ECRONICON OPEN ACCESS

EC PSYCHOLOGY AND PSYCHIATRY
Research Article

Towards a Better Understanding of Clinical Health Psychology Services: Exploring Referring Clinicians' Perceptions of Value

Lindsey Bloor*, Bethany E. Grix and Carolyn Fisher

Department of Psychiatry, University of Michigan, USA

***Corresponding Author:** Lindsey Bloor, Department of Psychiatry, University of Michigan, USA.

Received: May 25, 2017; **Published:** July 05, 2017

Abstract

Background: Clinical health psychology broadly supports health promotion and disease prevention, and its utility can be challenging to define and measure.

Purpose: We aimed to evaluate one applied outcome, clinicians' perceptions of health psychology, across one VA medical center.

Methods: The clinician perceptions survey was developed and psychometric properties evaluated. Fifty-four specialty medical, mental health and primary care clinicians completed the survey.

Results: Respondents perceived the services as useful (90.7%) and flexible/easily accessible (85.2%). Respondents perceived Veterans benefited in terms of mood/functioning (79.6%) and healthcare engagement (66.6%). Open-ended comments were coded for quality improvement themes.

Conclusions: Findings provided support for clinical health psychology's value, as well as future growth areas. There continues to be a need to demonstrate clinical health psychology's utility through generalizable and accessible outcomes at the Veteran and provider levels. Such efforts can elucidate how health psychology contributes uniquely to health promotion and disease prevention.

Keywords: *Clinical Health Psychology; Survey; Healthcare Services; Descriptive Survey Study*

Introduction

It is imperative that clinical health psychologists continue to establish themselves as valued members of healthcare teams and define clearly their roles, services provided, and outcomes. This means clinical health psychology must demonstrate utility both within the empirically-based movement and the broader healthcare system, which necessarily focuses on outcomes of cost, utilization, and effectiveness. A secondary outcome, measuring how health psychology services are perceived by referring clinicians in the healthcare system, is also of interest. Capturing perceptions, such as the following examples gathered informally via professional conversations, can be particularly important as health psychologists strive to develop and garner support for these services:

"I don't think the Veteran would have come in and been admitted for the surgery without you calling and talking with him." -- Oncology Surgeon

"After you met with the Veteran, he started to trust me and the healthcare system again. I feel like we now have rapport and can work on health behaviors proactively" -- Primary Care Physician.

The current study aimed to capture perceptions of healthcare clinicians, including the utility, availability, and quality of health psychology services, prior to having a formally recognized health psychology service at one VA medical center.

The complexity and range of health psychology services

The American Psychological Association (APA) defines clinical health psychology as the practical application of scientific knowledge to the promotion of health and prevention of disease, illness, and disability for individuals, groups, and the healthcare system [1]. This is done so by means of assessment, intervention, and consultation via the individual, family, health care providers/system, and the sociocultural context [2]. Examples of interventions at the individual level include behavior change, improved functioning, improved quality of life, reduced psychological symptoms or psychosocial distress, relapse-prevention, psychological or health education, and mental health or pre-treatment/procedure evaluation [3]. Working in collaboration with multidisciplinary teams across different levels of a healthcare system, clinical health psychology's role also includes training and consultation services for other mental health and non-mental health clinicians (e.g., milieu consultation, identification and clarification of psychosocial or mood-related obstacles to care, and the improvement of communication and/or decrease in ineffective encounters between patients and medical staff). These training and consultation roles are to support clinicians more broadly in their role to promote health and prevent disease.

Competency benchmarks have been established to serve as a guide for clinical health psychologists to understand further the foundational and functional proficiencies of the profession [4,5]. However, in practice, these aforementioned roles and capacities expected within the specific healthcare system often are not explicitly stated and evolve over time. Clinical health psychology's roles within certain specialty medical care clinics may be more adequately defined given the scope of their practice and work as part of an integrated team. For example, health psychology services are an established component of comprehensive Phase II Cardiac Rehabilitation, and a required part of the continuum of care with Oncology/Palliative Care. Nonetheless, clinical health psychologists may function independently in such specialty medical clinics and become siloed, with their skill-set possibly underutilized (i.e., utilized only to meet a standard of care but not engaged in adjunctive staff consultation services or offering individualized patient care to address comorbidity, adherence, or other factors impacting patient outcomes). Further complications appear when defining the role of more general clinical health psychology services, provided across a wide range of primary care and specialty medicine clinics.

