

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

Protocol Title

Title: **Patient Well-Being Research Project**

Objectives

Well-being is a positive state affairs in six domains of life: interpersonal, community, occupational, physical, psychological, and economic (I COPPE). The purpose of the study is to evaluate the effectiveness, feasibility, and acceptability of an online intervention designed to promote skills and self-efficacy in the I COPPE domains of life.

Overview

The study design is a prospective, double-blind, longitudinal randomized controlled trial (RCT). The control group will be wait-listed. Well-being and self-efficacy measures will be administered at baseline (T1), 30 days-post baseline (T2) and 60 days -post baseline (T3). Approximately 6,000 University of Miami Health System (UHealth) patients who visit the UM Lennar Foundation Medical Center may have the opportunity to be invited to participate in the study. A maximum of 500 patients will be enrolled. Recruitment will take place on-site through IRB approved study flyers at the UM Lennar Foundation Medical Center. Eligibility verification, data collection, randomization, intervention group activities, and incentive distribution will take place entirely online. A secure website will be the sole location where all research activities will take place. Participants will only be able to access the site using unique user names and passwords. After consenting, participants in the intervention group will participate in online activities within 30 calendar days. Participants in the wait-list control group will be given access to the intervention after all study participants have completed the three survey battery administrations. The study team has full support at the highest administrative levels of the University of Miami.

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Intervention condition: Through the online program named Fun For Wellness (FFW), participants will: 1) watch original videos with vignettes performed by professional actors; 2) read and/or watch mini-lectures that teach skills for behavior change; 3) engage in self-reflection exercises, 4) play original interactive games related to vignettes and mini-lectures; 5) interact with other FFW users via chat room functions and; 6) watch funny narrated video clips about well-being.

Wait-list control condition: Participants will conduct their lives as usual during the 30-day intervention period.

Screening and Enrollment

Study Participants:

All participants will be 18 years old and above, patients at the UHealth Lennar Foundation Medical Center, and will have no prior or current exposure to the FFW intervention.

The maximum number of subjects we intend to screen is 1,000.

The total number of subjects we intend to enroll is 500.

Exclusion/Inclusion Criteria

The study population will be patients at the UHealth Lennar Foundation Medical Center. The criteria for exclusion of participants are:

- 1) Those under the age of 18
- 2) Those not patients at the UHealth Lennar Foundation Medical Center
- 3) Those who have ever participated in the FFW intervention in another study

Rationale for exclusions: 1) Individuals who are not patients at the UHealth Lennar Foundation Medical Center will be excluded because we would like to generalize findings to patients at the UHealth Lennar Foundation Medical Center.

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2) Individuals under the age of 18 will be excluded as the program content and self-assessment tool have been created for an adult population.

3) Individuals who are/have been exposed to the FFW intervention will be excluded to avoid threats to the study's internal validity.

The criteria for inclusion of participants are:

- 1) Adults aged 18 and above
- 2) Those who are patients at the UHealth Lennar Foundation Medical Center.
- 3) Those who have never participated in the FFW intervention in another study.

Background

As previously mentioned, well-being occurs in six interacting domains of life: interpersonal, community, occupational, physical, psychological, and economic (I COPPE). Well-being can be promoted through the development of empirically-based skills. These skills are designed to promote change in I COPPE actions and emotions. Well-being may also be enhanced by improving an individual's self-efficacy. Participants in the FFW intervention condition will watch videos, play games, and learn 14 skills that support seven drivers of change that promote well-being in the I COPPE domains. These seven drivers of change are: Behaviors, Emotions, Thoughts, Interactions, Context, Awareness, and Next Steps. Together, the drivers form the acronym BET I CAN. The FFW intervention delivers activities within a platform that provides participants opportunities to experience and benefit from four primary sources of self-efficacy: 1) enactive mastery experiences, 2) vicarious experiences, 3) verbal persuasion, and 4) physiological and affective states (Bandura, 1977). To our knowledge, there are no other online interventions with our unique components that leverage BET I CAN drivers to promote well-being in the I COPPE domains.

Justification of Online Intervention

Recently we conducted a RCT of the FFW intervention in an employee sample, and found initial evidence for the effectiveness of the FFW intervention (Myers, Prilleltensky, I, Prilleltensky, O., McMahon, Dietz & Rubenstein, submitted). Participants who complied with the FFW intervention had significantly higher subjective well-being, as compared to compliers in the Usual Care group, in multiple I COPPE domains (Myers, Prilleltensky, I, Prilleltensky, O., McMahon, Dietz & Rubenstein, submitted)

Despite progress in real-world (i.e. offline) methods to promote health and wellness, problems persist: limited reach, insufficient engagement, and lack of sustainability (DiClemente, Crosby, & Kegler, 2002; Glanz, Rimer, & Viswanath, 2008; Levy & Sidel, 2006; Shumaker, Ockene, & Riekert, 2009). As the number of people experiencing physical and psychological problems remains stubbornly high, the need to find effective, sustainable and far reaching interventions grows more urgent by the day (Commission on Social Determinants of Health, 2008). The introduction of computerized or e-health programs is a promising avenue for developing effective, sustainable and far reaching interventions (Fogg, 2003; Fogg & Adler, 2009; Fogg & Eccles, 2007; Franklin, Farfanzar, & Thompson, 2009). E-health interventions also have the advantage of being anonymous, convenient, accessible 24/7, and more economical than in person treatments (Barak, Hen, Boniel-Nissim, & Shapira, 2008; Franklin, Farfanzar, & Thompson, 2009; Spek, Cuijpers, Nyklicek, Riper, Keyzer, & Pop, 2007).

