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Sustaining Attendance at a Mental Health Service:

A Randomized Controlled Trial

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Abstract

Objective: A substantial proportion of psychotherapeutic treatments are prematurely terminated because the client discontinues attendance. Interventions have been developed to reduce premature termination but these are only moderately effective, and often place considerable burden on clients and services. This research evaluated a brief, low-cost self-regulation intervention (i.e. implementation intentions) designed to sustain attendance at a group psychoeducation program.

Method: Clients (N = 82) who had been referred for a psychological intervention due to anxiety or depression were sent a questionnaire concerning their views of attendance. Participants were randomly assigned to form an implementation intention as part of the questionnaire, or not (controls). Attendance was then monitored over the 5 scheduled sessions of an evidence-based psychoeducational intervention.

Results: Intention-to-treat analyses indicated that forming implementation intentions led to attendance at a greater number of sessions ($M = 2.84$ vs. 1.62), $p < .01$, and higher rates of completing the full course of treatment compared to controls (35% vs. 11%), $p < .02$.

Conclusions: An intervention rooted in basic research on the psychology of action increased and sustained attendance at a mental health service.

Public Health Significance: This research suggests that implementation intentions are a low-cost and easy-to-implement intervention that are effective in reducing premature termination from psychological treatment; this intervention has wide-ranging potential for use across mental health service settings.

Keywords: psychoeducation; dropout; attendance; intervention; implementation intention

Sustaining Attendance at a Mental Health Service: A Randomized Controlled Trial

One of the greatest hurdles to delivering evidence-based psychological care is ensuring that patients attend and complete treatment. Forty percent of patients do not attend a single session following referral (i.e., "treatment refusal;" review by Hampton-Robb, Qualls, and Compton, 2003) and ~20% drop out before treatment is completed (i.e., "premature termination;" meta-analysis by Swift & Greenberg, 2012). Most interventions to reduce premature termination of treatment are highly intensive but only moderately successful (review by Oldham, Kellett, Miles, & Sheeran, 2012). The present research developed a brief self-regulation intervention rooted in basic research on mindsets and action phases, and tested its impact on treatment dropout from a widely used group psychoeducation program in the UK.

Mindset Theory of Action Phases and Implementation Intentions

One reason why existing interventions are not particularly effective in preventing dropout can be derived from the mindset theory of action phases (MTAP; Gollwitzer, 1990, 2012). MTAP specifies two types of mindsets in regards to goal pursuit: deliberative and implemental. The deliberative mindset pertains to choosing a goal (e.g., "Should I continue to attend my psychoeducation program or not?") and involves reflecting upon the desirability and feasibility of the goal. The outcome of a deliberative mindset is a decision to pursue the goal or not. The implemental mindset is activated once the goal is chosen and involves planning ways to reach the goal (e.g., when, where, and how the goal will be pursued). To date, interventions that aim to prevent dropout from treatment only targeted patients' deliberative mindsets, and neglected their implemental mindsets (i.e., planning their attendance; Oldham et al., 2012).

In an extension of mindset theory, Gollwitzer (1999, 2014) developed the concept of implementation intentions to understand how people could best prepare to pursue their goals. Implementation intentions are plans that have the format: if (opportunity/obstacle) - then I will (response)! The idea is that, once a goal is selected, patient's progress will be improved by specifying how to respond to good opportunities to act (e.g., "If it is 8 pm and I am at home, then I will search online for a bus that I can take to my psychoeducation program!") or to obstacles that stand in the way (e.g., "If I feel concerned about going to my psychoeducation program, then I will ignore these feelings and tell myself 'this will be good for me!'"). If-then planning is the mental act of linking instrumental responses to opportunities or obstacles relevant to one's goal.

Meta-analyses have shown that implementation intentions are effective in promoting goal attainment across a wide variety of domains (d = .65; Gollwitzer & Sheeran, 2006) and for clinical samples (d_+ = 0.99; Toli, Webb, & Hardy, 2016). Two key processes underpin the benefits of implementation intentions on rates of goal attainment. First, identifying opportunities and obstacles in advance heightens the accessibility of these cues – meaning that they are better remembered and more quickly recognized when the cues are later encountered (Webb & Sheeran, 2007, 2008). Second, the if-then format of implementation intentions forges a strong association between the relevant cue and the intended response, as was demonstrated in studies using sequential priming techniques (Webb & Sheeran, 2007, 2008). The upshot of these strong associations is that responding becomes automated (i.e., responses are initiated immediately, efficiently, and without the need for conscious intent; Gollwitzer & Sheeran, 2006; Martiny-Huenger et al., 2017). Neuroimaging evidence indicates that action initiation by if-then plans operates in a cue-driven (bottom-up) rather than goal-driven (top-down) fashion (e.g., Gilbert et al., 2009; Hallam et al., 2015).

