U.S. Department of Veterans Affairs Public Access Author manuscript Psychol Serv. Author manuscript; available in PMC 2024 April 10.

Published in final edited form as:

Psychol Serv. 2024 February; 21(1): 102-109. doi:10.1037/ser0000829.

Trust and perceived mental health access: Exploring the relationship between perceived access barriers and veteran-reported trust

Jeffrey M. Pyne^{1,2,3}, P. Adam Kelly^{2,4,5}, Ellen P. Fischer^{1,2,3}, Richard R. Owen^{1,2,3}, Michael A. Cucciare^{1,2,3}, Christopher J. Miller^{6,7}, Samantha L. Connolly^{6,7}, Kara A. Zamora^{8,9}, Christopher J. Koenig¹⁰, Karen H. Seal^{8,11}, John C. Fortney^{12,13}

¹·Center for Mental Healthcare and Outcomes Research, Central Arkansas Veterans Healthcare System, 2200 Fort Roots Drive, North Little Rock, AR

²·South Central Mental Illness Research, Education and Clinical Center, Central Arkansas Veterans Healthcare System, 2200 Fort Roots Drive, North Little Rock, AR

3. Psychiatric Research Institute, University of Arkansas for Medical Sciences, Little Rock, AR

⁴ Southeast Louisiana Veterans Health Care System, New Orleans, LA

^{5.}John. W. Deming Department of Medicine, Tulane University School of Medicine, New Orleans, LA

⁶·Center for Healthcare Organization and Implementation Research (CHOIR), VA Boston Healthcare System, Boston, MA

7. Department of Psychiatry, Harvard Medical School, Boston, MA

8. San Francisco VA Healthcare System, 4150 Clement Street, San Francisco, CA

⁹ Department of Humanities and Social Sciences, University of California San Francisco, San Francisco, CA

¹⁰ Department of Communication Studies, San Francisco State University, 1600 Holloway Avenue, Humanities Building, Room 282, San Francisco, CA

^{11.}Departments of Medicine and Psychiatry, University of California San Francisco, San Francisco, CA

¹²·HSR&D Center of Innovation for Veteran-Centered and Value-Driven Care, VA Puget Sound Healthcare System, Seattle WA

¹³ Division of Population Health, Department of Psychiatry and Behavioral Sciences, University of Washington, Seattle, WA

Abstract

Conflict of Interest: None

Objective: The importance of patients' trust in healthcare is well known. However, identifying actionable access barriers to trust is challenging. The goal of these exploratory analyses is to identify actionable access barriers that correlate with and predict patients' lack of trust in providers and in the healthcare system.

Methods: This paper combines existing data from three studies regarding perceived access to mental health services to explore the relationship between provider and system trust and other access barriers. Data from the Perceived Access Inventory (PAI) were analyzed from three studies that together enrolled a total of 353 veterans who screened positive for a mental health problem and had a VA mental health encounter in the previous 12 months. The PAI includes actionable barriers to accessing VA mental health services. The data are cross-sectional, and analyses include Spearman rank correlations of PAI access barriers and provider and system trust, and linear regressions examining the effect of demographic, clinical, and PAI barriers on lack of trust in VA mental health providers and in the VA healthcare system.

Results: Age, depression and anxiety symptoms, and PAI items demonstrated statistically significant bivariate correlations with provider and system trust. However, in multivariate linear regressions, only PAI items remained statistically significant.

Conclusions: The PAI items that predicted provider and system trust could be addressed in interventions to improve provider- and system-level trust.

Impact Statement: Building and maintaining trust in a healthcare environment is associated with better treatment outcomes but it is also complex and often requires a multifaceted approach. The Perceived Access Inventory items found to predict healthcare provider and system trust support the need for a multifaceted approach to improving trust and could be used to design interventions to improve provider- and system-level trust.

Keywords

access; mental health; veterans; trust		

INTRODUCTION

The Medical Dictionary defines trust as "a concept involving both confidence and reliance; to trust someone is to become vulnerable and dependent on the other person's intentions and motivations" (https://medical-dictionary.thefreedictionary.com/trust). Patient trust is most often measured in terms of provider and system trust (Ozawa & Sripad, 2013). Patients' trust in healthcare providers and in healthcare systems has been associated with higher quality care, greater adherence to treatment, lower anxiety about treatment, greater treatment satisfaction, and greater shared decision-making (Birkhäuer et al., 2017; Brown et al., 2016; Caterinicchio, 1979; Gilson, 2003; Keating et al., 2002; Pyne et al., 2022). Trust is described as multidimensional and linked with access to healthcare services (Goold, 2002; Hall et al., 2001; Ozawa & Sripad, 2013; Thiede, 2005). The link between trust and access is typically described in terms of interactive communication and relationships (Goold, 2002; Thiede, 2005). Per Thiede, trust is a facilitator of effective information sharing that leads to healthcare utilization (Thiede, 2005). Covey describes trust as an actionable asset that speeds up human interaction. (Covey, 2006). Understanding the modifiable correlates and predictors

of provider and system trust may assist a facility/system in identifying steps that could be taken to increase trust and, thereby, increase access to needed healthcare services.

