCC staff spread awareness of civil legal services to survivors, and their communities more broadly, to facilitate further survivor engagement with the civil system. Advocates and RCC staff noted these efforts increased the likelihood of survivors receiving accurate information from other service providers on civil legal options and of survivors opting to utilize the civil system to meet their post-assault needs.

Further, Bouffard and colleagues (2017) found that poor communication or collaboration between criminal legal service providers and civil legal service providers negatively impacted victims of crime seeking civil legal help. Similarly, this study also found that poor provider communication impacted sexual assault survivors' civil legal help-seeking. In addition to poor communication among providers, this study found there is inadequate communication from criminal legal service providers to survivors. This, in turn, impedes their ability to access the civil legal system and civil legal remedies.

Advocates reported sexual assault survivors struggle with being misinformed or misunderstanding information provided by other service providers (namely criminal legal service providers). This is a critical finding because participants believed this confusion sometimes leads to sexual assault survivors thinking they are either already protected by the civil system, or that civil legal services may not be an option available to them, which prevents survivors from attempting to access the civil system.

Acceptability. According to past research, survivors may fear engaging with formal helping systems due to past negative experience, immigration status, or cultural disinclination (Amin, 2017; Bouffard et al., 2017; Greene, 2015; Kennedy et al., 2012; Messing et al., 2021; Prentice et al., 2017). Advocates in this study reported survivors experience similar barriers regarding the civil legal system and service provider accessibility. Participants reported survivors may opt not to pursue civil legal help-seeking if they have had poor past experiences with other service providers, resulting in distrust or dislike of formal helping systems. Advocates discussed trauma experience as a barrier for survivors to follow through with service provision, particularly if the process was lengthy, complicated or difficult.

Conversely, study participants reported survivors who were in a “good place” in their healing journey, those who felt a sense of empowerment from pursuing civil legal options, and survivors with a solid emotional support system, were more likely to access and find the civil legal system acceptable. Additional facilitators shared included anything that streamlined or made the process easier to navigate. Participants reported making the civil process easier increased the likelihood of survivors staying engaged and not dropping their civil legal pursuit before the help-seeking process was complete. This

study builds upon past research findings that the civil legal process can be lengthy, difficult, and demanding and, as such, may turn help-seekers off from opting to pursue civil legal services (Bouffard et al., 2017; Lee & Backes, 2018). Our study adds to this by noting not only what is a deterrent, but also what increases the likelihood for survivors to remain engaged in the process.

Availability and Accommodation. Availability and accommodation in this study refer to how advocates report survivors are able to get to or meet with civil legal service providers or civil system entities. In accessibility literature, the *availability and accommodation* dimension is typically understood to be the availability of service providers to their clients (e.g., Levesque et al., 2013). Study participants reported survivors attempting to access the civil legal system often had to navigate limited availability of legal aid service providers due to few options and limited staffing at legal aid organizations.

Additionally, advocates discussed the location of survivors and civil legal service providers as a factor that significantly impacts survivors' ability to access the civil legal system and civil legal service providers. Often, advocates revealed a limited number of civil legal service agencies in their region as a barrier to accessing civil legal services or legal aid. Similarly, previous research has found survivors located in rural areas struggle to connect to services (Bouffard et al., 2017; Campbell, 2013; Kennedy et al., 2012). These findings also expand beyond prior research by outlining the benefits of having multiple legal aid agencies in a geographic area, especially in a place like Chicago, which houses many experienced civil legal service providers and specialists for advocates to refer clients.

Further, advocates shared how lack of transportation negatively impacts sexual assault survivors' ability to access the civil legal system and civil legal service providers. Advocates also discussed how virtual options and transportation assistance provided by RCCs help address these potential barriers. Past research has identified that transportation is a concern for survivors engaging in formal help-seeking or for crime victims pursuing civil legal options (Bouffard et al., 2017; Campbell, 2013; Kennedy et al., 2012). These findings indicate transportation concerns also impact survivors attempting to engage with the civil legal system *and* identify ways this barrier can be addressed to facilitate survivors' connection to civil legal services.

Beyond advocates and RCCs facilitating transportation for survivors, advocates also discussed other ways they support survivors connecting to civil legal supports and legal aid, such as collaborating and relationship building with other service providers in the community as well as warm referrals. Previous research has found advocates do this in the context of the criminal and medical systems (e.g., Wegrzyn et al., 2022). This research demonstrates how advocates build relationships in the community and with other service providers to help sexual assault survivors access the civil legal system. Additionally, this study also highlights how advocates provide logistical support to survivors (i.e., transit).

Affordability. Advocates in this study described survivors' financial status as an affordability accessibility facilitator *and* an affordability accessibility barrier. Participants indicated survivors struggled to get an attorney to help them pursue civil legal options, either because they did not have enough money, or their financial status exempted them from obtaining free legal aid services. Previous literature on domestic violence survivor

civil legal help-seeking supports findings from this study, as research on this population indicates income eligibility is a barrier for domestic violence victims attempting to get civil legal assistance (Hartley et al., 2013). Other monetary costs impacting survivors' ability to access the civil legal system discussed in this study include the cost of transportation, as well as the potential costs expended taking time off work to engage with the civil system. Previous research has found taking time from work is also a barrier for crime victims pursuing civil legal services (Bouffard et al., 2017). Results from our study support these findings and also expand beyond prior studies by demonstrating survivors also struggle to access the civil legal system due to the cost of transportation. In addition, this study goes beyond prior findings, as advocates also discussed money as a civil legal service facilitator. Participants noted survivors who had financial means can acquire paid representation if they are unable to attain legal aid or pro-bono representation.

Lastly, participants also discussed the emotional and mental costs associated with pursuing the civil system as a barrier survivors encounter attempting to access civil services. Extant research suggests economic costs are not the only affordability concerns survivors navigate when deciding whether to connect with formal helping systems (Kennedy et al. 2012). While past research has not examined affordability in relation to sexual assault survivor civil legal help-seeking accessibility specifically, findings from this study align with work indicating the help-seeking process has the potential to take an emotional toll on survivors (Kennedy et al., 2012).

Appropriateness. In this study, appropriateness accessibility factors reflected when either the service itself, or how it was provided, impacted survivors opting to

engage with or access the civil system and/or civil service providers. In this study appropriateness barriers primarily occurred when legal aid agencies denied providing survivors help for their civil legal case, often due to issues with survivor or case attributes not meeting organizational criteria (i.e., income ineligibility, geographic location, age of survivor, time since assault, “winnability” or “ease” of case). Previous civil legal help-seeking research has found that, for victims of crime, eligibility criteria (Bouffard et al., 2017) -- specifically income eligibility criteria for domestic violence survivors (Hartley et al., 2013) -- may be a barrier. Findings from this study indicate similar civil legal help-seeking barriers also apply to sexual assault survivors and their ability to access the civil legal system and civil legal service providers. Further, the specific criteria reported in this study around geographic location, time since assault, and case winnability are novel accessibility barriers that sexual assault survivors attempting to engage civil legal aid encounter.

In addition to case criteria factors, advocates in this study also reported service providers offering translation and/or culturally appropriate services—or no— impacted survivors’ ability to access civil legal help. The presence of interpreters was discussed as a significant facilitator to access, while civil courts or agencies that did not have language services were discussed as a significant barrier. Previous research has noted service providers may not provide culturally appropriate or effective services for survivors with varied and diverse needs (e.g., clients may need translation services, but the provider does not offer these options) attempting to engage with formal helping systems, such as the medical and criminal legal systems (Ahrens et al., 2009; Gelberg et al., 2000; Kennedy et al., 2012; Prentice et al., 2017; Snowden & Yamada, 2005). Findings from

this study indicate survivors are also impacted by this issue when attempting to access the civil legal system.

Similar to previous survivor help-seeking literature (i.e., Kennedy et al., 2012), findings from this study indicate survivors are less likely to decide to access and pursue civil legal help from the civil system if they feel the help is not guaranteed or they perceive the service options available to them as ineffectual. However, findings from this study also indicate that survivors may cease attempting to access civil legal help if there is a chance the civil case may impact an ongoing criminal case, or if they are advised by their criminal legal representation not to pursue civil legal options.

An additional appropriateness accessibility factor advocates reported in this study was unstandardized processes of other service providers. This made it difficult for advocates to help survivors access other providers and the civil system more broadly. Advocates reported how differences in form requirements, service provider criteria, and funding across organizations, counties, and individuals made it difficult for advocates to advise survivors or connect them to the best possible resources. Previous research has found legal processes are often inconsistent across jurisdictions (e.g., Dhami, 2005). These findings support this inconsistency and demonstrate that unstandardized processes affect the ability of advocates to help survivors access services.

Lastly, this study discussed how advocates' presence facilitated survivors' ability to successfully access civil legal help. This adds to the body of research on the impact of advocates (e.g., Campbell, 2006; Kirkner et al., 2021; Moylan et al., 2017; Payne, 2007; Wegrzyn et al., 2022) which has found that advocates play an integral role in survivors' help-seeking from the medical and criminal legal systems. This study found that

advocates' support made survivors who wanted civil legal options more willing to pursue them. Advocates felt this was particularly critical for survivors who had been turned down by civil legal aid. Further, advocates also discussed how their presence made it more likely that other civil service providers would provide help to their clients during their attempt to access and navigate the civil system. This finding is supported by extant research, which has found that advocate presence makes police more likely to found sexual assault cases, and nurses more likely to provide forensic exams to survivors attempting to seek help from the criminal or medical system (Campbell, 2005; 2006).

Limitations

While this study explores a new area of research and yields novel insights related to civil legal service accessibility, it is not without limitations. Legal advocates have considerable knowledge of survivors' civil legal help seeking experiences and issues they may struggle with regarding service access. However, as civil legal service providers are not the individuals attempting to access civil legal help for themselves, they may not accurately identify just how impactful the barriers or facilitators they report are on survivors' decisions to engage in civil legal help-seeking. Additionally, legal advocates work with survivors who were able to access their services; thus, this study does not capture those who did not engage with advocacy services. Future research should consider survivors' perspectives on the accessibility of various civil legal service providers, including RCCs during their civil legal help-seeking experiences. Lastly, advocates in this study had relatively few years of experience in their current role. This is not atypical for the position. Less experienced civil service providers may be an additional accessibility barrier encountered by survivors not captured in this study.

Implications for Research, Policy, and Practice

Research. This is a new and emergent body of research. Future research may use these findings from advocates' perspectives to inform studies on how survivors experience civil legal accessibility. For instance, now that different facilitators and barriers to survivors' access to the civil legal system have been identified, it may be useful to quantify the extent to which survivors experience each of these barriers via survey data.

To the author's knowledge, this is also the first study to apply the framework of accessibility (De Poli et al., 2020; Jacobs et al., 2012; Kurpas et al., 2018; Levesque et al., 2013) to civil legal help-seeking. As the framework yielded robust information regarding how the different components of accessibility influence survivors' ability to engage with the civil legal system, future studies examining survivors' attempts to access formal helping-systems may consider also utilizing this framework. This framework is most often applied to patients' ability to access healthcare services. As such it may be particularly salient for studies evaluating survivors' ability to access medical care. However, these findings also indicate this framework is also applicable for evaluating accessibility of other helping services, beyond the medical system.

Policy. Data from this study can be used to influence policymakers in the state of Illinois. Data can primarily be used to advocate for more civil legal system funding in Illinois as well as for clarification, and possible revisiting, of certain civil legal system policies that impact survivors' ability to access help. Results can also be used to influence RCC and legal aid agency's organizational policies in the state of Illinois.

Civil System and Civil Service Provider Funding. For RCCs, advocates in this

study reported how some agencies had funding to support survivors with transportation during the civil legal help-seeking process, while others also had funding to help support survivors with retaining legal representation. By increasing RCC organizational funding across Illinois, it is likely more survivors attempting to access the civil system will receive assistance with transportation and obtaining legal representation.

Advocates also discussed how, when *legal aid agencies* had more funding, they were able to take more cases and/or were less stringent regarding eligibility requirements for survivors attempting to engage their services. Findings suggest that increased funding, particularly for legal aid agencies, may increase survivors' ability to connect and further engage with the civil legal system. Conversely, limited funding likely negatively impacts survivors' ability to access the civil legal system. If funding for legal aid agencies were to increase in the state of Illinois, it is probable agencies could hire more service providers and more locations could be opened across the state to increase availability to survivors.

Lastly, participants also reported how *civil legal system* funding varied by county. In some counties, there was funding for judges to appoint legal representation to survivors unable to attain legal aid on their own, while in others there was not. Bouffard and colleagues' (2017) survey of civil legal service providers for crime victims also discussed funding as a barrier to service provision. These findings suggest it may be useful to ensure each county has enough funding allocated for civil legal services that service provision and options for survivors do not vary from county to county, and the same opportunities are afforded to all survivors across the state regardless of their locality.

Civil System and Legal Aid Organizational Policies. These data also indicate that

current organizational policy around legal aid service provision criteria may be allowing sexual assault survivors who wish to pursue civil legal remedies to slip through the cracks when they are denied legal aid. It may be useful to update organizational policy, particularly around survivor financial status. Many advocates in this study discussed how they have worked with survivors who were ineligible for legal aid due to their financial status. However, these survivors did not have enough money to hire a private attorney to support them in their civil legal help-seeking. Thus, survivors may often be unable to access the civil legal system, due to financial constraints.

Further, advocates also discussed timing as an issue survivors encountered when attempting to engage with the civil system. Some participants shared how time limits exist for pursuing certain civil legal options, or how legal service providers were unwilling to assist survivors if the assault had taken place too long ago. Survivors who attempted to first seek help via the criminal system, or who needed to get other services to process the trauma so they may be able to fully engage in the civil process, were denied the opportunity to pursue the civil pursuits they needed. As such, it may be useful for policy makers to re-evaluate statutes of limitations as they apply to different civil legal help-seeking options for sexual assault survivors, and potentially extend them or clarify to legal aid service providers which civil legal options do and do not have time limits.

Practice. This study revealed many ways civil legal service providers (e.g., RCCs, legal aid agencies, and courthouses and staff) can improve practice to better support survivors attempting to connect to and stay engaged with the civil legal system.

Inter-agency Collaboration. Advocates discussed how inter-agency collaboration and RCC relationships were key in connecting survivors to civil legal services (e.g., no cost legal representation). Formalized mechanisms for inter-agency and disciplinary collaboration and connections to support survivors may better ensure survivors' ability to access the civil legal services they need. Past research has discussed wrap-around services as a helpful service provision solution for victims of crime as well as domestic violence survivors (Bouffard et al., 2017; Jweied & Yang-Green, 2016; Kaman et al., 2012; Lee & Backes, 2018; Zweig & Burt, 2007). There has also been a push for coordinated service provision for survivors navigating the medical or criminal legal system (e.g., Cole, 2018; Greeson & Campbell, 2015; Maier, 2011; Moylan & Lindhorst, 2015; Moylan et al., 2017; Patterson & Pennefather, 2015). Data from this study indicate some forms of interdisciplinary collaboration can be helpful for sexual assault survivors attempting to engage with the civil system. For example, participants discussed how legal aid and advocacy presence in courthouses facilitated survivors' ability to receive services when they needed them, rather than having to wait. By having service providers in the same location, working together to support clients, the likelihood of connecting survivors to the services they need increases, as does timeliness of service provision. Further, miscommunication or confusion between service providers may decrease when different groups coordinate more.

RCC Practices. Advocates in this study discussed, at length, the role RCCs and legal advocates play in ensuring survivors are able to access the civil legal system. Previous research on advocacy for rape victims indicates that advocates play a crucial role in ensuring survivors get the services they should receive from the medical or

criminal legal systems (Campbell, 2006; Moylan et al., 2017; Payne, 2007; Wegrzyn et al., 2022). Advocates in this study discussed how legal advocates also do this within the civil legal system. As advocates play a critical role in survivor civil help-seeking, there should be dedicated civil advocates at RCCs to support survivors. Advocates in this study often reported they had multiple roles within their organization (i.e., DV advocate, medical advocate, general legal advocate, hotline). By ensuring the staffing of specifically *civil legal* advocates, survivors may receive more tailored civil services to meet their needs from RCCs, and advocates will be less burdened by having multiple roles to play.

Legal advocates in this study also discussed the role that RCCs and advocates play in educating survivors, the community, and other service providers on civil legal options. Advocates strongly believed this influenced survivors' knowledge and ability to access the civil system. As such, any RCCs that are not doing this already may consider regular community outreach and education sessions to ensure survivors are aware of all options available to them.

Legal Aid Agency Practices. In addition to RCC agency practices, advocates in this study also revealed insights into ways to improve legal aid agency practices to better support survivors attempting to access civil legal help. Survivors in Illinois may benefit from legal aid agencies hiring more civil attorneys to serve survivors. Limited availability of service providers at legal aid agencies was a critical barrier to survivors' ability to access civil legal services. Increasing the number of civil legal service providers and staff may increase the likelihood of survivors connecting with, and staying connected to, the civil legal system during the help-seeking process. Advocates often reported that legal aid

and lawyers were facilitators to accessing civil legal services for sexual assault survivors. They discussed legal aid attorneys' ability to connect survivors to more resources and the way in which legal aid and having legal representation increased survivors' willingness to continue with next steps in the civil legal help-seeking process. Further, advocates noted some legal aid agencies had a presence in courthouses or provided monthly legal aid clinics. These practices were identified as facilitators in survivors' ability to access civil legal help. As such, it may be useful for one or both of these practices to be adopted more broadly by civil legal aid agencies across Illinois.

Courthouse Practices. There were several courthouse practices that advocates in this study noted as helpful to survivors attempting to access civil services. These included virtual options (e.g., zoom hearings), judges appointing legal representation, and having advocates present at the courthouse to offer services. Advocates noted these streamlined or made the civil process easier to navigate. Participants also reported this increased the likelihood of survivors staying engaged and not dropping their civil legal pursuit before the help-seeking process was complete. Thus, it may be useful for courthouses across Illinois to adopt one, or all, of these options.

Across Providers. Lastly, across all civil legal service system providers, there were several practices study participants noted that significantly impact survivors' ability to access the civil legal system. First, participants lauded the employment of translation staff or staff that can provide culturally appropriate services to survivors as factors that helped survivors stay engaged in the civil legal system. Study data suggests that, while important, employment of these service providers across all civil legal service organizations (i.e., RCCs, legal aid agencies, and courthouses) is not guaranteed.

Findings indicate civil legal service providers in Illinois should push to ensure all agencies have staff to support survivors from a variety of diverse backgrounds, reflective of the community which they serve. Second, according to advocates in this study, interpretation of civil legal processes and requirements seems to vary widely by region, organization, and the individual offering civil legal services. Advocates suggested that by standardizing and making the civil legal process more transparent, advocates and other service providers may be able to better serve survivors and help them navigate the civil legal system more quickly and effectively.

Overall, findings from this study highlight facilitators and barriers advocates note survivors encounter when attempting to access the civil legal system. These findings are useful in identifying both effective forms of civil legal service provision across providers, as well as identifying areas for improvement. Findings can also be utilized by future researchers and policymakers to improve civil legal service provision for sexual assault survivors.

Study Two: Geographic Accessibility Mapping

Research Question(s)

The second study used spatial analyses to better understand the *availability and accommodation* dimension of accessibility (Kurpas et al., 2018). Using spatial data, this study explored the research question: How geographically accessible are civil legal services for sexual assault survivors across Illinois? and sub-question: Which counties are most and least accessible geographically?

Method

Geographic Information System (GIS) software was used to examine the spatial nature of accessibility, or *geographic* accessibility, of each county in Illinois based on the location of key civil legal service providers for sexual assault survivors. GIS software is unique in that it can combine spatial and non-spatial data for both visualization (e.g., creation of a multi-layered map) and data analysis (Hanein, 2014; Miller & Shaw, 2015). The ability to incorporate visualization in analyses allows researchers and stakeholders to identify patterns and trends that may not have been otherwise obvious without layered spatial representation (Hanein, 2014). For this study, spatial data analysis was conducted in R to create the visualization of geographic accessibility of the physical locations of civil legal service centers across the state of Illinois by county. Statistical packages in R used to conduct spatial analyses included: measurement (Birk, 2019), tmap (Tennekes, 2018), ggmap, (Kahle & Wickham, 2013), ggplot2 (Wickham, 2016), sf (Pebesma, 2018), sp (Bivand et al., 2013; Pebesma & Bivand, 2005), leaflet (Cheng et al., 2022), osmdata (Padgham et al., 2023), and leaflegend (Roh & Basa, 2022).