The obstacles to maintaining attendance at psychological interventions are varied and can include affective issues such as worry about the nature of treatment, embarrassment about needing help and fear of exposure or stigma (e.g., Anderson & White, 1994; Corrigan, 2004). Evidence indicates that if-then plans are highly effective in helping people to regulate their emotions ($d = .53$ in a meta-analysis by Webb et al., 2012). Implementation intentions helped highly anxious people to reduce their symptoms over 8 weeks (Varley, Webb, & Sheeran, 2011) and helped spider-fearful people to effectively regulate the experience of threat according to the P100 electrocortical index (Schweiger Gallo et al., 2009). Thus, there are ample empirical grounds for thinking that implementation intentions could help clients manage feelings that might otherwise prevent them from maintaining attendance at psychotherapy.

The Present Research

The present study is a randomized controlled trial of an intervention based on implementation intentions that is designed to sustain attendance at a widely used group psychoeducational intervention. The study hypothesis was that implementation intentions would reduce rates of premature termination.

Method

Participants

The South Yorkshire NHS Research Ethics Committee approved the study methods. Participants were from an economically disadvantaged community in the north of England, and comprised all patients who were referred to two consecutive psychoeducational groups ($N \approx 40$) conducted in community-based facilities. Eighty-six clients initially opted into the psychoeducational groups, which included a mix of participants from each study arm; 4 clients cancelled their first appointment, leaving 82 participants for whom attendance data could be

analyzed (see Figure 1). Participants' mean age was 42.11 years (SD = 12.63) and the majority was female (63.4%). Participants had low socioeconomic status; less than one-half were employed, one-third had no formal educational qualifications, and almost 2 in 5 did not have their own transport. Participants were referred by their GP for anxiety only (n = 25), stress only (n = 9), depression only (n = 7), or for multiple (n = 36) or unspecified (n = 5) reasons.

Procedure

Psychoeducation sessions. The UK National Health Service uses the principle of stepped care whereby patients initially receive effective, brief, and low-intensity interventions and are 'stepped-up' to high-intensity therapies (including individual cognitive-behavioral therapy) based on risk and non-response (see Firth, Barkham & Kellett, 2015, for a review). The most widely delivered low-intensity group intervention is the Stress Control (SC) course (Delgadillo et al., 2016). The course is founded on clinical-trial and practice-based evidence (see Burns et al., 2016, for a review) and comprises five weekly group sessions. Each 2-hour session takes the form of a psychoeducational PowerPoint presentation that emphasizes a self-help approach modeled on cognitive-behavioral principles; sessions are delivered by cognitive-behavioral therapists. The course has the following manualized format: Session 1 provides information on anxiety and depression and how maintenance patterns are established; session 2 teaches relaxation skills and positive lifestyle changes; session 3 instructs participants on how to deal with panic; session 4 discusses the role of thoughts and teaches thought-challenging practices; in the final session, patients are taught problem-solving skills, approach behaviors, and planning for the future. Stress Control classes are clinically effective and have similar outcomes to one-to-one sessions of CBT of equivalent duration (Kellett, Clarke, & Matthews, 2007). Class attendance is a key predictor of treatment outcome (Burns et al., 2016).

Randomization and study questionnaire. Two weeks prior to the first psychoeducation class, all participants were mailed a questionnaire concerning their views of attendance, together with a freepost return envelope.[1] The implementation intention induction came at the end of the questionnaire for relevant participants. Participants were randomly assigned to conditions (intervention vs. control) via Graphpad, which generates unbiased randomization sequences (see Suresh, 2011, for a review). Participants and therapists were blind to allocation.