A randomized controlled trial evaluating the effectiveness of a multimodal online wellness program found intervention participants made significant improvement in their well-being compared to controls at 30 and 90-days post-intervention exposure (Cobb & Poirier, 2014). Some systematic reviews and meta-analyses of computer-based wellness interventions

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indicate overall positive results on physical and psychological problems (Barak et al., 2008; Franklin, Farfanzar, & Thompson, 2009; Kroeze, Werkman, & Brug, 2006; Spek et al., 2007). Barak and colleagues (2008) report overall medium effects for a variety of problems, including depression, post-traumatic stress disorder, panic and anxiety, drinking, and weight loss.

Spek and colleagues (2007), in a meta-analysis of the impact of cognitive behavioral therapy on anxiety and depression reported small positive effects for the latter and large positive effects for the former. In a review of the research literature ranging from 1964 to 2004, Kroeze and colleagues (2006) found promising outcomes for the use of computer-based tailored interventions for physical activity and dietary behaviors. In comparing e-health interventions with comparison groups, Norman and colleagues reported that half of the 41 studies they reviewed had more favorable outcomes for computerized interventions (Norman, Zabinski, Adams, Rosenberg, Yaroch, & Atienza, 2007).

Improved knowledge, attitude, and self-efficacy beliefs; as well as reduced obsessive compulsive thinking were reported in some programs (Alemi, Cherry, & Meffert, 1989; Epstein & McGaha, 1999; Markham, Shegog, Leonard, Buia, & Paul, 2009; Paperny & Starn, 1989; Roberto, Zimmerman, Carlyle, & Abner, 2007; Thomas, Cahill, & Santilli, 1997; Verduin, LaRowe, Myrick, Cannon-Bowers, & Bowers, 2013). Improvements in behavioral outcomes such as reduced sexual activity and/or initiation, and increased safe sex behaviors were also reported (Downs, Murray, Bruine de Bruin, Penrose, Palmgren, & Fischhoff, 2004; Mustanski, Garafolo, Monahan, Gratzler, & Andrews, 2013; Tortolero, Markham, Peskin, Shegog, Addy, Escobar-Chaves, & Baumler, 2010; WILL & Navy's Center for Personal Development, 2013).

Literature Review

I COPPE domains

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Personal well-being is complex and dynamic, encompassing subjective elements such as self-determination, perceptions of life satisfaction, sense of control, mastery over the environment, and positive emotions (Eid & Larsen, 2008; Fredrickson, 2009; Lyubomirsky, 2008; Marmot, 2004; Rath & Harter 2010; Seligman, 2011). Objective elements include socio-economic levels and educational attainment. The I COPPE Scale is based on the well-being literature focusing on subjective well-being (SWB). For further information on the development and validation of the I COPPE Scale (self-assessment) please see prior studies by our research team: Prilleltensky, I., Dietz, Prilleltensky, O., Myers, Rubenstein, Jin, & McMahon, 2015; and Myers, Prilleltensky, I, Jin, Dietz, Rubenstein, Prilleltensky, O., & McMahon, 2014.

For individuals to thrive, skills must support wellness in each one of the six I COPPE domains of wellness. Research on personal (Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi, & Biswas-Diener, 2009; Eid & Larsen, 2008; Keyes, 2007; Lyubomirsky, 2008; Marmot, 2004; Powers & Faden, 2006; Rath & Harter, 2010; Seligman, 2011), interpersonal (Cacioppo, Reis, & Zautra, 2011; Cohen, 2004; Gottman, Gottman, & Atkins, 2011), organizational (Bolman & Deal, 2003; Sisodia, Wolfe, & Sheth, 2007), and communal well-being (Commission on Social Determinants of Health, 2008; Graham, 2009; Inglehart, Foa, Peterson, & Welzel, 2008; Wilkinson & Pickett, 2009) provides support for the claim that the I COPPE domains are vital for the flourishing of persons and systems. Research shows that overall subjective well-being is linked to satisfaction in the I COPPE domains of life (Prilleltensky et al., 2015; Argyle, 2001; Cohen, 1999; Gonzalez, Coenders, Saez & Casas, 2010; Erdogan, Bauer, Truxillo, & Mansfield, 2012).

