

Mental health outcomes for doctors treated at UK Practitioner Health Service: a pilot study

Clare Gerada¹
Mark Ashworth²
Lucy Warner³
Jessica Willis⁴
Jenny Keen⁵

¹ Medical director, Practitioner Health Service, London, UK

² Reader in Primary Care, School of Population Health and Environmental Sciences, King's College London, UK

³ Chief executive, Practitioner Health Service London, UK

⁴ Information analyst, Practitioner Health Service London, UK

⁵ GP, Practitioner Health Service London, UK

Address for correspondence:

Clare Gerada
Medical director, Practitioner Health Service
INHS Practitioner Health Programme, Riverside
Medical Centre, 18 Wandsworth Rd, London SW8 2JB
E-mail: jenny.keen1@nhs.net

Abstract

Introduction: Many studies have shown high levels of distress among doctors and have investigated the reasons for this. There are very few studies of the effectiveness of treatment interventions. This pilot study evaluates outcomes for the UK Practitioner Health Service (PHS). PHS is an innovative service providing mental health interventions and support including addiction treatment to self-referred doctors and dentists in the UK. This study compares repeated psychometric test scores at entry and 6 months into treatment or discharge. The outcomes are placed in a context of 10 years of descriptive data. The study pilots this method of measuring outcomes.

Methods: The data are drawn from routinely collected anonymised data within the service. The outcome study uses a set of five validated psychometric tests with standardized outcome measures and compares scores at entry and at 6 months. Included in the study is the first cohort of patients to complete two sets of psychometric tests routinely administered by the service for clinical use from December 2017 to June 2018. The primary outcome measure was the effect

size, a standardised measure of change calculated as the change score divided by the standard deviation of the baseline sample. The instruments used are as follows: Patient Health Questionnaire-9 (PHQ9); Generalised Anxiety Disorder-7 (GAD7); Psychological Outcome Profiles (PSYCHLOPS); Warwick-Edinburgh Mental Well-being Scale (WEMWBS); Perceived Stress Scale (PSS).

Results: The baseline scores and standardised change scores during the six months for those patients who completed questionnaires are summarised below. Instrument Effect Size (95% confidence intervals): PHQ9 0.73 (0.60, 0.86); n=229; GAD7 0.96 (0.81, 1.12); n=229; PSYCHLOPS 1.39 (1.03, 1.75); n=150; WEMWBS 1.19 (0.97, 1.42); n=150; PSS 1.41 (1.16, 1.66); n=150.

Discussion: All five psychometric instruments demonstrated significant improvement following treatment within PHS. This suggests positive early outcomes for the service. It also suggests that this method of measurement may be useful as statistical significance was achieved with a relatively small initial sample size, suggesting that the effect size is large enough for change to be detected by these instruments.

KEY WORDS: Practitioner Health Service, distress, anxiety, doctors, mental health.

Introduction

Background

There are many reasons why a specialist service for doctors was considered necessary in the UK and was commissioned in 2008 (1,2). Despite having higher rates of mental illness than the general population, doctors often have poor access to healthcare, especially mental health services (3). Doctors have many personal, professional and institutional barriers to accessing care when they need it. Some of these barriers are practical such as long, irregular hours or difficulties in actually registering with a general practitioner when regularly moving address. Despite working in the health system, doctors often do not know where to seek help. They also face emotional barriers - an unwillingness to admit to illness and preferring to suffer in silence (4). Some doctors deliberately conceal their problems. Perhaps the biggest barriers for doctors when accessing care are concerns regarding confidentiality,

the possible impact disclosing an illness might have on their career, and that any transgression might lead to a referral to the Regulator. This is especially the case where addiction is the issue.

As a result of these problems doctors may self-diagnose and self-treat. The need to see a medical professional unknown to the practitioner-patient is all the more important where the sick doctor wants to discuss a sensitive issue.

