Service Navigation Workforce Study

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A mixed-method study exploring the practice experiences and resource needs of a statewide cross-sector service navigation workforce

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A report to the Minnesota Department of Human Services, Department of Health, and Community Health Worker Alliance

Abstract

Objectives. Service navigation is an emerging practice to promote health and social equity and prevent adverse childhood experiences. Understanding navigators practice experiences and resource needs can inform policies and practices to strengthen service navigation effectiveness.

Participants. Ninety-one service navigators (i.e., family navigators, community health workers) completed a cross-sectional survey which included two study-specific scales examining Perceived Importance and Resource Needs across nineteen areas of navigation practice, the General Self-Efficacy scale, and Evidence Based Practice Attitudes scale. Twenty-two navigators completed follow-up interviews to expand on their survey responses.

Methods. Descriptive and multivariate statistics examined associations between the study constructs. Thematic analysis of interview data explored navigators work experiences, resource needs, and opportunities for innovation. Findings were mixed to identify similarities and differences across the data sources.

Results: Participants rate all nineteen areas of navigation practice in the Perceived Importance scale as "very important" to their work. Resource needs varied by geographic practice location. Self-efficacy and evidence-based practice attitudes were moderately associated, with non-white respondents reporting less favorable attitudes towards EBPs than their white peers. In interviews, navigators expressed pragmatic attitudes towards EBPs, so long as they fit well with prevailing practice wisdom and were accompanied by organizational and legislative support.

Conclusions: Administrative, legislative, and technical assistance strategies are needed to support the service navigation workforce. These strategies should compliment existing practices and address systemic barriers to effective navigation practice.

Keywords: Mental Health, Navigation, Prevention, Workforce

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Declarations

Competing Interests

The authors have no competing interests to declare that are relevant to the content of this report.

Ethics Approval

Institutional review board approval and oversight was provided by the University of Minnesota, #17909. The study was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments.

Informed Consent

Informed consent was obtained from all individual participants in this study.

Consent to Publish

The authors affirm that research participants provided informed consent for publication of study data, including direct participant quotes.

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Introduction

Health and social inequality are associated with multiple adverse life course experiences including poor physical and mental health, family violence, and child maltreatment (Eckenrode et al., 2014; National Academy of Sciences, Engineering, and Health, 2017). Early and well-timed engagement with culturally responsive and person-centered health care and social services can help prevent these adversities (Costello, 2016), however; large sections of the population, including rural, racial/ethnic minority, and immigrant individuals and families, experience barriers accessing needed services (Singh et al., 2017).

Recently, there have been calls to reshape human service systems to address the underlying causes of health and social inequality and support individuals and families prior to problem development (US DHHS, 2020). These calls coincide with efforts to transform the child welfare system (Samuels, 2020), which has typically been responsible for addressing the correlates and consequences of health and social inequality. Calls to reshape human services center primarily around questions regarding the appropriateness of current systems to response to poverty related risks (Briar-Lawson et al., 2021), and the disproportionate involvement and removal of low income, black, and indigenous children from their families and placement into out-of-home care (Briggs et al, 2022).

In response to these concerns, new service delivery models are being designed and implemented to reduce barriers and facilitate access to needed services, in a primary and secondary prevention framework (Pampel & Beachy-Quick, 2013). These models have been referred to interchangeably as patient navigation, family navigation, and service navigation (MN Department of Human Services, 2023; Saloner et al., 2022) and are delivered by a range of helping professionals across a variety of practice settings. There is significant heterogeneity with

regard to how service navigation programs are designed and delivered, which important to consider when developing statewide organizational and workforce supports. To support ongoing, cross-system efforts to strengthen primary and secondary prevention services to individuals and families in Minnesota, the current study engaged a statewide, cross-sector service navigation workforce to understand their practice experiences, resource needs, and attitudes towards research and evidence-based practices. The goal of this study is to inform future service navigation practice, policy, and research to reduce health and social inequality and prevent adverse childhood experiences in the state.

Study Background and Literature Review

From December 2019 to 2022, Minnesota received federal funds through the Preschool Development Grant (PDG), which were used by the Minnesota Department of Human Services to create Community Resource Hubs. Then, during the 2023 legislative session, the Department of Humans Services received funding from the state to create a network of Community Resource Centers in addition to the hubs. The purpose of these hubs and centers was to ensure that individuals and families had equitable access to the services and supports that they needed. Community Resource Hubs were implemented in 12 pilot sites. The scope of practice among these Community Resource Hubs varied considerably, so there was interest in exploring and understanding the scope of practices happening in these hubs and in service navigation more broadly. There was also interest in exploring what types of resources and supports these hubs need, as the model is currently being expanded. In addition, Community Health Workers were performing similar roles in terms of navigation, and helping diverse populations across the state connect with resources that they need, so we aimed to explore their needs and experiences as well.

Service navigation characteristics and activities

Service navigation is a care coordination approach which aims to identify and resolve barriers to health and social care, facilitate access to needed services, and ensure the needs of individuals and families are met in a holistic and person-centered way (Teggart et al., 2023; Valaitis et al., 2017; Waid et al., 2021). Models of service navigation originated in the oncology field (Paskett et al., 2011), and have since expanded to mental health (Waid et al., 2021) and addiction services (Mullen et al., 2023), kinship care (Lee et al., 2021) and post-adoption services (Waid et al, 2018). Navigation activities are conducted by practitioners who are trained to engage, assess, educate, and assist individuals and families in overcoming barriers and connecting with needed services. Navigators vary with respect to training and licensure, but typically include peers, paraprofessionals, community health workers, nurses, and social workers (Teggart et al., 2023; Wells et al., 2018). Models of service navigation can be delivered in-person, by telephone, online, or using a combination of modalities (Waid et al., 2021). Activities that are common to service navigation include engagement, assessment, education, advocacy, service identification and referral, facilitating client-provider interactions, monitoring progress, and follow-up (Waid et al., 2022). Current research suggests navigator models characterized by empathy, flexibility, person-centered care, and integrated care can promote service access (Carter et al, 2018; Mullen et al., 2023; Waid et al, 2022), however the effects of community-based service navigation on individual and family well-being remain unclear (Teggart et al., 2023).

Navigator self-efficacy, evidence-based practice attitudes, and workforce development

Within the workforce development literature, practitioner self-efficacy and attitudes towards evidence-based practices have been identified as important correlates to workforce

effectiveness. Self-efficacy is defined as one's belief in their ability to carry out the behaviors necessary to produce a specific outcome (Bandura, 1977) and involves the interaction of cognitive, affective, and behavioral processes which are influenced by the contexts in which the practitioners work (Lunenburg, 2011). Higher levels of self-efficacy is associated with reduced feelings of burnout (Shoji et al., 2015). When combined with supportive supervision, self-efficacy may improve job satisfaction, workplace effectiveness, and employee retention (Chen & Scannapieco, 2010; Consiglio et al., 2016).

Understanding workforce self-efficacy can help inform supervision, training, and technical assistance efforts. However, the development of service workforce supports must also be sensitive to the contextual and cultural circumstances in which navigation services are delivered. Use of evidence-supported practices in community settings tends to be influenced by practitioner attitudes towards research and evidence-based practices (Aarons et al., 2005), and attitudes towards evidence-based practices have been shown to vary by demographic, social, and workplace characteristics (Rye et al., 2019). Therefore, it is important to understand how the service navigation workforce views evidence-based practices, so that subsequent resources and supports align research-informed strategies with practitioner attitudes and community wisdom.