Study Area

The state of Illinois is in the Midwest region of the U.S. Illinois is an ideal state to conduct this study as population demographics by percentage are representative of the U.S. population (United States Census Bureau, 2022). Civil legal system accessibility in Illinois was analyzed by county, per community partner needs. Accessibility for each county was quantified based on the geographic location of civil legal services for survivors within each county, and their proximity to other locations within the county (i.e., proximity of civil legal services to one another, to public transit stops, and to the population center of the county; see measures details below). There are 102 counties across the state of Illinois. The maps display the varied geographic accessibility of the civil legal system across the state of Illinois, with each of the 102 counties receiving an individual accessibility score.

Measures

To examine the construct of geographic accessibility I obtained archival data on the location of civil legal system agencies (i.e., civil legal aid agencies, RCCs and courthouses) and the population mean center for each county (i.e., the point in the county that represents the center of that county's population). I also obtained data on the location of public transit stops (train and bus) for urban counties. Public transit data were used to assess intra-county transportation. While Illinois also has a commuter train (Metra), Metra is most often used for commuting and traveling across counties. Metra is also used for intra-county transportation in Cook County but is primarily used for people in neighboring counties to come into Cook County. Because people typically travel to services in their own county, and Metra is mostly used outside of Cook for traveling

across counties, Metra data was not included in these analyses. See Table 3 for a complete list of data variables and data sources.

Table 3

Geographic Data Table

Data for	Variable Type	Data Source	Data Format	Year
Geographic Accessibility Maps	Census Map of Illinois by County	Data.gov (https://catalog.data.gov/datasets/tiger-line-shapefile-2016-state-illinois-current-county-subdivision-state-based)	Shape file	2016
	Address (Location of courthouses across Illinois)	https://www.illinoiscourts.gov/courts-directory/interactive-map	XLSX	2022
	Address (location of RCC centers in Illinois)	ICASA (https://icasa.org/crisis-centers)	XLSX	2022
	Address (location of Legal aid agencies across Illinois)	https://www.justia.com/lawyers/illinois/legal-aid-and-pro-bono-services	XLSX	2022
	Illinois bus stop location	https://mygeodata.cloud)	XLSX	2022
	Illinois CTA train stop location	City of Chicago public data set (https://data.cityofchicago.org/Transportation/CTA-System-Information-List-of-L-Stops/8pix-ypme) mygeodata.cloud	XLSX	2022
	Illinois statewide bus stop data	mygeodata.cloud	XLSX	2022
	Population mean center by county	Census.gov https://www2.census.gov/geo/docs/reference/cenpop2020/county/CenPop2020_Mean_CO17.txt	CSV	2020

Procedure

Archival publicly available data were downloaded from their respective websites (Table 3). These data were then aggregated into an attribute table in excel. Data were cleaned (i.e., cross-checked for accuracy, duplicate data were removed, variables were renamed to be compatible with R) uploaded into R for analysis, and addresses were geocoded prior to mapping using a googlekey and the osmdata package (Padgham et al., 2023).

Analysis

Spatial Mapping

In R, I created interactive map(s) of the state of Illinois using the leaflet (Cheng et al., 2022) and leaflegend packages (Roh & Basa, 2022) that visualized the locations of civil legal service agencies and public transit routes (bus and train) and stops across the state.

Composite Accessibility Index

Two composite civil legal service provider accessibility indices were created. The first was created to quantify the accessibility of civil legal service providers across the state, not accounting for public transit, because it is not available in every county. The second accessibility index assesses how accessible civil legal service providers are in urban counties after accounting for public transit options, as urban counties are where public transit is predominantly located in Illinois.

Statewide Index. The statewide civil legal system composite accessibility index had two primary components. The first component was the average Euclidean distance of service providers (RCC(s), courthouse(s), and legal aid agency(ies)) to the population

mean center in the county. Euclidean distance represents the shortest distance between two points (i.e., service provider and population mean center) and is meant to be used when determining proximity of the nearest point of interest (Jones et al., 2010). If a county did not have a certain type of service provider, the nearest service provider in a different county (Euclidean distance) was used in the analyses. If there were multiple of a certain type of service providers in a county (e.g., multiple RCCs), the mean distance across each of those locations was used for that service provider's distance score for that county. The mean Euclidean distance for each type of service provider per county was then averaged together for a "service provider average distance."

As an example, DuPage County had four total service providers: one courthouse, one RCC and two legal aid agencies. The distance from the courthouse to the population mean center (3.79 miles), the distance from the RCC center to the population mean center (5.99 miles) and the average distance from the two legal aid agencies [(3.84 miles + 9.11 miles)/2 = 6.49 miles] to the population mean center were all added together and then divided by three (due to three types of service providers) to determine the average distance from service providers to the population mean center for the county (5.42 miles).

Once this distance was determined for each county, the service provider average distances were converted to z-scores. These represent how similar or dissimilar their distance between service providers was from the average distance between service providers per county in the state. The raw z-scores were then multiplied by -1 to reverse them because the raw z-scores originally reflected greatest distance from service provider to population mean center as a positive and shortest distance as a negative. In this study, shortest distance is indicative of increased accessibility. These inverted z-scores were the

first component of the statewide accessibility index and represent the geographic accessibility of service providers based on their proximity to their respective population mean center.

The second component of the statewide accessibility index was the number of service providers in each county. I plotted and then added together the numbers of service providers (RCC, legal aid and courthouse) in each county. This combined service provider score was also then converted to a z-score. This z-score represents how similar or dissimilar the number of service providers in each county was from the average number of service providers per county in Illinois. This z-score was not flipped, as higher number of service providers in this case is indicative of increased accessibility.

Once each county's final "service provider average distance" z-score and number of service providers z-score were calculated, the two z-scores for each county were summed. This created a "total county z-score." The final summed z-scores represented the raw accessibility scores for each county. These raw accessibility scores were then used to create grouped accessibility rankings for each county. Counties received rankings from one (least geographically accessible) to 10 (most geographically accessible) based on the final raw accessibility scores. To determine each county's ranking, I found the range (13.54) from the highest z-score (Cook County, 10.70) to the lowest (Lawrence County, -2.84). I divided the range by 10 to determine the intervals between each ranking score, one through ten (1.35). Thus, any county that fell between -2.84 and -1.49 received a "one" rank score as they had similar levels of accessibility, -1.49 and -0.14 a "two" rank score, and so forth until 10 (any counties that received between 9.35 and 10.70).

This index treats counties with more service providers as inherently more accessible on the basis of *geography*, regardless of the total population served. As service providers were not located in every county, it is difficult to determine exactly how many people are served by each provider, in each county. People have to travel to other counties to receive certain services or may not travel or attempt to receive services at all, which makes estimating people served per provider difficult. Due to the complexity of this issue, and that in most counties service provision was not relegated to people within the county, population density was not incorporated in statewide or urban index analyses, but was provided to contextualize geographic accessibility findings.

Urban County Index. To understand the influence of public transit on civil legal service provider accessibility in Illinois, I created a second urban composite accessibility index. This index was applied only to urban counties, defined as a metropolitan statistical area by the U.S. census with a population of over 60,000 residents (IPHCA, 2020; $N = 20$) with public transportation. Three counties denoted as urban (Kankakee, Macon and Vermillion) had no public transit options and were removed. Remaining counties ($n = 17$) were utilized to create the urban composite accessibility index.

This index had three primary components. In addition to calculating the average distance from service providers to the population mean center, as well as the number of service providers per county (using the same procedures as the statewide analysis), in the urban analyses, I also calculated the average Euclidean distance from each type of service provider and the population mean center to the nearest public transit stop for each county. These distances were averaged for an “average transit distance” for each county. As an example, average transit distance for Champaign County was 0.27 miles. Champaign

County had three service providers: one courthouse, one RCC, and one legal aid agency. The distance from the courthouse to the nearest public transit stop (0.12 miles), the distance from the RCC center to the nearest public transit stop (0.21 miles), the distance from the legal aid agency to the nearest public transit stop (0.22 miles), and the distance from the population mean center to the nearest public transit stop (0.54 miles) were averaged (i.e., these distances were added together and then divided by four) for an average transit distance for the county.

Once the average transit distance was found for each county, these average distances were also converted to z-scores in R and multiplied by -1. I then recalculated the z-scores for average distance from service provider to population mean center (and multiplied by -1) and number of service providers for this subset of urban counties. These three z-scores were summed, for a “total urban county z-score.” The final summed z-scores represented the raw urban accessibility scores for each county.

These raw accessibility scores were then used to create grouped accessibility rankings for each county. Counties received rankings from one (least geographically accessible) to 10 (most geographically accessible) based on the final raw accessibility scores. To determine each county’s ranking, I found the range (7.36) from the highest z-score (Cook County, 3.98) to the lowest (Kendall County, -3.38). I divided the range by 10 to determine the intervals between each ranking score, one through ten (0.74). Thus, any county that fell between -3.38 and -2.64 received a “one” group rank score as they had similar levels of accessibility, -2.64 and -1.91 a “two” group rank score, and so forth until 10 (any counties that received between 3.25 and 3.98).

Results

Service Provider Map

Based on this analysis process, several maps were produced. The first map is an interactive map of civil legal service provider locations across Illinois ([Figure 2](#))⁵. This map shows the location of RCCs, courthouses, and legal aid agencies across Illinois as depicted in the image on the right side of the figure. This map was created for a visual representation of service provider location in Illinois for community-partner use. It also offers a visual representation of the location and number of service providers across the state, which are components of the composite accessibility indices developed to determine the level of accessibility of each county in the state. There were 50 (49%) counties across the state that had neither legal aid agencies nor RCCs. There were 33 (32%) counties that had RCCs, but no legal aid, and there were 19 (19%) counties that had at least one RCC and one legal aid agency. Each county had at least one courthouse.

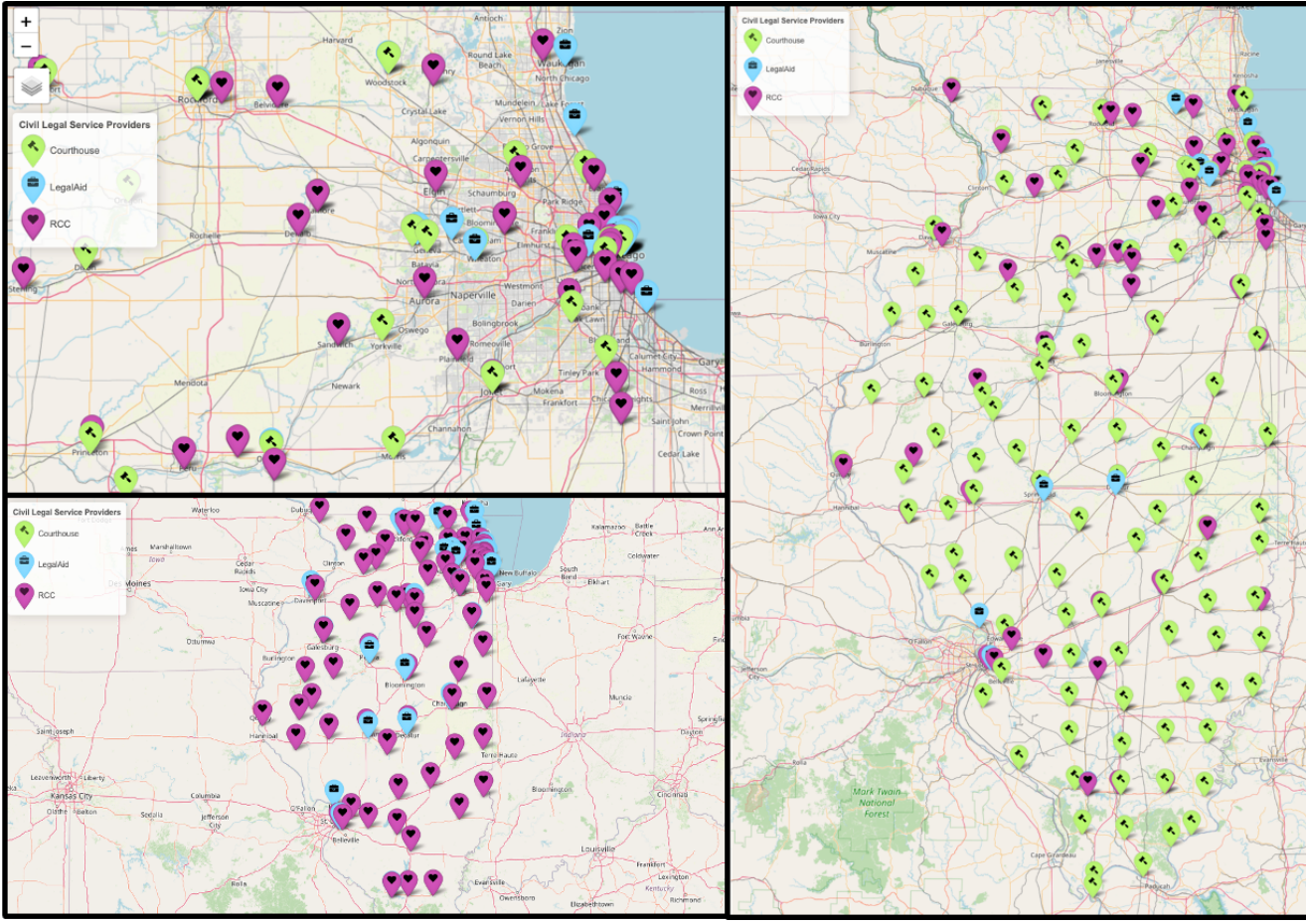
In the upper left corner of Figure 2, the map depicts a close-up examination of service provider location in Cook County. Cook County is the most populous county in the state, containing about 42% of the entire state's population (U.S Census Bureau, 2022), and the density of service providers is highest in this area. Specifically, about 26% of the total number of service providers in the state are located in this county. This is the greatest density of service providers per county in the state, but is significantly less than

⁵ Please note to see courthouses on this map, you must select "courthouses" in the menu on the upper left corner.

the population density (i.e., 42%). There are 17 RCCs (22% of total RCCs), 19 legal aid agencies (49% of total agencies), and nine courthouses in Cook County (8% of courthouses; typically, there is only one courthouse per county). The map in the lower left corner depicts the dispersion of legal aid agencies (blue) and RCCs (purple) across the entire state. While RCCs appear to be somewhat evenly dispersed, there are significantly less legal aid agencies, and the majority are clustered in the greater Chicago area (Cook County, Lake County, McHenry County, DuPage County, Kane County, Will County).

Figure 2

Map of Civil Legal Service Providers Across Illinois

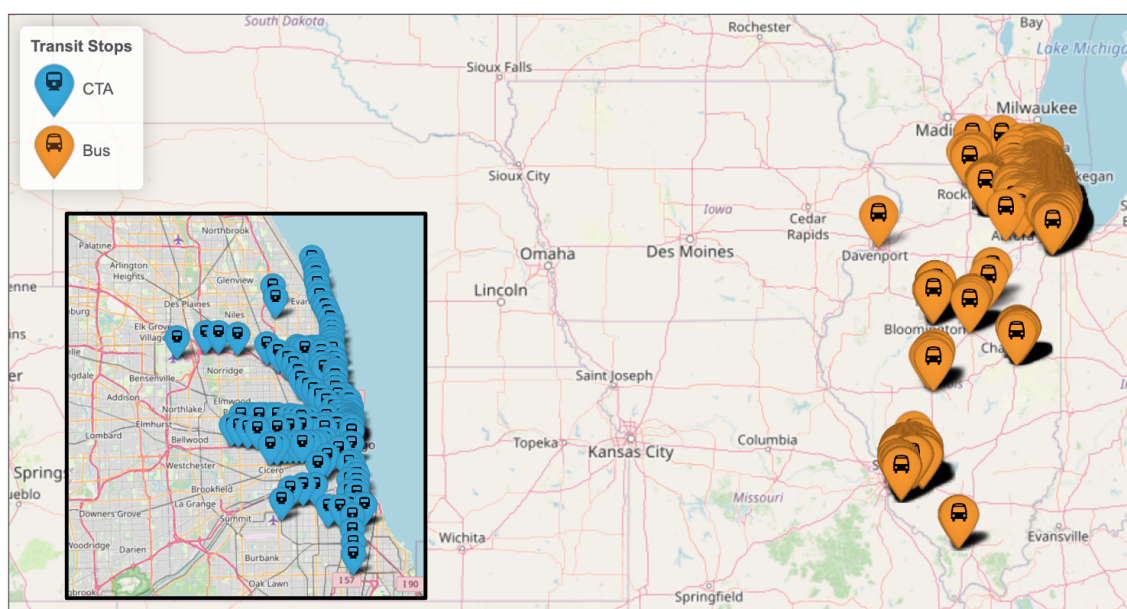


Public Transit Map

The second map displays public transit stops across Illinois ([Figure 3](#)). The larger map depicts all bus stops across Illinois (i.e., Chicagoland, Peoria, Springfield, Bloomington, East St. Louis, Champaign). The inset map reveals the location of all Chicago Transit Authority (CTA) “El” stops across the Chicagoland area.

Figure 3

Map of Public Transit Stops Across Illinois



Composite Accessibility Index Maps

The service provider and public transit locations were used to determine how geographically accessible each county in Illinois was. Using these data, two geographic accessibility analyses were conducted. One composite accessibility index was created to assess how geographically accessible each county is in Illinois (Figure 7). The second composite accessibility index assessed how geographically accessible civil legal services in urban counties (Figure 8; IPHCA, 2020) are for survivors of sexual assault. These

calculations included public transit stop location, which were not incorporated in the prior accessibility calculations.

Statewide Composite Accessibility. Grouped statewide accessibility rankings for each county were determined using two components: (1) average distance from service providers to the population mean center, and (2) number of service providers in the county (see Table 4). The group rank column reflects each county’s relative level of civil legal service inter-connectivity and accessibility for the average person in that county (10 indicating highest accessibility group ranking, 1 indicating lowest accessibility group ranking). Group rankings reflect counties with similar overall accessibility levels, but please note there is variability within each group rank score (e.g., counties denoted as a “two” have z-scores that range from -1.49 to -0.13).