When doctors do present for help, it may be hard for caregivers, especially other doctors, to see beyond the professional to the patient. Doctors may treat sick doctors differently from other patients.

The professional responsibilities placed on doctors also cause anxieties, where the caregiver or colleague may feel the need to alert the regulator to the doctor's illness and escalate issues, often unnecessarily.

All of these factors were involved in the decision to commission an accessible and confidential service available for doctors, run by staff who understand the special needs of this hard-to-reach group.

PHS is a confidential, free, self-referral NHS service for doctors and dentists with mental illness and addiction problems, which has now been running for 10 years in the UK and is able to offer a wide range of pharmacological treatments and talking therapies.

There have been many studies looking at prevalence and causes of distress and mental ill health among doctors. This paper will give only a brief overview.

As discussed in the PHS 10-year report (5) doctors may be more at risk of mental illness because they are chosen for those very personality factors which foster the antecedents of mental illness - perfectionism, obsessionism and altruism. Doctors occupy a privileged position in society: they have status, expertise, considerable power and are granted access to the most intimate parts of patients' lives. But with these privileges come darker consequences. Doctors contain some of the most painful aspects of their patients' problems for which there is often no technical solution (6). This can be a tremendous burden, and some, without the necessary support and spaces to reflect and talk about their work, may not be able to cope.

Unrealistic expectations from patients, together with a constant fear of being named, blamed or shamed for any errors, adds an extra burden to an already difficult job. The risk of legal actions may lead to defensive practice which does not reflect the reasons doctors entered medicine. Easy access to prescription drugs and knowledge of how to use them is a major risk factor for addiction (7, 8), especially pertinent given the higher rates of addiction amongst anaesthetists, accident and emergency doctors and dentists. Finally, the heavy workload, long and unpredictable hours and sleep deprivation all add to the risks of developing mental illness.

For doctors, a complaint can be the first factor which may eventually lead to future defensive action, depression, anxiety, suicidal thoughts and sadly even suicide (9,10). In 2012, the GMC found that there

were high rates of suicide among doctors going through their processes (4).

Many studies have shown high levels of distress among doctors and have investigated the reasons for this (11-17). There are very few quantitative studies of the effectiveness of treatment interventions although the issue of treatment has been addressed (3, 18-21).

Aims of the study

This study evaluates the first 6 months of outcomes measured by standardised and validated outcome measures for a small pilot cohort of doctor-patients entering the UK NHS practitioner health service, by comparing repeated psychometric test scores at entry and 6 months into treatment or at discharge. The outcomes are placed in a context of 10 years of descriptive data.

Funding, ethics and conflicts of interest

There was no external funding for this non-interventional records-based study.

Data were routinely collected for clinical purposes and were entirely anonymous at the point of data analysis. The Authors were advised that NHS research ethics committee approval is not necessary for service evaluations of this kind.

Three of the Authors work within the service and one, now external, has past links with the service.

Methods

Setting and participants

NHS Practitioner Health Service is an innovative service providing mental health interventions and support including addiction treatment to self-referred doctors and dentists in a large part of the UK. The service is confidential and is possibly unique worldwide in operating completely separately from the profession's regulatory bodies, within an agreed framework. The service provides a wide range of interventions as set out in Table 1.

Included in the study is the first cohort of doctor-patients entering PHP to complete 2 sets of psychometric tests routinely administered by the service for clinical use, at entry and at 6 months or at discharge, from December 2017 to June 2018.

Data collection and analysis

Data were analysed anonymously from PHS computerised records. Participants routinely complete these scores as part of their clinical treatment and the scores were extracted and analysed anonymously. The descriptive data used for context are drawn from routinely collected anonymised data within the service. The outcome data uses a set of 5 validated psychometric tests with standardised outcome scores and compares scores at entry and at 6 months. The primary outcome measure was the effect size, a standardised measure of change calculated as the

Table 1. Services provided as part of PHS service.