Study Objectives

The purpose of this study was to explore the practice experiences and resources needs of service navigators in Minnesota. In this study "navigation" refers to a broad combination of non-clinical, case management related activities that help clients prioritize their service needs and goals, identify and resolve barriers to care, and support their connection and engagement with needed services. "Navigator" refers to individuals of varied training and professional licensure who engage in activities to support client access and engagement with needed services.

"Services" refers broadly to the various forms of health care, mental health care, and social services that are available to individuals, children, and families in the state.

There were three specific aims associated with this study: The first aim was to utilize a cross-sectional electronic survey to examine the resource needs and practice experiences of the service navigation workforce. Participants were asked about the perceived importance and need for resources across nineteen different areas of service navigation practice, their feelings of self-efficacy in their work, and their attitudes towards research and evidence-based practices. The second aim was to conduct semi-structured interviews and focus groups with a subsample of survey respondents to explore their experiences with service navigation in greater detail. In both interviews and focus groups, participants were asked to describe their practice context (e.g., goals of their work, activities they engage in, how they define success), resource needs (e.g., biggest challenges in their work, what they need to be successful, where they go for resources and support), and opportunities for innovation (e.g., barriers, supports, and experiences with implementing new approaches and evidence-based practices). The third aim was to integrate quantitative and qualitative data to identify and describe themes which emerged across the data sources. The specific research questions were: (1) what navigation activities do practitioners perceive as important to their work? (2) what are their resource needs and preferences? (3) does practitioner self-efficacy and evidence-based practice attitudes influence their practice experiences and resource needs?

Methods

This study employed a convergent mixed-method research design. Mixed-methods research was chosen because the methodology supports a more in-depth understanding of these

phenomena than could be gathered from only one source of data. Specifically, the quantitative data would provide an understanding of the scope of the practitioners resource needs, their perceived importance of empirically identified navigation practices, feelings of self-efficacy, and attitudes towards evidence-based practices, while the qualitative data would provide a deeper understanding of the specific challenges and opportunities practitioners they experience in their work. Together, the data would create a more complete picture of the best ways to support the service navigation workforce.

Researcher Description

The first author is an Associate Professor of Social Work at the University of Minnesota. He is an intervention and services researcher who focuses primarily on issues affecting families with minor-age children who are considered at-risk of child maltreatment. Prior to entering the research field he worked for many years as a child welfare caseworker, mental health services worker, family group facilitator, and family preservation interventionist. He has supported statewide evaluations of child welfare training programs, led international evaluations of multi-site programs serving youth in foster care, and has developed and tested navigator interventions with caregivers of children at risk of child welfare involvement.

The second author is a fourth-year doctoral candidate in social work and is primarily interested in health equity, especially as it concerns people who are marginalized on the basis of disability, race, sexual orientation, gender identity, class, and/or geography. They have a master of science degree in clinical psychology, and clinical experience working as a mental health counselor, clinical research coordinator, and psychometrist. Most of what they have learned about family navigation and the navigator workforce has been from being involved in this research project.

Inclusion and Exclusion

To be eligible for inclusion in the study, participants needed to be adults who worked in the field of service navigation in Minnesota. We defined "working in service navigation" as providing direct navigation support to individuals/families in need of services, providing supervision to navigators, or being an organizational director, administrator or community leader who manages or provides administrative oversight to service navigation programs. Participants were recruited from two statewide list-servs which included practitioners from the states Family Navigator Community of Practice and Community Health Worker Alliance.

Participant Characteristics

Electronic Survey

Ninety-one individuals provided data for this study. Data were missing for one participant on some demographic measures, two participants for the workforce survey, and four participants for the Evidence-Based Practice Attitudes scale and the Generalized Self-Efficacy Scale. Participants identified primarily as direct practitioners (75.8%, n = 69), supervisors (15.4%, n = 14), and administrators (8.8%, n = 8). The average length of time spent working in their current position was five years (M = 4.7, SD = 5.2, range = 0 – 35), and in the human service field for 11 years (M = 11.5, SD = 8.5., range = 0-35). Using a "select all that apply" response option, participants reported working across rural (38.8%, n = 52), suburban (29.1%, n = 39), urban (25.4%, n = 34), and tribal (6.7%, n = 9) communities, and were involved in navigation through their affiliation to the Navigator Community of Practice (17.6%, n = 16), Community Resource Hubs (6.6%, n = 6), Community Health Workers' Alliance (27.5%, n = 25), through schools or early intervention programs (20.9%, n = 19), community non-profit organizations (16.5%, n = 15), and public health departments or other governmental bodies (9.9%, n = 9). Participants

reported their race as White (55.4%, n = 62), Black (14.3%, n = 16), Latino (14.3%, n = 16), Multiracial (8%, n = 9), Asian (3.6%, n = 4), American Indian / Alaska Native (3.6%, n = 4), and other (.9%, n = 1). Participants identified their gender as female (93.4%, n = 85), male (3.3%, n = 3), non-binary (1.1%, n = 1) and two-spirit (1.1%, n =1). The mean respondent age was 42 years (M = 42.2, SD = 11.9, range = 20 – 70).

Follow-Up Interviews

Twenty survey respondents completed a follow up interview, and two survey respondents participated in one focus group. These individuals reported working as community health workers (36.4%, n = 8), family navigators (40.1%, n = 9), supervisors (13.6%, n = 3), and program administrators (0.9%, n = 2)**.** They reported working in healthcare (31.8%, n = 7), social services (27.3%, n = 6), schools (9.1%, n = 2) and community settings (31.8%, n = 7).

Sampling Procedures

This study used purposive sampling. An invitation email which included a link to the study information, informed consent, and survey form was distributed to the listservs. Ninety-one individuals provided their consent to participate, eighty-seven completed all items in the electronic survey, and twenty-two completed a follow-up interview or focus group. Survey participants received a $15 gift card, and interview participants received an additional $20 gift card. This design was approved by the University of Minnesota Institutional Review Board, STUDY00017909.

Measures and Covariates

Electronic Survey

The survey included a two-item electronic informed consent, two-item screening measure, a nineteen-item study specific measure assessing the Perceived Importance of different

evidence-supported navigation practices, a nineteen-item study specific measure assessing Resource Needs in different evidence-supported navigation practices, the ten-item General Self-Efficacy scale (Schwarzer & Jerusalem, 1995), the 36-item Evidence-Based Practice Attitudes scale (Rye et al., 2017), a six-item demographic questionnaire, a one-item incentive payment link, and one-item follow-up interview invitation. The primary outcome measures were the sum of responses (i.e., total score) on the Perceived Importance and Resource Needs scales. Secondary measures were respondents' sum of responses to the General Self-Efficacy scale (Schwarzer & Jerusalem, 1995) and mean scores for the Evidence-Based Practice Attitudes scale and subscales (Rye et al., 2017).

Study measures demonstrated acceptable to excellent internal consistency and reliability. A principal component analysis and scree plot of the Perceived Importance and Resource Needs scales each suggested a one-factor solution. Cronbach's alpha was excellent for the Perceived Importance (alpha = .94, n = 89) and Resource Needs (alpha = .97, n = 89) scales. Internal consistency for the Evidence-Based Practice Attitudes Scale and its subscales were acceptable to excellent (total alpha= .85; Requirements = .93; Appeal = .75; Openness = .78; Divergence = .81; Limitations = .91; Fit = .84; Monitoring = .86; Balance = .64; Burden = .61; Job Security = .93; Organizational Support = .84; Feedback = .89). The General Self-Efficacy Scale demonstrated good internal consistency (alpha = .82, n = 87). The Perceived Importance scale was moderately correlated to the Resource Needs scale ($r = .28$, $p < .001$), weakly correlated to the Evidence-Based Practice Attitudes Scale ($r = .17$, $p = .13$), and moderately correlated to the General Self-Efficacy Scale ($r = .25$, $p = .02$). Resource Needs was not correlated to the Evidence-Based Practice Attitudes Scale ($r = -.03$, $p = .79$) or the General Self-Efficacy Scale (r

= -.02, p = .98). The Evidence-Based Practice Attitudes Scale was weakly correlated to the General Self-Efficacy scale (r = .25, p = .02).