Measuring health psychology service outcomes

In addition to the challenges related to the complexity of these roles, offering a wide range of services often yields disparate outcomes that are difficult to measure directly. Symptom reduction is a common psychological outcome variable, but may not always be attainable or even clinically indicated given the complex nature of the services offered to patients (e.g., serving patients with progressive or terminal conditions). Less obvious but important outcomes include initiation of health behavior change, reduction of risky behaviors, re-engagement in healthcare, improved adherence and cooperation, decreased utilization of urgent medical care (or increased effective utilization of medical care), and more effective clinical shared decision-making, to name a few.

Well-defined objective measures have been developed and studied to measure such outcomes as access/utilization and cost-effectiveness. In this literature, there is growing evidence to suggest that better identification of behavioral health needs, particularly in primary care, is associated with improved utilization [6] and more cost-effective medical treatment [7]. As an indicator of more effective healthcare utilization, Veterans with a mental health diagnosis who had at least one encounter with the primary care mental health integration (PC-MHI) team were two-times as likely to initiate with specialty mental health services, as opposed to those who did not encounter PC-MHI [8].

Perceptions of health psychology services

This study's focused on a wide range of health psychology services and a proximal measure of perceived value. That is, this study aimed to capture referring clinicians' perceptions of the services as they were developing, and prior to having a recognized health psychology service with specially funded positions. Informally, referring providers often say they appreciate health psychology services, in the absence of more accessible or generalizable outcomes. These perceptions are important to delineate, as clinicians' knowledge and opinion of clinical health psychology services likely impacts whether these services are offered to patients when warranted. Therefore, measuring clinicians' perceptions of the quality and utility of clinical health psychology services is an important step toward further understanding, defining, and justifying these services in a large medical setting.

Neuropsychology is a similar consultative psychology service that, like clinical health psychology, has recognized the need to justify the quality and utility of services and survey referring medical specialty clinicians [3,9]. Researchers have found that the assessment of providers' perceptions of neuropsychological services, such as satisfaction, utility, and future referrals [10], have led to further research focused on the provider perceptions of their service's significance as part of the medical system, and ultimately more effective services [11]. Similarly, several studies have investigated provider perceptions of general PC-MHI/behavioral health services within primary care clinics, with positive and promising results [12,13]. While the aforementioned studies lend support for the value of assessing clinician perceptions of behavioral health services, within integrated primary care teams, clinician perceptions of clinical health psychology services, across a large medical center, have yet to be studied.

Using a translational research approach [14], this study's main focus was to measure outcomes on a more practical and applied level, by measuring clinician perceptions of the quality, availability and utility of clinical health psychology services across primary care and specialty clinics within a large VA healthcare system. Although clinical health psychology often overlaps with PC-MHI/behavioral health services, health psychology provides a more extensive and specialized set of behavioral health services for both patients and clinicians across the medical system. Additionally, while there has been an ongoing emergence of the foundational, theoretical, and conceptual frameworks of clinical health psychology's role [3,15], there appears to be a lack of empirical literature capturing the practical and direct measurement of these unique roles within medical systems. This gap in the literature demonstrates a need for further research focused on the application of clinical health psychology services, starting with clinicians' perceptions of services, while broadening this method of measurement to both primary care and specialty medical clinics. This practical and applied method of measurement is an important step toward understanding and justifying the role and utility of health psychology services within a large medical setting.

