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Mental Health Prevention and Promotion for Those Who Have Had Covid-19 in Primary Care: A Case Series Study

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Abstract

The Covid-19 pandemic has had a negative impact upon individual's psychological wellbeing. This case study series aimed to use a mental health prevention and promotion approach to promote positive emotional wellbeing and prevent deterioration of mental health difficulties in individuals who have had Covid-19. 573 individuals, who had recently tested positive for Covid-19, registered across two General Practices (GP), were initially screened, and 409 were contacted and offered psychological support. 9.1% accepted the offer at first but only 3.2% started the sessions. Psychometrics was used within the first and last session but also at a 6-week follow up to measure wellbeing, resiliency, low mood and anxiety. Experience of service questionnaires was also taken. Scores for wellbeing and resiliency increased at a statistically significant level. Scores for anxiety and low mood decreased at a statistically significant level, this was maintained at follow up. Qualitative feedback was positive. This service supports previous findings that mental health prevention and promotion interventions are effective. However, it is important to be mindful that given only 12 individuals finalized the sessions, the power of statistical findings are reduced. Nonetheless, this service is reasonably effective for people with a recent, positive Covid-19 test. Service scope should widen to include those who have struggled with the effects of the pandemic and not just those who received a positive diagnosis.

Keywords

Covid-19, Mental Health, Prevention, Promotion, Primary Care

1. Introduction

Coronavirus disease (Covid-19), a novel coronavirus, has affected the entire world. In 2020, the changes and sacrifices we were all asked to make, to help save lives, had a significant impact upon many. The World Health Organisation (WHO) raised their highest level of alarm and declared a Public Health Emergency on the 30th of January 2020 (World Health Organisation, 2020). As the pandemic continues into 2021, from the 10th May 2021 WHO has confirmed 157,897,763 confirmed cases and 3,287,082 deaths globally (World Health Organisation, 2021).

What is also becoming clear is that the coronavirus pandemic has also had a negative impact on psychological wellbeing. In the UK, a study found that rates of mental health deteriorated compared to pre-Covid-19 levels (Pierce et al., 2020). The UK prevalence of clinically significant mental difficulty has risen considerably to 27.3% in April 2020 from 18.9% in 2018-19 (Pierce et al., 2020). In China's Covid-19 outbreak, a study found over half (53.8%) of participants rated the psychological impact of the outbreak as moderate to severe (Wang et al., 2020). This is mirrored within Denmark, as rates of psychological wellbeing significantly decreased compared to the pre-Covid era (Sonderskov et al., 2020). Similar rates of anxiety, depression, post-traumatic stress disorder (PTSD) and psychological distress were reported in the general population during the Covid-19 pandemic in China, Spain, Italy, Iran, the US, Turkey, Nepal, and Denmark (Xiong et al., 2020). Furthermore, a recent literature review of 28 articles exploring Covid-19 and mental health overwhelmingly predicts the negative impact of the pandemic on psychological wellbeing across diverse continents (Rajikumar, 2020).

It is clear that the pandemic has had a negative psychological impact on the world. For many, the first wave of the pandemic called for people to quarantine and self-isolate, further decreasing wellbeing. A recent literature review noted quarantine can cause: exhaustion, detachment from others, anxiety, irritability, insomnia, poor concentration, and a higher chance of developing PTSD, depression and sadness (Brooks et al., 2020). In Iran, social isolation led to increased symptoms of stress concluding in a call for additional mental health services (Zandifar & Badrfam, 2020). Similarly, children and adolescents who experience quarantine elicit greater levels of psychological distress alongside feelings of worry, helplessness and fear (Saurabh & Ranjan, 2020).