BET I CAN Drivers of Change

Extensive scholarship supports the impact of certain behavioral principles (Botella, Gallego, Garica-Palacios, Guillen, Banos, Quero, & Alcaniz, 2010; Cameron & Moss-Morris; 2010; Domjan & Grau, 2009; Watson & Tharp, 2007), emotions (Fredrickson, 2009; Lyubomirsky, 2008; Williams, Kielcot-Glaser, Legato, Ornish, Power, Syme, & Williams, 1999), and thoughts (Bandura, 1986; Meichenbaum, 1977, 1985; Spek, Cuijpers, Nyklicek, Riper, Keyzer, & Pop, 2007; Sutton, 2010) on the acquisition of healthy habits. Behaviors, emotions and cognitions interact over time in a person's life. Personality and previous experiences with eating, physical exercise, or stress greatly influence present and future efforts at changing behavior and improving wellness (Dunbar-Jacob, Gemmell, & Schlenk, 2009; Mols & Denollet, 2010; Ogden, 2010; Wiebe, Drew, & Croom, 2010). Interpersonal factors such as conflict or support also influence well-being greatly (Inoue & Kawakami, 2010; Zimmerman & Connor, 1989), as do community factors such as culture (Uskul, 2010), neighborhood conditions (Raja, Ball, Booth, Haberstro, & Veith, 2009), and economic conditions (Williams, DiMatteo, & Haskard, 2009). In brief, community factors include elements of the social, cultural and built environment.

The factor we call awareness has to do with the ability to see connections among the previous five considerations. People seeking to attain health and wellness goals should be able to see how behaviors, emotions, thoughts, interpersonal and community factors impact their health and decision to change (Dunbar-Jacob et al., 2009; Lane & Rollnick, 2009; Williams et al., 2009). In addition, people must attain a level of personal awareness to embark on positive change. The final factor, which we call next steps, concerns the ability of the person to keep moving from one stage of the change process to the next.

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Some proven methods of health behavior change include self-monitoring, feedback, rewards and social support (Kroeze, Werkman, & Brug, 2006; Norman, Zabinski, Adams, Rosenberg, Yaroch, & Atienza, 2007; Samoocha, Bruinvels, Elbers, Anema, & van der Beek, 2010; Spek et al., 2007; Webb, Joseph, Yardley, & Michie, 2010). FFW is based on knowledge of the process of change which is informed by factors and mechanisms involved in change. The very first phase is called motivational interaction because of the crucial importance of engaging users in the program. Inspired by motivational interviewing techniques, this phase recognizes that users are ambivalent about making changes, and that it is crucial to address these hesitations (Lane & Rollnick, 2009; Martins & McNeil, 2009). Goal setting theory contends that the behavior of setting goals acts as a motivator for people to change their behavior. The main premise of this theory is that when people are encouraged to pursue a “difficult but realistic” goal, they are more likely to do better than if they were supported to simply “do their best” (Locke & Latham, 1990, 2002). A review of 23 studies examined the effectiveness of goal setting interventions on diet and physical activity outcomes and found positive results (Shiltz, Horowitz, & Townsend, 2004). Achievement of sub-goals builds self-efficacy, which leads to improved performance (Bandura, 1977; 1986).

Self-Efficacy

Self-efficacy is a key construct in our intervention because it is associated with well-being. Studies across cultures and countries have established the relationship between high levels of general self-efficacy and high levels of well-being (Luszczynska & Gutierrez-Dona, 2005). Positive correlations have been found for generalized self-efficacy and job satisfaction (Judge & Bono, 2001). Moreover, self-efficacy for health care practices has been found to be an important antecedent of preventive health behaviors (Jayanti & Burns, 1998). Domain-

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specific self-efficacy, in turn, is a central construct in safe sex practices (Bandura, 1994) and substance abuse (Bandura, 1999). High self-efficacy beliefs for avoiding certain risk behaviors are associated with lower alcohol consumption (Oei, 2007). Specific self-efficacy beliefs also play a significant role in mediating the effects of interventions on substance use and sexual risk behavior (Kadden & Litt, 2011; O’Leary, 1992). Health education research has also established that self-efficacy beliefs can be enhanced. These enhancements, in turn, lead to positive changes across multiple health risk behaviors (Strecher et al., 1986; Danaher, Smolkowski, Seeley, & Severson, 2008; Jardin & Carpenter, 2012; Brown, Seraganian, Tremblay, & Annis, 2002; Gilchrist & Schinke, 1983; Schmiede et al., 2009).

In our intervention, we are targeting two specific contexts where self-efficacy occurs: 1) Self-efficacy in I COPPE and; 2) Self-efficacy in BET I CAN. The literature on self-efficacy suggests that designing study-specific self-efficacy measures is at least as good as using existing self-efficacy measures (Bandura, 1997). Below, we describe in detail, the rationale that led to the creation of the BET I CAN and I COPPE instruments we will be using. These measures are congruent with the intervention and are discussed in a subsequent section entitled *Description of Measures*. In the next section we elaborate the rationale for choosing the BET I CAN drivers of change.

Intervention Design and Rationale

Fun For Wellness (FFW) is an interactive program where participants will learn skills and techniques to improve their health and well-being. They will participate in activities and learn 14 skills specifically designed to improve interpersonal, community, occupational, psychological, physical, and economic well-being. The skills support seven drivers of change: Behaviors, Emotions, Thoughts, Interactions, Context, Awareness, and Next Steps. Together, the

drivers form the acronym BET I CAN. Study participants will be exposed to two skills per driver, thus culminating in 14 total skills. The skills are listed below along with the supporting research evidence under each driver. See Appendix for details of each supporting research study.