Methods

A one-page Clinician Perceptions Survey (CPS; see measures section) was administered to 54 clinicians (i.e., physicians/residents, nurse practitioners, nurses, psychiatrists, psychologists, social workers, dietitians) in the clinics to which health psychologists had outreached, within a Midwestern VA medical center. This study was approved by the hospital's Institutional Review Board (IRB). All respondents provided written informed consent and did not receive any incentive or payment for their participation. Of the 54 clinicians surveyed, 30.2% worked in Primary Care, 24.5% worked in Mental Health, 45.3% worked in a Specialty Medical Clinic (e.g., oncology, women's health, bariatric services, palliative care, sleep medicine), and one clinician did not specify a service. Given the voluntary and applied nature of the study, the specific number of clinicians opting out of the survey was not captured. Ongoing outreach to promote health psychology to the medical center consists of regular attendance at clinic meetings. During this ongoing outreach, the study's surveys were administered and collected over approximately a 4-month period from clinicians who attended monthly or quarterly meetings (depending on the clinic's practice). As one example, over the collection period, 16 of 29 total primary care physicians completed the survey; however, the number of primary care physicians attending each month's staff meeting was not assessed. Additional examples include, 2 of the 4 bariatric team clinicians and 5 of the 9 clinicians from the Sleep Medicine Clinic completed the survey. The survey was self-administered

and returned either during the meetings or via an arranged pick-up from study personnel, depending on each clinician's availability. In terms of the breadth of care provided to primary and specialty clinics, health psychology services have included pre-surgery evaluations, brief functional/psychological/psychosocial assessments, consultation/liaison services, as well as brief interventions with patients that range from one to eight sessions, drawing from brief evidence-based psychotherapies.

Measure - Clinician Perceptions Survey (CPS)

The CPS is a brief, 6-item survey developed specifically for this study. The first item gathered information on clinicians' appointed departments (i.e., whether they work primarily in Primary Care, Mental Health, or a Specialty Medical Clinic) and whether or not they had used health psychology services. If clinicians had used services, they are asked to indicate the specific types of referrals placed, by checking boxes of services (e.g., pain-related, adjustment to medical illness, health behavior change, etc.). Drawing from past literature on healthcare satisfaction survey development [e.g., 3,9-11] and the anecdotal comments received, the five remaining items were created. These items assessed clinicians' perceptions of health psychology services, namely, the flexibility/accessibility of services (item 2), the utility of services to provider (item 3), perceived benefit in Veteran's mood/functioning as a result of services (item 4), the extent to which Veterans engaged more effectively in their healthcare as a result of services (item 5), and future intention to utilize health psychology services (item 6). These five items were rated on a 5-point Likert-like scale. For items 4 and 5, higher scores indicate more positive perceptions, and for items 2, 3, and 6, lower scores indicated more positive perceptions. Items 2, 3, and 6 were reverse-scored for subsequent analyses in order to aid in interpretation. As such, higher scores can be interpreted as more positive perceptions. Finally, the last section allowed clinicians to add qualitative feedback on services.

In order to assess the factor structure of the five items assessing clinician perceptions, we performed an exploratory factor analysis using a Principal Components Analysis (PCA), using SPSS version 21. Cases with missing item-level data (n = 7) were excluded list wise; thus, the PCA was performed on 47 participants. Prior to performing the PCA, the suitability of data for factor analysis was assessed. The Kaiser-Myer-Olkin value was 0.68, meeting the recommended value of 0.6 [16] and the Bartlett's Test of Sphericity [17] reached statistical significance ($df = 10$, $p \leq .001$), supporting the factorability of the correlation matrix. Using Cattell's [18] scree test, it was decided to retain two components for further investigation. The two component solution explained a total of 80.1% of the variance, with Component 1 contributing 59.4% and Component 2 contributing 20.6%.

To aid in the interpretation of these two components, oblimin rotation with Kaiser normalization was performed. The rotated solution revealed that all of the items loaded onto these two components (Table 1). The final factor structure resulted in retaining all five items, with each item loading strongly onto only one of two components. The interpretation of the two factors indicated two distinct aspects of health psychology services, Component 1: Service Utility (i.e., availability, flexibility, intentions to consult in the future) and Component 2: Service Quality (i.e., beneficial to patients and providers). The CPS Total scale demonstrated good internal consistency (Cronbach $\alpha = .83$, as did both components: Service Utility and Service Quality (Cronbach $\alpha = 0.81$ and 0.82, respectively).