There has been a range of research into the psychological impact on different groups throughout the pandemic. Vindegaard and Benros (2020) conducted a

literature review of 43 papers looking at the mental health consequences of Covid-19. 21 out of 43 papers focused on health care workers and all papers showed either anxiety or low mood levels increased due to the pandemic. The literature review also found health care workers suffered from poor sleep which supported research by [Feinman and colleagues \(2020\)](#). Reported symptoms such as these seem to mirror the front-line clinicians who were involved with the SARS pandemic ([Schwartz et al., 2020](#)). The earlier mentioned literature review also found that health care workers are at a significant risk of decreased psychological wellbeing ([Rajikumar, 2020](#)). Alongside health care workers, older adults, the homeless, migrant workers, those with mental health difficulties, pregnant women have been identified as vulnerable populations at risk of mental health deterioration due to the pandemic ([Rajikumar, 2020](#)). Within the elderly population, due to higher rates of pre-existing depressive symptoms and pre-existing lack of access to services older adults are seen as a higher risk group ([Yang et al., 2020b](#)). Research in the UK has supported the notion that older adults have been particularly vulnerable to the negative emotional consequences of the pandemic, with a documented increase in anxiety, loneliness and insomnia in adults over 60 ([Wong et al., 2020](#)). In [Vindegard and Benro's \(2020\)](#) literature review they identified a range of different risk factors to anxiety and depression due to the pandemic such as; sociodemographic factors (living alone, student status, female), current medical disease (psychiatric disorders and substance abuse) and psychological and social factors (poor health, high perceived stress, less family support etc.).

There is an array of research focussing on the psychological impact of the pandemic on the general population but a lack of research on the psychological impact of individuals who have suffered from the virus itself. It is important to note that the current research around the psychological impact of Covid-19, is based on individuals who have suffered severe symptoms. [Hosey & Needham \(2020\)](#) and [Yang et al. \(2020a\)](#) both noted in individuals who have suffered from Covid-19 there is increased rates of anxiety, sleep problems, depression and PTSD symptoms. Furthermore, some individuals who have experienced Covid-19 also display extreme worry around consequences of infection ([Park & Park 2020](#)). In the literature review conducted by [Vindegard and Benros \(2020\)](#) only 2 studies were found that focused on individual's who had experienced Covid-19. Of the two studies [Bo and colleagues \(2020\)](#) found post-traumatic stress disorder (PTSD) present in 96.2% of 714 clinically stabilized inpatient Covid-19 patients. The second study found depression at a prevalence of 29.2% in newly recovered Covid-19 patients compared to 9.8% of individuals who were quarantining at home due to the virus ([Zhang et al., 2020](#)). Furthermore, The British Psychological Society (BPS) guidelines stated individuals recovering from severe coronavirus may additionally experience: increased hypervigilance, impaired memory and effects on attention ([British Psychological Society, 2020](#)).

There was been various recommendations for treating psychological distress

associated with Covid-19. Some of these recommendations have focused upon supporting frontline workers. [Feinman et al. \(2020\)](#) recommend frequent communication, listening to concerns, problem solving and team work. Furthering this, [Wu et al. \(2020\)](#) stressed the importance of building staff self-care whilst strengthening an individual's support system. For the general population and individuals who have suffered from Covid-19, it is important to encourage adaptive coping strategies and empower the community around the individual ([Chew et al., 2020](#)). [Ho et al. \(2020\)](#) suggested identifying high risk groups for psychological distress and screening through GP appointments to then offer appropriate psychological intervention. Lastly, [Rajikumar's \(2020\)](#) literature review found 5 studies listing specific strategies to reduce mental health deterioration such as; specialist teams, training of community health teams and online mental health services. But what interventions have actually been used?

Several studies look into interventions to increase wellbeing within the general population. In Turkey, [Tanhan et al. \(2020\)](#) delivered therapy either virtually or via the telephone which included Acceptance and Commitment Therapy (ACT) techniques with a heavy focus on the system around the individual and collaborating with the community. The therapy reduced levels of anxiety and depression and increased quality of life in participants. In relation to general practice and community settings, [Ping et al. \(2020\)](#) delivered "ultra-brief psychological interventions" (UBPI) to the general population and individuals who had experienced Covid-19. UBPI were designed to be delivered within 20 minutes by primary care clinicians (including those with no prior mental health training). The sessions included CBT, ACT, Dialectical Behavioural Therapy (DBT) and motivational interviewing (MI) techniques. The UBPI handbook also included collaboration skills, problem solving, shared decision making, mindfulness and validation skills. The study lacks quantitative data around efficacy but qualitative reports were generally positive.