Semi-Structured Interview

The semi-structured interview / focus group protocol contained one-item exploring the respondent's professional role, six items exploring the respondents practice context, where participants were asked about their daily activities and approach to their work, five items exploring their resource needs, where participants were asked about the challenges and barriers they face in their work, and five items exploring opportunities for innovation, where participants were asked about their experiences with evidence-based practices and implementing new approaches or interventions. Participants also had an opportunity to share any final thoughts or anything else they would like to discuss before closing the interview.

Data Diagnostics

Data were explored for missingness and meeting the assumptions of relevant statistical tests prior to analysis. Data were missing from four of the 91 respondents for items in the Evidence-Based Practice Attitudes scale, the General Self-Efficacy scale, and demographic questionnaire. This did not appear to have any effect on inferences drawn from the data or subsequent statistical tests. Due to small cell sizes for racial/ethnic identity, these variables were recorded into white/non-white for multivariate analyses.

Analytic Strategy

Quantitative Analysis

Descriptive statistics. Descriptive analysis was conducted to understand the characteristics, experiences, and preferences of the survey sample. This included the primary way participants' work related to navigation, organizations they were connected to, their

professional role, years in practice, years in the field, geographic location, age, race, and gender. Descriptive and correlational statistics were also conducted on each individual survey instrument, including the Perceived Importance scale, Resource Needs scale, General Self-Efficacy scale, and Evidence-Based Practice Attitudes scale and subscales.

Psychometrics. Psychometric analyses were conducted for each survey scale and subscale. In addition, a principal component analysis and scree-plot was created to assess the number of constructs being measured by the Perceived Importance and Resource Needs scales, as these measures were developed specifically for this study.

Analysis of Variance. We utilized analysis of variance to explore potential differences in total scores for Perceived Importance, Resource Needs, Evidence-Based Practice Attitudes, and General Self-Efficacy scales by respondent race, gender, organizational affiliation, geographic location, and practice role.

Regression Analysis. We computed seven linear regression models. The first regression model (Model 1) was constructed with the sum of responses to the Perceived Importance scale as the dependent variable, with the mean total for the Evidence-Based Practice Attitudes scale, sum total for the General Self-Efficacy scale, and sum total for the Resource Needs scale as independent variables, with participant's gender, race/ethnicity, and geographic location of practice as covariates. Model 2 was constructed with the sum total for the Resource Needs scale as the dependent variable, with scores for the Evidence-Based Practice Attitudes scale, General Self-Efficacy scale, and Perceived Importance scale as independent variables, with participant's gender, race/ethnicity, and geographic location of practice as covariates. Model 3 was constructed with the General Self-Efficacy scale total score as the dependent variable, with scores for the Evidence-Based Practice Attitudes scale, Perceived Importance scale, and Resource

Needs scale as independent variables, with participant's gender, race/ethnicity, and geographic location of practice as covariates. Model 4 was constructed with the Evidence-Based Practice Attitudes scale mean total score as the dependent variable, and the scores for the General-Self-Efficacy Scale, Perceived Importance scale, and Resource Needs scale as independent variables, with participant's gender, race/ethnicity, and geographic location of practice as covariates. Model 5 was constructed with the Perceived Importance total score as the dependent variable, and mean scores for the 12 Evidence-Based Practice Attitudes subscales as independent variables. Model 6 was constructed with the Resource Needs scale total score as the dependent variable, with mean scores for the 12 Evidence-Based Practice Attitudes subscales as independent variables. Model 7 was constructed with the General Self-Efficacy scale total score as the dependent variable, and mean scores for the 12 Evidence-Based Practice Attitudes subscales as independent variables.

Qualitative Analysis

The interviews and focus group were recorded and transcribed in Zoom. The second author checked and edited each transcript for accuracy before coding began. The qualitative analysis followed Braun & Clarke's (2006) approach which includes familiarizing with the data, generating a list of codes, refining the codes into a list of themes, reviewing themes, naming and defining themes, and identifying exemplars. To assess the truthfulness of the findings, the researchers employed triangulation by consulting with a third group of study partners, which included individuals working at the state Department of Health, Department of Human Services, and Community Health Worker Alliance, each of whom respectively have in-depth knowledge of service navigation and community health work in the state.

Mixed Analysis

Quantitative and qualitative data were collected in parallel and analyzed concurrently. Quantitative findings were compared and contrasted with qualitative themes, with the analysis focused on similarities and differences within the data sources. Preliminary mixed findings were shared with the studies partnering organizations for feedback and interpretation prior to dissemination.

Results

Participant Flow

The electronic survey invitation was distributed to the two statewide list-servs on two occasions in February 2023. Six-hundred and two individuals representing the state's service navigation workforce were invited to participate. The study received 91 survey responses (15.1% population response rate). Invitations to follow-up interviews were sent to survey respondents on three occasions over a six-week period in March-April 2023. Between April-May 2023, twenty individual interviews and one focus group was conducted (24.2% sample response rate).

Quantitative Results

Workforce Needs Assessment

The first part of the workforce needs assessment asked participants to rate the Perceived Importance of 19 domains of navigation practice, on a scale from 1 (not at all important) to 7 (very important). Overall, each item in the Perceived Importance scale was rated highly by participants, indicating that the items in the scale were an accurate representation of the scope of service navigators work. The highest-rated Perceived Importance domains were “establishing and maintaining working relationships with clients” (M = 6.7, SD = 0.7), “empathy, compassion, and support” (M = 6.6, SD = 0.6), “providing resources and education,” (M = 6.5, SD = 0.7), “assessing clients’ specific service needs and barriers” (M = 6.5, SD = 0.8), and “engaging and

retaining clients" (M = 6.5, SD = 1.0). See Table 1 for the mean and standard deviation of ratings for each item in the Perceived Importance scale.

The second part of the workforce needs assessment presented the same 19 domains of practice, but asked participants to rate their Resource Needs in each domain, on a scale of 1 (no need for resources) to 7 (high need for resources). Overall, ratings of Resource Needs were more varied. The highest-rated Resource Needs domains were "cross-cultural practice" (M = 5.3, SD = 1.7), "anti-oppressive practice" (M = 5.2, SD = 1.8), and "problem-solving challenges" (M = 5.2, SD = 1.6). See Table 1 for the mean and standard deviation of ratings for each item in the Resource Needs scale.

Evidence-Based Practice (EBP) Attitudes Scale

The Evidence-Based Practice Attitudes scale assessed participants' across 36 items and 12 subscales (Table 2). All items were on a five-point Likert-type scale. Nine items asked how likely the participant would be to adopt a new intervention or service (i.e., "not at all likely, quite unlikely, moderately likely, quite likely, or very likely"), while the remaining 27 items asked participants the extent to which they agreed with each statement (i.e., "not at all, slight extent, moderate extent, great extent, or very great extent"). A participant's evidence-based practice attitudes score was calculated by first reverse-scoring items in five of the 12 subscales (i.e., divergence, limitations, monitoring, balance, and burden), a total of 15 items, and then finding the average score of all 36 items. The average overall score was 2.76 (SD = .39) on a scale of 1 to 5, indicating moderate attitudes toward evidence-based practices.