Behaviors

1. Set a goal. Goal-setting is beneficial in planning positive actions and increasing well-being (Coote & MacLeod, 2012). Learning to set goals in a single session is associated with significant academic improvement for college students who are experiencing academic difficulty (Morisano, Hirsch, Peterson, Pihl, & Shore, 2010). In this goal-setting program, students learned to contemplate their desired future, identify goals of personal importance, prioritize these goals, explore positive goal outcome expectancies, determine sub-goals, identify potential obstacles and strategies for overcoming them, set benchmarks for goal attainment, and evaluate goal commitment. Setting goals also serves to enhance one's motivation and adherence.
2. Create positive habits. To create positive habits, one must understand the triggers that initiate the behavior and the rewards that maintain it. By taking charge of cues and rewards, one may decrease negative habits while creating new positive habits. For breaking bad habits, Adriaanse and colleagues (2011) found implementation intentions effective. Implementation intentions link a new desired behavior to a situation that triggers a habitual response (e.g., If I am in situation X, then I will perform goal-directed behavior Y). Creating positive habits is instrumental in helping individuals to lose weight. For example, overweight adults who received information on habit formation lost significantly more weight over eight weeks than overweight adults in a wait-list condition (Chipperfield, Lally, & Wardle, 2008). Keeping track of one's behavior related to a goal, such as weight loss, enhances one's ability to create

positive habits. In a study on weight loss over a 24-month period, adherence to self-monitoring daily food intake and physical activity (i.e., food and activity diary) was found to be significantly associated with weight loss (Turk et al., 2013).

Emotions

3. Cope with negative emotions. In order to cope with negative emotions, we must be aware of emotions and how they affect us. Through meditation and mindfulness, one can better tolerate negative emotions and avoid escalating their affective intensity. An intervention focused on meditation for emotion regulation was associated with positive changes in emotional behavior (e.g., reduced negative affect, rumination, and depression; Kemeny et al., 2012). Robins and colleagues (2012) found a mindfulness intervention on emotion experience and expression to be associated with significant decreases in fear of emotions, worry, and difficulties regulating emotions. The experience of focusing on one's negative emotions in an active manner (i.e., not ruminating) is also beneficial. For example, writing about feelings and experiences related to interpersonal hurt has been found to significantly decrease this hurt over time (Yu-Hsin Liao, Wei, Russell, & Abraham, 2012).
4. Collect positive emotions. Positive emotions promote well-being. Focusing on the good things for which one is grateful helps to increase positive emotions. In three studies by Emmons and McCullough (2003), daily gratitude thoughts led to an increase in positive emotions and a decrease in negative emotions. Similarly, interventions focused on one's strengths were found to be associated with significant increases in happiness and decreases in depression (Gander, Proyer, Ruch, & Wyss, 2013). Ouweneel and colleagues (2014) found that engaging in daily thoughts of gratitude and acts of kindness each day were both associated with a significant positive effect on positive emotions.

Thoughts

5. Challenge assumptions. By recognizing negative automatic thoughts, one can challenge them. Challenging assumptions and negative thoughts helps to weaken the link between the negative emotion and the negative thought. Reappraising a situation that provokes anxiety helps to moderate the subjective feeling of anxiety associated with that situation more so than merely accepting or suppressing the anxiety (Hofmann, Heering, Sawyer, & Asnaani, 2009). Shurick and colleagues (2012) examined the effect of cognitive restructuring (i.e., reinterpreting stimuli in a less negative way) on conditioned fear responses. Cognitive restructuring was associated with a reduction in fear. Similarly, undergraduate students high in social anxiety who received cognitive restructuring prompts about a social situation reported less deterioration in mood than those who received no cognitive restructuring prompts (Rodebaugh, Jakatdar, Rosenberg, & Heimberg, 2009).
6. Write a new story. Writing a new story empowers individuals to disengage from an unhelpful story about the self and to develop a more optimistic and fulfilling narrative. One's mindset has a powerful effect on performance. In an intervention study, Good and colleagues (2003) demonstrated the positive effect of a mentoring program in which students were encouraged to make non-pejorative attributions for their academic difficulties. They found that students who encounter negative stereotypes about their abilities experienced an increase in achievement when they were encouraged to adopt a less pejorative mindset. A study on mindset induction found that the type of mindset induced impacted one's ability to adapt performance after errors. While both growth-mindset (i.e., malleability of intelligence) and fixed-mindset (i.e., immutability of intelligence) induction led to enhanced attention on a task, only the growth-mindset induction led to enhanced attention to improving performance

after errors (Schroder, Moran, Brent Donnellan, & Moser, 2014). Life review therapy, which focuses on integrating difficult life events from the past and retrieving positive memories to develop new life stories, has been effective in reducing depressive symptoms and increasing well-being (Korte, Bohlmeijer, Cappeliez, Smit, & Westerhof, 2012).