The majority of studies looking into decreasing mental health difficulties during the pandemic are conducted in China, where there appears to be a more specific focus on mental health prevention and promotion. During the midst of the pandemic online self-help booklets were distributed and positive mental health was promoted through social media ([Liu et al., 2020](#)). China also created 24-hour online and telephone help service based on Cognitive Behavioural Therapy (CBT) and self-help materials to prevent deterioration of mental health ([Liu et al., 2020](#)). Also in China a "Covid-19 Psychological Resilience Model" was created which included 24 hour helplines that would offer aid with sleep problems, problem-solving, general emotional distress and a referral to further services if needed ([He et al., 2020](#)). It is clear that mental health promotion and prevention strategies are effective for individuals who have suffered from Covid-19 but also they can reduce illness, promote resilience and good mental health ([Thomas et al., 2016](#)).

There is a growing identification within the UK that there is "no health with-

out mental health” resulting in a larger focus on mental health prevention and promotion (Budd et al., 2020). The research base demonstrating the efficacy of this approach is growing. Research has found preventative and promotional interventions can decrease mental health rates (e.g., Jane-Llopis et al., 2011; McDaid & Park., 2011). Additionally, there is a growing evidence base that mental health prevention and promotion approaches reduce healthcare system costs (Jacka & Reavley, 2014). Mental health promotion activities entail improving positive mental health, enhancing mental well-being and strengthening individuals and communities (WHO, 2004). Whereas, mental health prevention “Focuses on the causes or risk factors of mental illness and aims to reduce the incidence, prevalence, or seriousness of mental health problems, symptoms, and disorders” (Le et al., 2021). In terms of the post Covid-19 mental health crisis “primary prevention must be a parallel part to the solution” (Carbone, 2020). Carbone (2020) suggests primary prevention and promotion techniques such as self-care based on positive psychology, mental health promotional materials and skills building programmes to flatten the curve of mental health caused by the recent pandemic.

Yet there is a gap in the research base concerning the use of prevention and promotion techniques to address the negative psychological impact of the pandemic within the UK. A proactive prevention and promotion approach is a clear solution when infection is associated with higher risk for mood disorders (Zhang et al., 2020; Benros et al., 2013). There is a further gap in the research due to the lack of studies on interventions for individuals who have suffered from Covid-19 with the primary focus being on the general population. Additionally, the current research base lacks quality and is predominantly focused on Asian countries leading for to a call for further research (Rajikumar, 2020; Vindegaard & Benros, 2020). Therefore, this study adds to the research gap by taking a proactive approach to prevent the deterioration of mental health and promote positive mental health within individuals who have suffered from Covid-19 in the UK.

Service Evaluation Objectives

Following the breadth of research into the negative psychological impact of Covid-19 combined with the growing research base into the efficacy of mental health prevention and promotion a proactive wellbeing promotion approach was offered to promote wellbeing and prevent deterioration in individuals who have suffered from Covid-19. This service was delivered in a GP practice as primary prevention is vital to managing the post Covid-19 mental health crisis (Carbone, 2020). The service was offered to all individuals registered across GP two surgeries, who had had a positive Covid-19 test result. The added value of this service was then evaluated. The service aimed to 1) Promote emotional wellbeing and 2) Prevent deterioration of mental health difficulties in those individuals who have had Covid-19.

2. Methods

2.1. Individual Characteristics

From November 2020 to January 2021, a total of 573 individuals tested positive for Covid-19 across two GP practices in England. These individuals were screened, via a review of their GP notes, to identify those who should be offered additional psychological support in the form of a brief psychological intervention.