Items	Utility	Quality
Item 2	**.79**	-.06
Item 3	**.94**	.01
Item 4	.16	**.84**
Item 5	-.09	**.97**
Item 6	**.86**	.10

Table 1: *Item Loadings for Two-Factor Solution of the CPS.*

Note: n = 47; Factor loadings in bold indicate the highest loading among factors for each item.

Results

Survey data were collected from a total of 54 clinicians. Of the clinicians who had utilized health psychology services (81.5%; n = 44), a majority of referral types utilized were for pain management services (61.4%). A summary of the frequencies of referral types placed by clinicians can be found in Figure 1. Out of the total sample (N = 54), individuals consulted an average of 2.19 (SD = 1.56) different services. Number of referral types was moderately positively correlated with CPS Total score (r = .36; p ≤ .05), indicating that as the number of referral types increased, clinician perceptions became more positive overall. Lastly, a minority of clinicians assessed had not used services nor placed referrals (18.5 %; n = 10).

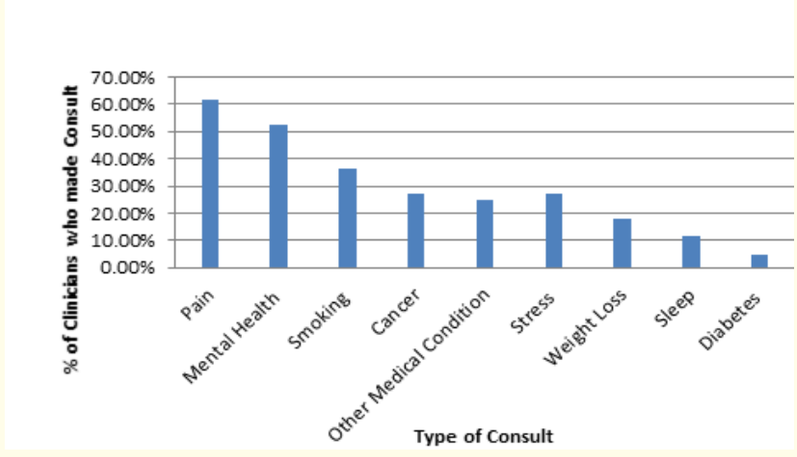

Figure 1: *Percentage of Types of Referrals Made.*

Note: Percentages are out of individuals who have used the service (n = 44)

Regarding perceptions across all clinicians surveyed, the majority perceived health psychology services as useful (90.7%), flexible and easily accessible (85.2%), and indicated intentions to use the services in the future (90.7%). In addition, clinicians generally perceived that Veterans had benefitted from services, in terms of mood/functioning (79.6%) and engagement in their healthcare (66.6%; see Table 2 for distribution of item endorsement). To note, some clinicians who had not used services omitted items pertaining to service quality (i.e., n = 5 for item 4 & n = 6 for item 5). Additional examination of data from only clinicians who had utilized health psychology services (n = 44) showed an increase in positive service perceptions. That is, among Service Utility items, 100% perceived health psychology services as useful, 93.2% perceived services as flexible and easily accessible, and 100% indicated intentions to use the services in the future. Regarding Service Quality items, clinicians indicated higher levels of perceived benefit from services in terms of Veterans' mood/functioning (85.7%) and engagement in their healthcare (70.8%).