Table 4

Illinois Composite Accessibility Index by County

Statewide Accessibility Index	Accessibility Index Components					
	SP Mean Distance from Population Mean Center	SP Distance Z-Score ^a	Number of SP	Number SP Z-Score	Total Z-Score	Group Accessibility Ranking
	Score by County					
Adams	31.30	-1.55	2	-0.04	-1.59	1
Alexander	30.39	-1.45	1	-0.27	-1.72	1
Bond	19.85	-0.31	1	-0.27	-0.58	2
Boone	5.89	1.19	2	-0.04	1.16	3
Brown	24.09	-0.77	2	-0.04	-0.81	2
Bureau	11.49	.59	2	-0.04	0.56	3
Calhoun	25.74	-0.95	1	-0.27	-1.22	2
Carroll	16.95	-0.00	2	-0.04	-0.04	3
Cass	21.00	-0.44	1	-0.27	-0.70	2
Champaign	1.47	1.67	3	0.18	1.87	4
Christian	10.15	0.73	2	-0.04	0.70	3
Clark	27.55	-1.14	1	-0.27	-1.41	2
Clay	35.02	-1.95	1	-0.27	-2.23	1
Clinton	15.33	0.17	2	-0.04	0.14	3
Coles	17.96	-0.11	2	-0.04	-0.15	2
Cook	8.31	0.93	45	9.76	10.70	10

Crawford	28.46	-1.24	1	-0.27	-1.29	2
Cumberland	25.50	-0.92	1	-0.27	-1.19	2
DeKalb	11.21	0.62	3	0.18	1.03	3
De Witt	15.57	0.15	1	-0.27	-0.11	3
Douglas	15.50	0.16	1	-0.27	-0.11	3
DuPage	5.42	1.24	4	0.41	1.65	4
Edgar	15.79	0.13	2	-0.04	0.09	3
Edwards	34.69	-1.92	1	-0.27	-2.19	1
Effingham	25.43	-0.91	2	-0.04	-0.96	2
Fayette	23.31	-0.68	2	-0.04	-0.73	2
Ford	14.32	0.29	2	-0.04	0.25	3
Franklin	13.52	0.38	1	-0.27	0.11	3
Fulton	14.63	0.26	2	-0.04	0.22	3
Gallatin	24.76	-0.84	1	-0.27	-1.11	2
Greene	21.85	-0.52	1	-0.27	-0.80	2
Grundy	8.84	0.89	1	-0.27	0.62	3
Hamilton	23.19	-0.67	1	-0.27	-0.94	2
Hancock	29.45	-1.35	1	-0.27	-1.62	1
Hardin	25.85	-0.96	1	-0.27	-1.23	2
Henderson	22.70	-0.62	1	-0.27	-0.89	2
Henry	14.63	0.26	2	-0.04	0.22	3
Iroquois	12.82	0.46	2	-0.04	0.41	3
Jackson	3.61	1.46	3	0.18	1.64	4
Jasper	32.46	-1.68	1	-0.27	-1.95	1
Jefferson	15.05	0.21	2	-0.04	0.17	3
Jersey	16.84	0.02	1	-0.27	-0.25	2
Jo Daviess	24.99	-0.86	2	-0.04	-0.91	2
Johnson	16.16	0.09	1	-0.27	-0.18	2
Kane	4.67	1.34	5	0.64	1.98	4
Kankakee	2.38	1.59	3	0.18	1.77	4
Kendall	9.75	0.79	1	-0.27	0.52	3
Knox	2.15	1.61	3	0.18	1.79	4
Lake	7.69	1.01	4	0.41	1.42	4
LaSalle	5.61	1.24	5	0.64	1.88	4
Lawrence	40.68	-2.57	1	-0.27	-2.84	1
Lee	14.95	0.22	2	-0.04	0.18	3
Livingston	13.53	0.38	2	-0.04	0.33	3
Logan	22.63	-0.61	1	-0.27	-0.88	2
McDonough	12.74	0.46	2	-0.04	0.42	3
McHenry	5.86	1.21	3	0.18	1.39	4
McLean	1.83	1.65	3	0.18	1.83	4
Macon	12.49	0.49	3	0.18	0.66	3
Macoupin	21.42	-0.48	1	-0.27	-0.75	2
Madison	7.34	1.05	3	0.18	1.23	4
Marion	23.28	-0.68	2	-0.04	-0.72	2
Marshall	18.21	-0.13	1	-0.27	-0.40	2
Mason	21.79	-0.52	1	-0.27	-0.79	2
Massac	29.37	-1.34	1	-0.27	-1.61	1
Menard	12.58	0.48	1	-0.27	0.21	3
Mercer	14.70	0.25	1	-0.27	-0.02	3
Monroe	12.09	0.53	1	-0.27	0.263	3

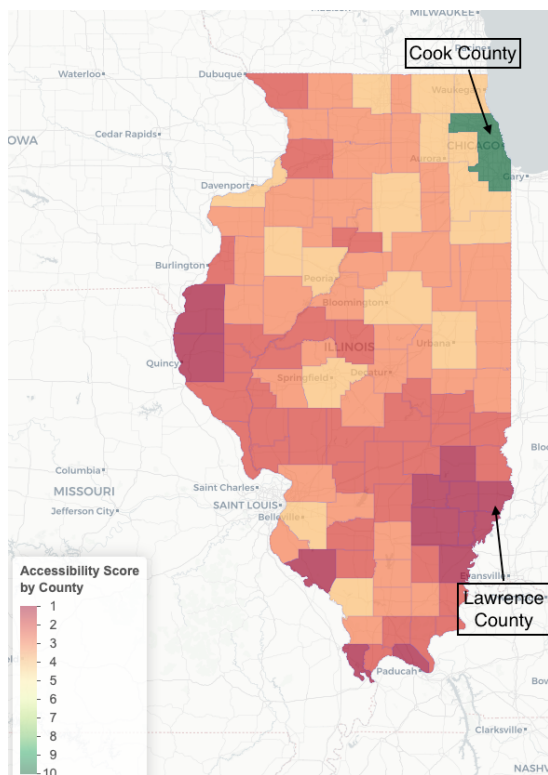
Montgomery	22.60	-0.61	1	-0.27	-0.88	2
Morgan	12.29	0.51	2	-0.04	0.47	3
Moultrie	21.60	-0.50	1	-0.27	-0.77	2
Ogle	9.08	0.86	2	-0.04	0.82	3
Peoria	3.63	1.45	3	0.18	1.64	4
Perry	17.13	-0.01	1	-0.27	-0.28	2
Piatt	13.97	0.33	1	-0.27	0.06	3
Pike	22.56	-0.60	2	-0.04	-0.65	2
Pope	23.56	-0.71	1	-0.27	-0.98	2
Pulaski	26.89	-1.07	1	-0.27	-1.34	2
Putnam	12.34	0.51	1	-0.27	0.24	3
Randolph	30.24	-1.43	1	-0.27	-1.71	1
Richland	31.11	-1.53	2	-0.04	-1.57	1
Rock Island	3.32	1.49	3	0.18	1.67	4
St. Clair	4.89	1.32	4	0.41	1.73	4
Saline	13.08	0.43	2	-0.04	0.38	3
Sangamon	2.24	1.60	3	0.18	1.79	4
Schuyler	19.43	-0.26	2	-0.04	-0.30	2
Scott	19.72	-0.29	1	-0.27	-0.56	2
Shelby	24.32	-0.79	1	-0.27	-1.06	2
Stark	14.98	0.22	1	-0.27	-0.05	3
Stephenson	10.67	0.69	2	-0.04	0.65	3
Tazewell	7.96	-0.83	1	-0.27	0.71	3
Union	12.43	0.50	1	-0.27	0.23	3
Vermilion	11.80	0.57	2	-0.04	0.52	3
Wabash	40.04	-2.50	1	-0.27	-2.77	1
Warren	10.33	0.73	1	-0.27	0.45	3
Washington	20.15	-0.34	1	-0.27	-0.61	2
Wayne	31.67	-1.59	1	-0.27	-1.86	1
White	31.08	-1.52	1	-0.27	-1.80	1
Whiteside	19.09	-0.22	2	-0.04	-0.27	2
Will	5.80	1.21	5	0.64	1.86	4
Williamson	6.10	1.19	2	-0.04	1.14	3
Winnebago	3.289	1.49	4	0.41	1.90	4
Woodford	12.13	0.53	1	-0.27	0.26	3

Note. All numbers in the table were rounded to two decimal points for ease of reading, exact numbers were used for all calculations.

Note. This treats counties with more service providers as inherently more accessible on the basis of *geography*, regardless of the total population served.

^aDistance z-scores presented in the table reflects inverted z-scores.

Figure 4 maps the statewide composite accessibility values from Table 4.

Figure 4Statewide Map of Accessibility

In these analyses, Cook County had the highest geographic accessibility score (i.e., 10) and was the only county to receive that ranking. The next highest score received by any county was four ($n = 16$), followed by three ($n = 38$), and then two ($n = 34$). There were 13 counties that received the lowest possible geographic accessibility score (i.e., one). Lawrence County had the lowest possible z-score making it the least geographically accessible county in the state for survivors who need to access civil legal services on this index.

Cook County is located in the northeast corner of the state and is depicted in the map as dark green (see Figure 4). Cook County is surrounded by yellow counties indicating better geographic accessibility across the region. Lawrence County is located

in the Southeast region of the state, is dark red, and is found in a cluster of other counties also ranked as least accessible (one). When we examine the data from these counties side by side (Table 5), we see that while Lawrence County's courthouse is closer to the population mean center than Cook County's by almost a third, the average distance from legal aid agencies and RCC(s) to the population mean center is closer for Cook County than for Lawrence County by an exponential amount. This appears to be driven by the fact that Cook County has a much greater number of service providers, and Lawrence has no legal aid agencies or RCCs. This makes the mean difference of service providers to the population mean center much higher since survivors in Lawrence County (and other similarly grouped counties) would have had to travel further (ie., to a neighboring county) for legal aid and/or advocacy services.

Table 5

Most and Least Geographically Accessible County Comparison

Geographic Accessibility Score Components	Counties	
	Cook County	Lawrence County
	Average Distance from Population Mean Center (Miles)	
Rape Crisis Center(s)	8.27	18.27
Legal Aid Agency(ies)	6.88	100.28
Courthouse(s)	9.79	3.5
Average Across Providers	8.31	40.68
	Number of Service Providers	
Rape Crisis Center(s)	17	0
Legal Aid Agency(ies)	19	0
Courthouse(s)	9	1
Total Service Providers	45	1
	Z-Score	
Distance Z-Score ^a	0.95	-2.57
Service Provider Z-Score	9.86	-0.27
Summed Z-Score	10.70	-2.84
	Accessibility	
Group Score 1-10	10	1

Note. All numbers in the table were rounded to two decimal points for ease of reading, exact numbers were used for all calculations.

Note. This treats counties with more service providers as inherently more accessible on the basis of *geography*, regardless of the total population served.

^aDistance z-scores presented in the table reflects inverted z-scores.

These findings are useful to better understand relative geographic accessibility for counties in Illinois. However, county population was not included in the accessibility index. This means that counties are treated as geographically more accessible, even if the ratio of population served to number of service providers is poorer compared to other counties. To contextualize the geographic accessibility rankings, table 6 provides each county's population, the number of each type of service provider in each county, and the number of people per agency in each county. In reviewing this data, it is important to note however, the number of people per agency reflects *people within that county*. There are counties without certain types of service providers across Illinois and people from those counties need to travel to other counties for civil service provision. Thus, in reality those agencies are serving more people than the table reflects. Of the 102 counties in Illinois, only 19 counties have legal aid agencies. This means there are 83 counties or approximately 2,222,094 people without legal aid available to them in their home county. Further, there are 52 counties with RCCs. This means there are 50 counties, or approximately 1,006,901 people without RCCs available to them in their home county.

Table 6*Service Providers Per Capita by County*

Service providers per Capita	Statewide Ranking	County Population	Number of service providers	Number of RCCs	Number of RCCs per 1000 people	Number of Legal Aid Agencies	Number of Legal Aid Agencies per 1000 people	Number of Courthouses	Number of Courthouses per 1000 people
Service Provider Information by County									
Adams	1	64,954	2	1	0.015	0	--	1	0.015
Alexander	1	5,030	1	0	--	0	--	1	0.199
Bond	2	16,596	1	0	--	0	--	1	0.060
Boone	3	53,159	2	1	0.019	0	--	1	0.019
Brown	2	6,421	2	1	0.156	0	--	1	0.156
Bureau	3	32,883	2	1	0.030	0	--	1	0.030
Calhoun	2	4,369	1	0	--	0	--	1	0.229
Carroll	3	15,698	2	1	0.064	0	--	1	0.064
Cass	2	12,773	1	0	--	0	--	1	0.078
Champaign	4	205,943	3	1	0.005	1	0.005	1	0.005
Christian	3	33,662	2	1	0.030	0	--	1	0.030
Clark	2	15,300	1	0	--	0	--	1	0.065
Clay	1	13,143	1	0	--	0	--	1	0.076
Clinton	3	36,793	2	1	0.027	0	--	1	0.027
Coles	2	46,765	2	1	0.021	0	--	1	0.021
Cook	10	5,173,000	45	17	0.003	19	0.004	9	0.002
Crawford	2	18,659	1	0	--	0	--	1	0.054
Cumberland	2	10,345	1	0	--	0	--	1	0.097
DeKalb	3	100,414	3	2	0.020	0	--	1	0.010
De Witt	3	15,341	1	0	--	0	--	1	0.065
Douglas	3	19,722	1	0	--	0	--	1	0.051
DuPage	4	924,885	4	1	0.001	2	0.002	1	0.001
Edgar	3	16,520	2	1	0.061	0	--	1	0.061
Edwards	1	6,075	1	0	--	0	--	1	0.165
Effingham	2	34,430	2	1	0.029	0	--	1	0.029
Fayette	2	21,384	2	1	0.047	0	--	1	0.047
Ford	3	13,511	2	1	0.074	0	--	1	0.074
Franklin	3	37,442	1	0	--	0	--	1	0.027
Fulton	3	33,197	2	1	0.030	0	--	1	0.030
Gallatin	2	4,903	1	0	--	0	--	1	0.204
Greene	2	11,843	1	0	--	0	--	1	0.084
Grundy	3	52,989	2	1	0.019	0	--	1	0.019
Hamilton	2	7,911	1	0	--	0	--	1	0.126
Hancock	1	17,400	1	0	--	0	--	1	0.057
Hardin	2	3,650	1	0	--	0	--	1	0.274
Henderson	2	6,312	1	0	--	0	--	1	0.158
Henry	3	48,907	2	1	0.020	0	--	1	0.020
Iroquois	3	26,827	2	1	0.037	0	--	1	0.037
Jackson	4	52,565	3	1	0.019	1	0.019	1	0.019
Jasper	1	9,193	1	0	--	0	--	1	0.109
Jefferson	3	36,877	2	1	0.027	0	--	1	0.027
Jersey	2	21,333	1	0	--	0	--	1	0.047
Jo Daviess	2	21,939	2	1	0.046	0	--	1	0.046
Johnson	2	13,463	1	0	--	0	--	1	0.074
Kane	4	515,588	5	2	0.004	1	0.002	2	0.004
Kankakee	4	106,601	3	1	0.009	1	0.009	1	0.009
Kendall	3	134,867	1	0	--	0	--	1	0.007
Knox	4	49,268	3	1	0.020	1	0.020	1	0.020
Lake	4	711,239	4	1	0.001	2	0.003	1	0.001
LaSalle	4	108,965	5	3	0.028	1	0.009	1	0.009
Lawrence	1	15,152	1	0	--	0	--	1	0.066
Lee	3	34,049	2	1	0.029	0	--	1	0.029
Livingston	3	35,664	2	1	0.028	0	--	1	0.028

Logan	2	27,992	1	0	--	0	--	1	0.036
McDonough	3	26,828	2	1	0.037	0	--	1	0.037
McHenry	4	311,122	3	1	0.003	1	0.003	1	0.003
McLean	4	170,889	3	1	0.006	1	0.006	1	0.006
Macon	3	102,432	3	1	0.010	1	0.010	1	0.010
Macoupin	2	44,406	1	0	--	0	--	1	0.023
Madison	4	264,490	3	1	0.004	1	0.004	1	0.004
Marion	2	37,390	2	1	0.027	0	--	1	0.027
Marshall	2	11,663	1	0	--	0	--	1	0.086
Mason	2	12,881	1	0	--	0	--	1	0.078
Massac	1	13,960	1	0	--	0	--	1	0.072
Menard	3	12,164	1	0	--	0	--	1	0.082
Mercer	3	15,582	1	0	--	0	--	1	0.064
Monroe	3	34,932	1	0	--	0	--	1	0.029
Montgomery	2	28,084	1	0	--	0	--	1	0.036
Morgan	3	32,606	2	1	0.031	0	--	1	0.031
Moultrie	2	14,510	1	0	--	0	--	1	0.069
Ogle	3	51,449	2	1	0.019	0	--	1	0.019
Peoria	4	179,432	3	1	0.006	1	0.006	1	0.006
Perry	2	20,985	1	0	--	0	--	1	0.048
Piatt	3	16,753	1	0	--	0	--	1	0.060
Pike	2	14,618	2	1	0.068	0	--	1	0.068
Pope	2	3,779	1	0	--	0	--	1	0.265
Pulaski	2	5,065	1	0	--	0	--	1	0.197
Putnam	3	5,566	1	0	--	0	--	1	0.180
Randolph	1	30,142	1	0	--	0	--	1	0.033
Richland	1	15,796	2	1	0.063	0	--	1	0.063
Rock Island	4	142,909	3	1	0.007	1	0.007	1	0.007
St. Clair	4	254,796	4	2	0.008	1	0.004	1	0.004
Saline	3	23,320	2	1	0.043	0	--	1	0.043
Sangamon	4	194,734	3	1	0.005	1	0.005	1	0.005
Schuyler	2	6,843	2	1	0.146	0	--	1	0.146
Scott	2	4,836	1	0	--	0	--	1	0.207
Shelby	2	20,789	1	0	--	0	--	1	0.048
Stark	3	5,294	1	0	--	0	--	1	0.189
Stephenson	3	44,021	2	1	0.023	0	--	1	0.023
Tazewell	3	130,413	1	0	--	0	--	1	0.008
Union	3	16,923	1	0	--	0	--	1	0.059
Vermilion	3	73,095	2	1	0.014	0	--	1	0.014
Wabash	1	11,202	1	0	--	0	--	1	0.089
Warren	3	16,531	1	0	--	0	--	1	0.060
Washington	2	13,655	1	0	--	0	--	1	0.073
Wayne	1	15,963	1	0	--	0	--	1	0.063
White	1	13,784	1	0	--	0	--	1	0.073
Whiteside	2	55,305	2	1	0.018	0	--	1	0.018
Will	4	697,252	5	3	0.004	1	0.001	1	0.001
Williamson	3	66,879	2	1	0.015	0	--	1	0.015
Winnebago	4	283,119	4	1	0.004	1	0.004	2	0.007
Woodford	3	38,225	1	0	--	0	--	1	0.026

Note. County population included to contextualize findings, but not used in index.

Note. -- Indicates no providers available for people in that county.

Urban Composite Accessibility Maps. To understand the influence of public transit on civil legal service provider accessibility in Illinois, I created a second, urban composite accessibility index for the 17 urban counties in the state with public transit.

This index had three components: (1) average distance from civil legal service providers to the population mean center for each county; (2) number of service providers per county; and (3) average distance from the nearest public transit stop to the population mean center and civil legal service providers (Table 7). The group rank column reflects each county's relative level of civil legal service inter-connectivity and accessibility for the average person in that county (10 indicating highest accessibility grouping, 1 indicating lowest accessibility grouping). Higher levels of geographic accessibility were largely driven by high levels of public transit connectivity and increased number of service providers for each county. Counties with lower scores typically had few public transit options, fewer service providers, and greater distance between public transit and service providers. Group rankings reflect counties with similar overall geographic accessibility levels, but please note there is variability within each group rank score.

Table 7*Urban Accessibility Index*

Urban Accessibility Index	Accessibility Index Components							
	SP Mean Distance	SP Distance Z-Score ^a	Number of SP	Number SP Z-Score	Mean Transit Distance	Transit Z- Score ^a	Raw Accessibility Score	Group Rank
Scores By County								
Champaign	1.47	1.44	3	-0.27	0.27	0.99	2.17	8
Cook	8.31	-0.96	45	3.86	0.10	1.08	3.98	10
DeKalb	11.21	-1.98	3	-0.27	1.38	0.39	-1.86	3
DuPage	5.42	0.06	4	-0.17	1.75	0.18	0.07	5
Kane	4.67	0.32	5	-0.07	0.54	0.84	1.09	7
Kendall	10.02	-1.56	1	-0.46	4.56	-1.36	-3.38	1
Lake	7.69	-0.74	4	-0.17	1.25	0.46	-0.45	4
McHenry	5.86	-0.10	3	-0.27	4.68	-1.42	-1.79	3
McLean	1.83	1.32	3	-0.27	1.45	0.35	1.40	7
Madison	7.34	-0.61	3	-0.27	4.44	-1.29	-2.17	2
Peoria	3.63	0.69	3	-0.27	2.03	0.03	0.45	6
Rock Island	3.32	0.79	3	-0.27	2.64	-0.30	0.22	5
St. Clair	4.89	0.24	4	-0.17	0.17	1.05	1.12	7
Sangamon	2.24	1.17	3	-0.27	0.86	0.67	1.58	7
Tazewell	7.96	-0.83	1	-0.46	2.41	-0.18	-1.48	3
Will	5.80	-0.07	5	-0.07	6.12	-2.21	-2.35	2
Winnebago	3.289	0.81	4	-0.17	0.72	0.74	1.39	7

Note. All numbers in the table were rounded to two decimal points for ease of reading, exact numbers were used for all calculations.