The interpersonal aspect of an encounter is important to patients, and trust is central to building and maintaining interpersonal relationships (Hall et al., 2001). Building trust requires repeated positive interactions, yet these are threatened by current healthcare trends such as increasing numbers of clinicians caring for a patient; digitization of healthcare, specifically electronic health records; data-driven policies; daily health monitoring; artificial intelligence; and social media (Khullar, 2019). Depending on their personal history, perspectives, and experiences, patients may develop trust—or a lack of trust—in their clinicians or in their healthcare institutions more broadly (Ward, 2017).

In 2014, the US Department of Veterans Affairs (VA) experienced a wait time scandal that harmed its reputation and resulted in reduced trust among veterans (Veterans Health Administration Scandal of 2014, 2021). In response, the VA created the Veterans Experience Office in 2015 and began measuring veterans' trust in the VA system via quarterly surveys that asked a series of yes/no questions, e.g., "Do you trust VA to continue to deliver care in a safe, respectful and trustworthy way?" Since 2016, veterans' trust in the VA system has increased from 55% to 78% in June 2021 (Department of Veterans Affairs, 2021). In the 2021 VA Survey of Enrollees, 79.1% of veterans responded Strongly Agree or Somewhat Agree to a statement about trusting the VA system to fulfill our country's commitment to veterans, a slight increase from previous years (Veterans Health Administration, Office of Policy and Planning, n.d.).

The Perceived Access Inventory (PAI) is a 43-item patient-centered questionnaire developed to understand the veteran perspective about access barriers to mental health services. The PAI includes provider and system trust items among other perceived access barriers (Pyne et al, 2020). The PAI was originally developed to identify actionable access barriers to VA mental health treatment. However, with the current intense interest in patient trust, we explored the relationship between provider and system trust and other perceived access barriers using PAI data from a combined total of 353 veteran participants in three studies. We also explored the relationship between trust and veteran demographic and clinical variables because these are also reported as predictors of patient trust. Our exploratory hypotheses were that perceived access barriers would be correlated and predict veteran-reported lack of trust in VA mental healthcare providers and the VA healthcare system.

METHODS

Design.

This paper combined PAI data from three studies for secondary data analyses examining the relationship between trust and other barriers to mental healthcare access. PAI data were collected via telephone interview as part of each study (total N=353). Data from the studies were combined because they included similar samples of veterans receiving outpatient VA mental health services. The first study was the initial validation of the PAI (N=92), the second examined primary care mental health integration delivered via telehealth (N=125), and the third assessed the utility of a computer-assisted cognitive behavioral therapy tool

(N=136). All three studies were reviewed and approved by the appropriate VA Institutional Review Boards and Research and Development Committees as was the combining of data from the three studies for these analyses.

Perceived Access Inventory.

The PAI was developed in response to the need for patient-centered measures of access to mental health services. (Department of Veterans Affairs, Office of Inspector General, Offices of Audits and Evaluations and Healthcare Inspections, 2012). We used a multiphase, sequential mixed-methods approach to develop the PAI starting with qualitative interviews with rural and urban veterans across three geographic regions (Arkansas, Maine, and Northern California) (Pyne et al., 2020). The process generated the PAI, a 43-item patient-centered questionnaire. The PAI was designed to allow administrators and researchers to use the items to identify specific actionable access barriers, design interventions to address them, and measure the impact of their interventions over time (Pyne et al., 2020).

Each PAI item consists of two parts. Part 1 questions are measures of <u>prevalence</u> because they collect simple Yes/No responses to a barrier without assessing the level of interference of that barrier in getting needed mental healthcare. Part 2 questions, which are only administered to those who respond "Yes" to Part 1, <u>do</u> assess the extent to which a barrier interferes with getting needed VA mental healthcare, e.g., "How much did that interfere with getting the VA mental healthcare you needed?" (Not at all=1 to Completely=5). Therefore, Part 2 responses are described as a measure of *interference* because they describe the level of interference of that barrier to getting needed care.

Thirty-three of the 43 PAI items were included in analyses for this report. Eight items pertaining to access to digital services were excluded because they did not use the same Part 1 and 2 formats as other items. Another item was excluded because it was only relevant for veterans who had their first VA mental health appointment within the past 12 months, therefore pertaining to a smaller proportion of veterans. Another item was excluded because it was phrased as a facilitator rather than a barrier.

Data Sources.

The first of the three PAI studies examined the validity of the PAI and is reported in detail elsewhere (Pyne et al., 2022). Briefly, veterans aged 18 to 70 years who had at least one positive screen for post-traumatic stress disorder (PTSD), alcohol use disorder, or depression in the previous 12 months were recruited. A purposive sample of veterans was created based on geographic region (Northern California, Arkansas, Maine), rural/urban residence, and gender (oversampled 20% women). Potential participants were excluded if they reported no stress-related or emotional problems related to PTSD, alcohol use disorder, or depression in the past year. Ninety-two veterans completed the research interview from February to November 2018.

The second study used a stepped-wedge design to compare outcomes of primary care mental health integration services provided via telehealth (Tele-PCMHI) versus usual care (in-person referral for mental health treatment) delivered in small VA community-based outpatient clinics (CBOCs) serving predominately rural veterans (Owen et al., 2019).