Utility Items[a]	1	2	3	4	5
Flexible and easily accessible	1.9	0.0	13.0	44.4	40.7
Useful to providers	0.0	1.9	7.4	31.5	59.3
Plan to use services in the future	0.0	0.0	9.3	27.8	63.0
Quality Items[b]					
Benefit in mood/functioning[c]	0.0	4.1	16.3	46.9	32.7
Engage more effectively in their health care[d]	0.0	4.2	29.2	58.3	8.3

Table 2: *Percent Distribution of Item Endorsement.*

Note: [a] n = 54, 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree;

[b] 1 = No Benefit, 3 = Neutral or Variable Benefit, 5 = Significant Benefit; [c] n = 49; [d] n = 48

Regarding differences in perceptions between clinicians who had used services versus those who had not, independent samples t-tests revealed that clinicians who had used services in some capacity endorsed more positive perceptions, including higher CPS Total scores ($p < 0.001$), Service Utility scores ($p = 0.003$), and Service Quality scores ($p = 0.03$; see Table 3). Due to the majority of referrals pertaining to pain management services, additional independent samples t-tests were computed to assess differences in perceptions between individuals who have used pain services and those who have not. No differences were found in clinician perceptions between these two groups.

	Users, M(SD)	Non-Users, M(SD)	T	P
Service Utility[a]	13.70 (1.36)	10.80 (2.30)	3.85	.003
Service Quality[b]	8.00 (1.30)	6.86 (1.07)	2.19	.03
Total Score[b]	21.80 (2.10)	17.57 (3.05)	4.58	< .001

Table 3: *Independent Samples T-Tests Examining Differences in CPS scores between Service Users versus Non-Users*

Note: [a] n = 54; [b] n = 47

In order to determine whether perceptions and use of services differed between the distinct disciplines assessed (i.e., primary care, mental health, and specialty clinics), a chi-squared analysis was computed using the total sample. Results revealed no differences between disciplines related to whether or not they had used services in some capacity. Notably, the ability to detect differences may have been attenuated by the small number of individuals who had not used services. Similarly, four separate one-way ANOVAs revealed no differences between disciplines in terms of number of referral types, CPS Total scores, Service Utility scores, nor Service Quality scores.

Twenty-four (44.4%) of the 54 clinicians who completed the survey elected to write open-ended comments at the end of the one-page survey and a total of 42 comments were provided from those 24 clinicians. These comments were then independently evaluated and coded by three health psychologists, which yielded eight agreed upon distinct, yet over-lapping comment themes categories. This review continued until there was complete agreement among the three psychologists. Due to the open-ended nature of the comments sections, each statement was subject to multiple codings, which was contingent on the theme(s) involved. Lastly, each comment theme category was then characterized as positive (38%), neutral (40%), or need for improvement (21%). The comment themes are presented below (percentages determined using a total of 24 clinicians who elected to provide comments):

- **Appreciative of the services (Positive):** Seven clinicians (29.2%) discussed overall value and appreciation of health psychology services; for example, "Your team has been amazing, helpful, responsive, thorough, and wonderful collaborators," and "You guys are great from the time of consult and time of contact…"
- **Beneficial to patients and clinicians (Positive):** Six clinicians (25%) discussed recognizing the benefit of health psychology services related to patient-care, as well as support and consultation provided to clinicians. For example, "Veteran's really benefit from assistance while coping with their diagnosis," and regarding provider benefits, "[Health psychology is] very good about communicating with me as their [patients'] primary provider, and are very good about keeping me in the loop in terms of d/c [discharge], progress (lack thereof), and what plan will be".
- **Appreciative of the availability and/or flexibility of services (Positive):** Three clinicians (25%) discussed appreciation for the availability and flexibility of health psychology services. For example, "Wonderful to have more access for the Veterans in ambulatory care" and "[Health psychology is] flexible, thorough, valuable".
- **A need for more services (Neutral):** Five clinicians (20.8%) discussed a need for more services. More specifically, expressing a need for longer-term and individual-based services, in general and in specific areas (e.g., pain, insomnia, weight loss, etc.). For example, "Individual work with patient is better accepted by patient and patient seems more willing to engage (compared with having patient attend groups)."