Implementation intention intervention. Participants in the implementation intention condition received an if-then plan that came at the end of the questionnaire. The plan was derived from pilot research, and was designed to increase attendance by helping patients to down-regulate feelings of concern about attending the large group sessions. The implementation intention read: "If I feel concerned about attending my stress control classes[2], then I will ignore these feelings and tell myself that I just have to listen to somebody giving a talk!" Participants were asked to read the plan three times, and to repeat it silently to themselves.

Results

Thirty-seven of the original 82 questionnaires were returned for a response rate of 45.1%. Data were analyzed using an intention-to-treat approach.

Session Attendance and Premature Termination

Figure 2 (left panel) shows the attendance rates in both arms of the trial. Implementation intentions did not significantly benefit rates of attendance at the first session (62.2% vs. 48.9%), $\chi^2(1, N = 82) = 1.45$, $p = .27$. However, implementation intentions generated increased attendance at the second (56.8% vs. 33.3%), third (59.5% vs. 33.3%), and fifth (62.2% vs. 22.2%) group sessions, $\chi^2(1, N = 82) = 4.52$, 5.60, and 13.47, respectively, $ps < .05$ (two-tailed),

and led to marginally greater attendance at the fourth group session (43.2% vs. 24.4%), $\chi^2(1, N = 82) = 3.25$, $p < .06$ (one-tailed).

Premature termination was operationalized in two ways: The total number of group psychoeducation sessions attended and the percentage of participants who attended at least 2, 3, or 4 sessions, or full treatment. Findings showed that participants who formed if-then plans attended a greater number of sessions compared to controls (M = 2.84 and 1.62, SD = 2.14 and 1.76, respectively), $t(69.6) = 2.77$, $p < .01$, $d = .63$. Figure 2 (right panel) shows the percentage of participants who attended at least 2, 3, or 4 sessions, or full treatment. Implementation intention participants were no more likely to attend at least two sessions than controls (62.2% vs. 44.4%), $\chi^2(1, N = 82) = 2.56$, $p = .13$. However, participants who formed implementation intentions were more likely to attend at least 3 sessions (59.5% vs. 33.3%), $\chi^2(1, N = 82) = 5.60$, $p < .03$, at least 4 sessions (54.1% vs. 15.6%), $\chi^2(1, N = 82) = 13.63$, $p < .001$, and to complete full treatment (35.1% vs. 11.1%), $\chi^2(1, N = 82) = 6.84$, $p < .02$.

Discussion

The present study tested a novel translational intervention derived from principles discovered in basic self-regulation research in a routine service delivery context. Drawing upon Gollwitzer's (1999, 2012) mindset theory of action phases and the concept of implementation intentions, we developed and tested an intervention that could help clients to effectively regulate attendance-related negative affect. Findings suggested that this intervention was successful. Implementation intention participants not only attended more sessions overall compared to controls, they were also more likely to attend at least three sessions, at least four sessions, and to complete the full treatment. Given (a) the number of patients who are treated using low-intensity interventions (Firth et al., 2015), and (b) the low cost of delivering implementation intention

interventions by mail, the present findings may have wide ranging implications for promoting engagement and reducing premature termination.

The impact of implementation intentions on premature termination of psychoeducation was of medium-to-large magnitude (d = .63). This d-value compares favorably to the effect sizes observed in a meta-analysis of interventions to promote psychotherapy attendance (d = .39; Oldham et al., 2012). Most previous interventions involved "Preparation" which involves giving patients the opportunity to try out therapy in order to manage their expectations about the desirability and feasibility of treatment. However, as Oldham et al. (2012) pointed out, this approach is highly resource-intensive. The implementation intention strategy used here, on the other hand, demanded little in the way of time, effort, or resources from clients and services.

How could if-then plans prove just as effective as much more intensive attendance interventions? We suspect that the explanation lies in the insights afforded by the mindset theory of action phases (Gollwitzer, 1990, 2012). Whereas previous interventions focused on deliberative mindsets and endeavored to increase motivation and ability to attend, mindset theory indicates that deliberation is only the starting point for goal pursuit. Mental health service users not only need to decide to undergo treatment, they also need to plan out how they will manage obstacles that they may encounter as they strive to complete treatment. Implementation intentions are if-then plans that specifically target this implemental phase of goal pursuit, and help to ensure that motivation is translated into action (Gollwitzer & Sheeran, 2006; Sheeran & Webb, 2016). Thus, insights derived from basic research enabled us to design an intervention to help resolve real-world obstacles to attendance at group psychoeducation.