Veterans were eligible for this study if they had a positive screen for PTSD, alcohol use disorder, or depression at a recent CBOC visit. Exclusion criteria included receiving specialized mental health treatment in the 6 months prior to recruitment. One hundred and twenty-five veterans were enrolled from July 2017 to January 2020.

The third study used a randomized controlled design to compare two methods for implementing the Coordinated Anxiety Learning Management (CALM) intervention (computer-assisted versus printed manual) in VA CBOCs (Cucciare et al., 2020, 2021). CALM is a tool to guide mental health providers with little or no training in delivering cognitive behavioral therapy (CBT) to patients with anxiety disorders or PTSD with or without comorbid depression (Roy-Byrne et al., 2010). Computer-assisted CALM is a computer program that a patient and provider view on-screen together as they proceed through CBT content at a personalized pace. Veterans were eligible for participation if they were a patient of a participating provider; wanted to receive CBT for depression, PTSD, or an anxiety disorder; and were willing to have therapy sessions audiotaped. One hundred and thirty-six veterans were enrolled from March 2017 to December 2018.

Additional Measures Collected from Each Study.

In addition to the demographic variables listed in Table 1, the following measures were included in each study and reported here: 9-item Patient Health Questionnaire depression screen (PHQ-9, possible range 0 to 27)(Kroenke et al., 2001; Spitzer et al., 1999) and the 7-item Generalized Anxiety Disorder screen (GAD-7, possible range 0 to 21).(Spitzer et al., 2006) Rural/urban status was determined using a ZIP code approximation of the census tract-based rural-urban commuting area (RUCA) codes (Rural Health Research Gateway, n.d.).

Analysis.

Descriptive statistics (mean, standard deviation, and percentages) for demographic and clinical variables are shown in Table 1. Comparisons between participants in the three studies are reported using Tukey's Honestly Significant Difference (HSD) post-hoc comparison test. Chi-square test was used to compare the Part 1 Yes/No responses for lack of trust in VA providers versus VA healthcare system. Welch's t-test (equal variance not assumed) was used to compare PAI Part 2 interference scores for lack of trust in VA mental healthcare providers versus lack of trust in the VA healthcare system. Interference scores (0 to 5) were defined as 0 for Veterans who responded "No" to the Part 1 question and 1-5 for those who answered "Yes" to Part 1 and completed Part 2. Table 2 shows Spearman rank correlation coefficients between PAI Part 1 prevalence and Part 2 interference scores (VA provider and VA system) and demographic and clinical variables. Table 3 shows the correlation between PAI barrier-specific interference scores and provider and system trust. Tables 4 and 5 present coefficients and associated model fit statistics for linear regressions of demographic, clinical variables, and interference scores for 10 PAI barrier items having the strongest correlation (as shown in Table 3) predicting interference scores for lack of trust in provider and lack of trust in system, respectively.

RESULTS

Sample Characteristics

Participants' mean age for the total sample was 48.0 years. The total sample was 79% male, 61% White/Caucasian, and 41% rural residents (see Table 1). The mean PHQ-9 score was 14.2 and the mean GAD-7 was 12.1. There were statistically significant differences in demographics and clinical variables across the three studies. For example, CALM study participants were younger, more likely to be Hispanic, and less likely to live in a rural area than participants in the other two studies. In addition, CALM participants reported higher depression and anxiety scores than PAI study participants and were less likely to self-report as White or Black than Tele-PCMHI study participants.

Reported Trust

Using Part 1 prevalence scores, 21% of respondents (74/353) reported a lack of trust in VA mental healthcare providers; 42.2% (149/353) reported a lack of trust in the VA healthcare system (chi-square=36.87, p<.001). The mean Part 2 interference score (possible range 0-5) for lacking trust in VA mental healthcare providers was 0.76 (SD=1.56), while the mean interference score for lacking trust in the VA healthcare system was 1.33 (SD=1.78). Welch's t-test was significant t(684.95)=-4.49, p<.001. Part 1 prevalence responses regarding lack of trust in VA mental healthcare providers were significantly correlated with Part 1 prevalence regarding lack of trust in the VA system (rho=0.29; p<0.001) as were Part 2 provider and system lack of trust interference scores (rho=.40; p<.001).

Demographic and Clinical Correlates of Lack of Trust

The correlations between Part 1 prevalence and Part 2 interference provider and system trust scores and demographic and clinical variables are shown in Table 2. Age was the only demographic variable to significantly (inversely) correlate with lack of trust in the VA healthcare system. Younger veterans were more likely to lack trust in the VA healthcare system (rho=-.11, p=.04) and to report that this lack of trust interfered with getting needed mental healthcare (rho=-.11, p=.04) than older veterans.

PHQ-9 and GAD-7 scores were significantly (positively) correlated with prevalence and interference scores for both lack of trust in providers and in the VA system (PHQ-9: rho=.21 to .23; GAD-7: rho=.21 to .25), respectively, all p-values <.001). Veterans with more self-reported symptoms on these measures were more likely to lack trust in VA mental healthcare providers and in the VA healthcare system (Part 1 prevalence score) and to report greater interference in getting needed mental healthcare due to the lack of trust (Part 2 interference score) than veterans with fewer self-reported symptoms.