- **Clinician never used services (Neutral):** Five clinicians (20.8%) indicated that they had not used the service and were not able to provide further comments on the service.
- **Suggested service improvements or changes (Neutral):** Seven clinicians (29.2%) discussed suggestions for changing and/or improving the service, such as same day service, embedded care, specific services, and provider education. For example, "Recommend promoting provider education of what services can be offered to the Veterans" and "I do wish we could do same day services but I know this may not be practical with availability of space".
- **Do not understand role of health psychology (Need for Improvement):** Four clinicians (16.7%) discussed a lack of knowledge and understanding as to the role of health psychology, services offered, differentiation from general mental health, and appropriate referrals. For example, "I don't really have a good sense of who is eligible, what services are available, or when to place a consult".
- **Difficulty with patient engagement and follow through (Need for Improvement):** Five clinicians (12.5%) discussed difficulty with patient engagement and/or poor patient follow through. For example, "I wish more Vets took advantage of this," and "Veteran did not follow up with appointment so cannot evaluate effectiveness of intervention".

Discussion

The practical and applied role of clinical health psychology within a large medical system includes a wide-range of services provided for patients and clinicians. These roles and responsibilities are not yet well understood nor defined. Furthermore, the complexity of roles includes a limited understanding of generalizable and accessible measurements of consultation, assessment and intervention service outcomes. As such, this study investigated one functional and practical outcome: clinicians' perceptions of the utility, availability, and quality of clinical health psychology services, across primary care and specialty clinics within a large VA medical center.

A 5-item survey was developed as part of this study to assess clinician perceptions (i.e., the CPS). All five survey items loaded cleanly onto two factors (Service Quality and Service Utility). The full scale and two factors were all found to have good internal consistency and therefore was considered to be a suitable measure of clinician perceptions of health psychology services in this setting. The survey showed that overall clinicians had generally positive perceptions of health psychology services. The two factors revealed that clinicians found health psychology to be useful and effective. More specifically, health psychology services were perceived to be flexible and useful, and clinicians indicated that the services would be used again in the future. In addition, clinicians generally perceived that Veteran patients had benefitted from services in terms of mood/functioning and engagement in their healthcare. As expected, clinician perceptions were found to be even more positive in the subsample of clinicians who had utilized services, as well as those who referred to an increased number of health psychology services (e.g., pain management, adjustment to chronic illness, stress, etc.).

Given the generally positive responses to the quantitative items, it was informative to thoroughly explore the qualitative data. Responding clinicians provided a well-rounded annotation of their perceptions of health psychology services, highlighting utility and effectiveness, as well as areas for improvement. The more positive comments generally related to areas of flexibility, availability, and the value of communication and consultation. These comments provided support for health psychology's continual efforts toward developing and upholding professional and supportive relationships with clinicians, which is a proximal but essential role for overall quality patient-care [2].

Conversely, the more critical comments suggested areas of improvement, pointing out the challenge for clinical health psychologists to engage and intervene with every Veteran referred for services, similar to the challenges faced by all medical and mental health departments. Moreover, critical comments also brought to light the need for clinical health psychology to provide ongoing outreach and medical education on the roles and services provided. Reviewing such feedback can serve as a starting point for quality improvement efforts.

Likewise, one would speculate that health psychology services may be better understood or received in some clinics, or among certain disciplines, than others (e.g., mental health clinicians). However, no differences emerged in perceptions between disciplines. This showed that relationship-building and outreach may be important efforts when collaborating not only with medical services and clinicians but other mental health colleagues as well.

The quantitative finding that perceptions were more positive among the subsample of individuals who had utilized health psychology services suggested that more negative perceptions may be attributed to a lack of familiarity with or knowledge of the services. This lack of familiarity may have been influenced by situational factors in this study, but likely found in many medical settings. For example, the site from which these data were collected was an academic medical center, with relatively rapid cycling of clinical trainees, in addition to the general fast-paced and complex environment of most clinics. Regardless of the influences, ongoing outreach, such as clinician education of services offered and appropriate referrals, are among the integral parts of a clinical health psychologist's role within a large medical center [2]. Furthermore, these findings also bring attention to the larger issue of integrating psychology into the educational curriculum and training of medical students and residents, to broaden their knowledge and skill sets, as well as improve the effectiveness of the integrated care models [19].