There were also 12 subscales of the evidence-based practice attitudes scale (Table 2). The subscale scores were calculated by finding the average of all items in the scale (three items per scale). The subscales were "requirements," whether participants would use EBPs if it was

required by their supervisors or administrators (M = 3.3, SD = .81, alpha = .93), “appeal,” the appeal of using EBPs (M = 3.3, SD = .61, alpha = .75), “openness,” participants’ openness to using EBPs (M = 2.9, SD = .63, alpha = .78), “divergence” (reverse-coded), the perceived incongruence of EBP’s from typical practice (M = 1.2, SD = .86, alpha = .81), “limitations” (reverse-coded), their perception of EBPs’ limited scope (M = .94, SD = 1.0, alpha = .81), “fit” the fit of EBPs to their own setting and clientele (M = 3.6, SD = .58, alpha = .84), “monitoring” (reverse-coded), their attitudes toward having their own work be monitored (M = 1.6, SD = 1.2, alpha = .86), “balance” (reverse-coded), their beliefs about a balance between EBPs and non-evidence based practice (M = 2.3, SD = .79, alpha = .64), “burden” (reverse-coded), the perceived burden of EBPs (M = .69, SD = .70, alpha = .61), “job security,” the perception of how EBPs help with job security (M = 1.9, SD = 1.1, alpha = .93), “organizational support,” their perception of their organization’s support for EBPs (M = 3.0, SD = .71, alpha = .84), and “feedback,” their attitude toward receiving feedback about their work (M = 3.0, SD = .90, alpha = .89).

General Self-Efficacy (GSE) Scale

The General Self-Efficacy scale assessed participants’ self-efficacy, with 10 items asking participants to rate how true each statement is for them on a scale from 1 (not at all true) to 4 (exactly true). The total score was calculated as a sum of all items, so scores could range from 10 to 40. The mean GSE score for all participants was 22.4 (SD = 3.4), indicating moderate practitioner self-efficacy. Chronbach’s alpha was .82, indicating acceptable reliability for this measure (Table 2).

Analysis of Variance

The analysis of variance uncovered differences in ratings for the Resource Needs scale by respondent race ($F = 3.7$, $df = 3$, $p = .02$), with Asian, Pacific Islander, Indigenous, and Multiracial participants reporting the greatest needs ($M = 114.2$, $SD = 9.7$), followed by Black/AfricanAmerican ($M = 103.1$, $SD = 32.4$), Hispanic / Latine (M - 97.1, SD - 35.0), and White ($M = 85.3$, $SD = 23.0$) respondents. There were no differences by respondent characteristics for the Perceived Relevance scale, Evidence-Based Practices Attitudes scale, or General Self-Efficacy scale.

Multivariate Analysis

Multivariate linear models were constructed with each of the above-discussed variables as a dependent variable: (1) Perceived Importance (2) Resource Needs, (3) Evidence-Based Practice Attitudes, and (4) General Self-Efficacy. See Table 3 for all estimates, standard errors, p-values regarding models 1 through 4, and Table 4 for all estimates, standard errors, p-values and regarding models 5 through 7.

Model 1 - Predicting Perceived Importance

In this analysis, Evidence-Based Practice Attitudes, General Self-Efficacy, Resource Needs, and respondent characteristics were not associated with Perceived Importance of navigation practices.

Model 2 - Predicting Resource Needs

In this analysis, the respondents' geographic location of practice was associated with Resource Needs. Evidence-Based Practice Attitudes, General Self-Efficacy, Perceived Importance, and other respondent characteristics were not associated with Resource Needs.

Model 3 - Predicting General Self-Efficacy

In this analysis Evidence-Based Practice Attitudes was positively associated with General Self-Efficacy (Beta = 2.3, SE = 1.1, p = .04). Perceived Importance, Resource Needs, and respondent characteristics were not associated with General Self-Efficacy.

Model 4 - Predicting Evidence-Based Practice Attitudes

In this analysis General Self-Efficacy was positively associated with Evidence-Based Practice Attitudes (Beta = .03, SE = .01, p = .04). White navigators also held more favorable attitudes toward evidence-based practices than racially diverse navigators (Beta = .23, SE = .11, p = .04). Perceived Importance, Resource Needs, and other respondent characteristics were not associated with Evidence-Based Practice Attitudes.

Model 5 - EBPAS Subscales Predicting Perceived Importance

In this analysis, the EBPA subscale "openness" was positively associated with Perceived Importance scale (Beta = 9.5, SE = 3.0, p = .002). No other subscales were associated with Perceived Importance.

Model 6 - EBPAS Subscales Predicting Resource Needs

In this analysis the EBPA subscale "limitations" (Beta = 8.6, SE = 3.8, p =.03) and "job security" (Beta = 6.3, SE = 2.8, p = .03) were positively associated with Resource Needs. No other subscales were associated with Resource Needs.

Model 7 - EBPAS Subscales Predicting General Self-Efficacy

In this analysis, "appeal" (Beta = 2.1, SE = .79, p = .01), "openness" (Beta = 1.5, SE = .64, p = .02), "divergence" (Beta = 1.1, SE = .54, p = .04) , and "monitoring" (Beta = .68, SE = .33, p = .04), and subscales were positively associated with General Self Efficacy. The "burden" subscale was negatively associated with General Self-Efficacy (Beta, = -1.9, SE = .55, p < .001). No other subscales were significantly associated with General Self-Efficacy.

.Qualitative Results

The qualitative analysis of the data was guided by three main questions: 1) what do navigators want others to know about their work? 2) what support do navigators currently have? and 3) what resources and supports do navigators need? The first round of individual open coding yielded a list of codes, which included topics including as engagement, assessment, and partnering, outreach and engagement, barriers to care, modality of work, cultural humility, navigator-client relationships, payer flexibility, follow-up, data collection, and family centered-practice. After discussing these codes and the similarities and differences between the researchers' code lists, a second round of coding was conducted to identify initial themes. This initial theme list included philosophy of practice; navigation activities; measuring success, and family, navigator, and system needs. These themes were further discussed between the researchers and study partners and refined into nine themes which are described below.

What do navigators want others to know about their work?

Importance of Navigator-Client Relationship

Nearly all participants emphasized that the most important aspect of their work was the navigator-client relationship, which included building rapport with the client (individual or family), and centering their individual needs. Person- and family-centered practices were central to many navigators' practice philosophy. As one participant said, "I try my best to ensure that the family feels respected and their voice is important and heard. That they know that when they're in the space with me, it's a non-judgmental space and I will interact as much as they want to interact. It really becomes, you have to adjust to how the family is coming to meet you, and align with that." Many participants highlighted the importance of adapting their work to their clients,

and making sure it is the client's goals and needs that determine the direction and focus of their work.

Scope of Navigation Work

Respondents reported the institutions in which they operate need a better understanding of the scope of work which service navigation encompasses. Specifically, participants noted the risks and challenges of service navigation, and the need for more support and training on crisis de-escalation and safety when visiting clients' in their homes and communities. They also noted a need for flexibility as it pertains to scope of work and billing, as navigation work often covers a broad variety of domains not covered under managed care contracts. Ultimately, participants described the goal of their work as connecting their clients with the resources they need. "The most important for me is, how will the family be successful? When they get the resource that they need, when they've achieved the goal that has been discussed… breaking through the barriers, seeing some difference in where they started versus where they are now." Practitioners measured success regarding this goal in a variety of ways, from sporadic follow-up, to individual check-ins with clients, to highly structured systems of data collection and record-keeping.