Interactions

7. Connect. Connection and support are important protective factors. In a study with individuals following substance abuse treatment, Bond and colleagues (2003) found that receiving support from others who also had a history of substance abuse (e.g., others in AA) was a significant positive predictor of maintaining abstinence. The way in which we share successes is also important to the well-being of our relationships. For example, one study with dating couples found that active and constructive responses to positive event discussions were significantly related to relationship well-being and break-up, more so than responses to negative event discussions (Gable, Gonzaga, & Strachman, 2006). Healthy relationship skills, which are critical to interpersonal well-being, can be taught. For situationally violent couples, an intervention focused on enhancing healthy relationship skills was effective in reducing violence (Bradley & Gottman, 2012).
8. Communicate. Effective and empathic communication helps to cultivate fulfilling relationships. Active listening is an integral element of interpersonal communication. Bodie and colleagues (2015) found that active listening (e.g., asking open questions, paraphrasing content, reflecting feelings) signaled more emotional awareness and prompted greater emotional improvement for college students who were disclosing an upsetting problem. In initial interactions, active listening is also associated with feeling more understood (Weger, Bell, & Robinson, 2014). Assertiveness (e.g., confronting criticism, expressing

dissatisfaction) is another important component of interpersonal communication. An assertiveness training program for nursing and medical students with low assertiveness was found to be effective in improving both assertiveness and self-esteem (Lin et al., 2004).

Context

9. Read the cues. Signals in our environment play an important role in the behaviors we engage in. For people trying to lose weight, adapting one's behavior to cues in the environment can be instrumental in reaching this goal. For example, in the presence of holiday food cues, dieters tend to bolster self-regulatory resources and eat less than in the absence of holiday food cues (Martins & Vallen, 2014). Prinsen and colleagues (2013) examined the role of environmental cues in food choice. They found that participants were more likely to eat chocolates in the presence of empty wrappers, suggesting that others had them too, and more likely to eat a healthy or unhealthy snack based on what others had chosen. People also tend to eat less in the presence of cues reminding them of how much they have already eaten; that is, they tend to eat more when sitting at tables that are bussed during the meal (Wansink & Payne, 2007). Environmental cues also elicit the craving to smoke. In the presence of cues related to smoking (e.g., sight, smell, lighting of cigarette), both daily and occasional smokers experienced significant increases in craving (Carpenter et al., 2014).
10. Change the cues. Changing cues enhances one's ability to modify problematic behavior and promote healthy behavior. In the presence of attractive food cues (e.g., the smell of food), dieters have been found to eat more than non-dieters (Papies & Hamstra, 2010). However, when reminded of their dieting goal prior to entering the tempting eating situation, dieters reduced their eating behavior. Research has also found that lighting and music can affect food consumption and satisfaction (Wansink & Van Ittersum, 2012). Similarly, listening to

soft music at bedtime is associated with significantly better sleep quality (Lai & Good, 2005). Janse Van Rensburg and colleagues (2013) found that light and vigorous exercise significantly decreased urges to smoke and increased positive affect for smokers deprived of nicotine overnight.

Awareness

11. Know yourself. Knowing oneself can help clarify one's values and make it easier to commit to actions that align with those values. Mindfulness can serve as a powerful tool in the quest for creating greater clarity and meaning in one's life. Research supports the relationship between mindfulness and positive emotional states (Warren Brown & Ryan, 2003). Bowen and colleagues (2014) conducted a long-term efficacy study of mindfulness-based relapse prevention for individuals who had successfully completed treatment for substance use disorder. Compared with standard relapse prevention and treatment as usual, the mindfulness-based program was associated with significantly lower relapse at 12 months. Focused breathing has been found to help with emotion regulation more so than worry or unfocused attention (Arch & Craske, 2006).
12. Know the issue. Knowledge empowers individuals to take responsibility for assessing choices and making decisions. Research supports the role of knowledge in promoting well-being. In a systematic review, Husson and colleagues (2011) found that information provision was positively associated with health-related quality-of-life and negatively associated with depression and anxiety. An intervention focused on nutrition education was found to be associated with a decrease in total fat intake and an increase in calcium and vitamin D intake (Manios, Moschonis, Katsaroli, Grammatikaki, & Tanagra, 2007). Psycho-

education has also been found to help in preventing relapse for adults with remitted major depression (Morokuma et al., 2013).

Next Steps

13. Make a plan. Making a plan provides a general direction for setting goals and aligning one's actions with goals. In a study by Lange and colleagues (2013), participants who had learned dietary planning skills in a one-hour online intervention achieved significantly greater fruit consumption than those who did not learn such skills. Wiedemann and colleagues (2011) explored the processes by which planning interventions achieve their effects. They found that a planning intervention had positive effects on fruit and vegetable intake as well as health behavior change for employees. An intervention requiring participants to develop action plans to incorporate walking into their weekly schedule found that planning such behavior increased perceived behavioral control, attitudes, intentions and time spent walking each day (Darker, French, Eves, & Sniehotta, 2010).
14. Make it stick. Personal change has no end point. Once new skills are learned, one must practice them in order to maintain positive habits and cope with setbacks. For participants involved in physical and mental activity interventions, coping plans predicted adherence to the interventions, more so than intentions or self-efficacy (Evers, Klusmann, Schwarzer, & Heuser, 2012). Kiernan and colleagues (2013) investigated the effect of learning problem-solving maintenance skills before losing weight on long-term weight loss management. Compared with participants who had participated in a weight loss intervention before learning these skills, participants who learned them prior to beginning the weight loss program regained significantly less weight during the 12-month follow-up period. Similarly, social support from one's friends enhances one's ability to maintain weight loss over time

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(Wing & Jeffrey, 1999). Thinking about one's future self helps individuals with their saving behavior. Specifically, those who interact with a virtual future self, exhibit an increased tendency to accept delayed monetary rewards over immediate rewards (Hershfield et al., 2011).