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- Telephone advice
 - First contact assessment, formulation and treatment planning with a multi-professional approach to care
 - Brief intervention, cognitive behaviour therapy, relapse prevention, brief psychotherapy, active case management- Prescribing for mental health conditions
 - Community-based detoxification and access to in-patient drug and alcohol detoxification and rehabilitation
 - Substitute medication for opiate addiction
 - Therapeutic blood, urine and hair testing as part of treatment
 - Report writing
 - Attendance at employment tribunals or other work-related hearings
 - Specific interventions, such as behaviour therapy for exam failure
 - Direct liaison with defence organisations/barristers
 - Liaison with educational supervisors/training programme directors where necessary
 - Contact with GMC/GDC supervisor and attendance at GMC/GDC hearings
 - Group work (including for suspended doctors, addiction, reflection) and peer support
 - Expert help for doctors out of work for long periods (e.g. due to illness or erasure from work)
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change score divided by the standard deviation of the baseline sample. Confidence intervals were calculated for the mean change score and applied to the effect size.

Patient mental health questionnaires

The service introduced (from December 2017) a new baseline set of five validated mental health questionnaires:

- Patient Health Questionnaire-9 (PHQ9) (22)
- Generalised Anxiety Disorder-7 (GAD7) (23)
- PSYCHLOPS (24)
- Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (25)
- Perceived Stress Scale (PSS) (26).

All practitioner-patients are asked to complete these questionnaires at registration and to fill them in again six months later. The pilot patients were the first to complete the full range of 5 psychometric tests at entry and at 6 months or discharge.

Patient Health Questionnaire-9 (PHQ-9) and Generalized Anxiety Disorder Assessment-7 (GAD-7) are the national standard measures routinely used by GPs, therapists and psychiatrists as screening and diagnostic tools. PHQ-9 is a measurement for depression and the GAD-7 is a measurement for generalised anxiety disorder.

Psychological Outcome Profiles (PSYCHLOPS) with the introduction of a nationwide extension for GPs to access PHS, known as GP Health (GPH), PHS begun to use (we believe for the first time with this patient group) the Psychological Outcome Profiles question-

naire, PSYCHLOPS. This is a recently developed, validated, individualised, patient-generated, psychometric instrument which can be used as an outcome measure.

PSYCHLOPS is designed to measure change following a therapeutic intervention. It seeks the patient's perspective about psychological distress and is intended to capture items of greatest personal significance rather than imposing an external frame of reference to interpret psychological distress. It promotes a patient-centred definition of therapy outcome. It is patient-generated and can be self-completed. It has questions on problems, function and wellbeing. Patients are asked to describe their main problem (or problems) and how this affects them (function). Responses to all free text questions are scored by the patient for severity.

PSYCHLOPS may be used as a means of setting a focus for therapy from the outset. It is not intended as a diagnostic instrument; it is a measure of change during the course of psychotherapeutic interventions. It captures data before, during and after a course of therapy. Change can be measured throughout the process of therapy, whether or not therapy is completed.

The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) was developed to allow the monitoring of mental wellbeing in the general population and the evaluation of projects, programmes and policies which aim to improve mental wellbeing.

WEMWBS is a 14-item scale with five response categories, summed to provide a single score ranging from 14-70. The items are all worded positively and

cover both feeling and functioning aspects of mental wellbeing. Mean scores for the general population are generally around 51 in the UK.

People with a WEMWBS score of ≤ 40 could be at high risk of major depression and should be advised to seek help. Those with scores between 41 and 45 should be considered in high risk of psychological distress and increased risk of depression.

The Perceived Stress Scale was developed to measure the degree to which situations in one's life are perceived as stressful. The PSS was developed in 1983 and has become one of the most widely used psychological instruments for measuring nonspecific perceived stress.

Sensitivity to change is quantified using the 'Effect Size'. For psychometric instruments of this kind, Effect Size values greater than 0.8 are generally considered clinically significant (26).

Results

Descriptive statistics 2008-2018

Overview

The total number of patients seen in the service in the time frame from the beginning of the service to the date of our search for the study group was 6221.