Cultural Factors in Service Navigation

Navigators are far more likely than other care providers and professionals to share identity characteristics like race, ethnicity, culture, and spoken languages, with their clients. This results in navigators often functioning as cultural liaisons and language interpreters. One participant described being a cultural liaison as a primary aspect of their job: "My job is to be that resource connector, and also the cultural liaison… and also, you know, interpreter, I'm also interpreting and translating documents for them," going on to explain how they help their clients understand questions on surveys or applications. Another participant said of their organization,

"we have cultural liaisons, especially in the Somali community and in the Hispanic community. We have people in the office who can translate if somebody comes to the front window and they need help, and they only speak Spanish, or they only speak Somali." Navigators were able to communicate with clients in ways that other professionals could not, due not only to shared languages, but also shared knowledge of cultural norms and practices. This aspect of navigators' role differentiates them from other professionals working in health care and social services, and makes them a vital part of these fields.

Community Engagement

Community engagement and outreach was emphasized as one of the main activities of navigation work. Many participants explained that cold outreach and typical referral systems do not always work, so outreach requires more active engagement and making lasting connections. One participant described community outreach as being "about authentic connection" and another said that "authentic and meaningful recruitment" has to be "more organic than mechanical." Specifically, participants stated that they conducted outreach and recruitment by forming relationships with community organizations, working with community leaders, and hosting community events. One participant explained "we are doing some workshops for our community and outside our clinic, for them to understand what we offer. Also we do have an advisory board of our patients, to bring those resources and all that information to the community."

What support do navigators currently have?

Community of Practice

One source of support that most navigators mentioned was the relationships to others working in similar roles. This navigator-to-navigator support network was a source of

collaboration, information, guidance, and even emotional support. As one participant said,"I completely rely on the networking aspect of connecting with other navigation teams. I'm sold on that. I don't feel like I could do my work successfully if I didn't connect with Help Me Connect and other navigators." Many participants mentioned the Community Health Worker Alliance or Family Navigation Community of Practice as being important hubs for the communication and sharing of resources between navigators. Many also mentioned that they would like more opportunities for such connections. One participant in the focus group said to another, "you and I need a group like that where we could share what we're doing and give people our list of resources. It's a lonely job," and another participant commented that they "literally only know three community health workers" that they can connect with about their work.

Self-Care and Professional Boundaries

Most participants expressed the need for self-care and professional boundaries in their work. The nature of navigation comes with risk of compassion fatigue, and participants described the ways that they take care of themselves. For example: "I need me time, and family time, and work time… I need to have time to myself in the morning."

In general, this need for self-care seemed to be well-understood and supported by leaders in their organizations. This includes supervisors "ending a staff meeting with some kind of meditation or just a reminder of self-care" and creating a culture where it is understood that self-care is "not selfish. It's almost like a mandate to take care of yourself." However, participants also mentioned a need for more active promotion of these supports. One participant explained that "there's a difference between it being offered and being built-in… if we're going to talk about self-care, we also need to think about the ways that our institutions are structured that promote self-care." From participants' descriptions, it appears that while the need for

self-care is understood by organizations and leaders in the navigation field, there could be more support for navigators to fully utilize the self-care resources that may be available to them.

What resources do navigators need?

Overcoming Barriers to Access for Clients/Families

Participants described numerous barriers their clients encounter when attempting to access the services they need. Lack of insurance, inability to afford care with insurance, exclusionary eligibility criteria, lack of cultural humility on the part of service providers, language barriers, lack of transportation or child care, and wait lists were among those frequently mentioned. The extent to which clients' needs exceeded available resources is highlighted by the length of waitlists and wait times for services. For example, one participant said,"My god, you're looking at getting a service for a two-year-old and there's a two year waiting list." Many participants also endorsed the notion that these barriers are part of a systemic issue and not something that they can resolve alone within their job description. One participant pointed out that "I think the only way that we are going to fix this issue of housing is really one person, one individual feeling connected and cared about and seen. There is a point where the machine is almost bigger than the problem. I'm watching all the dollars go into the machine and not towards the actual humans." Another participant explained that while in a wealthy country like the United States, resources are plentiful, but "a lot of organizations are coming from a mindset of scarcity. There's not enough staff, there's not enough dollars, there's not enough housing-- there is. There is plenty of all of it in the United States. We need to figure out how we can reallocate those things and re-purpose those things, and that's a pretty large question. I don't know if I have an answer for that right away."

Resolving Institutional Barriers to Navigation Work

One highly actionable need mentioned by navigators was they would like to be systematically notified of changes to policies and programs that affect their work, such as changes to Medicaid enrollment, and that these notifications should be clearly communicated to them in an accessible format and plain language, like policy and practice briefs. One navigator said, “I think it would be wonderful for us to have those training on how we can better help people navigate understanding those programs. There's always changes, programs change due to policies.” This participant expressed a need for resources to help them stay “updated on those changes and learning, being an expert on these programs.”

In addition to policy-related resources, participants also expressed that all aspects of navigation practice need to be better funded. Many participants noted that funding was the greatest barrier to accomplishing the goals of their work. One participant said, “I think funding is really the largest piece, because unfortunately there is such a demand for our services. And the funding is just not there.” This lack of funding also affects navigator’s compensation. Navigators tend to be from the communities in which they work, and are experienced in engaging and communicating effectively with the populations they serve. As mentioned above, many even serve as cultural liaisons or interpreters as a regular part of their work. Participants expressed that this expertise deserves to be valued at least as highly as formal education and certification, and should be compensated accordingly. One participant, who is a supervisor of navigators, said: “You're talking about 22 bucks an hour to do really, really hard and heavy work. That is hard to justify when you can, which is also valuable work, but I can drive a forklift for the night shift as a stocker, and make 24, 25 bucks an hour. So I think paying people, valuing the work that they're doing, and paying them accordingly.”

Not only did participants express that the pay rate for navigators needs to be higher to appropriately value navigators' expertise and the difficulty of their work, many participants, especially community health workers, explained that they are not able to bill for all the hours and types of work that they do. One community health worker said "we bill in 15 minute increments. But we can only have, I max out at two hours per week, or I think it's 24 hours in a month per client. Some of these clients need more than that, and I can't bill for that." Other community health workers mentioned that they can only bill for health education, or medically-focused services, despite the fact that they provide navigation that goes far beyond the scope of those billable services. It is clear that navigators can be better supported in their work by the institutions within which they work, including providing training on policies and programs, raising the pay rate for navigators, and making sure that navigators can be paid for all the services that they provide.

Pragmatic Attitudes Towards Evidence-Based Practices

In interviews and focus groups, practitioners expressed pragmatic attitudes toward evidence-based practices. Most said they either already use evidence-based practices, or would be willing to try using them as long as the practices were contextually appropriate and helpful to their clients. One participant said "I'm very open to new ideas or experiences. If you give me something that's going to work really good, I'm going to try it. If it's not for my best convenience, and it's going to be for the convenience of my clients, I will try it." The primary difficulty participants expressed regarding their experiences with evidence-based practices was a lack of flexibility in how these practices could be implemented, as their work requires a high amount of flexibility due to the breadth of services they provide and clients they serve. One participant said "So we don't bill by the hour, we don't bill by the minute, we bill by outcome,

and we only can do that with the hub having a contract with these payers. And so community health workers can only bill for health education. And we have 21 pathways, and *one of them* is health education." Overall, participants expressed positive attitudes toward evidence-based practices, but it was important to them that evidence-based practices fit in with the context of their work, which means that these practices needed to be effective, contextually appropriate, and flexible.