Finally, the more neutral comments reflected a need for greater capacity to offer more individual and group services, as well as same-day or walk-in services. Having such capacity is foundational for the targeted primary care mental health integration service and its demonstrated effectiveness for improved access and utilization outcomes [8]. This documented finding in primary care settings also lends itself toward the utility of co-located or embedded behavioral health care in specialty clinics. This model can aid not only in the availability of the services, but also the clinical expertise, relations, outreach, and education while embedded in the targeted areas.

Chronic pain management is one example of a targeted area or subspecialty of clinical health psychology (similar to psycho-oncology) that has received a great deal of attention in recent empirical literature [20,21]. In this study, the majority of referral types were for pain management services, with several qualitative comments indicating the need for more individual pain services in particular. Thus, consistent with national VA trends, it is clear that clinical health psychology should continue efforts to allocate more staff and resources to provide comprehensive pain management for this site. Of note, during this project, this VA medical center began establishing a primary care based interdisciplinary pain team. This team included a new pain psychologist who would work in collaboration with general health psychology services. Still, while chronic pain management appears to be a high-need service, the preponderance of pain service referrals and the finding that referring clinicians had only made on average two types of referrals, may further indicate that providers are unaware of the breadth of services offered by health psychology. Therefore, using two referral types as a base-line measure, efforts to increase this average will serve as a measurable quality improvement outcome at this particular site.

The comments related to Veteran patient benefit in terms of mood and functioning call for a related effort to directly measure patient outcomes. This standard is well-recognized by clinical health psychology, using a range of evidence-based symptomatology, functional, and self-efficacy measures, while remaining practical and patient-centered [14]. As in all health care practice, ongoing assessment of patients' perspective and outcomes is essential. As mentioned, this study was developed with a translational approach in mind, keeping the survey practical and brief, to one page. To elaborate on the current findings, a future direction may be to assess the convergence and/or divergence of subjective clinician perceptions with patient perceptions of care, intervention outcomes (e.g., improved mood/functioning, behavioral change, etc.), and/or more objective measures of patient treatment adherence and/or health status (i.e., changes with blood pressure, weight, or blood sugar levels, etc.).

This study has limitations that are important to address in order to inform future efforts. First, the psychometric properties of the CPS developed for this study were not established and would merit further examination if used in the future. Additionally, the brevity of the instrument was intended to encourage as many clinicians as possible to take part; however, a longer more comprehensive survey and/or

interview may enhance future studies' understanding of clinician perceptions and outcomes (e.g., clinician demographic and professional information, case examples/health data, etc.). Second, survey data is limited by selection bias, which was likely an issue in the current study. Despite the brief survey, clinicians with less familiarity of health psychology services may have been less likely to participate and/or provide qualitative commentary; therefore, the data may have been skewed and other critical areas for improvement not addressed. Additionally, clinician perceptions are simply one step toward understanding the utility, availability, quality, and effectiveness of health psychology services. While it is critical that clinicians have positive perceptions of and interactions with health psychology services, there are other equally important outcomes to consider (e.g., behavior change, symptom reduction, cost effectiveness). However, as aforementioned in the previous paragraph, these warrant future investigation and are beyond the scope of the current paper.

Despite these limitations, this study aimed to provide a foundational contribution to the measurement of the practical and applicable outcomes of health psychology services for providers and patients, across a large VA medical center. Future efforts will be aimed to offer a shift from informal clinician remarks, to a more formal understanding of the value, utility, and quality improvement factors associated with the services. Findings suggest there continues to be a need for outreach to other services hospital-wide, to provide additional education on clinical health psychology's role, as well as the breadth of their skill-set and services available to clinicians and patients. Future related efforts should examine both subjective outcomes in corroboration with more objective outcomes of clinical health psychology services, including patient symptomatology, health status/biomarkers, and behavior change. Collectively, health psychology services can then demonstrate more clearly the ways in which the field uniquely contributes to health promotion and disease prevention.

Informed Consent

Informed consent was obtained from all individual participants included in the study. Although not identifying information, additional informed consent was obtained to include two quotes from two individual participants who were referring clinicians. The purpose of using the quotes in the opening paragraph of the manuscript is to offer specific examples of the perceptions of referring clinicians.