At the start of the service more men than women presented (M53 vs W47%) but by the end of the first decade women far outnumbered men (M32.5 vs W67.5%).

Over the years, the service has seen a year-on-year drop in the mean age of doctors presenting for treatment, from 51.6 years in 2008 to 38.9 years in 2018. Many are still in training.

The service saw a significant increase in self-referrals in 2016 which coincided with the NHS junior doctor industrial action.

Overall, 430 doctors have been involved in regulatory processes (GMC, GDC).

Most patients (83.5%) suffer from mental health problems; 10.1% have addiction issues and 6.3% other diagnoses.

Around 25% of practitioner-patients were not at work when they presented to the service.

There has been a large drop in those involved with the regulator, from 33% (2008/9) to less than 5.1% (2017/18). The mean over the years 2008-2018 is 11%.

Over the years there has been a marked drop in the percentage of doctors with addiction problems, from 36% (2008/09) to 10.1% (2017/2018).

As a percentage of those presenting from each specialty, anaesthetists, dentists and emergency practitioners are more likely to present with problems related to addiction than patients from other specialties.

Over the ten years the patients have become younger, and more female (see below). The average age has dropped from 51.6 years (2008/9) to 38.9 years (2017/2018); across the ten-year period, the average age is around 41 years. The age of doctors

presenting for care has ranged from 24 years old (newly qualified doctors just days from starting work), to those at the other end of their career (recently retired doctors, in their early to late 70s).

Gender

The gender breakdown of doctors qualifying has changed considerably over the years since PHS has been in operation. For the first year, 53% of all our patients were men, but this dropped to 32.5% by 2017/2018. Currently women make up around 67% of patients.

Across the health service, between 2009 and 2017 the number of female hospital and community doctors increased by 11,000, whilst the number of male doctors over the same period rose by just over 4,000. In 2017, 41% of all doctors were women compared to 35% in 2009. The percentage also varies across different specialties - 51% of all psychiatrists are women compared to only 27% of surgeons, for example.

General practice has a higher proportion of women compared to hospital medicine, both at career grade level and at the specialty training/registrars group level.

At PHS there has been a change in the proportion of women attending and differences across specialties.

As with the national figures, the service has seen more male surgeons than female (60 vs 40%); paediatrics, obstetrics and gynaecology, and those on vocational training GP schemes also have significantly more women than men (around 80 vs 20%). However, women attending PHS are still over-represented within these specialties. For example, only 27% of surgeons are women yet they represent 38% of surgeons presenting to PHS.

Doctors in training vs consultant-grade or GP

Over half of the doctors attending PHS (54%) have not yet completed their speciality training. This is the case for every specialty other than general practice (this reflects the much shorter training for GPs [three years] compared to all other specialties). Consultants and general practitioners are more likely to present with complex mental illnesses than their younger counterparts still in training. These issues cross a broad range of mental health, financial and work areas.

In relation to the other categories, the caseload over the last ten years has identified that:

Disability - only 8% of those who have registered with PHS have identified as having a disability. Patients are not asked to distinguish between physical or mental disabilities.

Ethnicity - information on ethnicity is broken down into seven categories. Of the patients who have registered with PHS over the last ten years, 62% have identified themselves as White, 22% Asian or Asian British, 4% as Black or Black British, 4% as Mixed ethnicity, 2% as Chinese and 2% as 'Other'. When asked, 4% of PHS patients did not identify their race.

Religion or belief - this item has eight categories. When asked, 33% identified themselves as Christian, 31% as 'other' and 26% as 'no religion'. Other

religions recorded were Muslim (9%), Hindu (7%), Jewish (2%), Sikh (1%) and Buddhist (1%).

Sexual orientation - of those patients who have registered with PHS the majority have identified themselves as heterosexual (88%), 4% as a gay man, 1% as a gay woman/ lesbian, 1% as bisexual, 1% as other; and 5% indicated that they would prefer not to say.