Mixed Results

The researchers regularly discussed the themes emerging from qualitative interviews in the context of the quantitative findings. Specifically, how participants' responses in interviews elaborated on or clarified aspects of the quantitative findings, and how the qualitative and quantitative findings supported or diverged from one another.

What service navigation activities do practitioners perceive as important to their work?

In interviews and focus groups navigators spoke at length about the centrality of the navigator-client relationship, the broad range of practices they engaged in to support clients, the complexity of cultural considerations in service navigation, and the importance of community engagement to navigation practice. Navigators emphasized the person-centered nature of their work, the importance of connecting clients with personalized resources they need, and providing them with education and active assistance navigating health care and social services systems. Navigators reported their communities of practice provided critical support to their work, and also reported engaging in self-care and maintaining professional boundaries were critical to sustaining their ability to work in service navigation over time. In the surveys, participants rated each of the 19 domains of navigation practice as "somewhat" to "very important" to their work.

The most important navigation practices endorsed were establishing and maintaining relationships with clients, displaying empathy, compassion, and support, engaging and retaining clients, and providing resources and education. Together, the sources of data suggest the most important aspects of navigation practice are interpersonal in nature. Navigators work hard to establish meaningful, trusting relationships with their clients so they can engage in the activities necessary to support service access. Navigators relied heavily on other navigators and communities of practice, which provided them various forms of social and instrumental support to support both their effectiveness and wellness.

What are service navigators' resource needs and preferences?

Interviews and focus groups uncovered needs related to overcoming barriers to service access at the individual, organizational, and system levels. Commonly encountered barriers included navigating program eligibility requirements, long wait lists, language and other cultural barriers between clients and service providers, lack of transportation and child care, and inadequate housing. Navigators also described institutional barriers, such as the need for sustainable funding and increased compensation for navigators, expanding the range of billable navigation services, access to continuing education, and technical assistance with policy translation and evidence-based practices. Navigators felt their work needed to be valued through higher pay, better institutional support, and greater flexibility. Navigators also wanted more support for self-care, more collaboration and communication between navigators, and clearer communication and training around changes to policies and programs. In the surveys, navigators identified needs related to cross-cultural practice, anti-oppressive practice, identifying personalized services, promoting self-determination and empowerment, providing resources and

education, resolving barriers to care, and navigator self-care. Together, findings elucidated important workforce needs related to resolving service barriers, support for engaging self-care, and effective cross-cultural and anti-oppressive navigation strategies.

Does practitioner self-efficacy and evidence-based practice attitudes influence their practice experiences and resource needs?

In interviews and focus groups navigators expressed pragmatic attitudes towards evidence-based practices and openness to new approaches in general. Navigators were more likely to adopt evidence-based practices if they perceived them to be contextually appropriate, helpful to their clients, and provided flexibility to accommodate the broad range of activities navigators engaged in. In the surveys, navigators held moderate attitudes towards evidence-based practices, with racially diverse navigators holding less favorable attitudes towards EBPs than their white peers. Openness to evidence-based practices was associated with greater perceived importance of navigation practices, while the limitations and job security provided by EBP's were associated with higher reported resources needs. Favorable attitudes towards evidence-based practices were also associated with higher practitioner self-efficacy. The appeal of EBP's, their divergence with current practices, and monitoring dimensions were associated with greater navigator self-efficacy, while the burden of implementing evidence-based practice was associated with lower navigator self-efficacy. Practitioner self-efficacy was not associated with the perceived relevance or need for resources in different navigation practices. Together, the sources of data showed practitioners viewed evidence-based practices in a pragmatic way, although navigators may have reservations concerning how well evidence-based practices fit with the work that they do, and are concerned about the possible limitations of evidence-based practices. The qualitative findings helped explain why practitioners may have these reservations;

navigators made in interviews that they are interested in using evidence-based practices if it helps their clients, and as long as those practices are flexible enough to accommodate the wide range of services their work entails.

Discussion

Study findings provide insight into the scope of service navigation practice, what resources and support practitioners in this field need, what they think about evidence-based practices, and what factors contribute to those attitudes. These insights present a number of implications for supervisors and administrators in service navigation practice, policymakers who craft legislation which impacts navigation practice, and researchers interested in promoting service navigation workforce effectiveness.

Quantitative Findings

Practitioners' high ratings on the Perceived Importance scale suggest there are common elements of service navigation practice that occur across populations and practice settings. This suggests an opportunity to develop service navigation workforce supports that are relevant across populations and practice settings. The Perceived Importance scale may also be valuable as an exploratory tool to understand how individual service navigation programs operate, as it provides a comprehensive list of activities which may constitute the core of service navigation.

Differences in respondent ratings for the Resource Needs scale by geographic region of practice suggest navigators vary with regard to the specific resources they need to work effectively. This suggests some programs may need more personalized workforce supports, and the Resource Needs scale may be valuable to help administrators understand the needs of specific navigation programs and regions of practice. Navigators broadly reported a need for

resources specific to cross-cultural practice, anti-oppressive practice, and problem solving, suggesting areas for support across populations and practice settings.

` Finally, the multivariate analysis of study scales provides insight into how practice experiences and resource needs relate to practitioners' self efficacy and attitudes toward evidence-based practices. Navigators with higher levels of self-efficacy held more favorable attitudes toward evidence-based practices, and those who were open to EBPs were more likely to perceive navigation practices as important. Navigators who felt EBPs provided job security and did not limit their practice were more likely to report resource needs. In practice, supervisors should foster self-efficacy among navigators, specifically concerning their ability to apply evidence-based practices to their work. However, it is also important to make sure that there is sufficient organizational support for putting these practices in place, and that flexibility for the diversity of methods used in service navigation be built into these practices. While self-efficacy and attitudes toward evidence-based practices were positively related, these two constructs did not appear to differ by participants' professional role or practice context. From a workforce development perspective, this suggests strategies to strengthen practitioner self-efficacy may be beneficial to the service navigation workforce regardless of the practice context. However, consistent with other findings on the topic, racially minoritized practitioners held slightly less favorable attitudes towards evidence-based practices than did white respondents, suggesting the introduction of EBPs should be considered in relationship to the practitioners cultural frame of reference and grounded in contextually appropriate research.

Qualitative Findings

The qualitative findings helped elucidate what navigators want people to know about their work. First, themes related to the centrality of the navigator-client relationship suggest what

has long been known in human services practice and research: that the relationships navigators form with their clients is an important precondition to effective work with them. Workforce supports should therefore include aspects of relationship, rapport, and empathy in their onboarding and training programs. Another important finding is that service navigators are a diverse workforce serving many communities, which is valuable and needs to be compensated accordingly. Workforce diversity, when considered in relationship to evidence-based practice attitudes, suggests a need for culturally-sensitive and culturally-tailored workforce supports. Given the fact that many navigators work with and within their own cultural communities, there may be opportunities for co-learning and cultural exchanges that honor and uplift community knowledge. This can help promote and support culturally responsive navigation practices. This was also reflected in the theme of community engagement in interviews with practitioners, which suggests that some practitioners have encountered difficulties accessing and engaging with the community, and there is a need to build trust and relationships at the community level to enhance knowledge and availability of services provided by navigators. The theme self-care and professional boundaries highlights the effects of service navigation on workforce well-being, and the need for policy and practice solutions that help ensure the workforce is supported and protected. This is something that coincides with, but is distinct from the scope of navigation theme. It is important to recognize and value service navigation work with good pay and resources to do the job effectively, but it is also important to protect navigators well-being through policies and practices that prioritize worker safety and well-being.