The present research has several strengths including repeated and objective measurement of the primary outcome measure of attendance and the use of intention-to-treat analysis, which

afforded a conservative estimate of the impact of the intervention. This research also has limitations. Even though recruitment took place over a 6-month period, attendance information could be obtained for only 82 participants. It is also the case that only 45.1% of participants returned their mailed questionnaires. Despite this small sample size and modest response rate, we nonetheless observed significant effects of our intervention, though it is worth noting that even participants who formed implementation intentions attended only 57% of the treatment sessions. Another limitation of the present study is the lack of evidence concerning the mechanisms driving the impact of implementation intentions on attendance rates. Considerable progress has been made by basic researchers in understanding the processes underlying implementation intention effects (e.g., Martiny-Huenger et al., 2017). It was not feasible, however, to deploy the cognitive and neuroimaging techniques needed to explicate mechanisms in the present translational work. Thus, an important avenue for future studies will be to try to simultaneously address translational (outcome) and basic (process) research questions.

Future studies could also consider alternative strategies for delivering the intervention used here. For instance, it might be desirable to deliver implementation intentions at the end of the first session in order to promote continued engagement. SMS messaging of implementation intentions could also form part of routine service provision, and represent a low-cost intervention for attendance at both group and individual psychotherapy. Comparing the efficacy of implementations for individual vs. group therapies is an avenue for further study. Future research should also consider taking account of the mere measurement effect (e.g., Godin et al., 2008) by including a study arm that does not involve distributing a questionnaire about attendance. It is possible that the effects of implementation intentions observed here could have been attenuated by mailing a questionnaire about attendance to control participants.

In conclusion, the present study provides empirical support for a novel translational intervention – implementation intentions – in reducing premature termination at a frequently-delivered, evidence-based psychoeducational intervention. The implementation intention intervention was cheap, quick and easy-to-administer and resulted in a medium-to-large improvement in attendance rates. Use of this intervention could result in at least one additional session of psychoeducation per patient, on average, and potentially lead to meaningful downstream benefits for the delivery of mental health services across differing settings and treatment approaches.

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Footnotes

[1] Copies of the questionnaire are available upon request.

[2] The term “stress control classes” is less intimidating than the term “group psychotherapy” and was therefore used in all materials presented to the participants. Research demonstrates that the stress control classes are clinically effective and have similar outcomes to one-to-one sessions of CBT of a similar duration (Kellett, Clarke, & Matthews, 2007).