Presenting problems

Over the 10 years, the sort of problems doctors present with has stayed more or less the same - anxiety, depression, obsessive compulsive disorder, alcohol and drug addiction. What has changed is the proportions of each. During the first year more than one third of all doctors (36%) presented with problems related to either drug or alcohol (mainly alcohol) misuse. This figure for the ten-year period (2008-2018) has dropped to 10.1%; currently for 2017-2018 only around seven per cent of doctors are presenting with

addiction issues. These addictions are mainly to alcohol (over 75% of cases) but also include addiction to drugs, gambling and, for a small number of doctors, pornography or online gaming.

Of those with mental health problems, 82% have problems with anxiety, mild to moderate depression, mild to moderate obsessive-compulsive disorder or adjustment disorder; the remaining 18% have serious (or major) mental health problems, mostly eating disorders or bipolar affective disorder, and a few have personality disorder or psychosis (Table 2).

In actual numbers, and across all specialities, general practitioners were most likely to present with problems related to addiction (35% of the total), but this is related to the higher number of GPs able to access PHS. However, when weighted according to the numbers presenting from each speciality, anaesthetists, emergency department doctors and dentists have the highest percentages presenting with problems related to addiction (Table 3).

Table 2. Presenting mental health problem 2008/9 vs 2017/18.

Year	Mental Health (Common and Complex)	Addiction	Other
2008/9	62% (114) Common 61% (70/114) Complex 39% (44/11)	36% (67) Alcohol 77% (51/67) Drugs and Other 23% 16/67	2% (3)
2017/18	83.5% (3146) Common 82% (2577/3146) Complex 18% (569/3146)	10.1% (381) Alcohol 75% (382) Drugs and Other 25% 95/381	6.3% (240)

Table 3.

	% of each speciality with addiction disorder
Paediatrician	<1
GP Trainee	3.4
Foundation Dr	8.4
GP	8.7
Physician	9.7
O+G	9.8
Surgeon	9.8
Pathology	9.8
Average	10.5
Others	11.7
Psychiatrist	12.5
Dentist	19.3
Anaesthetist	19.8
Emergency	20.2

Involvement with regulatory bodies

Across the 10 years, 430 doctors have been involved in regulatory proceedings - from referral to the GMC/GDC through to investigation, undertakings, conditions or Fitness to Practice hearings to erasure. Younger doctors are more likely to be involved in regulatory processes than older ones (Table 4); and men are more likely to be than women (69.3 vs 30.7%).

A major change over the years is the number of doctors coming to PHS who are involved in regulatory or formal disciplinary procedures. During the first year, 33% of all new patients had some sort of regulatory involvement. This dropped to just over 5% by year ten (2018) and averaged over the 10 years (2008-2018), 11% of all patients have been involved in regulatory processes. We hope that the drop over the years is a result of doctors are coming to PHS earlier, before their problem has begun to cause difficulties at work.

Whilst the use of drugs and/or alcohol is a common reason why doctors coming to PHS are involved with the regulator, it is by no means only this group who find themselves for one reason or another referred to

Table 4.

Age breakdown of those involved with the regulator	%	Number
Under 29	3	13
30 - 39	25	107
40 - 49	30	129
50 - 59	25	105
>60	18	76

Table 5. Mental health category of those involved with the regulator.

Category	Number	%
Addiction	161	37
Mental Health		
Common	169	39
Complex	80	19
Other	20	5
Total	430	100

them. A breakdown of those involved with regulatory procedures by mental health/addiction category is shown in Table 5.

When compared with the number in each category, overall those presenting with addiction are most likely to be involved in regulatory processes (42.3% of all of those with addiction vs 15% complex mental illness, 7% common mental illness).