Correlations of Other PAI Barrier Items with Lack of Trust

Because most PAI barrier items had a positive, non-zero correlation with the lack of trust items, we show all PAI interference scores in Table 3. Correlation coefficients for the lack of trust in VA mental health providers interfering with needed mental healthcare ranged from .02 (Lose income taking time off work) to .62 (VA mental healthcare providers did not

genuinely care about you). Correlation coefficients for the lack of trust in the VA healthcare system interfering ranged from .06 (Did not get reminder phone calls) to .48 (Feeling stuck in VA "red tape" or paperwork). Notably, providers and staff not genuinely caring about you were among the top four barriers on both lists.

Linear Regressions Predicting Provider and System Trust

Table 4 displays linear regression results predicting lack of provider trust interfering with getting needed VA mental healthcare based on demographic, clinical, and the ten PAI interference items with the strongest bivariate correlations (see Table 3). Table 5 displays the same regression model predicting lack of system trust interfering with getting needed VA mental healthcare. Demographic and clinical variables did not remain significant in either model. Not surprisingly, five of the six significant access barriers predicting lack of provider trust (Table 4) were related to provider and staff behaviors. The sixth was feeling stuck in VA red tape. In the system trust regression (Table 5), four PAI barriers were significant: feeling stuck in VA red tape, fear that one's right to own a gun might be taken away, feeling that one should just 'tough it out', and feeling that staff do not genuinely care about you.

DISCUSSION

We found a significant correlation between veterans' lack of trust in VA mental healthcare providers and in the VA healthcare system. This is consistent with prior literature suggesting that system trust may be influenced by interpersonal trust among other factors (Ward, 2017). The mean interference score was greater for lack of trust in the VA healthcare system than for lack of trust in VA mental healthcare providers. Lack of trust in the healthcare system is reported elsewhere to be more prevalent than lack of trust in providers and is strongly associated with worse self-reported health(Armstrong et al., 2006).

Bivariate correlation results will be discussed next then regression results. Significant bivariate correlations for age were identified. Similar correlations between lack of trust and age are reported elsewhere (Hall et al., 2001). The system trust correlations with age are also consistent with the Veteran Experience Office 2021 VA Trust Report and 2021 VA Survey of Veteran Enrollees which both reported that older veterans reported more trust in the VA healthcare system than younger veterans (Department of Veterans Affairs, 2021; Wang et al., 2021).

Depression and anxiety symptom severity were significantly correlated with the prevalence and interference of lack of trust in providers and lack of trust in the VA system. This finding is consistent with other studies which demonstrated a strong correlation between greater mental health symptoms and greater distrust in healthcare (Guerrero et al., 2015; S. Lee et al., 2014). Informing providers and staff about the demographic and clinical groups at higher risk for lack of trust interfering with needed mental healthcare is one step towards addressing this problem, as well as utilizing the activities described below that promote patient/provider trust. However, in the presence of PAI access barriers, none of the above demographic or clinical remained significant.

The VA's FY18-24 Strategic Plan (Department of Veterans Affairs, Office of Enterprise Integration, 2019) and the 2018 American Board of Internal Medicine Foundation Forum on [Re]Building Trust (T. H. Lee et al., 2019), both highlight the importance of patient experience and building patient trust. Building and maintaining trust in a healthcare environment is complex and often requires a multifaceted approach. The high number and variety of PAI items found to correlate with trust support a multifaceted approach to improving trust. Many of the PAI items with the strongest correlations were interpersonal factors (e.g., not caring, not taking problems seriously, not asking for patient's opinions, not showing respect). Interestingly, the financial, temporal, or geographic barriers were among the more weakly correlated PAI items.

The significant PAI items in the multivariate model predicting lack of trust in VA mental health providers interfering with getting needed mental healthcare were mostly attributable to interactions with providers and staff. To address these barriers, Zulman and colleagues (Zulman et al., 2020) identified five categories of evidence-based activities that promote patient/provider trust: (1) prepare with intention; (2) listen intently and completely; (3) agree on what matters most; (4) connect with the patient's story; and (5) explore emotional cues. The other significant PAI item in the provider model was more administrative in nature (feeling stuck in VA red tape) and is discussed further below.

The significant PAI items in the multivariate model predicting lack of trust in VA healthcare system interference included administrative (red tape and gun rights), stigma (tough it out), and interpersonal (staff not caring about you) items. These barriers also suggest a multifaceted approach from making administrative and clinical processes of care less burdensome for veterans, to decreasing stigma, to improving interactions with VA staff. The red tape barrier could be addressed by a combination of streamlining the administrative and clinical processes from the perspective of the veteran and utilizing the patient/provider activities described above for all providers and staff who have contact with veteran patients. The gun rights barrier could be addressed with straightforward messaging about the relationship between gun rights and mental health treatment. The use of media resources (e.g., https://www.maketheconnection.net/) and peers to communicate veterans' experiences accessing mental health treatment can address stigma barriers. Interpersonal staff barriers can be addressed with the activities described above to promote patient/provider trust.