Respondents consistently reported that connecting with other navigators through their community of practice / alliance was a critical aspect of effective navigation. This one-to-one and one-to-many support system provides a source of social and emotional support, but also

information about available resources, strategies to support engagement, and problem solving. Building and maintaining communities of practice are critical to the success of navigation, and systems of care need to design, maintain, and cultivate these communities of practice. These venues are ideal for information-sharing, collaboration, and coordination of efforts that cross populations and practice settings.

Another clear take away from the qualitative findings was many of the challenges and barriers navigators encounter are structural in nature. When discussing how to overcome barriers to access for clients and families, practitioners spoke at length about the structural barriers that limit navigation effectiveness: low supply of community based resources, eligibility limitations, lack of culturally specific services and long wait times are issues that cannot be resolved at the workforce level. These structural barriers require policy-level solutions and infusion of resources to address critical gaps in the service continuum. The related theme of resolving institutional barriers to navigation work provides ideas for policies that can strengthen navigation practice. Funding and compensation needs to value the difficult work navigators engage in. There also need to be flexible payment models that allow navigators to be paid for aspects of the work that address social determinants of health that are currently outside of current reimbursement contracts.

Finally, quantitative findings provide insight into practitioners' perspectives on evidence-based practices. Specifically, interviews with practitioners suggest that evidence-based practices are valuable to navigators if they are relevant and effective for the populations served, and they would be open to using them if there were organizational supports in place to support their use. Relatedly, the qualitative findings around measuring success and evaluating outcomes suggest that evaluation of progress and goal- achievement could be better aligned, as current

systems are highly varied. Similar to a core components approach to training, standardized outcome measurement and an adaptive evaluation design framework could help the field understand how various practices, lengths of involvement, and intensity of services across parts of the system lead to positive outcomes.

Integration of Findings

Overall, findings from the quantitative and qualitative sources of data support one another. Nothing in the interviews and focus group contradicted what was learned from the surveys, and the sources of data provide some convergent validity and confidence to the findings. In some cases, the qualitative data helped explain the quantitative findings, providing a more complete understanding of trends and relationships identified in the quantitative analysis.

Findings concerning the importance of navigation practices were highly consistent across the data sources, and reflect the centrality of relationships and person-centered care in navigation practice. Concerning resource needs and preferences, integrated findings show a need for resources to overcome barriers to access for their clients, more effective cross-cultural and anti-oppressive practices, as well as support for maintaining professional boundaries and engaging in self-care. Navigators need greater institutional support in the form of sustainable funding and compensation, stronger networks of communication and collaboration, high quality training, and rapid translation and dissemination of information about changes to policies and programs that are relevant to individuals and families they serve. As communication and collaboration between practitioners was mentioned by nearly all participants as their primary source of support, we recommend strengthening and expanding the Navigator Community of Practice, providing more training and opportunities to connect through the Community Health Workers Alliance (CHWA), and/or raising awareness of existing opportunities and resources

connected to these areas of need. Resources and support should be easily accessible and available at no cost to the workforce. Finally, in terms of additional professional development opportunities for navigators, the state should consider grants and scholarships to prepare the workforce, similar to those provided through the Community Health Worker training model. Due to the structural nature of many of the challenges raised by practitioners, these findings also carry a number of implications at the policy level. It is clear from the above conclusions that legislative advocacy and action is needed to address the structural issues practitioners encounter, including a lack of services in certain geographic areas, as well as a lack of transportation, housing, and child care. Additionally, navigators, supervisors, and administrators alike all strongly advocated increasing pay for those who work directly with clients, as paying them at a rate that values their expertise and work would allow them to better serve their clients. As such, policies that allotted more funding toward paying navigators are supported by this research. Finally, one highly actionable need navigators mentioned was that they would like to be systematically notified of changes to policies and programs that affect their work (e.g., changes to Medicaid enrollment), and that these notifications be clearly communicated to them in an accessible format and plain language (e.g., policy to practice briefs).

Finally, integrated findings suggest practitioners hold pragmatic attitudes toward evidence-based approaches. Practitioners held less favorable attitudes if the EBP was limited in scope, conflicted with prevailing practice wisdom and clinical expertise, or was perceived as a burden to their existing practice. This suggests the introduction of EBPs to navigation practice should be accompanied by ample organizational support, and the EBPs' selected should be intuitively appealing, congruent with prevailing practice wisdom, and fit well with existing navigation practices. There is an appetite among practitioners for an evidence-informed approach

that leverages effective practices while simultaneously honoring and uplifting community knowledge and lived experiences of practitioners and community members. Research and evaluation to support navigation practice needs to be approached pragmatically, in terms of what will work best for practitioners and their clients. Specifically, this means seamlessly integrating measures and evaluation tools into practice in ways that are helpful and low burden for practitioners. Due to the variety in the scope of practice among service navigators, Community Health Workers, and in Community Resource Hubs, evaluation design approaches need to be adaptive and capable of accounting for variability in practices occurring in different practice contexts and in different parts of the state. To achieve this, it would be helpful to develop a "common core" approach to measurement; identifying specific domains to measure across all sites (i.e., current service needs, current service use, barriers to care, connection to services, type and frequency of navigation activities). This would allow individual centers to provide services in ways that are flexible, while allowing within- and cross-site evaluation of CRC processes and outcomes at the state level.

Limitations

This study had several limitations. First, the samples in both our quantitative and qualitative components were not wholly representative of practitioners who engage in navigation practice in Minnesota. While the survey response rate was appropriate, those who responded may be more amenable to research, meaning that their views on topics like evidence-based practices may differ systematically from those who did not participate. As such, we are unable to say if the sample is representative of the population of service navigators. Another threat to generalizability is that data were only collected from one state in the U.S., so attempts to extrapolate these findings outside of the state may not be appropriate.

Next, while in our quantitative instrument we used previously-validated measures of evidence-based practice attitudes and generalized self-efficacy, the perceived importance and resource needs scales were based on previous literature and practice documents, and have not yet been validated, which may threaten internal validity. In addition, though there was some missing data, we did not impute data, but rather performed a complete-case analysis. While we do not know whether data were missing at random or systematically, there were only a maximum of four respondents with missing data out of 91 total participants on any given scale. Finally, while our sample size of 91 was sufficient for basic statistical analysis, it limited the range of analyses which could be conducted, such as latent class analysis. Despite these limitations, we were able to sample from the entire population. We also used mixed methods with standardized measures, and had a diverse sample with respect to race, geography, and years of practice experience. Triangulation of data was conducted with stakeholders in the Department of Health and the Department of Human Services. Data was also shared with participants who were invited to provide feedback about our interpretation.

Conclusion

The service navigation workforce needs support in the areas of practice, policy, and research. With regards to practice, navigators are self-sufficient with respect to conducting the relational aspects of navigation practice, but their supervisors and organizations could provide more support regarding self-care and professional boundaries, as well as allowing for flexibility and autonomy in their work. When providing training for navigators, such training should focus on the relational and technical of service navigation but also address self-care, safety, and professional boundaries. Training also needs to attend to cultural and anti-oppressive dimensions of navigation practice. In terms of administration and policy, there is a need to address the

structural barriers to care identified in this study, as well as a need for identification and installation of evidence-based practices which fit the practice context and are accompanied by organizational support. In addition, supervisors, administrators, and policymakers should strongly consider expanding and institutionalizing the communities of practice that support navigators in their work. Greater funding for navigation practice and compensation for navigators is also needed to better support this workforce. Finally, because the location and practice settings of navigators vary considerably, adaptive designs that include common measures but allow for differences in how services are delivered are indicated.