Group Conditions

Intervention description. Participants will: 1) watch original vignettes performed by professional actors; 2) watch and/or read mini-lectures narrated by a coach teaching 14 empirically-based skills, 3) engage in self-reflection exercises, and 4) play team-produced interactive games related to the vignettes and the skills.

Each of the 14 skill modules is linked to one of the BET I CAN drivers (2 skills per driver). Each module consists of 4 to 14 challenges (i.e. activities). There are six types of challenges: 1) read text and watch narrated video clips, 2) watch video scenes representing challenges in the I COPPE domains of life, 3) play Fun For Wellness (FFW) games linked to the video scenes to learn skills, 4) write reflective responses to open-ended questions to gain personal insight, 5) interact with other FFW users via chat room functions and, 6) watch funny narrated video clips about well-being.

Some types of challenges are presented more than once in some modules. Challenge type descriptions follow:

- 1) Read text and watch narrated video clips- Psycho-educational wellness content pertaining to the skill is provided in text format. A short video (approx. 30-90 seconds) of a person narrating the same text is embedded in the same screen.
- 2) Video scenes- A mini-drama consisting of a series of 34 independently viewable scenes (approx. 90 seconds each) is distributed throughout the program. These videos depict a network

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of characters (played by actors) engaging in real-life enactments of common experiences of BET I CAN drivers across I COPPE domains.

3) Games-Interactive video games, produced by the team, are embedded throughout various modules. The games contain well-being content specific to the targeted skill in each module. Game content is interwoven with recognizable vocabulary and character storylines from the mini-drama videos.

4) Written self-reflection exercises-Text prompts and open-ended questions related to the skill of focus are provided in strategically placed module sections. Participants will be encouraged to provide free responses to prompts about the content they have: a) read about, b) listened to in the narrated videos, or c) seen acted out in the mini-scenes drama videos. These self-reflective exercises will provide participants with the conceptual and physical space to plan, develop, revise, and document their goals for self-directed change. Participants will be able to go back and read their responses throughout their FFW experience and make changes as they wish.

5) Chat room and community forum social interactions-

a. Chat room: Live chat room functions will be available to intervention participants to send and receive real-time communications to other intervention group participants. Only participants who will be online at the exact same time with each other will have the opportunity to communicate with each other. Identification of participants will only be made using a participants' screen name created by each participant during the initial study registration. Chat room log interactions are not permanently posted for participants to view at later times. Each chat log interaction will only remain visible to participants for as long as a participant is present in the chat room. Chat logs will not be systematically monitored by the research team.

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b. Community forum: Community forum capabilities will be available for participants to begin conversations based on specific topics. These threads will be posted to the forum boards and will remain visible to all intervention participants who click on a particular topic thread. Community forum logs will not be systematically monitored by the research team.

6) Funny narrated video clips about well-being- Humorous video clips of well-being stories, narrated and performed by the principal investigator, are embedded at the end of each of the 14 modules. Starting at module #5, users must beat some challenges to unlock and watch the nine remaining funny videos.

The Fun For Wellness (FFW) modules, corresponding challenges, and funny videos are listed below.

Introduction

Challenge 1: Orient yourself

Challenge 2: Learn about I COPPE

Challenge 3: Be strategic: Learn about BET I CAN

Challenge 4: Meet the characters

Funny Video: *Laugh*

Driver 1: Behaviors

Skill 1: Set a goal

Challenge 1: Choose a goal

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 2: Watch Florence struggle with her goal

Activity- watch character video scene

Challenge 3: Commit to your goal

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 4: Think about the long term

Activity- written self-reflection exercise

Challenge 5: Help Karl set a goal

Activities- a) watch character video scene; b) text and narrated video

Challenge 6: Learn about SMART sub-goals

Activity- text and narrated video

Challenge 7: Set a SMART sub-goal

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 8: Play video game

Activity- video game “*Getting It Done!*”

Funny Video: *Smile*

Skill 2: Create positive habits

Challenge 1: Learn about the power of rewards

Activities- a) watch character video scene; b) text and narrated video

Challenge 2: Reward baby steps

Activity- text and narrated video

Challenge 3: Design your reward system

Activity- written self-reflection exercise

Challenge 4: Watch Florence reviewing her food journal

Activities- a) watch character video scene; b) text and narrated video

Challenge 5: Play video game

Activity- video game “*HabEats of the Mind*”

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Challenge 6: Become a good detective

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 7: Learn from Erin

Activities- a) watch character video scene; b) text and narrated video

Challenge 8: Learn about alternatives

Activities- a) watch character video scene; b) text and narrated video

Challenge 9: Play video game

Activity- video game “*Nutrition Wars*”

Funny Video: *Share the experience*

Driver 2: Emotions

Skill 1: Cope with negative emotions

Challenge 1: Understand negative emotions

Activity- text and narrated video

Challenge 2: Watch Larry and Erin arguing

Activity- watch character video scene

Challenge 3: Play Detective!

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 4: Detect and Reflect!