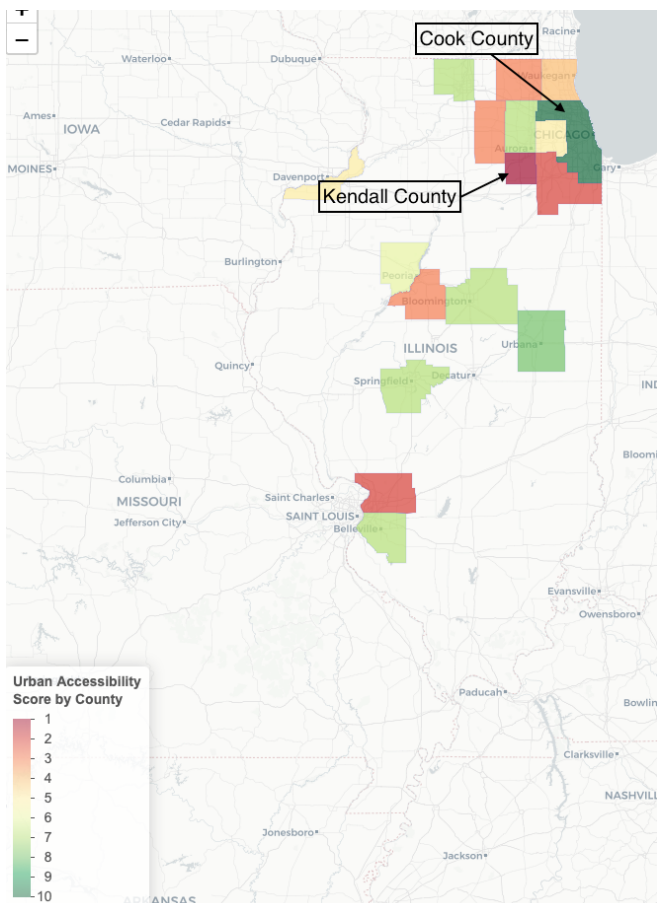
Note. This treats counties with more service providers as inherently more accessible on the basis of *geography*, regardless of the total population served.

^aDistance z-scores presented in the table reflects inverted z-scores.

Figure 5 maps urban composite accessibility values from table 7.

Figure 5

Map of Accessibility (Including Public Transit in Urban Counties)



In these analyses, Cook County was the only county in the highest geographic accessibility ranking group (i.e., 10), followed by Champaign County with a geographic accessibility ranking score of eight. Kendall County was the only county to receive the lowest possible geographic accessibility ranking (i.e., one), thus, making it the least geographically accessible urban county in the state for survivors who need to access civil legal services via public transit, according to this index.

Cook County is located in the northeast region of the state and is depicted in the map as dark green (see Figure 5). Kendall County is located in approximately the same region, southwest of Cook County, and is dark red (see Figure 5). Examining these counties side by side (Table 8), we see that while Kendall County's courthouse and RCC average distance is closer to the population mean center than Cook County's, the average distance across legal aid and all provider types to the population mean center is closer for Cook County than Kendall County by almost two miles. Additionally, Cook County has significantly more service providers located in that county than Kendall County. Further, the distance from all service provider types and population mean center to the nearest public transit stop is much shorter for Cook County, with an average across all location data points being a tenth of a mile for Cook County and just over four and a half miles for Kendall. While Cook County service providers may be easier to get to geographically, this does not account for population served. As seen in table 6, Cook County is home to approximately 5.173 million people (0.004 legal aid agencies per 1000 people; 0.003 rape crisis center per 1000 people; 0.002 courthouses per 1000 people), while Kendall County houses 134,867 people (no legal aid agencies per 1000 people; no rape crisis center per 1000 people; 0.007 courthouses per 1000 people). These findings are useful to better understand relative geographic accessibility for counties in Illinois. However, county population was not included in the accessibility index. This means that counties are treated as geographically more accessible, even if the ratio of population served to number of service providers is poorer compared to other counties.

Table 8

Most and Least Geographically Accessible Urban County Comparison

Accessibility Score Components	Counties	
	Cook County	Kendall County
	Average Distance to Population Mean Center (Miles)	
Rape Crisis Center(s)	8.27	7.81
Legal Aid Agency(ies)	6.88	17.77
Courthouse(s)	9.79	4.48
Average Across Providers	8.31	10.02
	Service Providers	
Rape Crisis Center(s)	17	0
Legal Aid Agency(ies)	19	0
Courthouse(s)	9	1
Total Service Providers	45	1
	Average Distance to Public Transit (Miles)	
Rape Crisis Center(s)	.10	.49
Legal Aid Agency(ies)	.04	7.78
Courthouse(s)	.06	4.89
Population Mean Center	.20	5.09
Average Across Locations	.10	4.56
	Z-Score	
Distance Z-Score ^a	-0.96	-1.56
Service Provider Z-Score	3.86	-0.46
Public Transit Z-Score ^a	1.08	-1.36
Summed Z-Score	3.98	-3.38
	Accessibility	
Rank Score 1-10	10	1

Note. All numbers in the table were rounded to two decimal points for ease of reading, exact numbers were used for all calculations.

Note. This treats counties with more service providers as inherently more accessible on the basis of *geography*, regardless of the total population served.

^aDistance z-scores presented in the table reflects inverted z-scores.

Discussion

The aim of this study was to better understand the geographic *availability* of civil legal services for survivors. This was done by examining the geographic accessibility of civil legal service providers by county across Illinois. Civil legal services and civil legal service providers play a key role in survivors' healing journey post assault (Bouffard et

al., 2017; Zinter & Greeson, 2022). However, past research indicates accessibility of post-assault services for survivors is highly variable and depends on a myriad of individual, organizational, and systemic factors (e.g., Lonsway & Archambault, 2012; Price et al., 2014; Seidman & Vickers, 2004; Sit & Stermac, 2021; Sualp et al., 2021). This is the first study to utilize GIS methodology to quantify the *geographic* accessibility of the civil legal system. By creating a spatial map of the physical location of civil legal system services and provider location, I was able to visualize civil legal system geographic accessibility variation by county in Illinois. I determined which counties were most geographically accessible (Statewide and Urban analyses: Cook County) and least geographically accessible (Statewide Analyses: Lawrence County; Urban Analyses: Kendall County) based on factors that advocates believe (see Study One results) impact survivors' ability to get to civil legal services (i.e., number of service providers, whether service providers exist in the area, and transportation concerns). This allows us to see potential systemic and organizational gaps in civil legal service provision for sexual assault survivors.

Extant research suggests service delivery is more useful when there is an established network of service providers that work together in an area (Hu et al., 2020). Findings from this study indicate certain regions in Illinois (e.g., counties with higher geographic accessibility scores) have a greater density of civil legal service providers and are thus more likely than others (e.g., counties with lower geographic accessibility scores) to be able to efficiently meet the needs of survivors seeking civil legal remedies. Survivors in these higher density regions may be better able to physically access civil legal service providers.

Statewide

When examining the statewide geographic accessibility index and resulting map, Cook County by far has the highest level of civil legal service provider geographic accessibility. Additionally, the surrounding “Chicagoland” counties also reflect higher geographic accessibility when compared to the rest of the state (DuPage, Kane, Kankakee, Lake, McHenry and Will). These counties all received a “four” ranking for accessibility, which is the second highest statewide geographic accessibility index ranking any county received in the state. This cluster of counties indicates the Northeast portion of the state generally contains more civil legal service providers for sexual assault survivors than other counties, and service providers are located closer to their respective population mean center for ease of access compared to the rest of the state.

Lawrence County subsequently has the lowest possible civil legal service geographic accessibility group ranking (one) and the lowest raw geographic accessibility score for the entire state. Lawrence County is surrounded by counties who also received a ranking of “one” (Clay, Edwards, Jasper, Richland, Wabash, Wayne and White). These counties are clustered in the Southeast portion of the state. No counties in this entire region have a geographic accessibility score higher than a three, with most reflecting either ones or twos. This suggests a region with significant geographic challenges related to accessibility.

We can examine the presence of legal aid to highlight the geographic accessibility discrepancies between these two regions (and counties). The nearest legal aid agency to the population mean center of Cook County is 0.34 miles away. The nearest legal aid agency to the population mean center of Lawrence County is 100.28 miles away. Further,

Cook County houses 19 different legal aid agencies, while Lawrence County contains none.

The limited numbers of civil service providers, and greater distance from providers to population centers suggests that survivors located in Lawrence County and the surrounding southeast region, as well as other counties across the state with lower accessibility rankings (i.e., ones and twos), may especially struggle with physically accessing civil legal services. As there are no or few local service providers, the likelihood of survivors being aware of where they need to go to attain civil legal assistance is also diminished. This is supported by Bouffard and colleagues (2017) who found that limited number of service providers and geographic isolation are key barriers to crime victims pursuing civil legal services in Texas. These findings are significant because survivors in this area may want civil legal options but may be unable to obtain legal aid and/or RCC services due to isolation. Findings from Greeson and Zinter (2022) and Teufel and colleagues (2021) indicate survivors are less successful obtaining civil legal help (e.g., protective orders, other civil legal options) when they do not have legal representation. Additionally, findings from Study One indicated advocates play a critical role in connecting survivors to the services they need. Thus, in areas where the likelihood of utilizing advocacy or legal aid services is diminished for geographic reasons, survivors may be less likely to find the civil legal system useful for meeting their needs.

Further, the nearest legal aid or RCC to these counties are not necessarily located in the same area, or even in the same direction from the population mean center. This is problematic because survivors needing to travel to and devote time to attaining civil legal services (e.g., spend two or more hours in a vehicle one way) may be less likely to pursue

these services if multiple services are required but not located near one another (Bouffard et al., 2017; Gwinn et al., 2007; Shepard et al, 2002). This is a barrier, particularly for low-income sexual assault survivors or sexual assault survivors who may not be able to take time off from work to engage in civil legal help-seeking (see Study One results). By requiring survivors to take extended periods of time off from work to pursue civil services, the likelihood of engaging with civil legal service providers (who increase the likelihood of civil legal need attainment; Teufel et al., 2021), or the civil legal system at all, is reduced (see Study One results). Previous research suggests creating a “one-stop-shop” for victim services may be useful to clients navigating the civil legal system (Bouffard et al., 2017; Gwinn et al., 2007; Shepard et al, 2002). This study finds support for this idea.

Additionally, there is one legal aid agency that serves roughly a quarter of the counties in the state: the legal aid agency in Jackson County serves the south/southeast portion of the state. This legal aid agencies serves 21 counties, with a total population of nearly 384,000 people (United States Census Bureau, 2022). As a result, provider availability may be severely diminished.

Compared to the rest of the state, the sheer number of service providers in Cook County greatly increases Cook County’s geographic accessibility ranking. However, when one considers the substantial population in Cook County (5.173 million people), one legal aid agency ($n = 19$) may, in theory, serve up to 272,263 people. This suggests that, while there are more providers in Cook County, the number of providers still may not be sufficient to provide legal aid for all who need it. Extant literature suggests a salient barrier for civil legal need attainment for victims of crime broadly is the limited

number of service providers (e.g., Bouffard et al., 2017). This study underscores these findings.

Urban Counties

The presence of public transit stops in relation to both service providers and the population mean center were all accounted for in geographic accessibility calculations when focusing specifically on the geographic accessibility of urban counties across Illinois. With these new factors, Cook County still received the highest geographic accessibility ranking. The majority of service providers in Cook County and public transit stops in this county are clustered in “The Loop,” or the downtown region of the metropolis of Chicago, which houses approximately 46,000 people (Chicago Loop Alliance, 2023). This is reflected in the close proximity of public transit options to service provider locations in the county and suggests that survivors without vehicles may be able to easily access civil legal service providers within a reasonable geographic distance. Further, it is possible the presence of multiple service providers in high density areas, as reflected in Cook County, may increase the likelihood of sexual assault survivors being aware of services, and thus increase their help-seeking engagement. Additionally, the clustering of service providers in one area, and their accessibility via multiple forms of transit, allows survivors the opportunity to reach multiple service providers easily, rather than having to travel greater distances, or in different directions, to meet their civil legal needs. This clustering is particularly useful as research indicates survivors are more likely to engage in help-seeking when it is less inconvenient for them to do so (Bouffard et al., 2017; Gwinn et al., 2007; Shepard et al, 2002).

Kendall County, while an urban county with a population of 134,867 (U.S. Census Bureau, 2022), did not have any RCCs or legal aid agencies. Thus, anyone in the county in need of civil legal services needs to travel outside the county if they want assistance from legal aid or advocacy services. While Kendall County has neighboring counties with these types of civil legal service providers, and survivors may not have to travel very far (eight miles for RCC, 18 miles for legal aid from the Kendall County population center), travel may be more difficult for urban survivors rather than suburban as they are less likely to have their own personal form of transit and may need to rely on public transit (Delbosc & Currie, 2011). Thus, while Kendall County has intra-county public transportation options, transit without presence of providers in the region is ineffectual for improving geographic accessibility of civil legal service providers. Lack of service provider options in a populous county may put a strain on civil legal service providers in nearby counties who may potentially have to support a community of an additional 100,000+ people beyond the potential clientele in their own county. This may then limit their availability to provide civil legal services for sexual assault survivors in the area. Further, extant research (i.e., Greeson & Zinter, 2022) indicates that civil service providers, such as advocates, are most familiar with legal aid options and judges in their county or region. So, while advocates from outside Kendall may be able to offer services to survivors in other counties, they may be less familiar with local players or practices, and their services may be less tailored to the survivors' needs based on their geographic location and the court system they are working in.

Limitations

This study offers novel insights into geographic accessibility of the civil legal

system in the state of Illinois; however, it is not without limitations. For instance, these findings indicate certain counties are more or less geographically accessible in relation to other counties in the state of Illinois. While this is important for this study, they may not denote “actual” accessibility levels, simply geographic accessibility when compared to the rest of the study area. It is also important to note there are many components of accessibility. While geographic accessibility (i.e., distance between service providers or public transit stops and service providers) is an important component, there are other factors that impact sexual assault survivors’ ability to successfully attain civil legal remedies post assault. One such example is the impact of population density, and service providers available per capita. This may result in service providers being overburdened and not taking clients, as highlighted in Study One. Thus, counties with a higher geographic accessibility ranking may be easier to get to but may not ultimately be easier to receive services in if the agencies are unable to take all clients who seek help. Thus, while this information is important, it does not account for all aspects of civil legal system accessibility in the state of Illinois.

Moreover, geographic civil legal accessibility does not account for services that may be provided for survivors virtually. Thus, geographic accessibility scores of counties may not correlate with overall accessibility of that region when accounting for other service provision options, or facets of accessibility. As such, accessibility scores and rankings should be interpreted with caution.

In addition, this study is also subject to the modifiable areal unit problem (MAUP). MAUP is a statistical bias that occurs when point data (such as people) are summarized to set boundaries (in this case, county boundaries). MAUP it often

unavoidable when people are the subject of spatial research, because utilizing exact locational information comes with privacy concerns. In the case of this research, the accessibility measures are determined by county, but survivors may seek civil legal services across different counties, rather than from just one county. This is especially true as there are many counties without service providers.

Further, while we examined distances of service providers and public transit options from the mean population center, there are other ways to interpret the central point of a region (e.g., geographic median). While there is no “wrong” way to assess centrality; different data points will result in different findings. In this study, I opted to use average distance from service providers to the population mean center as that is where most of the county population is concentrated. However, for counties that have multiple RCCs for instance, having one RCC near the population mean center and one further away to service survivors not located near the population mean center may actually be useful. Depending on the size of the county, this usefulness may not be accurately reflected in the “average distance to service provider” calculations in the statewide accessibility index. However, there were very few counties where this would be an issue, and most were urban where the distance from public transportation may have offered a slight correction, which somewhat limits the impact of this issue in this dataset.

Additionally, this study did not include Metra transportation stops in the urban accessibility index. This was due to the fact that the Metra in Illinois is often used for inter-county transportation. However, it should be noted that this transit option is utilized for intra-county transportation within Cook County. Cook County has robust public transportation, and this was reflected in the accessibility index (i.e., average public transit

distance was one tenth of a mile), so it is not likely omission of Metra stops negatively impacted Cook County's ranking in this index.

Next, there was one county (Jackson County) that, while *not* denoted as urban by the U.S. census, did have public transit options that were not reflected in their statewide accessibility ranking. This county was not included in the urban county analyses. As such, Jackson County may have greater geographic accessibility than is currently reflected in the statewide accessibility ranking.

Lastly, I used Euclidian distance in this study to calculate average distance between points. Euclidian distance represents the shortest distance between points. Euclidean distance was the best option, as there was not an ideal way to calculate travel distance from points due to the many modalities of transit and routes people might take to get between points. However, it is important to note that, while this gives an estimate of how far people have to travel, it does not directly correlate to time spent traveling between points.

Implications For Research, Policy and Practice

Research. Future research in the fields of community psychology, gender-based violence, and studies focused on accessibility or help-seeking should consider utilizing GIS to offer further perspective on geographic and community context. Extant research on survivor help-seeking notes that some communities lack resources (Kennedy et al., 2012), but, to date, no studies have addressed or explored civil legal system geographic accessibility across varied community contexts for survivors of sexual assault. These data, when coupled with findings from Study One, reveal the impacts of number of civil legal service providers, distance from service providers, and transportation access, on a

survivors' ability to access the civil legal system. Future research on these topics should incorporate spatial analyses as a component for better understanding the impact of organization location and dispersal across regions on help-seekers.

Further, we may be able to use findings from this study, in tandem with future research, to make predictions regarding how much physical accessibility of civil legal resources may impact survivors' perceptions of overall accessibility of civil legal services. For example, future studies can examine survivors' perceptions of accessibility in Illinois and see which geographic facets identified in this study were most important to them in relation to how accessible the civil legal system is perceived to be in their area. In doing so, this may identify regions for state policy makers and service providers to concentrate their efforts regarding civil legal services for survivors.

Policy. Prior research has shown geographic accessibility is not only an access issue (Jacobs et al., 2012) but also reflects an equity issue. Limited geographic accessibility often indicates under-served regions and populations (Hipp et al., 2010; Prentice et al., 2017; Shah et al., 2015). The maps created from this study yield novel insights regarding geographic systemic factors that impact accessibility of the civil legal system and service providers across Illinois. These maps identify possible areas (i.e., counties with geographic accessibility scores of one through three in the Statewide Accessibility Map) where the state may want to consider investing in civil legal system infrastructure and service providers to better meet the needs of survivors of sexual assault. Based on these results, as an example of an area to direct state policy makers' attention, the southern and southeast portions of the state had significantly limited geographic accessibility with no legal aid in the region and fewer RCCs when compared

to the rest of the state. These may be areas for state officials to consider investing in civil legal infrastructure (e.g., opening more legal aid agencies, funding civil services at the state level etc.) as well as investigating whether there are other accessibility equity issues salient in the region. When survivors have to travel further to obtain services, survivors may be less likely to pursue the services, and service providers may be less likely to be able to help as they are overburdened by the number of people they are expected to serve. Further, this region had no public transit options, similar to the rest of the state. While much of Illinois is considered rural rather than urban, people living in rural settings do not always have affordable, reliable, or safe access to cars. As such, public transportation options also matter in these less populous regions. By both increasing the number of legal aid service providers and RCCs across the state and expanding public transit options in Illinois, the barrier of needing personal transportation is removed for both rural and urban counties alike.

Practice. Based on these findings, counties in Illinois with more service providers and more public transportation options were more geographically accessible. Legal aid agencies and RCCs should work to ensure there is at least one of each type of agency located in every county across Illinois. It may also be useful to locate these agencies near public transportation stops and/or the population mean center of the county for increased accessibility. Indeed, past research supports the idea of having service providers that serve the same population located in the same area or even potentially the same building for ease of use. Previous research suggests coordinating response across service providers and creating wrap-around, one stop shop services would be useful for people attempting to engage in civil legal help-seeking (Bouffard et al., 2017; Gwinn, et al., 2007; Lee &

Backes, 2018; Shepard et al, 2002; Zweig & Burt, 2007).

Thus, if organizations and the state work together to reduce systemic barriers by increasing the number of service providers per county, centralizing their location, and making it easy to access via public transit, the likelihood of civil legal service engagement by sexual assault survivor may increase. It may be useful for legal aid and RCCs in Illinois to be located in the same building or even the same agency to improve civil legal accessibility for survivors.

General Discussion

To-date, the experiences of sexual assault survivors attempting to access civil legal services has been under-explored, and it is not clear what impacts survivors' ability to engage with formal help-seeking from the civil legal system. These two studies examined each of the five dimensions of accessibility (i.e., approachability, acceptability, availability and accommodation, affordability, and appropriateness) as they related to survivors' ability to successfully access and stay connected to the civil legal system. In the first study, I focused on all five aspects of accessibility by examining focus group data on legal advocates' perspectives of survivors' experiences engaging in civil legal help-seeking. For the second study, I conducted an in-depth spatial analysis of the availability and accommodation dimension of accessibility, focusing on the under explored geographic accessibility component of the dimension. Results from these studies provide new information on civil legal service accessibility in Illinois.