The service did not approach elderly care home residents, individual's under 12, those with a moderate or severe intellectual disability, individuals who were already involved in mental health services and those with significant mental health need, where a brief intervention would not be appropriate.

Following this initial screening process, the service was then offered to 409 people. They were contacted initially via telephone to inform them about the wellbeing service available at their local GP practice and what support they would receive. 37 (9.1%) took up the offer of the sessions and 47 (11.5%) could not be contacted. Of the 37 who accepted the offer, 21 (56.8%) later declined the offer when followed up or dropped out of the sessions. Generally, those who declined the offer reported that they did not feel their emotional wellbeing had been adversely effected by having Covid-19. Other reported reasons were; already having support, not being able to commit to appointments or relying on family for support. To this date (27th of February 2021), 12 individuals have finished four sessions, 8 were female and 4 were male. All 12 individuals had tested positive for Covid-19 and presented with a range of symptom severity. 1 was asymptomatic, 8 experienced mild symptoms and 3 had presented with severe symptoms with 1 individual needing inpatient care. The mean age was 40.6, the minimum being 15 and the maximum being 66. 11 individuals were White British and 1 was Pakistani. Individuals had positive tests between October 2020 and January 2021. 8 individuals were taking antidepressants at the time of sessions, 4 were on no medication for their mental health. 7 individuals had full time employment, 3 individuals were in full time study and 1 individual was unemployed.

2.2. Psychometrics

Wellbeing

The Warwick and Edinburgh Mental Wellbeing Scale (WEMWBS) (Tennant et al., 2007), is a 14 item scale used to measure individual's wellbeing. Each item is scored on a 5-point Likert scale ranging from 1 (none of the time) to 5 (all of the time). The lowest score is 14 and the highest 70, a higher score demonstrating higher levels of general wellbeing (Mavali et al., 2020). The measure shows good content validity, high test-retest reliability and has been used within many diverse populations (Mavali et al., 2020; Tennant et al., 2007; Stewart-Brown et al., 2020).

Resiliency

The Connor-Davidson Resilience 10 Item Scale (CD-RISC-10) (Campbell-Sills & Stein, 2007) was used to measure resilience. The scale has been refined to 10 items from the original 25 item scale (Connor & Davidson, 2003). Each item is scored on a 5-point Likert scale ranging from 1 (Never true) to 4 (Very often true). The lowest score is 0 and highest 40, a higher score demonstrating higher resilience capacity (Ye et al., 2017). The measure shows good reliability, excellent construct validity, good internal consistency, has diverse translations and utilised with many populations (Campbell-Sills & Stein, 2007; Ye et al., 2017; Wang et al., 2010).

Low mood

The Patient Health Questionnaire-9 (PHQ-9) is a 9 item questionnaire used to measure symptoms of depression (Kroenke, Spitzer, & Williams, 2001). The scale lists 9 common depressive symptoms and asks individuals to rate how often these have transpired over the past 2 weeks utilising a 4-point Likert scale from 0 (not at all) to 3 (nearly every day). The lowest score is 0 and the highest is 27, a higher score suggesting severe depressive symptoms. The PHQ-9 demonstrates excellent internal reliability, excellent test-retest reliability and good validity (Kroenke, Spitzer, & Williams, 2001). The PHQ-9 is commonly used within GP practices within the UK (Cameron et al., 2011).

Anxiety

The Generalised Anxiety Disorder-7 Scale (GAD-7) was used to measure symptoms of anxiety (Spitzer et al., 2006). The scale lists common symptoms of generalised anxiety disorder and asks individuals to rate how often these have transpired over the past 2 weeks utilising a 4-point Likert scale from 0 (Not at all) to 3 (Nearly every day). The lowest score is 0 and the highest is 21, a higher score suggesting severe anxiety symptoms. The measure has good reliability and validity (Spitzer et al., 2006).

Patient and Support System Experience Questionnaires

Brief qualitative questionnaires were designed to understand users and their support systems experience of the service.