There are several limitations to these analyses. These data are cross-sectional; therefore, the direction and strength of the relationship between lack of trust and other perceived access barriers over time need to be examined in a longitudinal study. There were study design, demographic, and clinical differences between the studies combined for these analyses. Two studies (Tele-PCMHI and CALM) recruited veterans for an intervention trial and one (PAI) recruited veterans for a one-time interview only. However, all three studies recruited veterans with a history of VA mental health care. The PAI was originally designed to identify actionable access barriers and not to identify access barriers that impact trust. As such, these are exploratory analyses in need of replication. As exploratory analyses, we did not correct for multiple comparisons. PAI items pertaining to digital health barriers were excluded because they did not use the same Part 1 and 2 formats as other items. While VHA is the largest integrated healthcare system in the US, it is unique in many ways. As a

result, our findings may not generalize to other patient populations and healthcare systems. We examined experiential trust, rooted in patients' past experiences with VA-based mental healthcare; we did not address expectant or presumptive trust, which is in play before a first encounter. However, prior to enrolling in VA health care, veterans have reported avoiding the VA due to barriers similar to those covered in the PAI (e.g., uncaring and nonresponsive providers) (Fischer et al., 2016). The lack of provider and system trust were addressed by only one question each in this study. However, this approach is supported by findings that healthcare system trust can be effectively measured with a single question (Zheng et al., 2002). The PAI is focused on access to mental healthcare and would likely need to be modified for physical health treatment or more specific interventions such as vaccinations. Finally, these data were collected before the COVID-19 pandemic and therefore we do not know how the pandemic affected veterans' trust in VA mental health providers or the VA healthcare system or the correlations of trust with other access barriers.

CONCLUSION

In conclusion, trust in healthcare providers and in healthcare systems is critical because of the uncertainty and risk of healthcare interventions. The effect of trust is especially evident during national healthcare crises, such as the current COVID-19 pandemic. PAI items may help identify actionable perceived access barriers that can be addressed to improve provider and healthcare system trust.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Funding:

Veterans Affairs Health Services Research and Development (Grant #CRE 12-300) and South-Central Mental Illness Research, Education and Clinical Center. Samantha Connolly's contribution to this work was supported by the Department of Veterans Affairs Office of Academic Affiliations Advanced Fellowship Program in Health Services Research, the Center for Healthcare Organization and Implementation Research (CHOIR), VA Boston Healthcare System.

REFERENCES

- Armstrong K, Rose A, Peters N, Long JA, McMurphy S, & Shea JA (2006). Distrust of the health care system and self-reported health in the United States. Journal of General Internal Medicine, 21(4), 292–297. 10.1111/j.1525-1497.2006.00396.x [PubMed: 16686803]
- Birkhäuer J, Gaab J, Kossowsky J, Hasler S, Krummenacher P, Werner C, & Gerger H (2017). Trust in the health care professional and health outcome: A meta-analysis. PLoS ONE, 12(2), e0170988. 10.1371/journal.pone.0170988 [PubMed: 28170443]
- Brown MT, Bussell J, Dutta S, Davis K, Strong S, & Mathew S (2016). Medication adherence: Truth and consequences. The American Journal of the Medical Sciences, 351(4), 387–399. 10.1016/j.amjms.2016.01.010 [PubMed: 27079345]
- Caterinicchio RP (1979). Testing plausible path models of interpersonal trust in patient-physician treatment relationships. Social Science & Medicine. Part A: Medical Psychology & Medical Sociology, 13A(1), 81–99. 10.1016/0160-7979(79)90011-0
- Covey SMR (2006). The Speed of Trust: The one thing that changes everything. Free Press.
- Cucciare MA, Marchant K, Abraham T, Ecker A, Han X, White P, Craske MG, & Lindsay J (2021). A randomized controlled trial comparing a manual and computer version of CALM in VA

community-based outpatient clinics. Journal of Affective Disorders Reports, 6, 100202. 10.1016/j.jadr.2021.100202 [PubMed: 34423330]