In this section, I will highlight areas of convergence and divergence across the studies. Both studies examine the *availability and accommodation* dimension of accessibility. The *availability and accommodation* dimension was frequently cited by legal advocates in Study One as a barrier to civil legal service access for sexual assault survivors. Within this dimension, legal advocates specifically cited, among other barriers, lack of service providers, issues with transportation or with survivors being able to get to civil legal services, and geographic concerns. To better understand these barriers, Study Two provided a way to quantify geographic accessibility of civil legal service providers for sexual assault survivors. Findings from Study Two also underscore the importance of service provider availability and denote the potential impact of limited service providers

(specifically legal aid) and poor public transit infrastructure on survivors' ability to geographically access civil services across the state. Findings from Study Two suggest survivors in rural regions, particularly those located in the south/southeast portion of the state, may struggle more than survivors in urban areas (i.e., the Chicagoland area) to locate any service provider in their county, and may have to travel greater distances to attain civil legal help due to limited availability of service providers and poor public transportation options.

Study One also shows that civil legal service providers are already attempting to help mitigate some of these geographic barriers. Advocates noted the utilization of virtual options in some counties, as well as RCCs offering transportation support and fostering relationships with attorneys in the area who may offer pro-bono services to their clients, help counteract the limited number of legal aid agencies in the state. However, while these actions may help reduce the negative impact of limited service providers, virtual options are not systematically available, transportation tokens are not very useful if there are no service providers in the area (and were not offered by all RCCs in the state), and advocates often lamented how difficult it was to find a private practice attorney willing to take on an unpaid case. As such, while these activities may help mitigate some of the availability and accommodation issues noted in both studies, limited number of service providers and lack of transportation to and from service providers in counties across the state is still a serious barrier encountered by survivors attempting to access the civil legal system.

Further, Study One notes additional barriers encountered by survivors seeking civil legal services. Specifically, advocates reported that survivors' personal experiences

and feelings around the civil system and service providers may impede their ability to access civil legal services, service provider organizational practices, and civil system processes. Financial costs associated with civil legal help-seeking were also cited as a barrier. While both studies identify potential accessibility barriers experienced by survivors engaging in the civil legal help-seeking process, Study One also identifies facilitators that increase the likelihood of survivors engaging with the civil system and civil service providers (e.g., advocates and RCC activities, survivor mental/emotional supports, low-cost legal aid options, and flexible service providers). Finally, Study One also notes that while service providers may be highly geographically accessible, they may still turn away clients due to insufficient staffing and other reasons related to the survivor's case.

Civil Legal Accessibility for Sexual Assault Survivors

Considering these two studies together, findings reveal both facilitators and barriers to survivors' ability to access civil legal service providers, and the civil legal system as a whole. The majority of survivor formal help-seeking research focuses on survivors' experiences navigating medical or criminal legal systems (e.g., Campbell, 2005; 2006; Campbell & Bybee, 1997; Campbell & Martin, 2001; Campbell & Raja, 1999; Ledray, 1996; Ledray & Simmelink, 1997; Patterson et al., 2009; Wegrzyn et al., 2022; Williams, 1984). While previous research has concluded these systems are often inaccessible (Campbell et al. 2001), the data from these two studies expand on past research by exploring survivors' experiences attempting to access and engage in the civil system specifically.

Within the civil legal system, these studies found that survivors struggle with

limited numbers of legal aid locations across the state as well as limited staffing within these legal aid organizations. Previous research has found victims of crime and domestic violence survivors also struggle with connecting to legal representation (Bouffard et al., 2017; Lee & Backes, 2018). My work demonstrates this is also an issue encountered by sexual assault survivors attempting to engage in civil legal service seeking. Further, advocates in this study reported that survivors who were unable to obtain a lawyer for their civil case, often stopped attempting to access or further pursue civil legal remedies, even though those options are still available to complainants without legal representation. Thus, survivors unable to access legal representation were often deterred from accessing the civil legal system and civil legal options more broadly. These findings stress the importance of obtaining legal representation for survivors' ability to successfully connect with the civil legal system and continued engagement in the civil process to obtain civil legal remedies. As such, geographic isolation of legal aid locations, and limited overall number of civil legal representation options pose significant barriers to survivors' ability to access and continue accessing the civil system.

Conversely, according to both studies, urbanicity and areas where more civil service providers exist were facilitators to survivors' ability to access civil legal service providers. This expands on past research, which has found geographic isolation and rural location as a barrier to the help-seeking process, by indicating urban areas are a conduit for connecting and continued connection to the civil system throughout the help-seeking process. Urbanicity in both studies was indicative of more opportunities for survivors to physically access while areas of the state with few or no service providers were identified as problem areas for survivors' attempting to access and engage with the civil system.

Limitations

Beyond the limitations denoted in Study One and Study Two, it is important to note several points. First, this study provides preliminary insight into survivors' experiences of civil legal system accessibility. However, it does not do so from a survivor's perspective. Thus, there is a possibility that the impacts of certain accessibility factors are either under or over-represented. Second, data are limited to Illinois and survivors who seek help from RCCs; as such, I was unable to capture perspectives from survivors who did not work with RCCs and who may have had different experiences accessing the civil legal system. Therefore, results should be interpreted with caution, and generalizability to overall survivor experience is limited.

Implications***Research***

These findings have practical implications for future research. Sexual assault survivors' experiences within the civil legal system are a nascent body of research. Implications and results of survivors' interactions seeking help from the civil legal system are underexplored and should be a priority for further research exploring survivors' experiences with formal helping systems. These findings can provide a foundation for future research on the topic.

Future research examining sexual assault survivors' experiences with the civil legal system and civil legal system accessibility should explore sexual assault survivors' perspectives on civil legal help seeking. These aspects are important to consider when trying to make a system more supportive of those whose needs it attempts to meet. It may also be useful to triangulate the perspectives of advocates, legal service providers, and

sexual assault survivors on the efficacy of the civil legal system in supporting survivors. These studies would also do well to account for diversity concerns, and that fact that people from systemically marginalized backgrounds (e.g., women of color) may be less likely to engage with or access the civil system due to concerns around policing and the legal system more broadly. While some advocates in our study touched on these concerns, it may be important to center future research on the civil legal accessibility impediments experienced by diverse populations. Additionally, it is important for future research to examine the extent to which survivors perceive civil legal services as helpful and the impact of the civil legal system on survivors (Kennedy et al., 2012).

Further, research should examine the relationship between geographic accessibility of civil legal service providers, availability of service providers, and survivor perceived accessibility of service providers in a given location. Additionally, the use of GIS methodologies in this study highlights the way diverse methodologies may be used to examine social problems. The use of GIS and spatial analyses supported qualitative findings from Study One by providing important insights as to where service provider geographic availability is scarcest, as well as where public transit may be particularly useful. Spatial results offer concrete regions in the state to focus on to address issues of limited legal aid and transportation concerns encountered by survivors attempting to access the civil legal system. Community context matters in research. While using ecological levels of analysis in qualitative or quantitative study design allows for further understanding of the influence of community or social structures, this study highlights how spatial data and spatial analyses used in tandem with community-based research allows for richer understanding of how geography and community

structure impacts the formal help-seeking behaviors of sexual assault survivors. This study highlights the importance of attending to community-level factors and the usefulness of GIS methodologies in help-seeking research, gender-based violence research, and in the field of community psychology. Indeed, Luke (2005) calls for community psychologists to use stronger and diverse methods to better capture community context, including GIS. This work responds to this call and demonstrates the effectiveness of GIS as a tool in community-based research.

Policy

Findings from these studies have implications for federal policies designed to support sexual assault survivors. Key policies are the Victims of Crime Act (VOCA) of 1984 which is designed to support service providers (e.g., rape crisis centers) who respond to victims of crime, including sexual assault survivors (National Network to End Domestic Violence, 2017); and the Violence Against Women Act (VAWA) of 1994 which is intended to improve federal, state, local, and tribal response to crimes such as domestic violence, stalking, dating violence, and sexual assault (National Network to End Domestic Violence, 2017). These acts are designed to improve service provision, including civil legal service provision for survivors of sexual assault. Gaps in service provision accessibility including geographic gaps (i.e., rural areas with few RCCs and little or no legal aid agencies) and awareness and appropriateness gaps highlight areas to concentrate VOCA and VAWA funding where civil legal service provision for survivors may be improved, particularly in relation to accessibility.

Results from these studies may be used to identify areas of the state where an increase in funding and resource allocation for civil legal service provision specifically

for survivors of sexual assault may be useful to improve survivors' geographic access to civil legal services. For instance, Study Two suggests that dispersal of civil legal services across Illinois may not currently be sufficient to meet survivor needs. This is particularly true for survivors located in non-urban regions, such as the south/southeastern portion of the state. While fewer people live in these counties compared to Cook or other urban counties (U.S Census Bureau, 2022), the complete lack of legal aid options in the region puts a strain both on survivors who have to travel to engage with legal service providers and legal service providers who have to serve survivors from multiple areas across the state. However, findings from Study One also suggest the number of service providers across the state, particularly legal aid, is not sufficient to meet the current needs of sexual assault survivors engaged in formal civil legal help-seeking as survivors are often turned down for services due to limited number of available providers. The study is not however, able to demonstrate which geographic areas have the most issues with turning away clients.

Both studies also indicate it may be useful to expand public transportation infrastructure in the state. In Study One, findings suggest transportation to and from service providers and court is a barrier to survivors who pursue civil legal services. Advocates noted cost of transportation and poor public transit options available in their area as concerns. Additionally, Study Two results highlight stark differences in civil legal service system accessibility between counties with well-developed public transportation (i.e., Cook County) and other urban areas. While the average public transit distance from civil system services providers and population mean center in Cook County was only a tenth of a mile, the average transit distance from a public transit stop to the population

mean center and civil system service providers across all 17 counties was over two miles. For people without reliable transportation of their own, this highlights a significant barrier for survivors trying to access the system.

Lastly, Study One specifically stresses a need for the standardization of civil legal processes within the civil system across the state of Illinois. Advocates discussed how they struggled to connect survivors to appropriate resources and service providers, as service provision was highly variable across counties. Service providers may be better able to provide supports, and survivors may be better able to access civil legal services, if these services are more streamlined and uniform across counties and courts in the state. As the civil legal system can provide an alternative to criminal legal proceedings (Greene, 2015; Michener, 2020), investing in transportation and civil legal system infrastructure (i.e., increasing the number of legal aid agencies, standardizing the process) may reduce the overall costs of criminal legal system for the state. By allowing more survivors who want to take legal proceedings into their own hands (i.e., pursue civil legal options), more survivors may benefit from feelings of empowerment and healing (Holder & Daley, 2018; Lake et al., 2016; National Center for Victims of Crime, 2005), cases may move more quickly through the legal system due to scheduling and different evidence requirements (i.e., preponderance vs. beyond reasonable doubt; Sarre, 2001), and the state may save money due to reduction in costs of incarceration and criminal proceedings.

Practice

Extant research indicates survivors are less able to engage with helping systems when system service providers are hard to reach or spread out (Bouffard et al., 2017;

Gwinn, et al., 2007; Lee & Backes, 2018; Shepard et al, 2002; Zweig & Burt, 2007) as this places additional burdens on the help-seeker. This study reveals specific regions where survivors struggle or have few issues with accessing civil legal services. The map of geographic accessibility may be used to determine counties where systemic changes (i.e., addition of service providers locations) may be particularly useful for improving sexual assault survivors' access to civil legal services. For instance, there was a dearth of legal aid options for survivors in the south/southeast portion of the state. There were also fewer RCCs in the southeast portion of the state. This suggests adding agencies in this region is geographically likely to help survivors access services.

Further, Study One also identifies barriers RCC advocates can help survivors navigate. These findings can be used to inform RCC legal advocate training and organizational practice. As an example, results from Study One indicate RCC and advocate education around civil legal service options in the community and with other service providers is useful for improving survivors' knowledge of civil legal service options and how to access them. RCC education also may increase the likelihood that other service providers, such as police officers, provide survivors with accurate information around protective orders and other civil legal service options. These data indicate it may be useful for RCCs to formalize and expand education services, particularly with other formal helping system service providers. In addition to RCC service provision, Study One findings also suggest survivors may benefit if legal aid agencies and the court system improve virtual services (i.e., phone systems, offering zoom options, e-filing) and reduce bureaucratic impediments to better facilitate civil legal help-seeking.

Further, data from these studies indicate availability of legal aid is an issue. While Study Two emphasizes limited legal aid service providers as a barrier, Study One also identifies service provider criteria, limited staffing, and few available pro-bono civil legal representation options in the area as barriers survivors encounter accessing civil legal services. In addition to expanding locations, legal aid agencies should work to increase staffing, as well as revisit and standardize criteria for accepting cases. Advocates discussed issues with criterion, as well in variability in legal aid service providers following of criterion, and reasoning for decisions whether to take a survivors' civil case or not. Legal aid providers should especially revisit the decision to take a case or not based on "winnability" or "proof" as this may be re-victimizing and hurtful for survivors, indicating they do not believe them that the sexual victimization took place.

Lastly, advocates in Study One discussed how advocate and RCC collaboration with other civil legal service providers in their region facilitated survivors' ability to successfully access civil legal services. Findings suggest promoting inter-agency and cross-system collaboration may be useful for increasing civil legal system accessibility for survivors. These partnerships may result in more survivors obtaining legal representation, increase survivor knowledge of civil legal options available, and increase their ability to connect to other service providers.

Conclusion

Civil legal accessibility is a key component of survivor help-seeking post sexual assault. However, at present very little is known about survivors' experiences accessing the civil legal system. These two studies reveal survivors encounter a variety of factors that impact Illinois sexual assault survivors' ability to successfully access all aspects of

the civil legal help-seeking process. According to legal advocates working with survivors, the primary barriers to access survivors face include knowledge of civil legal services, availability and location of civil legal service providers, and eligibility criteria for legal aid services. The primary facilitators to civil legal service access discussed were advocacy and RCC services, money or free legal representation options for survivors, and availability of civil legal service providers. When I examined specifically the geographic accessibility of civil legal services in the state in Study Two, findings indicated urban areas are generally more geographically accessible, with Cook County being the most geographically accessible county across the state in both analyses. Additionally, findings from this study suggest rural areas of Illinois, particularly the south/southeast portion of the state, are the least geographically accessible with respect to civil legal service providers. To improve civil legal accessibility for sexual assault survivors in Illinois these findings suggest it may be useful to expand legal aid across the state, increase civil legal service funding, invest in transportation infrastructure, and continue research on how civil legal accessibility impacts survivors' civil legal help-seeking outcomes.

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Appendix A: Focus Group Interview Guide

FOCUS GROUP INTERVIEW

For this focus group, some of you may have similar experiences and some may be very different. Keep in mind there are no right or wrong answers. We are just interested in your honest perceptions.

From past experiences in groups like these we know some people talk a lot, and some people don't say much. I really want to hear from all of you because you've had different experiences. So if you are talking a lot, I may interrupt you and if you aren't saying as much, I may call on you. We have a lot to cover here today and it's just my way of making sure we get through all the questions and that everyone has a chance to talk. For the following questions, we are asking you to think about your experiences working with survivors of sexual assault through your center on civil legal issues during approximately the past 3 years in the state of Illinois. This timeframe begins [insert month/year], so it includes experiences both prior to and during the COVID-19 pandemic. We understand that some of you may not have been working with your rape crisis center or in this field for three years and that is okay, just speak to your experience since you began.

note to focus group facilitator: make sure to probe about particular protective orders when they come up (i.e., OP, CNCO, SNCO)

[This list will be on a flipchart for study participants to view:

- Protective orders
 - Orders of Protection (OP)
 - Civil No Contact Order(CNCO)
 - Stalking No Contact Order(SNCO)
- Housing Issues (Safe Homes Act/SHA)
- Employment Issues
 - Victim's economic safety and security act (VESSA)
 - Equal Employment Opportunity Commission(EEOC)
 - Human Rights Act Complaints (HRA)
- Civil lawsuits
- Immigration issues
 - U VISA
 - T VISA
- Title IX or SVHE Act (sexual abuse or harassment in education settings)

1) Here we have a list of civil legal issues survivors may need addressed. :

- a. Thinking of civil legal issues you help survivors address (either with referrals and/or other advocacy), are there any issues missing from this list?
 - b. Which, if any of these issues listed are rarely requested?
 - i. *Probe:* Why do you think that is?
- 2) How do clients you work with learn about the civil legal system and civil legal options? (*Note to facilitators:* options refers to protective orders, civil suits, addressing employment, housing and immigration issues, title IX; addressing sexual abuse and harassment in education, etc.)
- a. What options, if any, are clients aware of before connecting to your agency?
 - b. What options, if any, are clients generally not aware of?
- 3) Next we'd like you to tell us about what it is like helping clients obtain legal representation. To be clear, when we say legal representation, we mean a lawyer formally representing a client on some issue, not just having a meeting or initial conversation. (*Note to facilitator:* This might include things like writing a letter on the survivor's behalf, representing the survivor in a petition to the court or a court hearing.)
- a. What types of legal representation, if any, do you refer clients to? Why or why not? *If not discussed, ask about:*
 - i. Reasons for referring/not referring to a pro-bono attorney, legal aid agency, or paid private practice lawyer
 - b. What are barriers to clients obtaining legal representation?
 - i. *Probe on: Private practice paid lawyer, Pro-bono attorney, Legal aid agency*
 - c. What helps clients obtain legal representation?

Probe on: Private practice paid lawyer; Pro-bono attorney; Legal aid agency

- 4) We would like you to think about the process you go through once you or your client has identified a need that falls within the scope of the civil legal system...We've already discussed barriers to helping them get legal representation.
- a. What are **other** barriers to survivors connecting to the civil legal system (other than what you have already discussed)? (**facilitator notes: these are things related to access or getting the process going e.g., online forms, transit, childcare, etc.**)

- What helps survivors connect to the civil legal system (other than what you have already discussed)?
- 5) For clients that do seek help from the civil legal system, how helpful do you think the civil legal system is at meeting their needs? Why?
 - a. How do you think clients feel about the overall process? Why? (*if this was unclear, facilitator could say: e.g., would they recommend that other survivors in a similar situation go through it? Why or why not?*)
 - 6) We already talked about some barriers to *connecting* with the civil legal system. For those clients that do connect with the civil legal system, what are barriers to getting their needs met? (*facilitator notes if unclear: what makes the system less helpful? e.g., judge engaging in victim blaming, survivor is unable to attend hearing*)
 - a. *Note to facilitator, optional if low on time:* What are barriers you feel you are able to help or provide support with, and what are barriers you feel unable to assist with?
 - 7) For those clients that do connect with the civil legal system, what helps get their needs met?
 - 8) What role does either obtaining or not obtaining legal representation play in how helpful the civil legal system is for a client?
 - a. *If time:* Are there any circumstances where legal representation is not helpful or necessary in your opinion?
 - 9) How does your role in helping clients with civil legal issues differ when the client does vs. does not have legal representation?
 - a. How do you feel about that?
 - b. What, if anything, would you like to change about your role in helping clients on civil legal options?
 - 10) *If not addressed already:* Next, I'd like you to think specifically about times you helped clients with a protective order (including CNCOs, OPs & SNCOs). *Note to facilitator: ensure answers address all three and not just OPs*
 - a. How do you feel about the process? (e.g., smooth vs. difficult)
 - 11) *Ensure this is asked in all groups:* How, if at all, does the experience of clients attempting to get a protective order differ when both parties have a lawyer vs. the offender has a lawyer and the survivor doesn't?
 - 12) Thinking again about all civil legal options, not just protective orders, what are some of the outcomes or impacts of clients' interactions with the civil legal system? In other words, how does interacting (or not interacting with the civil legal system) affect clients?

- a. *If not covered:* How if at all, does legal representation change the effect of the civil legal system on clients?
- 13) Now to wrap up, we'd like to know what else, if anything, could be improved in Illinois to better help survivors get their civil legal needs met?