All the major specialties have had doctors involved with regulatory processes, but some specialties are over-represented. These tend to be the ones with higher rates of addiction. For example, involvement with the regulator is more likely to be a feature of anaesthetists (17%) and emergency department doctors (16%) as a percentage of those presenting to PHS. Paediatricians (<1%), trainees undertaking their hospital posts (2%) and GP trainees (3%) have the lowest involvement.

Work and Training

At presentation to PHS, around 74% of doctors are in work. Paediatricians, pathologists and foundation doctors are most likely to be at work (nearly 80% of them were at work at presentation), compared to obstetric and gynaecologists (only 66% were working), and emergency department doctors (69% were working).

Of those not working (around 25%), 40% are on short or long-term sick leave; 33% are on either sabbati-

cal/maternity/paternity/retired or unknown, 20% define themselves as unemployed and 7% are suspended from work. Of those not at work at presentation, 76% return to work within 12 months of accessing the service, most within the first six months. This included doctors who had been unemployed for over 10 years, and doctors with severe and enduring mental illness.

There is considerable overlap between unemployment and being involved with regulatory or disciplinary processes. PHS doctors who were not at work at presentation were more likely to be under regulatory processes compared to those who were working at presentation (46.7% compared to 11.5%). Of those doctors with addiction problems who were not working at presentation (161), 67 of them (42%) were undergoing regulatory procedures; 57.5% (46/80) were in the complex mental health category and 46% (77/169) were in the common mental health group.

Trainee Doctors' and dentists' support service

As can be seen from the data, the service has a high percentage of doctors who are in training. To try and prevent mental illness amongst trainees PHS has been specifically commissioned to provide wellbeing and prevention services to trainees in London and the South East area. The Trainee Doctors' and Dentists' Support Service (TDDSS) is not a treatment service per se, and rather a service which is able to signpost trainees to the most appropriate services. It can offer assessment plus up to four sessions of individual face-to-face support and signposting to a range of support services including online cognitive behaviour therapy (CBT), mindfulness and the other groups offered by PHS.

Over the first 14 months of this service, 297 junior doctors and a much smaller number of dentists self-referred, of whom 61 doctors were unwell enough to be on sick leave and 5 were suspended or unemployed. The majority of self-referrals were for anxiety, low mood and stress-related problems, often related to workplace stress and difficult working conditions such as understaffing, difficult rotas, long working hours and lack of senior support. Approximately half of these doctors when fully assessed were found to be mentally unwell to the extent of needing medication and/or behaviour treatment for conditions including depression and addictions. These doctors were signposted to the PHS main service or to their own GP and local services. Others reflected the wide variety of distress found across the service including relationship difficulties, adjustment problems and employment issues.

Outcomes from patients using PHS based on five psychometric instruments

The baseline scores and changes in scores during the six months for those patients who completed questionnaires from December 2017 to June 2018 are summarised below.

Instrument Effect Size with 95% confidence intervals:

PHQ9 0.73 (0.60, 0.86); n=229
 GAD7 0.96 (0.81, 1.12); n=229
 PSYCHLOPS 1.39 (1.03, 1.75); n=150
 WEMWBS 1.19 (0.97, 1.42); n=150
 PSS 1.41 (1.16, 1.66); n=150

Based on these findings, all five psychometric instruments demonstrated significant improvement following treatment with PHS. The effect size was >0.80 for four out of five of the selected instruments.

PHS change scores:

Discussion

This is a pilot study which looks at a small proportion of the patients treated in the service and places this in the context of descriptive data about the first 10 full years of the service.

The study's limitations include the relatively small sample size and the pilot nature of the study. The results should be interpreted with caution taking account of the fact that this is a retrospective data analysis and in a naturalistic study of this kind randomisation and control arms are not possible. Data limitations are due to the use of routinely coded clinical data: these include the reliance on clinical diagnosis for addiction and relative lack of detail regarding drug use and types of drugs used.