Activity- written self-reflection exercise

Challenge 5: Watch Jim lose his cool

Activity- watch character video scene

Challenge 6: Learn about emotional awareness

Activity- text and narrated video

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Challenge 7: Watch Erin trying to study

Activity- watch character video scene

Challenge 8: Play video game

Activity- video game "*Stress Less*"

Challenge 9: Stay on track

Activity- written self-reflection exercise

Funny Video: *Solve Isaac's stress*

Skill 2: Collect positive emotions

Challenge 1: Watch David and Alicia's anniversary dinner

Activity- watch character video scene

Challenge 2: Help David and Alicia collect positive emotions

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 3: Learn about positive emotions

Activity- text and narrated video

Challenge 4: Count Your Blessings

Activity- written self-reflection exercise

Challenge 5: You at your best

Activity- written self-reflection exercise

Challenge 6: Watch Too Busy To Coach

Activity- watch character video scene

Challenge 7: Commit acts of kindness

Activity- written self-reflection exercise

Challenge 8: Watch Jim coaching softball!

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Activity- watch character video scene

Challenge 9: Play video game

Activity- video game “*Emotional Seesaw*”

Challenge 10: Feel the Future

Activity- written self-reflection exercise

Funny Video: *Fantasize and laugh*

Driver 3: Thoughts

Skill 1: Challenge assumptions

Challenge 1: Explore the relationship between, thoughts, feelings, and behaviors

Activity- text and narrated video

Challenge 2: Watch Erin at the bulletin board

Activity- watch character video scene

Challenge 3: Discover the self-defeating loop

Activities- a) written self-reflection exercise; b) text

Challenge 4: Understand faulty thinking

Activity- text and narrated video

Challenge 5: Watch Jan and Jim at the office

Activity- watch character video scene

Challenge 6: Watch Larry about to join the party

Activity- watch character video scene

Challenge 7: Detect faulty thinking

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 8: Play video game

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Activity- video game “*Rethink That!*”

Challenge 9: Talk back to negative self-talk!

Activity- written self-reflection exercise

Challenge 10: Unplug from thoughts that short circuit your goal

Activity- written self-reflection exercise

Funny Video: *Minimize this!*

Skill 2: Write a new story

Challenge 1: Watch Larry write a new story

Activity- watch character video scene

Challenge 2: Read about the new ending to Larry’s story

Activity- text and narrated video

Challenge 3: Help Larry find sparkling moments

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 4: Find your own sparkling moments

Activity- written self-reflection exercise

Challenge 5: Re-watch Erin at the Student Career Center

Activity- watch character video scene

Challenge 6: Help Erin write a different ending

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 7: Explore the benefits of a growth mindset

Activity- text and narrated video

Challenge 8: Play video game

Activity- video game “*Fix a Fixed Mindset*”

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Challenge 9: Adopt a Growth Mindset

Activity- written self-reflection exercise

Challenge 10: Recover from setbacks

Activity- written self-reflection exercise

Funny Video: *Get to know the new Miami*

Driver 4: Interactions

Skill 1: Connect

Challenge 1: Read about the importance of connection

Activity- text and narrated video

Challenge 2: Guess the formula to a happy marriage

Activity- written self-reflection exercise

Challenge 3: Watch Larry preparing dinner

Activity- watch character video scene

Challenge 4: Search for hints of happiness

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 5: Watch Larry's bid for connection with Erin

Activities- a) watch character video scene; b) text and narrated video

Challenge 6: Watch Larry and Erin at the party

Activities- a) watch character video scene; b) text and narrated video

Challenge 7: Learn about gifts of the heart, the head, and the hand

Activity- text and narrated video

Challenge 8: Play video game

Activity- video game "*Better Together*"

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Challenge 9: Write about gifts you have given and received

Activity- written self-reflection exercise

Challenge 10: Learn to support when things go well

Activity- text and narrated video

Challenge 11: Play video game

Activity- video game “*Upbeat or Downbeat*”

Challenge 12: Let others help you

Activity- written self-reflection exercise

Funny Video: *Empathize, a little*

Skill 2: Communicate

Challenge 1: Communicate with L.O.V.E.

Activity- text and narrated video

Challenge 2: Re-watch the conflict between Erin and Larry

Activity- watch character video scene

Challenge 3: Do a L.O.V.E. analysis

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 4: Listen Well

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 5: Observe Well

Activity- text and narrated video

Challenge 6: Watch Jan asking for Jim’s help

Activities- a) watch character video scene; b) text and narrated video

Challenge 7: Verbalize Well

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Activity- text and narrated video

Challenge 8: Watch Karl's struggle with assertive communication

Activity- watch character video scene

Challenge 9: Play video game

Activity- video game "*Choose To Assert*"

Challenge 10: Assert Yourself

Activity- written self-reflection exercise

Challenge 11: Search for signs of empathy

Activities- a) watch character video scene; b) text and narrated video

Challenge 12: Put yourself in Erin's shoes

Activities- a) watch character video scene; b) text and narrated video

Challenge 13: Empathize Well

Activity- text and narrated video

Challenge 14: Ask for what you need

Activity- written self-reflection exercise

Funny Video: *Gossip, a little*

Driver 5: Context

Skill 1: Read the Cues

Challenge 1: Learn about cues

Activity- text and narrated video

Challenge 2: Watch Florence's struggle with food

Activity- watch character video scene

Challenge 3: Help Florence read the cues

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 4: Watch Erin trying to study