Appendix B: Salient Codes Extracted from Data Corpus

- **AWARENESS OF AND LEARNING ABOUT CIVIL LEGAL OPTIONS**
 - Aware of prior to connecting
 - How survivors learn
 - Misconceptions of options
 - Not aware of
- **OBTAINING LEGAL REPRESENTATION**
 - Barriers (obtaining legal rep)
 - Systemic, organizational & individual logistic barriers
 - Limited availability of legal aid resources
 - Legal service providers denial
 - Survivor psychosocial factors
 - Facilitators (obtaining legal representation)
 - RCC factors (obtaining legal rep)
 - Judge appoints lawyers
 - Attorney Factors
 - Survivor/case factors
- **CONNECTING TO THE CIVIL LEGAL SYSTEM**
 - Barriers (connecting)
 - Logistical connecting barrier
 - Societal or psychosocial
 - facilitators (connecting)
 - Logistical
 - Actors
 - Survivor knowledge
 - Societal or psychosocial

Appendix C: Accessibility Codebook

*general coding notes:

- do not code for hypotheticals
- DCFS does not equal civil legal service provider
- Co-code availability and accommodation AND affordability when judge appoints lawyer

Accessibility Codebook

1. Approachability

1. *Definition:* Whether stakeholders (i.e., survivors) or clients can or do identify a service to meet their needs or have knowledge that a service exists.
2. *Notes:* **How advocates report** stakeholders (i.e., survivors) or clients can or do identify a service to meet their needs, or have knowledge that a service exists.

1. Barriers:

1. *Definition:* When stakeholders or clients (i.e., survivors) are unable or struggle to accurately identify a service to meet their needs, have inaccurate information pertaining to the civil legal help-seeking process, or do not have knowledge that a service exists
2. *Example: Participant 1 (MG2):* *I think a lot of officers in my area too, like, I think it's probably more along the lines of what you're thinking is that they say like, I don't know how it gets misconstrued or if it's just a misunderstanding but like my clients often come in thinking they already have a protective order, so then we have to like "where is the paper work" and they are like "well I don't have paper work, I just have this report and it says that I have one". And it's like "no, this is explaining how you get one, but we can do that for you absolutely. It is not a problem," but it is heartbreaking sometimes to tell them, "You actually aren't protected right now, let's get you protected."*

3. Notes:

2. Facilitators:

1. *Definition:* When stakeholders or clients (i.e., survivors) can identify a service to meet their needs or have knowledge that a service exists and what enables their awareness

2. *Example: “Participant 4 (SC STATEWIDE): Yeah. I was gonna say, very similarly, um, I think our most common or primary way of contacting sexual assault survivors is through the hospital. Of course, we meet them, like at the courthouses or in stations, but primarily through the hospital. Um, hospitals—the six in DuPage we go to do offer like a very small resource packet, but that's more on like, um like compensation and then like health related issues. So most often we are that first point of contact for resources. Um, we talk about in detail if they choose about these resources, and then we always give them packets full of detailed resources.”*
3. *Notes: **How advocates report** clients (i.e., survivors) can identify a service to meet their needs or have knowledge that a service exists*

2. Availability and Accommodation

1. *Definition:* Whether clients (i.e., survivors) are able to get to and/or meet with service providers
2. *Notes:* This refers to any advocate discussion around distance to or and location of service agency, availability of service providers (i.e., staffing, ability to get an appointment, scheduling, timing etc.), or number of service providers available.
 1. *Barriers:*
 1. *Definition:* When advocates report clients (i.e., survivors) struggle with or are unable get to and/or meet with civil legal service providers and what contributes to that struggle.
 2. *Example: Facilitator: Uh-huh. I feel like, [Participant 3], you were mentioning that too- [Participant 3: Mhm.] like the length of it. Yeah, okay. Mhm. Okay, um, so this is all again, really helpful. Um, so we would like you to think some more about this process you go through once you and your client identify a need that falls within the scope of the civil legal system. So we've already disused barriers to helping them get legal representation, so, from an attorney. What are some other barriers to survivors connecting with the legal system? Are there any more than what we have already discussed? Participant 2 (MG1): **Getting transportation. Facilitator: Yeah. Could you say more about that? Participant 2 (MG1):**Um, a lot of them either don't have a vehicle or don't have enough money to be*

paying to go. Also work. Getting off work to be able to go.

3. *Notes:* This refers to any discussion around distance to or and location of service agency, availability of service providers (i.e., staffing, ability to get an appointment, scheduling, timing etc.), or number of service providers available.

2. *Facilitators:*

1. *Definition:* When advocates report clients (i.e., sexual assault survivors) can get to and/or meet with civil legal service providers and what enables those meetings to occur.
2. *Example: "Participant 3 (EH 1): For us, if it were at least our agency, if it was a barrier for transportation--no, that's where our case management comes in, no. We're going to make sure you can get where you need to go or if you need this resource. Um, so for us transportation isn't...quite. Because that's where our case management comes in and we provide that service for them or that resource to get them where they need to go. Um, distance though--"*
3. *Notes:* This refers to any discussion around distance to or and location of service agency, availability of service providers (i.e., staffing, ability to get an appointment, scheduling, timing etc.), or number of service providers available.

3. **Affordability**

1. *Definition:* The cost of service seeking (i.e., time, resources, and money) expended when engaging in formal civil legal help-seeking.
2. *Notes:* includes time costs
 1. *Barriers:*
 1. *Definition:* When advocates discuss specific costs of service seeking (i.e., time, resources, and money expended when engaging in formal civil legal help-seeking) as an impediment to help seeking
 2. *Example: "Participant 4 (MG STATEWIDE): Yeah. And just to add on to that, too, it just makes me think of another person that um, we helped with like immigration services. And um, another barrier was like her time off. Like, she's an undocumented person her only daytime. her only day off was a Sunday. Like she was not able to get anything done or reach out to any help because her employer would like*

dock her pay if she had to take days off. And because she's only getting paid cash, then she knows that if she like, you know tries to get another day off or like stand up for herself, or even use VESSA she can't because that employer is going to immediately fire her and just find someone else. So like, the fact that she, you know they don't even have the time sometimes too. Depending on their work availability because they're just working and working trying to survive. So I think yeah like, that's a yeah, huge."

3. Notes:

2. Facilitators:

1. *Definition:* When advocates discuss what helps survivors with the cost of service seeking (i.e., time, resources, and money expended when engaging in formal civil legal help-seeking).
2. *Example:* "Participant 4 (MG3): *ApSo we also try to refer to Prairie State legal a lot. But we find that they don't take many cases. Um, so recently, after like meeting with like a lot of the local judges, we've recently learned—and everybody else probably knows this [chuckles], but the fact that if a respondent has an attorney, the court will appoint one to the petitioner. But the public defenders have been few and far between right now for us. So we actually have an agreement with the judge that if we can find, like a private attorney that is willing to represent the petitioner, that they will appoint that. And pay them out of the county's funds. So that's been extremely beneficial."*

3. Notes:

4. **Appropriateness**

1. *Definition:* Whether the services provided fit the needs of the clients (i.e., sexual assault survivor survivor).

2. Notes:

1. *Barriers:*

1. *Definition:* When advocates discuss how the services provided do not adequately fit the needs of the stakeholder (i.e., survivor).
2. *Example:* Participant 1 (EH1) : "Yes, that's a great point. Thank you, [Participant 3]. 'Cause that's huge and being-and finding someone trauma-informed is hard."
3. Notes: include undue burden on survivor

2. Facilitators:

1. *Definition:* refers to how the services provided fit the needs of the stakeholder (i.e., survivor).
2. *Example: "Participant 1 (KZ STATEWIDE):* No, yes, no. It seems uh like here, uh, I don't like being off camera. Here, let me get back on my camera. Um, um, uh, yeah, actually, I was just talking to a client about Title IX things. But I feel like Title IX and, we do use SVHE. And I think also in Chicago, we have access to um, a other like legal agencies that really help us with the civil and I think that makes a big difference. Um, also of like what you're working with. When you have just more of a support system, or more resources around you because we have like staff out in DuPage County where it's not that far, but you go to a different county and, and, getting a pro bono lawyer in DuPage, It's really hard. And so the amount of civil that you would do, I feel like is um, it's in direct correlation with um the resources you have to make that happen. Because that's, it's like you would have to pay for that. And a lot of survivors just do not have that kind of money to pursue civil. Even like civil litigation or, or even know like how to move forward. So I feel like having just, even lawyers that you can talk to is always such a big help. Um, even like, CA- we work with this agency called CAASE, so they do a lot of Title, like they've sued schools. So like, if I have Title IX, I have someone to call. And, again, so I feel like, that, I don't know, if if you guys feel the same? The rest of the advocates when it comes to this?"
3. *Notes:*

5. Acceptability

1. *Definition:* Whether the population that agencies intend to serve (i.e., survivors) chooses to seek services (i.e., civil legal services), and deem them suitable.
2. *Example:*
3. *Notes:*
4. *Barriers:*
 1. *Definition:* When advocates discuss issues where the population that agencies intend to serve (i.e., survivors) do not choose to seek services (i.e., civil legal services)/or feel's disinclined to pursue them due to poor suitability
 2. *Example: Participant 2 (EH STATEWIDE):* "I could piggyback off the rape culture barrier and just kind of expand on that more. Is um, to just... if we, you know, we understand, you know, why survivors go through um maybe waiting to report or waiting to get an order of protection.

But just with rape culture um having to explain that, you know “why are you just now getting order protection?”, you know, can be really hard for a survivor to go through. And then also another barrier could be they just still don't feel safe. I've had a lot of survivors that tell me that “it's just a piece of paper. Like, what are the police going to do if they showed up to my house? It's just this piece of paper.” Um, so maybe just still not feeling protected, even with getting an order of protection. Um, and then just echoing what [Participant 3] and [Participant 1] have already mentioned about the other barriers like transportation and time and all those other things as well.”

3. Notes:

1. Acceptability barriers survivors who have civil legal needs may experience include: disinclination to pursue civil legal assistance due to fear or mistrust. Survivors may fear engaging with formal helping systems due to past negative experiences, cultural disinclination, or immigration status.
2. **okay to co-code with appropriateness when people or groups actually attempt to engage and then decide not to once they learn more/become more involved in the process*

i. *Facilitators:*

3. Definition: When advocates discuss what helps survivors choose to seek civil legal services and finds them suitable for their needs.
4. Example:
5. Notes: This includes people or processes that make civil legal help-seeking easier for survivors

Appendix D: R Code for GIS Analyses

Figure 2 R Code

```
##create GIS map of Geographic Accessibility of Civil Legal System##
#install packages and load libraries#
```

```
install.packages("data.table")
install.packages("tidyverse")
install.packages("sf")
install.packages("rgdal")
install.packages("tmap")
install.packages("tmaptools")
install.packages("sp")
install.packages("ggmap")
install.packages("tigris")
install.packages("measurements")
install.packages("mapview")
install.packages("maps")
install.packages("purrr")
install.packages("dplyr")
install.packages("leaflet") ##used this package###
```

```
library(tidyr) #datawrangling
library(tidyverse)
library(sf) #simple features- geospatial geometries
library(rgdal)
library(ggplot2) #datavisualization
library(data.table)
library(tmap) #static/interactive map library with ggplot-like syntax
library(tmaptools)
library(units)
library(sp)
library(ggmap) #downloading raster maps from a variety of sources
library(tigris)
library(measurements)
library(mapview) #interactive geometry viewing
library(maps)
library(purrr)
library(dplyr) #data wrangling
library(osmdata) #obtaining openstreetmap vector data
library(ggspatial) #mapbackgrounds and annotations for ggplot
library(leaflet) #basemap
```

```

#set working directory#
setwd("~/Desktop/DePaul/Dissertation/R data files/GIS map")

##load excel data files into global environment##
library(readxl)
Legal_Aid_Agencies <- read_excel("Legal Aid Agencies.xlsx")
View(Legal_Aid_Agencies)

library(readxl)
Rape_Crisis_Centers <- read_excel("RCC location.xlsx")

library(readxl)
Courthouses <- read_excel("Courthouse locations.xlsx")

library(readxl)
mean_center_of_population_by_county <- read_excel("mean center of population by
county.xlsx")
View(mean_center_of_population_by_county)

####transform addresses to latitude and longitude in data files for SERVICE
PROVIDERS####

##RCC lat and longitude conversion##
register_google(key = "AIzaSyBcRIGkHUm4kNeJ3aUu-yUvAFIs4V_z-uc", write =
TRUE)

RCC_ <- as.data.frame(Rape_Crisis_Centers)
RCCdf_latlong <- mutate_geocode(RCC_, Address)

#remove missing data from data frame#
RCCdf_latlong1 <- na.omit(RCCdf_latlong)

##courthouse lat and long conversion##

Courthouses_ <- as.data.frame(Courthouses)
courthousedf_latlong <-mutate_geocode(Courthouses_, Address)

#remove missing data from data frame#
courthousedf_latlong1 <- na.omit(courthousedf_latlong)

##legal aid agency lat and long conversion##
LegalAid_ <- as.data.frame(Legal_Aid_Agencies)
LegalAiddf_latlong <- mutate_geocode(LegalAid_, Address)

```

```

#remove missing data from data frame#
LegalAidlatlong_df1 <- na.omit(LegalAiddf_latlong)

####marker icons####

iconSet<- awesomeIconList(
  Courthouse = makeAwesomeIcon(
    icon = "gavel", markerColor = "lightgreen",
    library = "fa",
    iconColor = "black"
  ),

  LegalAid = makeAwesomeIcon(
    icon = "briefcase", markerColor = "lightblue",
    library = "fa",
    iconColor = "black"
  ),

  RCC = makeAwesomeIcon(
    icon = "heart", markerColor = "purple",
    library = "fa",
    iconColor = "black"
  ))

####add basemap using leaflet####

illinois_basemap <- leaflet() %>% setView(lng = -89.000000, lat = 40.000000, zoom =
7)
illinois_basemap %>% addTiles()

basemap <- leaflet() %>%
  # add different provider tiles
  addProviderTiles(
    "OpenStreetMap",
    # give the layer a name
    group = "OpenStreetMap"
  ) %>%
  addProviderTiles(
    "Stamen.Toner",
    group = "Stamen.Toner"
  ) %>%
  addProviderTiles(
    "Stamen.Terrain",

```



```

    group = "Stamen.Terrain"
  ) %>%
  addProviderTiles(
    "Esri.WorldStreetMap",
    group = "Esri.WorldStreetMap"
  ) %>%
  addProviderTiles(
    "Wikimedia",
    group = "Wikimedia"
  ) %>%
  addProviderTiles(
    "CartoDB.Positron",
    group = "CartoDB.Positron"
  ) %>%
  addTiles() %>%
  addAwesomeMarkers(data = courthousedf_latlong1, group = "Courthouses", label =
"Courthouse", icon = Courthouse) %>%
# add a layers control
addLayersControl(
  baseGroups = c(
    "OpenStreetMap", "Stamen.Toner",
    "Stamen.Terrain", "Esri.WorldStreetMap",
    "Wikimedia", "CartoDB.Positron", "Courthouses"
  ),
  # position it on the topleft
  position = "topleft"
)

basemap

##add legal aid clinics##

#legal aid chicago

SPmap_01 <- basemap %>%
  addAwesomeMarkers(
    lat = 41.88049,
    lng = -87.63280,
    label = "Legal Aid Chicago",
    icon = icon.fa1) %>%

#Prairie state
addAwesomeMarkers(
  lat = 42.27327,

```

```
    lng = -89.09272,  
    label = "Prairie State Legal Services",  
    icon = icon.fal  
  ) %>%
```

```
#Land of Lincoln Legal Assistance Foundation, Inc.
```

```
addAwesomeMarkers(  
  lat = 38.60050,  
  lng = -90.08402,  
  label = "Land of Lincoln Legal Assistance Foundation, Inc.",  
  icon = icon.fal  
) %>%
```

```
#West Central Illinois Legal Assistance- Prairie State Galesburg office
```

```
addAwesomeMarkers(  
  lat = 40.94778,  
  lng = -90.36594,  
  label = "West Central Illinois Legal Assistance- Prairie State Galesburg office",  
  icon = icon.fal  
) %>%
```

```
#Kane County Bar Association LRS
```

```
addAwesomeMarkers(  
  lat = 41.90482,  
  lng = -88.34053,  
  label = "Kane County Bar Association LRS",  
  icon = icon.fal  
) %>%
```

```
#DuPage Bar Legal Aid Service
```

```
addAwesomeMarkers(  
  lat = 41.86332,  
  lng = -88.14314,  
  label = "DuPage Bar Legal Aid Service",  
  icon = icon.fal  
) %>%
```

```
#Chicago Legal Clinic Pro Bono Program
```

```
addAwesomeMarkers(  
  lat = 41.73041,
```

```
    lng = -87.55236,  
    label = "Chicago Legal Clinic Pro Bono Program",  
    icon = icon.fal  
)%>%
```

```
#First Defense Legal Aid
```

```
addAwesomeMarkers(  
  lat = 41.87322,  
  lng = -87.75362,  
  label = "First Defense Legal Aid",  
  icon = icon.fal  
)%>%
```

```
#Hispanic Lawyers Association of Illinois & Asian American Bar Association of the  
Greater Chicago Area
```

```
addAwesomeMarkers(  
  lat = 41.87761,  
  lng = -87.62847,  
  label = "Hispanic Lawyers Association of Illinois & Asian American Bar Association  
of the Greater Chicago Area",  
  icon = icon.fal  
) %>%
```

```
#Lambda Legal
```

```
addAwesomeMarkers(  
  lat = 41.87922,  
  lng = -87.63104,  
  label = "Lambda Legal",  
  icon = icon.fal  
)%>%
```

```
#Legal Assistance Foundation of Metropolitan Chicago
```

```
addAwesomeMarkers(  
  lat = 41.88049,  
  lng = -87.63280,  
  label = "Legal Assistance Foundation of Metropolitan Chicago",  
  icon = icon.fal  
)%>%
```

```
#Center for Conflict Resolution (CCR)
```

```

addAwesomeMarkers(
  lat = 41.87933,
  lng = -87.62714,
  label = "Center for Conflict Resolution (CCR)",
  icon = icon.fal
)%>%

```

#Lawyers' Committee for Better Housing, Inc.

```

addAwesomeMarkers(
  lat = 41.88347,
  lng = -87.62913,
  label = "Lawyers' Committee for Better Housing, Inc.",
  icon = icon.fal
) %>%

```

#The Law Project

```

addAwesomeMarkers(
  lat = 41.88335,
  lng = -87.63287,
  label = "The Law Project",
  icon = icon.fal
)%>%

```

#Civil Court Clinic for Orders of Protection Pro Bono Advocates

```

addAwesomeMarkers(
  lat = 41.88276,
  lng = -87.63119,
  label = "Civil Court Clinic for Orders of Protection Pro Bono Advocates ",
  icon = icon.fal
) %>%

```

#Worker Rights Center, Chicago Interfaith Committee on Worker Issues

```

addAwesomeMarkers(
  lat = 41.98388,
  lng = -87.65635,
  label = "Worker Rights Center, Chicago Interfaith Committee on Worker Issues ",
  icon = icon.fal
)%>%