Nevertheless, based on these findings, all five psychometric instruments demonstrated significant im-

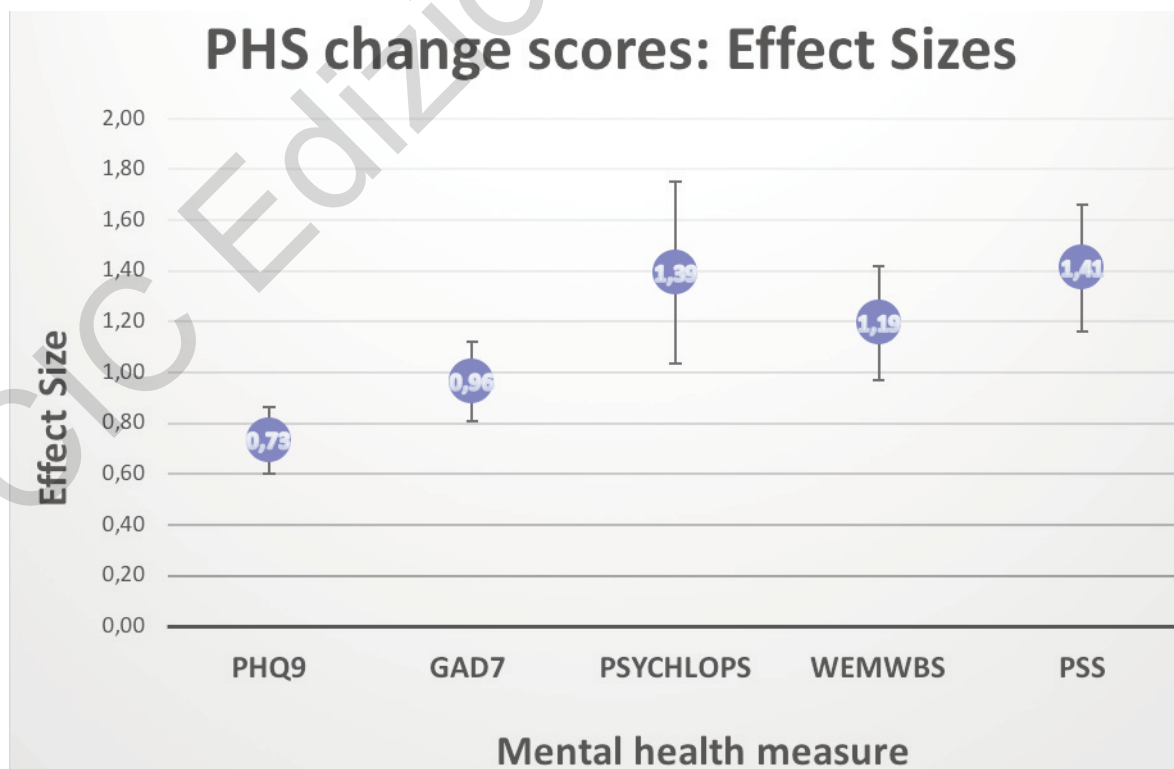
provement following treatment with PHS. This suggests positive early outcomes for the service.

A further study is planned to investigate in more depth which aspects of the service contribute to its success. The Authors believe that the emphasis on confidentiality and the separation from regulatory processes enable doctors to feel confident in presenting for treatment. The individualised nature of the interventions then allows a tailored approach. The follow-up study will combine qualitative and quantitative elements to elucidate this. A larger sample size will also enable meaningful analysis looking at subgroups.

Further work is also needed to determine which of the instruments studied was most sensitive to change and why some instruments appeared to demonstrate evidence of larger change than others. Four of the instruments are standardised and one, PSYCHLOPS is patient-generated and also generates qualitative data. Further work is needed to identify the characteristics of those least and most likely to respond to intervention, based both on qualitative PSYCHLOPS responses and also on demographic and professional characteristics.

These findings indicate that further research using these outcome measures on a larger cohort is likely to yield useful results.

If the early positive outcomes are replicated, this model of provision can potentially have important implications for the development of practitioner health services in the UK and worldwide.



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