- Cucciare MA, Marchant K, Lindsay J, Craske MG, Ecker A, Day S, Hogan J, Henn J, LeBeau RT, Rabalais A, Rose RD, Qualls M, Treanor M, & Abraham TH (2020). An evidence-based model for disseminating-implementing coordinated anxiety learning and management in Department of Veterans Affairs' community-based outpatient clinics. The Journal of Rural Health, 36(3), 371–380. 10.1111/jrh.12398 [PubMed: 31508861]
- Department of Veterans Affairs. (2021). VA Trust Report: Fiscal year 2021 Quarter 2. My VA. https://blogs.va.gov/VAntage/wp-content/uploads/2021/05/va-trust-report-fy21q2.pdf
- Department of Veterans Affairs, Office of Enterprise Integration. (2019). Department of Veterans Affairs Fiscal Year 2018—2024 Strategic Plan. https://www.va.gov/oei/docs/VA2018-2024strategicPlan.pdf
- Department of Veterans Affairs, Office of Inspector General, Offices of Audits and Evaluations and Healthcare Inspections. (2012). Veterans Health Administration: Review of veterans' access to mental health care (Publication No. 12-00900–168; pp. 1–63). https://www.va.gov/oig/pubs/VAOIG-12-00900-168.pdf
- Fischer EP, McSweeney JC, Wright P, Cheney A, Curran GM, Henderson K, & Fortney JC (2016). Overcoming barriers to sustained engagement in mental health care: Perspectives of rural veterans and providers. The Journal of Rural Health, 32(4), 429–438. 10.1111/jrh.12203 [PubMed: 27557334]
- Gilson L. (2003). Trust and the development of health care as a social institution. Social Science & Medicine (1982), 56(7), 1453–1468. 10.1016/s0277-9536(02)00142-9 [PubMed: 12614697]
- Goold SD (2002). Trust, distrust and trustworthiness. Journal of General Internal Medicine, 17(1), 79–81. 10.1046/j.1525-1497.2002.11132.x [PubMed: 11903779]
- Guerrero N, Mendes de Leon CF, Evans DA, & Jacobs EA (2015). Determinants of trust in health care in an older population. Journal of the American Geriatrics Society, 63(3), 553–557. 10.1111/jgs.13316 [PubMed: 25752478]
- Hall MA, Dugan E, Zheng B, & Mishra AK (2001). Trust in physicians and medical institutions: What is it, can it be measured, and does it matter? The Milbank Quarterly, 79(4), 613–639, v. 10.1111/1468-0009.00223 [PubMed: 11789119]
- Keating NL, Green DC, Kao AC, Gazmararian JA, Wu VY, & Cleary PD (2002). How are patients' specific ambulatory care experiences related to trust, satisfaction, and considering changing physicians? Journal of General Internal Medicine, 17(1), 29–39. 10.1046/ j.1525-1497.2002.10209.x [PubMed: 11903773]
- Khullar D (2019). Building trust in health care—Why, where, and how. American Medical Association, 322(6), 507–509. 10.1001/jama.2019.4892
- Kroenke K, Spitzer RL, & Williams JBW (2001). The PHQ-9: Validity of a brief depression severity measure. Journal of General Internal Medicine, 16(9), 606–613. 10.1046/j.1525-1497.2001.016009606.x [PubMed: 11556941]
- Lee S, Lam IMH, Kwok KPS, & Leung CMC (2014). A community-based epidemiological study of health anxiety and generalized anxiety disorder. Journal of Anxiety Disorders, 28(2), 187–194. 10.1016/j.janxdis.2013.10.002 [PubMed: 24295847]
- Lee TH, McGlynn EA, & Safran DG (2019). A framework for increasing trust between patients and the organizations that care for them. JAMA, 321(6), 539–540. 10.1001/jama.2018.19186 [PubMed: 30676628]
- Owen RR, Woodward EN, Drummond KL, Deen TL, Oliver KA, Petersen NJ, Meit SS, Fortney JC, & Kirchner JE (2019). Using implementation facilitation to implement primary care mental health integration via clinical video telehealth in rural clinics: Protocol for a hybrid type 2 cluster randomized stepped-wedge design. Implementation Science: IS, 14(1), 33. 10.1186/s13012-019-0875-5 [PubMed: 30898129]
- Ozawa S, & Sripad P (2013). How do you measure trust in the health system? A systematic review of the literature. Social Science & Medicine (1982), 91, 10–14. 10.1016/j.socscimed.2013.05.005 [PubMed: 23849233]

Pyne JM, Kelly PA, Fischer EP, Miller CJ, Connolly SL, Wright P, Zamora K, Koenig CJ, Seal KH, & Fortney JC (2022). Initial concurrent and convergent validity of the Perceived Access Inventory (PAI) for mental health services. Psychological Services, 19(1), 118–124. 10.1037/ser0000504 [PubMed: 33030947]

- Pyne JM, Kelly PA, Fischer EP, Miller CJ, Wright P, Zamora K, Koenig CJ, Stanley R, Seal K, Burgess JF, & Fortney JC (2020). Development of the Perceived Access Inventory: A patient-centered measure of access to mental health care. Psychological Services, 17(1), 13–24. 10.1037/ser0000235 [PubMed: 30024190]
- Roy-Byrne P, Craske MG, Sullivan G, Rose RD, Edlund MJ, Lang AJ, Bystritsky A, Welch SS, Chavira DA, Golinelli D, Campbell-Sills L, Sherbourne CD, & Stein MB (2010). Delivery of evidence-based treatment for multiple anxiety disorders in primary care: A randomized controlled trial. American Medical Association, 303(19), 1921–1928. 10.1001/jama.2010.608
- Rural Health Research Gateway. (n.d.). Rural-Urban Commuting Area (RUCA) Development Project: Demographic description and frontier enhancement. Retrieved March 3, 2022, from https://www.ruralhealthresearch.org/projects/100000143
- Spitzer RL, Kroenke K, & Williams JB (1999). Validation and utility of a self-report version of PRIME-MD: The PHQ primary care study. JAMA, 282(18), 1737–1744. 10.1001/jama.282.18.1737 [PubMed: 10568646]
- Spitzer RL, Kroenke K, Williams JBW, & Löwe B (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. Archives of Internal Medicine, 166(10), 1092–1097. 10.1001/archinte.166.10.1092 [PubMed: 16717171]
- Thiede M. (2005). Information and access to health care: Is there a role for trust? Social Science & Medicine (1982), 61(7), 1452–1462. 10.1016/j.socscimed.2004.11.076 [PubMed: 16005780]
- Veterans Health Administration, Office of Policy and Planning. (n.d.).