2.3. Service Provision

Following the initial screening, all individuals were offered the service 2 - 4 weeks following a positive test result. After three attempts to contact clients by telephone, if unsuccessful, a letter was sent advising the reason for the call and offering the service if required.

Up to four sessions, of between 45 - 60 minutes long, were offered. The four sessions would follow a pathway of psychological assessment, formulation (using either the “5 Ps” or cognitive behaviour therapy (CBT) “4-button model” approach) and then intervention. Within the first appointment psychometric measures were administered to understand need. The exact brief intervention provided would depend upon the presenting problem. However, clinicians were trained to use skills from a number of therapeutic modalities including: CBT; brief solution-focussed therapy (BSFT); mindfulness and motivational inter-

viewing. For example, for those who presented with stress related problems, stress management, problem solving skills and brief SFT were used. CBT skills (behavioural activation and thought challenging) were typically used for those who struggled with low mood and anxiety, as well as general coping strategies for anxiety (STOPP techniques worry time, grounding techniques and mindfulness). For individuals who struggled with sleep, tips, advice and education on good sleep hygiene were offered.

The approach was also informed by relational and systems theory (Patton, 2007); each individual was encouraged to bring an important other to the session with the aim of building resiliency within the system around them. In order to promote emotional wellbeing, all individuals were provided with psychoeducation around their presenting problem, principles from the 5 ways to well-being (this included discussing the importance of self-care) and encouraged communication within their support system. Various self-help resources were reviewed with clients, again, dependent upon their need e.g.

<https://www.psychologytools.com/>, <https://www.cci.health.wa.gov.au/>, <https://www.psychologytools.com/> and <https://www.therapistaid.com/>.

Within the last appointment the psychometrics were re-administered. Individuals were also offered a follow-up appointment, 4 - 6 weeks after their last appointment, within which, the psychometrics would again be completed. Brief qualitative questionnaires were also completed within the last appointment. A similar questionnaire was also given to the clients important other, if they had attended. Should clients have on-going need, they were to be referred on to the most appropriate service e.g. primary care mental health services such as improving access to psychological therapies services.

2.4. Analysis

This service evaluation was a case series design, with no control group that included both quantitative and qualitative methods to evaluate impact and outcome. Data was analysed within excel using two-tailed paired samples t-tests and descriptive statistics.

3. Results

3.1. Descriptive Statistics

Table 1 presents individual demographics (sex, age and ethnicity), severity of symptoms, scores completed during the first, last and follow up session for each questionnaire, the content of the interventions for the 12 individuals who completed all 4 sessions and if they were referred to another service after.

PHQ-9

A two-tailed paired samples t-test revealed that low mood scores were higher in the first wellbeing session ($M = 10.41$, $SD = 6.39$) when compared to the final wellbeing session ($M = 5.75$, $SD = 4.96$). Indicating that over the duration of the sessions, individuals' levels of low mood decreased at a statistically significant level, $t(12) = 3.31$, $p < .001$ (see supplementary materials for raw data).

Table 1. Descriptive data on cases.

Case	Sex	Age	Ethnicity	Covid-19 Severity	WEMWBS			CD-RISC-10			PHQ-9			GAD-7			Session content	Refer on
					Pre	Post	FU	Pre	Post	FU	Pre	Post	FU	Pre	Post	FU		
1	F	36	White British	Mild symptoms	45	38	40	18	14	15	12	14	10	9	16	12	Psychological assessment, formulation, psychoeducation, pacing, self-care, behavioural activation, thought challenging, mindfulness, worry management, breathing exercises	N
2	M	66	White British	Mild symptoms	28	42	42	13	28	28	15	8	10	6	1	4	Psychological assessment, formulation, psychoeducation, 5 ways to wellbeing, self-care, behavioural activation, pacing, mindfulness, breathing techniques	N
3	M	49	White British	Mild symptoms	63	65	65	40	40	40	0	0	0	0	0	0	Psychological assessment, formulation, psychoeducation, sleep hygiene	N
4	F	15	White British	Mild symptoms	50	63	66	29	39	40	9	0	0	4	2	0	Psychological assessment, formulation, psychoeducation, self-care, thought challenging, stress management, mindfulness	N
5	F	15	White British	Mild symptoms	28	31	35	10	10	8	16	11	16	20	18	14	Psychological assessment, formulation, psychoeducation, self-care, thought challenging, stress management, mindfulness	Y - CAMHS
6	F	51	White British	Mild symptoms	37	52	53	9	30	32	11	3	3	18	3	2	Psychological assessment, formulation, psychoeducation, behavioural activation, stress management, self-care, worry management, 5-ways to well-being, problem solving	N