Acknowledgements

This study was approved by the VAAAHCS Institutional Review Board and Research & Development Committees (Project #002). We would also like to recognize and thank Drs. Adam Tremblay, Chief, Primary Care and Clinton Greenstone, ACOS Ambulatory Care for the VAAAHCS for their support of these services and this survey project.

Bibliography

1. American Psychological Association. "Archival description of clinical health psychology as a specialty in professional psychology. Minutes of the meeting of the American Psychological Association Council of Representatives" (1997).

2. Belar CD. "Models and concepts". In S. Llewelyn & P. Kennedy (Eds.), Handbook of clinical health psychology. New York, NY: Wiley (2003): 719.

3. Belar CD. "Clinical health psychology: A health care specialty in professional psychology". *Professional Psychology: Research and Practice* 39.2 (2008): 229-233.

4. Assessment of Competency Benchmarks Work Group. "Assessment of Competency Benchmarks Work Group: A developmental model for the defining and measuring competence in professional psychology" (2007).

5. France CR., *et al*. "Application of the competency model to clinical health psychology". *Professional Psychology: Research and Practice* 39.6 (2008): 573-580.

6. Pallak MS. "Managed care and outcomes-based standards in the health care revolution". In SC Hayes, VM Follette, RM Dawes, & KEE Grady, (Eds.), Scientific standards of psychological practice: Issues and recommendations. Reno, NV: Context Press (1995): 73-77.

7. Blount A., *et al*. "The economics of behavioral health services in medical settings: A summary of the evidence". *Professional Psychology: Research and Practice* 38.3 (2007): 290-297.

8. Bohnert KM., *et al*. "Continuation of care following an initial primary care visit with a mental health diagnosis: differences by receipt of VHA primary care-mental health integration services". *General Hospital Psychiatry* 35.1 (2013): 66-70.

9. Sweet J., *et al*. "Ten-year follow-up survey of clinical neuropsychologists: Part II. Private practice and economics". *The Clinical Neuropsychologist* 14.4 (2000): 479-495.

10. Temple RO., *et al*. "A national survey of physicians' use of and satisfaction with neuropsychological services". *Archives of Clinical Neuropsychology* 21.5 (2006): 371-382.

11. Hilsabeck RC., *et al*. "Satisfaction of referring providers with neuropsychological services within a Veterans Administration Medical Center". Archives of Clinical Neuropsychology 29.2 (2014): 131-140.

12. Torrence ND., *et al*. "Medical provider attitudes about behavioral health consultants in integrated primary care: A preliminary study". *Families, Systems, and Health* 32.4 (2014): 426-432.

13. Vickers KS., *et al*. "Integration of mental health resources in a primary care setting leads to increased provider satisfaction and patient access". *General Hospital Psychiatry* 35.5 (2013): 461-467.

14. The University of Texas Health Sciences Center at Houston, Center for Clinical and Translational Sciences. "Translational Research. What is translational research?" (2008).

15. Belar CD. "Reflections on the future: Psychology as a health profession". *Professional Psychology: Research and Practice* 43.6 (2012): 545-550.

16. Kaiser HF. "An index of factorial simplicity". *Psychometrika* 39.1 (1974): 31-36.

17. Bartlett MS. "A note on the multiplying factors for various x2 approximation". *Journal of the Royal Statistical Society, Series B* 16.2 (1954): 296-298.

18. Cattell RB. "The scree test for the number of factors". *Multivariate Behavioral Research* 1.2 (1966): 245-276.

19. Robiner WN., *et al*. "Psychologists in medical schools and academic medical centers: Over 100 years of growth, influence, and partnership". *American Psychologist* 69.3 (2014): 230-248.

20. Jensen MP. "Chronic pain and psychology [Special issue]". *American Psychologist* 69.2 (2014).

21. McDonald PG., *et al*. "Cancer and psychology [Special issue]". American Psychologist 70.2 (2015).

Volume 4 Issue 2 July 2017