 2019 Survey of Veteran Enrollees' Health and Use of Health
 Care [Survey of Enrollees']. https://www.va.gov/HEALTHPOLICYPLANNING/
 SOE2019/2019_Enrollee_Data_Findings_Report-March_2020_508_Compliant.pd
- Veterans Health Administration scandal of 2014. (2021). In Wikipedia. https://en.wikipedia.org/w/index.php?title=Veterans_Health_Administration_scandal_of_2014&oldid=1056460948
- Wang ZJ, Dhanireddy P, Prince C, Larsen M, Schimpt M, & Pearman G (2021). 2021 Survey of Veteran Enrollees' Health and Use of Health Care (Data Findings No. VA245-17-C–0178; p. 207). https://www.va.gov/VHASTRATEGY/SOE2021/2021_Enrollee_Data_Findings_Report-508_Compliant.pdf
- Ward PR (2017). Improving access to, use of, and outcomes from public health programs: The importance of building and maintaining trust with patients/clients. Frontiers in Public Health, 5, 22. 10.3389/fpubh.2017.00022 [PubMed: 28337430]
- Zheng B, Hall MA, Dugan E, Kidd KE, & Levine D (2002). Development of a scale to measure patients' trust in health insurers. Health Services Research, 37(1), 187–202. [PubMed: 11949920]
- Zulman DM, Haverfield MC, Shaw JG, Brown-Johnson CG, Schwartz R, Tierney AA, Zionts DL, Safaeinili N, Fischer M, Thadaney Israni S, Asch SM, & Verghese A (2020). Practices to foster physician presence and connection with patients in the clinical encounter. JAMA, 323(1), 70–81. 10.1001/jama.2019.19003 [PubMed: 31910284]

Highlights:

1. Lack of trust in the VA healthcare system was reported more frequently than lack of trust in VA mental health providers using the Perceived Access Inventory (PAI).

- 2. Interference with getting needed mental healthcare was greater for lacking trust in the VA healthcare system than lacking trust in VA mental health providers.
- **3.** In multivariate regressions, PAI access barriers were significant predictors of lack of trust interfering with getting needed mental healthcare; demographic, depression and anxiety symptom severity were not.
- **4.** The PAI can be used to identify actionable perceived access barriers that can be targeted in the development and testing of VA interventions to increase trust.

Pyne et al.

Table 1

Demographics and Clinical Description of Veteran Participants (N=353)^a

Page 13

	PA	I	Tele-P	СМНІ	CA	LM	То	tal		
	N=	92	N=	125	N=	136	N=	353		
Age ² , 3	M	SD	M	SD	M	SD	M	SD	F	p _F
	50.8	2.4	50.5	15.2	43.8	13.1	48.0	14.1	10.6	<.01
	N	%	N	%	N	%	N	%		
Gender, male	72	78	107	86	100	74	279	79	2.9	>.05
$Race^b$										
White 3	60	65	84	67	69	51	213	61	4.3	.01
Black $^{\mathcal{J}}$	21	23	37	30	20	15	78	22	4.4	.01
Hispanic ² , 3	1	1	4	3	36	27	41	12	10.4	<.01
American										
Indian/Alaska										
Native	8	9	4	3	4	3	16	5		
Asian	2	2	0	0	0	0	2	<1		
Multiracial	1	1	1	.8	12	9	14	4		
Other/Unknown	1	1	1	0.8	20	15	22	6		
Rural Residence ² , 3	46	50	65	52	32	24	143	41	11.9	<.01
	M	SD	M	SD	M	SD	M	SD	F	$\mathbf{p_F}$
PHQ-9 total ²	14.2	5.6	13.1	5.8	15.2	6.4	14.2	6.1	3.9	.02
GAD-7 total ²	11.7	6.3	11.3	5.9	13.1	5.7	12.1	5.0	3.4	.03

a) N (%) unless otherwise noted. Superscript 1 denotes a statistically significant (p<.05) between PAI and Tele-PCMHI, 2 denotes PAI versus CALM, 3 denotes Tele-PCMHI versus CALM. Group differences obtained using Tukey's Honestly Significant Difference post-hoc comparison test

Note. PHQ-9 is 9-item Patient Health Questionnaire depression module, scores can range from 0 to 27, a standard cut-off for a positive screen is 10; GAD-7 is 7-item Generalized Anxiety Disorder screen, scores can range from 0 to 21, a standard cut-off for a positive screen is 10.

b) Total N does not equal 353 because participants were instructed to check all that apply.

Table 2 Spearman Correlation of PAI Trust Items with Demographic and Clinical Variables

Page 14

	Lack of Pr	ovider Trust	Lack of System Trust			
	Part 1 Prevalence	Part 2 Interference	Part 1 Prevalence	Part 2 Interference		
Age	09	08	11*	11*		
Gender, Male	.03	.03	.007	.01		
Race, White	.02	.02	007	006		
Rural residence	09	09	.03	008		
PHQ-9 total score	.21 ***	.21***	.20***	.23 ***		
GAD-7 total score	.23 ***	.24***	.21 ***	.25 ***		

^{*}p < .05.