Continued

7	F	44	White British	Severe symptoms	53	70	70	33	38	40	1	0	0	2	0	0	Psychological assessment, formulation, psychoeducation, thought challenging, worry management, 5-ways to well-being, stress management	N
8	F	47	White British	Severe symptoms	35	52	57	25	30	29	20	7	9	18	6	6	Psychological assessment, formulation, psychoeducation, problem solving, STOPP technique, stress management techniques, building assertiveness	N
9	M	52	White British	Mild symptoms	49	63	57	38	39	39	7	0	2	4	2	2	Psychological assessment, formulation, psychoeducation, sleep hygiene, worry management, mindfulness	N
10	F	54	White British	No symptoms	39	56	59	28	34	49	7	8	6	6	2	1	Psychological assessment, formulation, psychoeducation, mindfulness, stress management, thought challenging, behavioural activation, 5 ways to wellbeing	N
11	F	18	Pakistani	Mild symptoms	32	49	44	20	29	24	19	10	14	16	11	14	Psychological assessment, formulation, psychoeducation, STOPP technique, worry time, problem solving, behavioural activation, sleep hygiene, mindfulness	Y-IAPT
12	M	41	White British	Severe symptoms – Hospitalised	39	52	46	17	22	19	8	8	6	7	5	4	Psychological assessment, formulation, psychoeducation, self-care, STOPP technique, behavioural activation, thought challenging	N

F female; *M* male; *WEBWBS* The Warwick-Edinburgh Mental Wellbeing Scale; *CD-RISC-10* The Connor-Davidson Resilience 10 Item Scale; *PHQ-9* Patient Health Questionnaire; *GAD-7* Generalised Anxiety Disorder Assessment; *Y* Yes; *N* No; *CAMHS* Child and Adolescent Mental Health Services; *IAPT* Improving Access to Psychological Therapies.

A further two-tailed paired samples t-test revealed that low mood scores were higher in the first wellbeing session ($M = 10.41$, $SD = 6.39$) when compared to the follow up session ($M = 6.75$, $SD = 5.92$), this was at a statistically significant level suggesting follow up scores were maintained, $t(11) = 4.11$, $p < .001$ (see supplementary materials for raw data).

GAD-7

A two-tailed paired samples t-test revealed that anxiety scores were higher in the first wellbeing session ($M = 9.16$, $SD = 6.97$) when compared to the final wellbeing session ($M = 5.5$, $SD = 6.19$). Indicating that over the duration of the sessions, individuals levels of worry decreased at a statistically significant level, $t(12) = 2.87$, $p < .04$ (see supplementary materials for raw data).

A further two-tailed paired samples t-test revealed that anxiety scores were higher in the first wellbeing session ($M = 9.16$, $SD = 6.97$) when compared to the follow up session ($M = 5.92$, $SD = 6.61$), this was at a statistically significant level suggesting scores were maintained at follow up, $t(11) = 2.41$, $p < 0.03$ (see supplementary materials for raw data).

Wellbeing

A two-tailed paired samples t-test revealed that emotional wellbeing scores were lower in the first wellbeing session ($M = 41.5$, $SD = 10.72$) when compared to the final wellbeing session ($M = 52.75$, $SD = 11.64$). Indicating that over the duration of the sessions, individuals levels of emotional wellbeing increased at a statistically significant level, $t(12) = -5.05$, $p < .001$ (see supplementary materials for raw data).