```

#Cabrini Green Legal Aid Clinic

```
addAwesomeMarkers(
  lat = 41.89452,
  lng = -87.65275,
  label = "Cabrini Green Legal Aid Clinic",
  icon = icon.fal
)%>%
```

```
#Chicago Volunteer Legal Services Foundation
```

```
addAwesomeMarkers(
  lat = 41.88288,
  lng = -87.62893,
  label = "Chicago Volunteer Legal Services Foundation",
  icon = icon.fal
)%>%
```

```
# The Roger Baldwin Foundation of ACLU, Inc.
addAwesomeMarkers(
  lat = 41.88481,
  lng = -87.62495,
  label = "The Roger Baldwin Foundation of ACLU, Inc.",
  icon = icon.fal
)%>%
```

```
#Chicago Lawyers' Committee For Civil Rights Under Law, Inc.
```

```
addAwesomeMarkers(
  lat = 41.88335,
  lng = -87.63287,
  label = "Chicago Lawyers' Committee For Civil Rights Under Law, Inc.",
  icon = icon.fal
)%>%
```

```
#AIDS Legal Council of Chicago
```

```
addAwesomeMarkers(
  lat = 41.88552,
  lng = -87.62484,
  label = "AIDS Legal Council of Chicago",
  icon = icon.fal
)%>%
```

```
#Chicago Legal Advocacy for Incarcerated Mothers
```

```
addAwesomeMarkers(
```

```
lat = 41.88593,  
lng = -87.62553,  
label = "Chicago Legal Advocacy for Incarcerated Mothers",  
icon = icon.fal  
)%>%
```

```
# Legal Clinic for the Disabled, Inc.
```

```
addAwesomeMarkers(  
  lat = 41.89523,  
  lng = -87.61686,  
  label = "Legal Clinic for the Disabled, Inc.",  
  icon = icon.fal  
)%>%
```

```
# Highland Park-Highwood Legal Aid Clinic
```

```
addAwesomeMarkers(  
  lat = 42.18169,  
  lng = -87.80034,  
  label = "Highland Park-Highwood Legal Aid Clinic",  
  icon = icon.fal  
)%>%
```

```
# Prairie State Legal Services- Bloomington
```

```
addAwesomeMarkers(  
  lat = 40.47725,  
  lng = -88.99511,  
  label = "Prairie State Legal Services- Bloomington",  
  icon = icon.fal  
)%>%
```

```
# Prairie State Legal Services- Joliet Office
```

```
addAwesomeMarkers(  
  lat = 41.52772,  
  lng = -88.08231,  
  label = "Prairie State Legal Services- Joliet Office",  
  icon = icon.fal  
)%>%
```

```
# Prairie State Legal Services- Kankakee Office
```

```
addAwesomeMarkers(  
  lat = 41.52772,  
  lng = -88.08231,  
  label = "Prairie State Legal Services- Joliet Office",  
  icon = icon.fal  
)%>%
```

```
lat = 41.11928,  
lng = -87.86460,  
label = "Prairie State Legal Services- Kankakee Office",  
icon = icon.fal  
)%>%
```

```
# Prairie State Legal Services- Ottawa
```

```
addAwesomeMarkers(  
  lat = 41.35057,  
  lng = -88.84429,  
  label = "Prairie State Legal Services- Ottawa",  
  icon = icon.fal  
)%>%
```

```
# Prairie State Legal Services- Peoria Office
```

```
addAwesomeMarkers(  
  lat = 40.69374,  
  lng = -89.58996,  
  label = "Prairie State Legal Services- Peoria Office",  
  icon = icon.fal  
)%>%
```

```
# Prairie State Legal Services- Rock Island
```

```
addAwesomeMarkers(  
  lat = 41.50820,  
  lng = -90.57640,  
  label = "Prairie State Legal Services- Rock Island",  
  icon = icon.fal  
)%>%
```

```
# Prairie State Legal Services- Waukegan Office
```

```
addAwesomeMarkers(  
  lat = 42.35932,  
  lng = -87.83358,  
  label = "Prairie State Legal Services- Waukegan Office",  
  icon = icon.fal  
)%>%
```

```
# Prairie State Legal Services- West Suburban office
```

```

addAwesomeMarkers(
  lat = 41.91705,
  lng = -88.22382,
  label = "Prairie State Legal Services- West Suburban Office",
  icon = icon.fal
)%>%

```

```
# Prairie State Legal Services- Woodstock Office
```

```

addAwesomeMarkers(
  lat = 42.33939,
  lng = -88.44167,
  label = "Prairie State Legal Services- Woodstock Office",
  icon = icon.fal
)%>%

```

```
#Land of Lincoln Legal Assistance Foundation, Inc.- Alton Office
```

```

addAwesomeMarkers(
  lat = 38.89154,
  lng = -90.18383,
  label = "Land of Lincoln Legal Assistance Foundation, Inc.- Alton Office",
  icon = icon.fal
)%>%

```

```
#Land of Lincoln Legal Assistance Foundation, Inc.- Springfield Office
```

```

addAwesomeMarkers(
  lat = 39.75873,
  lng = -89.61010,
  label = "Land of Lincoln Legal Assistance Foundation, Inc.- Springfield Office",
  icon = icon.fal
) %>%

```

```
#Land of Lincoln Legal Assistance Foundation, Inc.- Champaign Office
```

```

addAwesomeMarkers(
  lat = 40.11870,
  lng = -88.23901,
  label = "Land of Lincoln Legal Assistance Foundation, Inc.- Champaign Office",
  icon = icon.fal
)%>%

```

```
#Land of Lincoln Legal Assistance Foundation, Inc.- Carbondale Office
```



```

addAwesomeMarkers(
  lat = 37.72262,
  lng = -89.21775,
  label = "Land of Lincoln Legal Assistance Foundation, Inc.- Carbondale Office",
  icon = icon.fa1
)%>%

```

```
#Metropolitan Family Services Legal Aid Society- Decatur
```

```

addAwesomeMarkers(
  lat = 39.80021,
  lng = -88.97033,
  label = "Metropolitan Family Services Legal Aid Society- Decatur",
  icon = icon.fa1
)%>%

```

```
####add Rape Crisis Centers####
```

```
#Brown County Satelite Office
```

```

addAwesomeMarkers(
  lat = 39.98775,
  lng = -90.76453,
  label = "Brown County Satelite Office",
  icon = icon.fa2
)%>%

```

```
# Call For Help, Inc. 1
```

```

addAwesomeMarkers(
  lat = 38.60572,
  lng = -90.11675,
  label = " Call For Help, Inc.(East St. Louis)",
  icon = icon.fa2
)%>%

```

```
# Call For Help, Inc.
```

```

addAwesomeMarkers(
  lat = 38.73249,
  lng = -89.89723,
  label = " Call For Help, Inc. (Troy Office)",
  icon = icon.fa2
) %>%

```

```
#      Call For Help, Inc.  
  
addAwesomeMarkers(  
  lat = 38.58717,  
  lng = -90.04780,  
  label = "    Call For Help, Inc. (East St. Louis)",  
  icon = icon.fa2  
)%>%
```

```
#      Clove Alliance  
  
addAwesomeMarkers(  
  lat = 41.12106,  
  lng = -87.88485,  
  label = "    Clove Alliance (Kankakee)",  
  icon = icon.fa2  
)%>%
```

```
#      Clove Alliance  
  
addAwesomeMarkers(  
  lat = 40.77391,  
  lng = -87.69646,  
  label = "    Clove Alliance (Watseka)",  
  icon = icon.fa2  
)%>%
```

```
#      Clove Alliance  
  
addAwesomeMarkers(  
  lat = 40.46210,  
  lng = -88.09805,  
  label = "    Clove Alliance (Paxton)",  
  icon = icon.fa2  
)%>%
```

```
#      Community Crisis Center  
  
addAwesomeMarkers(  
  lat = 42.03660,  
  lng = -88.27915,  
  label = "Community Crisis Center",  
  icon = icon.fa2  
)%>%
```

```
# Counseling & Information for Sexual Assault/Abuse (CAISA)
```

```
addAwesomeMarkers(  
  lat = 38.73087,  
  lng = -88.08458,  
  label = "CAISA (Olney)",  
  icon = icon.fa2  
)%>%
```

```
# Counseling & Information for Sexual Assault/Abuse (CAISA)
```

```
addAwesomeMarkers(  
  lat = 39.00755,  
  lng = -87.68423,  
  label = "CAISA (Robinson)",  
  icon = icon.fa2  
)%>%
```

```
# Crete Office
```

```
addAwesomeMarkers(  
  lat = 41.44339,  
  lng = -87.64150,  
  label = "Crete Office",  
  icon = icon.fa2  
)%>%
```

```
#Freedom House, Inc. 1
```

```
addAwesomeMarkers(  
  lat = 41.38369,  
  lng = -89.45852,  
  label = "Freedom House, Inc. (Princeton)",  
  icon = icon.fa2  
)%>%
```

```
#Freedom House, Inc. 2
```

```
addAwesomeMarkers(  
  lat = 41.22488,  
  lng = -89.92680,  
  label = "Freedom House, Inc. (Kewanee)",  
  icon = icon.fa2  
)%>%
```

#Fulton County Satellite Office

```

addAwesomeMarkers(
  lat = 40.49295,
  lng = -90.19816,
  label = "Fulton County Satellite Office",
  icon = icon.fa2
) %>%

```

#Growing Strong Sexual Assault Center

```

addAwesomeMarkers(
  lat = 39.84277,
  lng = -88.95870,
  label = "Growing Strong Sexual Assault Center",
  icon = icon.fa2
) %>%

```

#Grundy County Office

```

addAwesomeMarkers(
  lat = 41.35754,
  lng = -88.95870,
  label = "Grundy County Office",
  icon = icon.fa2
) %>%

```

Mujeres Latinas En Acción

```

addAwesomeMarkers(
  lat = 41.85329,
  lng = -87.67944,
  label = "Mujeres Latinas En Acción",
  icon = icon.fa2
) %>%

```

Mujeres Latinas En Acción North Riverside

```

addAwesomeMarkers(
  lat = 41.85076,
  lng = -87.80533,
  label = "Mujeres Latinas En Acción North Riverside",
  icon = icon.fa2
) %>%

```

```
# Mujeres Latinas En Acción South Chicago

addAwesomeMarkers(
  lat = 41.80807,
  lng = -87.69470,
  label = "Mujeres Latinas En Acción South Chicago",
  icon = icon.fa2
)%>%
```

```
# Mutual Ground, Inc.

addAwesomeMarkers(
  lat = 41.76509,
  lng = -88.31720,
  label = "Mutual Ground, Inc.",
  icon = icon.fa2
) %>%
```

```
# Northwest CASA at the Heartwood Center

addAwesomeMarkers(
  lat = 42.05020,
  lng = -87.98779,
  label = "Northwest Center Against Sexual Assault",
  icon = icon.fa2
)%>%
```

```
# Pillars Community Health

addAwesomeMarkers(
  lat = 41.73355,
  lng = -87.81962,
  label = "Pillars Community Health",
  icon = icon.fa2
)%>%
```

```
# Plainfield Office

addAwesomeMarkers(
  lat = 41.60819,
  lng = -88.20482,
  label = "Plainfield Office",
  icon = icon.fa2
)%>%
```

```
#    Prairie Center Against Sexual Assault

addAwesomeMarkers(
  lat = 39.73743,
  lng = -90.27097,
  label = "Prairie Center Against Sexual Assault (Jacksonville)",
  icon = icon.fa2
)%>%

#    Prairie Center Against Sexual Assault

addAwesomeMarkers(
  lat = 39.80122,
  lng = -89.64976,
  label = "Prairie Center Against Sexual Assault (Springfield)",
  icon = icon.fa2
)%>%

#    Prairie Center Against Sexual Assault

addAwesomeMarkers(
  lat = 39.54961,
  lng = -89.29697,
  label = "Prairie Center Against Sexual Assault (Taylorville)",
  icon = icon.fa2
)%>%

#    Quanada in Pike County

addAwesomeMarkers(
  lat = 39.60654,
  lng = -90.82096,
  label = "    Quanada in Pike County",
  icon = icon.fa2
)%>%

#    Quanada Sexual Assault Program

addAwesomeMarkers(
  lat = 39.91378,
  lng = -91.38652,
  label = "Quanada Sexual Assault Program",
  icon = icon.fa2
)%>%
```

```
# Rape, Advocacy, Counseling & Education Services

addAwesomeMarkers(
  lat = 40.11058,
  lng = -88.20709,
  label = "Rape, Advocacy, Counseling & Education Services",
  icon = icon.fa2
)%>%

# Resilience

addAwesomeMarkers(
  lat = 41.88557,
  lng = -87.62478,
  label = " Resilience",
  icon = icon.fa2
)%>%

# Resilience Austin Community Satellite

addAwesomeMarkers(
  lat = 41.90197,
  lng = -87.74923,
  label = "Resilience Austin Community Satellite",
  icon = icon.fa2
)%>%

#Resilience Northside Satellite Office

addAwesomeMarkers(
  lat = 41.96482,
  lng = -87.67853,
  label = "Resilience Northside Satellite Office",
  icon = icon.fa2
)%>%

# Resilience Stroger Hospital Satellite Office

addAwesomeMarkers(
  lat = 41.87362,
  lng = -87.67437,
  label = "Resilience Stroger Hospital Satellite Office",
  icon = icon.fa2
)%>%
```

```
# Riverview Center
```

```
addAwesomeMarkers(  
  lat = 42.41667,  
  lng = -90.42902,  
  label = "Riverview Center",  
  icon = icon.fa2  
)%>%
```

```
# Riverview Center Carroll County Satellite
```

```
addAwesomeMarkers(  
  lat = 42.08291,  
  lng = -89.98723,  
  label = "Riverview Center Carroll County Satellite",  
  icon = icon.fa2  
)%>%
```

```
# Rockford Sexual Assault Counseling
```

```
addAwesomeMarkers(  
  lat = 42.26385,  
  lng = -89.01489,  
  label = "Rockford Sexual Assault Counseling",  
  icon = icon.fa2  
)%>%
```

```
# Rockford Sexual Assault Counseling 2
```

```
addAwesomeMarkers(  
  lat = 42.25276,  
  lng = -88.82274,  
  label = "Rockford Sexual Assault Counseling (Belvidere)",  
  icon = icon.fa2  
) %>%
```

```
# Rockford Sexual Assault Counseling 3
```

```
addAwesomeMarkers(  
  lat = 42.01480,  
  lng = -89.33326,  
  label = "Rockford Sexual Assault Counseling (Oregon)",  
  icon = icon.fa2  
)%>%
```



```
# Safe Journeys 1
```

```
addAwesomeMarkers(  
  lat = 41.12572,  
  lng = -88.83592,  
  label = "Safe Journeys",  
  icon = icon.fa2  
)%>%
```

```
# Safe Journeys 2
```

```
addAwesomeMarkers(  
  lat = 41.32773,  
  lng = -89.14354,  
  label = "Safe Journeys (Peru)",  
  icon = icon.fa2  
)%>%
```

```
# Safe Journeys 3
```

```
addAwesomeMarkers(  
  lat = 41.29860,  
  lng = -88.83211,  
  label = "Safe Journeys Ottawa Outreach",  
  icon = icon.fa2  
)%>%
```

```
# Safe Journeys 4
```

```
addAwesomeMarkers(  
  lat = 40.88480,  
  lng = -88.63848,  
  label = "Safe Journeys Pontiac Outreach",  
  icon = icon.fa2  
)%>%
```

```
# Safe Passage, Inc. 1
```

```
addAwesomeMarkers(  
  lat = 41.92704,  
  lng = -88.75100,  
  label = "Safe Passage, Inc. (DeKalb)",  
  icon = icon.fa2
```

```
)%>%
```

```
# Safe Passage, Inc. 2
```

```
addAwesomeMarkers(  
  lat = 41.98851,  
  lng = -88.68569,  
  label = "Safe Passage, Inc. (Sycamore)",  
  icon = icon.fa2  
)%>%
```

```
# Safe Passage, Inc. 3
```

```
addAwesomeMarkers(  
  lat = 41.64565,  
  lng = -88.61301,  
  label = "Safe Passage, Inc. (Sandwich)",  
  icon = icon.fa2  
)%>%
```

```
# Schuyler Satellite Office
```

```
addAwesomeMarkers(  
  lat = 40.12109,  
  lng = -90.56381,  
  label = "Schuyler Satellite Office",  
  icon = icon.fa2  
)%>%
```

```
# Sexual Assault & Family Emergencies 1
```

```
addAwesomeMarkers(  
  lat = 38.97486,  
  lng = -89.11499,  
  label = "S.A.F.E (Vandalia)",  
  icon = icon.fa2  
)%>%
```

```
# Sexual Assault & Family Emergencies 2
```

```
addAwesomeMarkers(  
  lat = 38.52852,  
  lng = -89.13169,  
  label = "S.A.F.E (Centralia)",  
  icon = icon.fa2
```

)%>%

Sexual Assault & Family Emergencies 3

```
addAwesomeMarkers(
  lat = 39.12489,
  lng = -88.57586,
  label = "S.A.F.E (Effingham)",
  icon = icon.fa2
)%>%
```

Sexual Assault & Family Emergencies 4

```
addAwesomeMarkers(
  lat = 38.31710,
  lng = -88.90394,
  label = "S.A.F.E (Mt. Vernon)",
  icon = icon.fa2
)%>%
```

Sexual Assault & Family Emergencies 5

```
addAwesomeMarkers(
  lat = 38.61227,
  lng = -89.61471,
  label = "S.A.F.E (Aviston)",
  icon = icon.fa2
)%>%
```

Sexual Assault Counseling & Information Service (SACIS)

```
addAwesomeMarkers(
  lat = 39.49065,
  lng = -88.16215,
  label = "S.A.C.I.S",
  icon = icon.fa2
)%>%
```

Sexual Assault Service Center Guardian Angel Community Services

```
addAwesomeMarkers(
  lat = 41.52753,
  lng = -88.08281,
  label = "Sexual Assault Service Center Guardian Angel Community Services",
  icon = icon.fa2
```

```
)%>%
```

```
# Stepping Stones Sexual Assault Services YWCA McLean County
```

```
addAwesomeMarkers(  
  lat = 40.49065,  
  lng = -88.94252,  
  label = "Stepping Stones Sexual Assault Services YWCA McLean County",  
  icon = icon.fa2  
)%>%
```

```
# Survivor Empowerment Center 1
```

```
addAwesomeMarkers(  
  lat = 37.72081,  
  lng = -89.21897,  
  label = "Survivor Empowerment Center (Carbondale)",  
  icon = icon.fa2  
)%>%
```

```
# Survivor Empowerment Center 2
```

```
addAwesomeMarkers(  
  lat = 37.74134,  
  lng = -88.52707,  
  label = "Survivor Empowerment Center (Harrisburg)",  
  icon = icon.fa2  
)%>%
```

```
# Survivor Empowerment Center 3
```

```
addAwesomeMarkers(  
  lat = 37.73770,  
  lng = -88.95042,  
  label = "Survivor Empowerment Center (Marion)",  
  icon = icon.fa2  
)%>%
```

```
# Survivor Resource Center
```

```
addAwesomeMarkers(  
  lat = 40.12554,  
  lng = -87.62955,  
  label = "Survivor Resource Center",  
  icon = icon.fa2
```

```
)%>%
```

```
# Survivor Resource Center - Paris Satellite Office
```

```
addAwesomeMarkers(  
  lat = 39.61091,  
  lng = -87.69614,  
  label = "Survivor Resource Center- Paris Satellite Office",  
  icon = icon.fa2  
)%>%
```

```
# Survivor Services Department Family Resources, Inc.
```

```
addAwesomeMarkers(  
  lat = 41.46597,  
  lng = -90.51024,  
  label = "Survivor Services Department Family Resources, Inc.",  
  icon = icon.fa2  
)%>%
```

```
# Northwest CASA
```

```
addAwesomeMarkers(  
  lat = 42.30869,  
  lng = -88.28489,  
  label = "Northwest CASA",  
  icon = icon.fa2  
)%>%
```

```
# The CARE Center
```

```
addAwesomeMarkers(  
  lat = 41.83225,  
  lng = -87.79608,  
  label = "The CARE Center",  
  icon = icon.fa2  
)%>%
```

```
#The Center for Prevention of Abuse – Sexual Assault Services
```

```
addAwesomeMarkers(  
  lat = 40.74381,  
  lng = -89.60519,  
  label = "The Center for Prevention of Abuse – Sexual Assault Services",  
  icon = icon.fa2
```

)%>%

#Victim Services – Sexual Assault Program Knox County Satellite

```
addAwesomeMarkers(
  lat = 40.94759,
  lng = -90.36590,
  label = "Victim Services – Sexual Assault Program Knox County Satellite",
  icon = icon.fa2
)%>%
```

#VOICES of Stephenson County

```
addAwesomeMarkers(
  lat = 42.30365,
  lng = -89.64153,
  label = "VOICES of Stephenson County",
  icon = icon.fa2
)%>%
```

#Western Illinois Regional Council/Community Action Agency – Victim Services

```
addAwesomeMarkers(
  lat = 40.45846,
  lng = -90.67295,
  label = "Western Illinois Regional Council/Community Action Agency– Victim
Services",
  icon = icon.fa2
)%>%
```

#YWCA Metropolitan Chicago Patterson & McDaniel Family Center

```
addAwesomeMarkers(
  lat = 41.93112,
  lng = -88.04051,
  label = "YWCA Metropolitan Chicago Patterson & McDaniel Family Center",
  icon = icon.fa2
)%>%
```

#YWCA Metropolitan Chicago - South Suburban Center

```
addAwesomeMarkers(
  lat = 41.52164,
  lng = -87.65622,
  label = "YWCA Metropolitan Chicago - South Suburban Center",
  icon = icon.fa2
```