Pyne et al.

p < .01

p < .001,

Table 3

Spearman Correlation Matrix of PAI Items that Interfere with Access to Needed Mental Healthcare with Lack of Provide and System Trust a

PAI Item	Lack Provider Trust rho	p- value	95% CI	Lack system trust rho	p- value	95% CI
Provider does not genuinely care	.62	<.001	.5568	.39	<.001	.2947
Providers do not take my problems seriously	.50	<.001	.4157	.31	<.001	.2140
Staff does not genuinely care	.44	<.001	.3552	.33	<.001	.2342
Providers lack knowledge military culture	.44	<.001	.3956	.29	<.001	.2140
Stuck in VA red tape	.40	<.001	.3149	.48	<.001	.3956
Providers fail to ask for my opinion	.40	<.001	.3048	.24	<.001	.1434
Lack system trust	.40	<.001	.3149			
Provider fails to show respect	.37	<.001	.2846	.19	<.001	.0929
Appointments too short	.36	<.001	.2745	.26	<.001	.1636
Feel should just "tough it out"	.32	<.001	.2241	.35	<.001	.2544
Provider not available when needed	.32	<.001	.2241	.29	<.001	.1938
Have to repeat my story	.32	<.001	.2241	.25	<.001	.1535
Inconvenient appointment times	.31	<.001	.2140	.23	<.001	.1333
Staff fails to show respect	.29	<.001	.1938	.23	<.001	.1332
Problems with military and VA sharing records	.27	<.001	.1737	.27	<.001	.1636
Not aware of all services available	.27	<.001	.1737	.26	<.001	.1636
Problems getting in touch with provider	.25	<.001	.1535	.31	<.001	.2140
Long time between appointments	.23	<.001	.1333	.26	<.001	.1635
Spend a lot of money overall	.23	<.001	.1333	.26	<.001	.1635
Not seeing the same provider	.23	<.001	.1333	.20	<.001	.0930
Travel a long distance	.22	<.001	.1232	.21	<.001	.1131
Feel weak because need mental health help	.22	<.001	.1131	.21	<.001	.1131
Right to own gun might be taken away	.21	<.001	.1131	.29	<.001	.1938
No evening or weekend clinics	.20	.002	.0731	.26	<.001	.1437
Different cultural, religious, personal values than provider	.19	<.001	.0929	.19	<.001	.0829
Spend a lot of time in the waiting room	.18	<.001	.0828	.31	<.001	.2140
Problem with transportation	.18	<.001	.0728	.25	<.001	.1535
Spend a lot of money on travel	.17	.002	.0627	.24	<.001	.1333
Did not get reminder phone calls	.11	.034	.0223	.06	.29	0516
Need childcare	.04	.47	0714	.08	.12	0219
Lose income taking time off work	.02	.68	0813	.15	.006	.0425

 $^{^{}a)}$ PAI items listed in descending order of rho for Lack Provider Trust

Table 4

Linear Regression Predicting Lack of Trust in VA Mental Health Providers Interfering with Getting Needed VA Mental Healthcare

Variables	Unstandardized Beta	Standardized Beta	SE
Constant	.06	.00	.29
Age	01	08	.00
Gender, Male	.12	.03	.14
Race, White, Non-Hispanic	.19	.06	.12
PHQ-9 total	.00	.00	.01
GAD total	.02	.08	.01
Provider does not genuinely care	.40	.37***	.07
Providers lack knowledge military culture	.16	.14**	.06
Providers do not take my problems seriously	.18	.15**	.07
Stuck in VA red tape	.11	.12*	.04
Staff does not genuinely care	.15	.11*	.07
Provider fails to show respect	.16	.09*	.08
Provider not available when needed	04	03	.05
Providers fail to ask for my opinion	.05	.03	.07
Have to repeat my story	.03	.03	.05
Appointments too short	03	02	.06

Adjusted $R^2 = .59$

Note: N = 353. We examined the impact of PAI access barriers on lack of trust in VA mental healthcare providers interfering with getting needed mental healthcare controlling for demographic and clinical variables. PHQ-9 is 9-item Patient Health Questionnaire depression module. GAD-7 is 7-item Generalized Anxiety Disorder screen.

* p<.05

** p<.01

*** p<.001

Table 5

Linear Regression Predicting Lack of Trust in VA Healthcare System Interfering with Getting Needed VA Mental Healthcare

Variables	Unstandardized Beta	Standardized Beta	SE
Constant	.11	.00	.41
Age	.00	02	.01
Gender, Male	07	02	.20
Race, White, Non-Hispanic	05	01	.16
PHQ-9 total	.00	.01	.02
GAD total	.04	.12	.02
Stuck in VA red tape	.27	.26***	.06
Right to own gun might be taken away	.23	.19***	.06
Feel should just "tough it out"	.11	.11*	.05
Staff does not genuinely care	.18	.12*	.09
Spend a lot of time in the waiting room	.16	.09	.09
Providers do not take my problems seriously	.16	.11	.09
Provider not available when needed	11	09	.07
Provider does not genuinely care	.14	.10	.11
Problems getting in touch with provider	.09	.07	.06
Providers lack knowledge military culture	07	05	.08

Adjusted $R^2 = .38$

Note: N = 353. We examined the impact of PAI access barriers on lack of trust in VA healthcare system interfering with getting needed mental healthcare controlling for demographic and clinical variables. PHQ-9 is 9-item Patient Health Questionnaire depression module. GAD-7 is 7-item Generalized Anxiety Disorder screen.

* p<.05

** p<.01

*** p<.001