A further two-tailed paired samples t-test revealed that emotional wellbeing scores were lower in the first wellbeing session ($M = 41.5$, $SD = 10.72$) when compared to the follow up session ($M = 51.59$, $SD = 11.68$) this was at a statistically significant level indicating scores were maintained at follow up, $t(11) = -4.89$, $p < .001$ (see supplementary materials for raw data).

Resiliency

A two-tailed paired samples t-test revealed that resiliency scores were lower in the first wellbeing session ($M = 23.33$, $SD = 10.5$) when compared to the final wellbeing session ($M = 29.47$, $SD = 9.83$). Indicating that over the duration of the sessions, individuals levels of emotional wellbeing increased at a statistically significant level, $t(11) = -3.03$, $p < .01$ (see supplementary materials for raw data).

A further two-tailed paired samples t-test revealed that resiliency scores were lower in the first wellbeing session ($M = 23.33$, $SD = 10.5$) when compared to the follow up session ($M = 29.83$, $SD = 12.25$), although this was not a statistically significant level, $t(11) = -2.50$, $p < .02$ (see supplementary materials for raw data).

3.2. Qualitative Feedback

During the final session, individuals were given the option to complete a qualitative questionnaire in order to gather feedback about the mental health preven-

tion and promotion service they had received. All qualitative feedback was positive, with everyone reporting that they had found the service helpful and they had learnt something that helps them care for their emotional wellbeing, for example:

“Mental health is so important and I am lucky that with the help and support I have received it has helped me to recognise when I am struggling, and helped me recognise the situations and thoughts that cause anxiety, overthinking and negativity”.

“I have learnt that there is a lot more support out there than I first realised and I am pleased to see that my local GP’s practice is offering this service”.

“The strategies used within my sessions have helped me to cope much better with my overthinking.”

Positive feedback was also given by important others, who attended at least one wellbeing session. For example:

“Being able to see the progress my partner has made and understand the techniques he can use to help him”.

4. Discussion

The aim of the service was to prevent the deterioration of mental health problems and promote positive emotional wellbeing among those who tested positive with Covid-19. Following brief interventions, self-report scores on various mood-related measures improved on both a statistically significant and clinically significant level. These improvements were maintained at a follow-up 4 - 6 weeks later. Only two patients needed to be referred onto either IAPT or CAMHs after completing the 4 sessions. There was a variety of severity of Covid-19 symptoms, this does not seem to have impacted on the efficacy of the wellbeing sessions. All qualitative feedback was positive. Individuals reported that they benefited from the sessions and found the service helpful in terms of managing their mental health difficulties. Some individuals also said they felt more connected with their local community, as a result of linking them into various local groups. Community connection is important for building resiliency (Ellis & Abdi, 2017). The service also received positive feedback from important others who attended appointments with those they care for.

This service evaluation corroborates previous findings that mental health prevention and promotion interventions have a positive impact upon emotional wellbeing (Van Zoonen, 2014; Jane-Llopis et al., 2011). There is also growing evidence for the benefit of brief interventions, in a service evaluation of the “Oldham IAPT Plus Active Monitoring Service”, MIND found that low mood and anxiety scores significantly decreased after four sessions of mental health prevention and promotion (MIND, 2019). The results also support the more specific mental health prevention and promotion research that was conducted in China with those who have had Covid-19 (Chew et al., 2020; Ho et al., 2020; Liu et al., 2020). It is perhaps especially important to intervene early with those

struggling as a result of having Covid-19, given the stark predictions about the rise in mental health need that is predicted as a result of the current pandemic. Mental health services are costly and prevention and promotion approaches have been shown to be cost-effective (Jacka & Reavley, 2014). Primary care seems to be an ideal place to deliver such interventions for a number of reasons. Most people are registered with a general practice and as a location, it is seen by many as familiar and non-stigmatising. This idea was substantiated by clients who accessed the service in their feedback.