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Table 1: Perceived importance and need for resources in different areas of navigation practice

Domain Description	Perceived Importance Mean (SD)	Need for Resources Mean (SD)
1: Engaging and retaining clients	6.5 (1.0)	4.5 (1.8)
2: Establishing and maintaining working relationships with clients	6.7 (0.7)	4.4 (1.9)
3: Assessing clients' specific service needs and barriers	6.5 (0.8)	4.7 (1.7)
4: Collaborative service planning	6.4 (0.9)	4.7 (1.7)
5: Identifying personalized services	6.3 (1.0)	5.0 (1.8)
6: Promoting self-determination and empowerment	6.4 (0.9)	5.0 (1.6)
7: Empathy, compassion, support	6.6 (0.6)	4.4 (1.9)
8: Providing resources and education	6.5 (0.7)	5.0 (1.8)
9: Staying focused during navigation process	6.1 (1.1)	4.5 (1.8)
10: Problem-solving challenges	6.0 (1.3)	5.2 (1.6)
11: Building and maintaining client motivation	5.8 (1.3)	5.0 (1.7)
12: Strengths-based solution-focused interviews	5.9 (1.4)	4.9 (1.6)
13: Advocacy and outreach	5.8 (1.5)	4.9 (1.8)
14: Resolving barriers to care	6.0 (1.2)	5.0 (1.7)
15: Monitoring progress and collecting data	5.9 (1.4)	4.5 (2.0)
16: Consultation, training, supervision	5.9 (1.3)	4.6 (1.9)
17: Self-care	6.1 (1.2)	5.0 (1.7)
18: Cross-cultural practice	6.4 (1.1)	5.3 (1.7)
19: Anti-oppressive practice	6.1 (1.4)	5.2 (1.8)
Total	118.0 (14.3)	91.7 (26.8)

Note: The Perceived Importance and Resource Needs scales were from 1 (not at all important/ no need for resources) to 7 (very important/high need for resources). Both scales report a sum of responses for its total score.

Table 2: Practitioner's evidence-based practice attitudes and feelings of self-efficacy in their work

Scale	Mean / Sum	SD	Chronbach's Alpha
1: Requirements	3.3	.81	.93
2: Appeal	3.3	.61	.75
3: Openness	2.9	.63	.78
4: Divergence (reverse)	1.2	.86	.81
5: Limitations (reverse)	.94	1.0	.91
6: Fit	3.6	.58	.84
7: Monitoring (reverse)	1.6	1.2	.86
8: Balance (reverse)	2.3	.79	.64
9: Burden (reverse)	.69	.70	.61
10: Job security	1.9	1.1	.93
11: Organizational support	3.0	.71	.84
12: Feedback	3.0	.90	.89
Total EBPA scale	2.8	.39	.85
General Self-Efficacy scale	22.4	3.4	.82

Note: The Evidence-Based Practice Attitudes scale was from 1 (not at all likely / not at all) to 5 (very likely / very great extent) and reports mean values for the total scale and subscales. The General Self-Efficacy scale was from 1(not at all true) to 4 (exactly true) and reports a sum of responses for its total score.

Table 3: Regression Model Results for Models 1-4

	Model 1: Perceived Importance		Model 2: Resource Needs		Model 3: Self-Efficacy		Model 4: EBPAS	
	Est (SE)	**p-value**	**Est (SE)**	**p-value**	**Est (SE)**	**p-value**	**Est (SE)**	**p-value**
Perceived importance	-	-	.43 (.23)	.06.	.05 (.03)	.10.	.005 (.003)	.14
Resource needs	.11 (.06)	.06.	-	-	-.01 (.02)	.63	.001 (.002)	.75
Race (ref = non-white)	-7.51 (3.86)	.06.	-6.42 (19.27)	.40	.53 (.98)	.59	.23 (.11)	.04*
Self-efficacy	.80 (.48)	.10.	-.45 (.93)	.63	-	-	.028 (.013)	.04*
EBPAS	6.50 (4.34)	.14	2.70 (8.41)	.75	2.27 (1.06)	.04*	-	-
Gender (ref = female)	2.41 (10.11)	.81	11.63 (19.27)	.55	2.17 (2.5)	.39	.16 (.28)	.55
County = rural	-23.55 (14.64)	.11	60.59 (27.52)	.03*	1.68 (3.70)	.65	-.32 (.41)	.44
County = suburb	-27.33 (14.28)	.07.	67.34 (28.06)	.02*	1.36 (3.80)	.72	-.24 (.42)	.57
County = urban	-15.92 (15.07)	.29	66.58 (27.87)	.02*	2.39 (3.77)	.53	-.45 (.41)	.28
County = tribal	-22.58 (20.48)	.27	65.01 (38.66)	.10.	7.60 (5.06)	.14	-.70 (.56)	.22
COP	24.40 (15.02)	.11	-16.71 (29.16)	.57	-.03 (3.81)	.99	.28 (.42)	.51
CRH	29.86 (16.65)	.06.	-.90 (30.68)	.98	.33	.94	.28 (.44)	.52
CHWA	22.00 (14.56)	.14	-2.32 (28.26)	.94	2.59 (3.67)	.48	.09 (.41)	.83
School/	22.15	.14	-16.81	.56	1.61	.67	.16 (.41)	.71

EI	(14.56)		(28.70)		(3.74)			
Other Non-Profit	20.15 (14.39)	.13	-7.51 (27.87)	.79	1.37 (3.63)	.71	.18 (.40)	.66
Public Health/ Gov	23.88 (15.38)	.13	-9.80 (29.86)	.74	.69 (3.89)	.86	.35 (.43)	.42
Multiple R-squared		.30		.27		.23		.30

*Note: * indicates significance at the level alpha = .05*

Table 4: Regression Model Results for Models 5-7

	Model 5: Perceived Importance		Model 6: Resource Needs		Model 7: Self-Efficacy	
	Est (SE)	**p-value**	**Est (SE)**	**p-value**	**Est (SE)**	**p-value**
Scale 1 (requirements)	1.86 (2.36)	.43	1.45 (4.42)	.74	-.50 (.51)	.33
Scale 2 (appeal)	5.59 (3.69)	.13	1.13 (6.93)	.87	2.09 (.79)	.01**
Scale 3 (openness)	9.46 (2.99)	.002**	8.75 (5.61)	.12	1.51 (.64)	.02*
Scale 4 (divergence-R)	2.58 (2.52)	.31	2.69 (4.74)	.57	1.14 (.54)	.04*
Scale 5 (limitations-R)	-1.25 (2.01)	.54	8.58 (3.77)	.03*	-.81 (.44)	.07.
Scale 6 (fit)	-4.66 (3.70)	.21	-2.28 (6.94)	.74	-.12 (.79)	.88
Scale 7 (monitoring-R)	-1.02 (1.54)	.51	-3.31 (2.89)	.26	.68 (.33)	.04*
Scale 8 (balance- R)	-.15 (2.21)	.94	-5.04 (4.14)	.23	.003 (.47)	.99
Scale 9 (burden - reverse)	.22 (2.46)	.93	.57 (4.62)	.90	-1.89 (.55)	<.001***
Scale 10 (job security)	-1.07 (1.48)	.47	6.34 (2.78)	.03*	-.27 (.32)	.40
Scale 11 (organizational support)	-2.02 (3.54)	.57	3.48 (6.64)	.60	-.04 (.76)	.96
Scale 12 (feedback)	.61 (2.27)	.79	-3.01 (4.25)	.48	.44 (.48)	.36
Multiple R-Squared	.23		.23		.38	

*Note: * indicates significance at the level alpha = .05, ** indicates significance at the level alpha = .01, and *** indicates significance at the level alpha = .001*