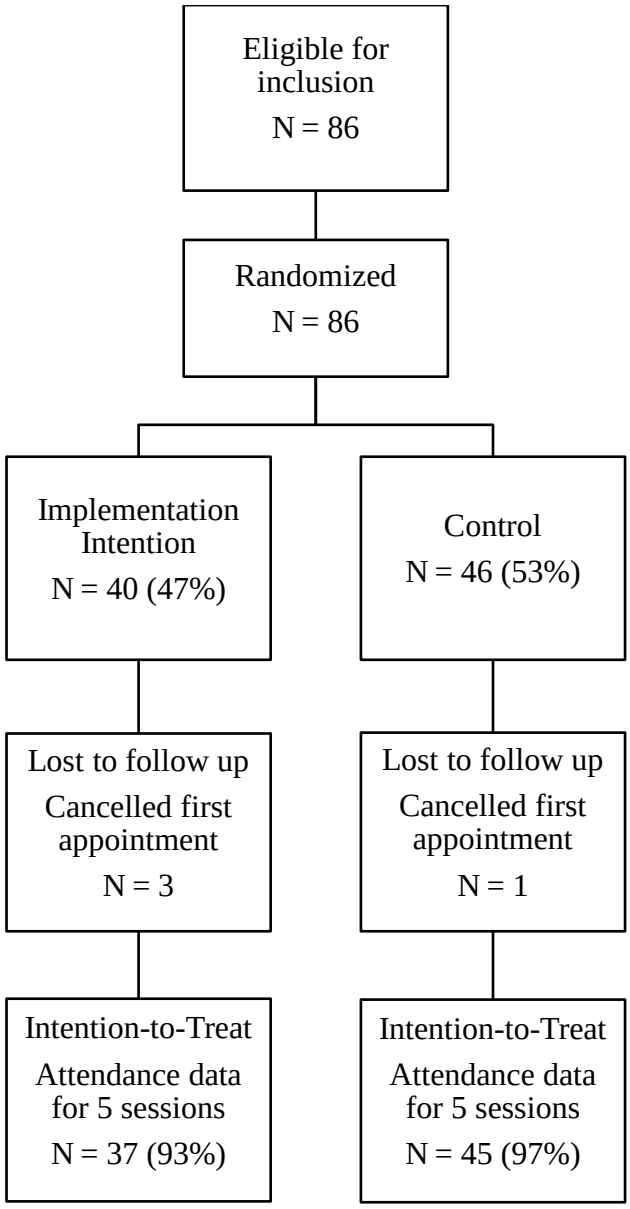

Figure 1. Flow of participants through the study.

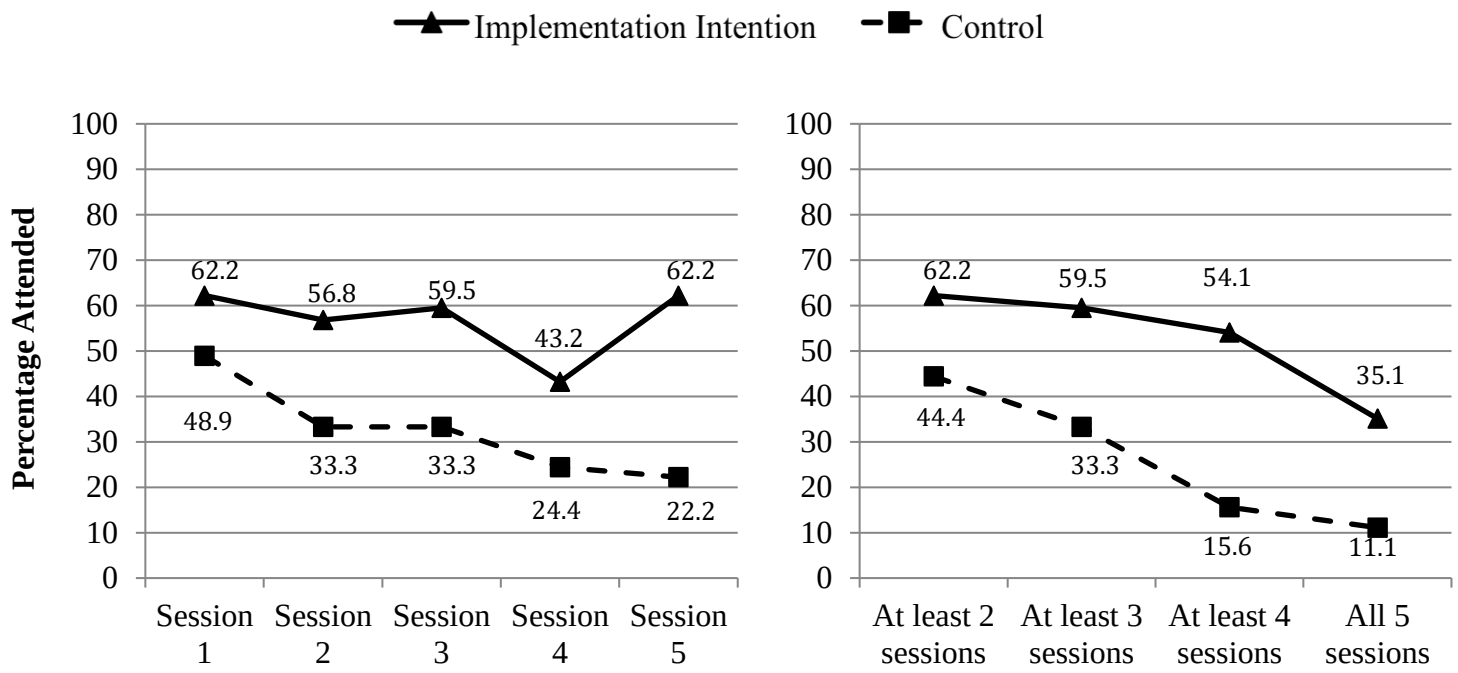

Figure 2. Attendance rates throughout the study.