)%>%

#YWCA Metropolitan Chicago Cynthia B. Lafuente Center

```
addAwesomeMarkers(
  lat = 41.92504,
  lng = -87.69713,
  label = "YWCA Metropolitan Chicago Cynthia B. Lafuente Center",
  icon = icon.fa2
)%>%
```

#YWCA Metropolitan Chicago Englewood Satellite Office

```
addAwesomeMarkers(
  lat = 41.77952,
  lng = -87.64138,
  label = "YWCA Metropolitan Chicago Englewood Satellite Office",
  icon = icon.fa2
)%>%
```

#YWCA Metropolitan Chicago Laura Parks and Mildred Francis Center

```
addAwesomeMarkers(
  lat = 41.77474,
  lng = -87.60628,
  label = "YWCA Metropolitan Chicago Laura Parks and Mildred Francis Center",
  icon = icon.fa2
)%>%
```

#YWCA Metropolitan Chicago Patterson and McDaniel

```
addAwesomeMarkers(
  lat = 41.93112,
  lng = -88.04051,
  label = "YWCA Metropolitan Chicago Patterson and McDaniel",
  icon = icon.fa2
)%>%
```

#YWCA Metropolitan Chicago Sexual Violence & Support Services & RISE Children's Center

```
addAwesomeMarkers(
  lat = 41.86357,
  lng = -87.67661,
```

```

    label = "YWCA Metropolitan Chicago Sexual Violence & Support Services & RISE
Children's Center",
    icon = icon.fa2
)%>%

```

```

#YWCA of the Sauk Valley - 1

```

```

addAwesomeMarkers(
  lat = 41.79005,
  lng = -89.69495,
  label = "YWCA of the Sauk Valley (Sterling)",
  icon = icon.fa2
)%>%

```

```

#YWCA of the Sauk Valley - 2

```

```

addAwesomeMarkers(
  lat = 41.84390,
  lng = -89.48260,
  label = "YWCA of the Sauk Valley (Dixon)",
  icon = icon.fa2
)%>%

```

```

#    Zacharias Sexual Abuse Center 1

```

```

addAwesomeMarkers(
  lat = 42.37042,
  lng = -87.90854,
  label = "Zacharias Sexual Abuse Center (Gurnee)",
  icon = icon.fa2
)%>%

```

```

#    Zacharias Sexual Abuse Center 2

```

```

addAwesomeMarkers(
  lat = 42.04102,
  lng = -87.73371,
  label = "Zacharias Sexual Abuse Center (Skokie)",
  icon = icon.fa2
)

```

```

SPmap_01
##add legend##

```



```

install.packages("leaflet")
library(leaflet)

SPmap_legend <- SPmap_01 %>% addLegendAwesomeIcon (iconSet = iconSet,
  orientation = 'vertical',
  title = htmltools::tags$div(
    style = 'font-size: 12px;',
    'Civil Legal Service Providers'),
  labelStyle = 'font-size: 12px;')
SPmap_legend

```

Figure 3 R Code

```

#####transit map#####
#packages#
library(leaflet)
library(leaflet)

#set working directory#
setwd("~/Desktop/DePaul/Dissertation/R data files/GIS map")

#add data#

library(readxl)
CTA_stops<- read_excel("CTA_stops.xls")

library(readr)
bus_stop_point <- read_csv("mygeodata/bus_stop_point.csv")

colnames(bus_stop_point)[1] ="longitude"
colnames(bus_stop_point)[2] ="latitude"

#create icons#

CTA<- makeAwesomeIcon(
  icon = "train", markerColor = "blue",
  library = "fa",
  iconColor = "black")

Bus<-makeAwesomeIcon(
  icon = "bus", markerColor = "orange",
  library = "fa",

```

```

    iconColor = "black")

iconSet1<- awesomeIconList(
  CTA = makeAwesomeIcon(
    icon = "train", markerColor = "blue",
    library = "fa",
    iconColor = "black"
  ),

  Bus = makeAwesomeIcon(
    icon = "bus", markerColor = "orange",
    library = "fa",
    iconColor = "black"
  ))

#create map#

illinois_basemap <- leaflet() %>% setView(lng = -89.000000, lat = 40.000000, zoom =
7)
illinois_basemap %>% addTiles()

TransitMap1 <- leaflet() %>%
# add different provider tiles
addProviderTiles(
  "OpenStreetMap",
  # give the layer a name
  group = "OpenStreetMap"
) %>%
addProviderTiles(
  "Esri.WorldStreetMap",
  group = "Esri.WorldStreetMap"
) %>%
addProviderTiles(
  "Wikimedia",
  group = "Wikimedia"
) %>%
addProviderTiles(
  "CartoDB.Positron",
  group = "CartoDB.Positron"
) %>%
addTiles()%>%
addAwesomeMarkers(data = CTA_stops, group = "CTA Stops", label = "CTA Stops",
icon = CTA)%>%
addTiles()%>%

```

```

addAwesomeMarkers(data = bus_stop_point, group = "Bus", label = "Bus Stop", icon =
Bus) %>%
# add a layers control
addLayersControl(
  baseGroups = c(
    "OpenStreetMap", "Stamen.Toner",
    "Stamen.Terrain", "Esri.WorldStreetMap",
    "Wikimedia", "CartoDB.Positron","Bus"
  ),
  # position it on the topleft
  position = "topleft"
)

```

```
TransitMap1
```

```
##add legend##
```

```

Transitmap_legend <-TransitMap1 %>% addLegendAwesomeIcon (iconSet = iconSet1,
orientation = 'vertical',
title = htmltools::tags$div(
  style = 'font-size: 12px;',
  'Civil Legal Service Providers'),
labelStyle = 'font-size: 12px;')

```

```
Transitmap_legend
```

Figure 4 R Code

```

##create composite accessibility index by county##
##create GIS map of Geographic Accessibility of Civil Legal System##

```

```
#install packages and load libraries#
```

```

install.packages("data.table")
install.packages("tidyverse")
install.packages("sf")
install.packages("rgdal")
install.packages("tmap")
install.packages("tmaptools")
install.packages("sp")
install.packages("ggmap")
install.packages("tigris")
install.packages("measurements")
install.packages("mapview")

```

```
install.packages("maps")
install.packages("purrr")
install.packages("dplyr")
install.packages("leaflet") ##used this package###
```

```
library(tidyr) #datawrangling
library(tidyverse)
library(sf) #simple features- geospatial geometries
library(rgdal)
library(ggplot2) #datavisualization
library(data.table)
library(tmap) #static/interactive map library with ggplot-like syntax
library(tmaptools)
library(units)
library(sp)
library(ggmap) #downloading raster maps from a variety of sources
library(tigris)
library(measurements)
library(mapview) #interactive geometry viewing
library(maps)
library(purrr)
library(dplyr) #data wrangling
library(osmdata) #obtaining openstreetmap vector data
library(ggspatial) #mapbackgrounds and annotations for ggplot
library(leaflet) #basemap
library(tidyr) #datawrangling
library(tidyverse)
library(sf) #simple features- geospatial geometries
library(rgdal)
library(ggplot2) #datavisualization
library(data.table)
library(tmap) #static/interactive map library with ggplot-like syntax
library(tmaptools)
library(units)
library(sp)
```

```
##load packages#
library(sf)
library(sp)
library(leaflet)
library(leafletlegend)
library(maps)
library(rgdal)
```

```

install.packages("geosphere")
library(geosphere)
install.packages("remotes")
remotes::install_github("GIScience/openrouteservice-r")
install.packages("leaflet.extras")
library(leaflet.extras)

#data#

library(readxl)
Rape_Crisis_Centers <- read_excel("RCC location.xlsx")

library(readxl)
Courthouses <- read_excel("Courthouse locations.xlsx")

library(readxl)
mean_center_of_population_by_county <- read_excel("mean center of population by
county.xlsx")
View(mean_center_of_population_by_county)

####transform addresses to latitude and longitude in data files for SERVICE
PROVIDERS####

##RCC lat and longitude conversion##
register_google(key = "AIzaSyBcRIGkHUm4kNeJ3aUu-yUvAFIs4V_z-uc", write =
TRUE)

RCC_ <- as.data.frame(Rape_Crisis_Centers)
RCCdf_latlong <- mutate_geocode(RCC_, Address)

#remove missing data from data frame#
RCCdf_latlong1 <- na.omit(RCCdf_latlong)

##courthouse lat and long conversion##

Courthouses_ <- as.data.frame(Courthouses)
courthousedf_latlong <-mutate_geocode(Courthouses_, Address)

#remove missing data from data frame#
courthousedf_latlong1 <- na.omit(courthousedf_latlong)

##legal aid agency lat and long conversion##
LegalAid_ <- as.data.frame(Legal_Aid_Agencies)
LegalAiddf_latlong <- mutate_geocode(LegalAid_, Address)

```

```

#remove missing data from data frame#
LegalAidlatlong_df1 <- na.omit(LegalAid_df1$latlong)

service_providers_and_mean_center <- read_excel("service providers and mean
center.xlsx")
View(service_providers_and_mean_center)

colnames(LegalAidlatlong_df1) [1] = "Name"
colnames(RCC_df1$latlong1) [1] = "RCC_name"

#create map
illinois_basemap <- leaflet() %>% setView(lng = -89.000000, lat = 40.000000, zoom =
7)

CAIMAP3 <- leaflet() %>%
  setView(lng = -89.000000, lat = 40.000000, zoom = 7) %>%
  # add different provider tiles
  addProviderTiles("OpenStreetMap") %>%
  addCircles(
    data = mean_center_of_population_by_county,
    radius = 6,
    color = "red",
    opacity = 0.9,
    popup = paste0(mean_center_of_population_by_county$COUNAME)) %>%
  addCircles(
    data = courthousedf_latlong1,
    radius = 6,
    color = "orange",
    opacity = 0.9,
    popup = paste0(courthousedf_latlong1$Address)) %>%
    addCircles(
      data = RCC_df1$latlong1,
      radius = 6,
      color = "purple",
      opacity = 0.9,
      popup = paste0(RCC_df1$RCC_name)) %>%
  addCircles(
    data = LegalAidlatlong_df1,
    radius = 6,
    color = "blue",
    opacity = 0.9,
    popup = paste0(LegalAidlatlong_df1$Name)) %>%

```

```

addWebGLHeatmap(
  data = service_providers_and_mean_center,
  size = 2000,
  units = "m",
  intensity = 0.1,
  gradientTexture = "skyline",
  alphaRange = 1,
  opacity = 0.8
) %>%
# add a measure control to the bottom left
addMeasure(
  position = "bottomleft",
  primaryLengthUnit = "meters",
  primaryAreaUnit = "sqmeters",
  activeColor = "#0bd3d3",
  completedColor = "#f890e7"
)

```

CAIMAP

```
##composite accessibility z scores
```

```

composite_accessibility_driving_df <- read_excel("composite_accessibility_r.xlsx")
View(composite_accessibility_driving_df)

```

```

z_scores_distance <- (composite_accessibility_driving_df$Avg_distance-
mean(composite_accessibility_driving_df$Avg_distance))/sd(composite_accessibility_driving_df$Avg_distance)

```

```

cat(paste(z_scores_distance), sep = "
")

```

```

z_scores_providers <- (composite_accessibility_driving_df$number_providers-
mean(composite_accessibility_driving_df$number_providers))/sd(composite_accessibility_driving_df$number_providers)

```

```

z_scores_providers
cat(paste(z_scores_providers), sep = "
")

```

```

##plot accessibility index by county##
library(raster)
install.packages("viridis")
library(viridis)
library(dplyr)
library(tidyr)
library(sf)
library(leaflet)
library(tigris)
library(ggplot2)
install.packages('hereR')
library(hereR)
library(censusapi)
install.packages("geodata")
library(geodata)

# Get USA polygon data

# Downloading the shapefiles for states/counties at the lowest resolution

counties <- counties(cb=T)

#add Illinois counties to leaflet map

pal <- colorNumeric("Greens", domain=merged_data$Accessibility_score_10)

counties %>%
  filter(STATEFP == 17) %>%
  leaflet() %>%
  setView(lng = -89.000000, lat = 40.000000, zoom = 6) %>%
  addTiles() %>%
  addPolygons(popup=~NAME)

library(readxl)
accessibility_score <- read_excel("countydata.xlsx")

library(leaflet)
library(dplyr)
library(rgdal)
library(sf)

```



```

library(terra)

il_county <- counties %>%
  filter(STATEFP == 17)
drivingaccessibility_score_df <- read_excel("countydata.xlsx")
merged_data <- merge(il_county, drivingaccessibility_score_df, by =
"COUNTY_NAME", "NAME")

# Create map

st_crs(merged_data)
merged_data2 <- st_transform(merged_data, 4326)

st_crs(merged_data2)
pal <- colorNumeric("RdYlGn", domain=merged_data2$Accessibility_score_10)

map <- leaflet(merged_data2) %>%
  addTiles() %>%
  setView(lng = -89.5, lat = 40, zoom = 7) %>%
  addProviderTiles("CartoDB.Positron") %>%
  setView(lng = -89.5, lat = 40, zoom = 7) %>%
  addPolygons(data = merged_data2,
    fillColor = ~pal(Accessibility_score_10),
    fillOpacity = 0.7,
    weight = 0.2,
    smoothFactor = 0.2,
    popup = ~NAME) %>%
  addLegend(pal = pal,
    values = merged_data2$Accessibility_score_10,
    position = "bottomleft",
    title = "Statewide Accessibility <br> Score by County")
map

```

Figure 5 R Code

```

##create composite accessibility index by county including public transit##
##create GIS map of Geographic Accessibility of Civil Legal System including public
transit##

#load packages#
library(sf)
library(sp)
library(leaflet)
library(leafletlegend)
library(maps)

```

```

library(rgdal)
library(geosphere)
library(leaflet.extras)

#read in data#
library(readxl)
Rape_Crisis_Centers <- read_excel("RCC location.xlsx")

library(readxl)
Courthouses <- read_excel("Courthouse locations.xlsx")

service_providers_and_mean_center <- read_excel("service providers and mean
center.xlsx")
View(service_providers_and_mean_center)

library(readxl)
bus_stop_point <- read_excel("mygeodata/bus_stop_point.xls")
View(bus_stop_point)

library(readxl)
CTA_System_Information_List_of_L_Stops_2 <- read_excel("CTA_ -
_System_Information_List_of_L_Stops-2.xls")
View(CTA_System_Information_List_of_L_Stops_2)

colnames(bus_stop_point) [1] ="lon"
colnames(bus_stop_point) [2] ="lat"

CAIMAP3 <- leaflet()>%
  setView(lng = -89.000000, lat = 40.000000, zoom = 7) %>%
  # add different provider tiles
  addProviderTiles("OpenStreetMap") %>%
  addCircles(
    data = mean_center_of_population_by_county,
    radius = 6,
    color = "red",
    opacity = 0.9,
    popup = paste0(mean_center_of_population_by_county$COUNAME)) %>%
  addCircles(
    data = courthousedf_latlong1,
    radius = 6,
    color = "orange",
    opacity = 0.9,
    popup = paste0(courthousedf_latlong1$Address)) %>%

```

```

addCircles(
  data = RCCdf_latlong1,
  radius = 6,
  color = "purple",
  opacity = 0.9,
  popup = paste0(RCCdf_latlong1$RCC_name)) %>%
addCircles(
  data = LegalAidlatlong_df1,
  radius = 6,
  color = "blue",
  opacity = 0.9,
  popup = paste0(LegalAidlatlong_df1$Name)) %>%
addCircles(
  data = bus_stop_point,
  radius = 6,
  color = "green",
  opacity = 0.9,
  popup = paste0(bus_stop_point$name)) %>%
# add a measure control to the bottom left
addMeasure(
  position = "bottomleft",
  primaryLengthUnit = "meters",
  primaryAreaUnit = "sqmeters",
  activeColor = "#0bd3d3",
  completedColor = "#f890e7"
)

```

CAIMAP3

```
### urban composite accessibility index###
```

```
##z-scores##
```

```
composite_accessibility_urban_df <- read_excel("composite_accessibility_r_urban.xlsx")
View(composite_accessibility_urban_df)
```

```
#z-score for provider distance#
```

```
z_scores_distance_provider <-
(composite_accessibility_urban_df$Avg_distance_provider-
mean(composite_accessibility_urban_df$Avg_distance_provider))/sd(composite_accessi
bility_urban_df$Avg_distance_provider)
```

```
cat(paste(z_scores_distance_provider), sep = "
")
```

```

#z-score for number of providers#

z_scores_providers_urban <- (composite_accessibility_urban_df$number_providers-
mean(composite_accessibility_urban_df$number_providers))/sd(composite_accessibility
_urban_df$number_providers)

z_scores_providers_urban
cat(paste(z_scores_providers_urban),sep="
")

#z-score for public transit distance#

z_scores_distance_transit <- (composite_accessibility_urban_df$Avg_distance_transit-
mean(composite_accessibility_urban_df$Avg_distance_transit))/sd(composite_accessibil
ity_urban_df$Avg_distance_transit)

cat(paste(z_scores_distance_transit), sep = "
")

##create urban accessibility index map map##

##load packages##
library(raster)
install.packages("viridis")
library(viridis)
library(dplyr)
library(tidyr)
library(sf)
library(leaflet)
library(tigris)
library(ggplot2)
install.packages('hereR')
library(hereR)
library(censusapi)
install.packages("geodata")
library(geodata)

# Get USA polygon data

# Downloading the shapefiles for states/counties at the lowest resolution

counties <- counties(cb=T)

```

```

#add Illinois counties to leaflet map

counties %>%
  filter(STATEFP == 17) %>%
  leaflet() %>%
  setView(lng = -89.000000, lat = 40.000000, zoom = 6) %>%
  addTiles() %>%
  addPolygons(popup=~NAME)

library(leaflet)
library(dplyr)
library(rgdal)
library(sf)
library(terra)

il_county <- counties %>%
  filter(STATEFP == 17)
urbanaccessibility_score_df <- read_excel("countydata_urban.xlsx")
merged_data_ <- merge(il_county, urbanaccessibility_score_df, by =
"COUNTY_NAME", "NAME")

# Create map

st_crs(merged_data_)
merged_data3<- st_transform(merged_data_, 4326)

st_crs(merged_data3)
pal <- colorNumeric("RdYlGn", domain=merged_data3$Accessibility_score_5)

map_urban <- leaflet(merged_data3) %>%
  addTiles() %>%
  setView(lng = -89.5, lat = 40, zoom = 7) %>%
  addProviderTiles("CartoDB.Positron") %>%
  addPolygons(data = merged_data3,
    fillColor = ~pal(Accessibility_score_5),
    fillOpacity = 0.7,
    weight = 0.2,
    smoothFactor = 0.2,
    popup = ~NAME) %>%
  addLegend(pal = pal,
    values = merged_data3$Accessibility_score_5,
    position = "bottomleft",

```

```

        title = "Urban Accessibility <br> Score by County")
map_urban

####urban map 2 out of 10####

counties <- counties(cb=T)

#add Illinois counties to leaflet map

counties %>%
  filter(STATEFP == 17) %>%
  leaflet() %>%
  setView(lng = -89.000000, lat = 40.000000, zoom = 6) %>%
  addTiles() %>%
  addPolygons(popup=~NAME)

library(leaflet)
library(dplyr)
library(rgdal)
library(sf)
library(terra)

il_county <- counties %>%
  filter(STATEFP == 17)
urbanaccessibility_score_df1 <- read_excel("countydata_urban2.xlsx")
merged_data_1 <- merge(il_county, urbanaccessibility_score_df1, by =
"COUNTY_NAME", "NAME")

# Create map

st_crs(merged_data_1)
merged_data4<- st_transform(merged_data_1, 4326)

st_crs(merged_data4)
pal <- colorNumeric("RdYlGn", domain=merged_data4$Accessibility_score_10)

map_urban2 <- leaflet(merged_data4) %>%
  addTiles() %>%
  setView(lng = -89.5, lat = 40, zoom = 7) %>%
  addProviderTiles("CartoDB.Positron") %>%
  addPolygons(data = merged_data4,

```

```
    fillColor = ~pal(Accessibility_score_10),
    fillOpacity = 0.7,
    weight = 0.2,
    smoothFactor = 0.2,
    popup = ~NAME) %>%
addLegend(pal = pal,
  values = merged_data4$Accessibility_score_10,
  position = "bottomleft",
  title = "Urban Accessibility <br> Score by County")
map_urban2
```