4.1. Limitations and Service Alterations

The uptake rate for this service offer was relatively low. At 2 - 4 weeks post infection, most individuals reported that they were not struggling with emotional difficulties. Perhaps this was indeed the case. Or perhaps, as is documented elsewhere, getting people to engage with prevention and promotion approaches can be challenging. There are examples of when others have struggled with recruitment and attrition rates for mental health prevention and promotion work (Batelaan et al., 2012; Mousa et al., 2013). There are numerous hypotheses for this. For example, some perhaps do not wish to talk about their emotional wellbeing if they do not currently perceive any problems, or if they believe their concerns are relatively mild. Whilst there may of course be merit in this viewpoint, it may also signal there is a need to encourage more universal approaches alongside targeted interventions. Approaches which focus upon normalising caring for our emotional wellbeing and talking about our feelings. However, within the context of social distancing and mixing restrictions, this was not possible at this time. Perhaps another hypothesis is that a positive Covid-19 result does not necessarily increase the likelihood that someone may struggle with psychological issues.

Due to the small sample of 12 participants it is difficult to fully conclude the clinical significance of the results. Furthermore, due to the small sample it is not clear how reliability and external validity may have been effected. This evaluation will need to be recreated with a larger sample size to determine a stronger clinical significance level. The study may have been at risk of selection bias due to the small sample size and only calling individuals who had had a positive Covid-19 test result which does not reflect the general population. Alongside this proactive wellbeing offer for those with a positive Covid-19 test, the mental health prevention and promotion service within the GP settings also takes more general referrals. Within the context of these referrals, the clinicians have noted that many individuals report psychological impact as a result of the Covid-19 pandemic, regardless of whether they contracted the infection or not. The service will continue to evaluate this impact, but has now broadened its focus to be a "Covid impact" service. Therefore seeking to understand and intervene early for all those who have felt the impact of the pandemic in one way or another. The negative impact of isolation on psychological wellbeing has already been

evidenced (Brooks et al., 2020; Saurabh & Ranjan, 2020). There is also a significant re-adjustment facing many as the world re-opens. It seems likely that there will be need in terms of supporting people to manage this adjustment process and associated anxiety. Whilst the initial uptake and retention of this first service offer was not large, it has still highlighted the need for additional mental health prevention and promotion support for those who are struggling as a result of Covid-19, with the aim of reducing longer-term distress.

The timing of this service offer is something to reflect upon. Perhaps offering the wellbeing support only 2 - 4 weeks post diagnosis was too early. Given the anecdotal evidence about some struggling with Covid-19 symptoms long after diagnosis and the link between physical health, quality of life and emotional wellbeing, the service offer may be timelier if it was offered later post diagnosis. The results of this initial evaluation have therefore lead to an alteration in service provision. The next stage of the proactive wellbeing support provided to individuals within general practice settings will now be offered between 8 - 12 weeks post diagnosis. It is hoped that the alteration in this timing will ensure those who are still struggling with Covid-19 symptoms, possibly long-Covid, will receive an “early intervention” offer of psychological support. There is little information of the psychological impact of long-Covid on mental health but it is reasonable to assume that those suffering with long-Covid may experience low mood associated with reduced physical functioning due to fatigue, breathlessness and poor concentration. One article also suggested that individuals with long-Covid report a lower quality of life (Mahase, 2020). However, there are currently practical challenges with this, as it is a new health condition and we are still learning. There is currently no way to code for this on the GP electronic record system, which presents a challenges of how to search for and identify those who present with this need.

4.2. Conclusion

To conclude, this evaluation has shown significant efficacy from a statistical and clinical perspective in terms of preventing mental health difficulties and promoting emotional wellbeing, however, this study will need to be recreated with a larger sample size to see if it applies to the general population. The difficulties in uptake have led to service delivery revisions, namely waiting longer to proactively contact people who have had Covid-19 to offer wellbeing support and to widen service scope to include anyone, registered with the practice, who is struggling as a result of Covid-19 and the associated restrictions.

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Declarations

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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