Activity- watch character video scene

Challenge 5: Help Erin read the cues

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 6: Watch David and Alicia at the restaurant

Activity- watch character video scene

Challenge 7: Help David read the cues

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 8: Read the cues in your environment

Activity- written self-reflection exercise

Challenge 9: Take control of your response to cues

Activity- text and narrated video

Challenge 10: Play video game

Activity- video game “*Self Control*”

Funny Video: *Read the cues, please.*

Skill 2: Change the cues

Challenge 1: Read about changing the cues

Activity- text and narrated video

Challenge 2: Play video game

Activity- video game “*NewTriton*”

Challenge 3: Change the cues that lead you astray

Activities- a) text and narrated video; b) written self-reflection exercise

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Challenge 4: Watch David and Karl planning lunch

Activities- a) watch character video scene; b) text and narrated video

Challenge 5: Watch David and Karl at the restaurant

Activity- watch character video scene

Challenge 6: Attend to cues and rewards

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 7: See how the story ends

Activities- a) watch character video scene; b) text and narrated video

Challenge 8: Watch Erin resisting distractions

Activities- a) watch character video scene; b) text and narrated video

Challenge 9: Help Erin do even better

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 10: Create your environment

Activities- a) text and narrated video; b) written self-reflection exercise

Funny Video: *Tame temptations*

Driver 6: Awareness

Skill 1: Know yourself

Challenge 1: Watch Karl and Jim at the office

Activity- watch character video scene

Challenge 2: Look for signs of stress

Activity- written self-reflection exercise

Challenge 3: Learn about our response to threat

Activity- text and narrated video

Challenge 4: Watch Erin and Jason on campus

Activities- a) watch character video scene; b) text and narrated video

Challenge 5: Reflect on how you deal with stress

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 6: Watch Karl's epiphany

Activities- a) watch character video scene; b) text and narrated video

Challenge 7: Explore your values and priorities

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 8: Think about the end of life

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 9: Build a thriving community

Activity- written self-reflection exercise

Challenge 10: Watch Jim self-reflect

Activities- a) watch character video scene; b) text and narrated video

Challenge 11: Consider the benefits of mindfulness

Activity- text and narrated video

Challenge 12: Focus on your breath

Activity- text and narrated video

Challenge 13: Play video game

Activity- video game "*Mindful Living*"

Challenge 14: Link goal and meaning

Activity- written self-reflection exercise

Funny Video: *Know your weakness*

Skill 2: Know the issue

Challenge 1: Become informed

Activity- text and narrated video

Challenge 2: See how David ignores information!

Activity- a) watch character video scene; b) text and narrated video

Challenge 3: Discover your own biases

Activity- a) written self-reflection exercise; b) text and narrated video

Challenge 4: Master the basics of I COPPE

Activity- text and narrated video

Challenge 5: Play Stop Before You Shop

Activity- video game “*Stop Before You Shop*”

Challenge 6: Play True or False

Activity- video game “*True or False*”

Challenge 7: Play Well Words

Activity- video game “*Well Words*”

Challenge 8: Play Match the Task

Activity- video game “*Match the Task*”

Challenge 9: Select a BET I CAN strategy to match your goal

Activity- written self-reflection exercise

Funny Video: *Know what you're getting into*

Driver 7: Next Steps

Skill 1: Make a plan

Challenge 1: Imagine your best possible self

Activities- a) written self-reflection exercise; b) text and narrated video

Challenge 2: Turn your aspirations into goals

Activity- written self-reflection exercise

Challenge 3: Watch Karl clean up his act

Activities- a) watch character video scene; b) text and narrated video

Challenge 4: Make it gradual

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 5: Help Florence make it gradual

Activities- a) watch character video scene; b) text and narrated video

Challenge 6: Reinforce yourself

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 7: Make it easy

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 8: Explore alternatives

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 9: Help David explore alternatives

Activities- a) watch character video scene; b) text and narrated video

Challenge 10: Seek support

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 11: Educate yourself

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 12: Play video game

Activity- video game "*GREASE the Plan*"

Funny Video: *Declutter*

Skill 2: Make it stick

Challenge 1: Consider the long haul

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 2: Keep recording and rewarding

Activity- text and narrated video

Challenge 3: Watch Florence struggling with temptation

Activities- a) watch character video scene; b) text and narrated video

Challenge 4: Fortify yourself

Activity- written self-reflection exercise

Challenge 5: Surf the urge

Activity- text and narrated video

Challenge 6: Help Florence stay on track

Activities- a) watch character video scene; b) text and narrated video

Challenge 7: Practice saying no

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 8: Plan ahead

Activities- a) text and narrated video; b) written self-reflection exercise

Challenge 9: Don't let a slip be your downfall

Activity- text and narrated video

Challenge 10: Consider your next step

Activities- a) watch character video scene; b) text and narrated video

Challenge 11: Play Skill Drill

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Activity- video game “*Skill Drill*”

Funny Video: *Remain calm*

Online Intervention Bibliography. Participants in the intervention condition will have access to a reference list of literature that supports the design and content of the Fun For Wellness components listed above. Please see the document named “References ONLINE FFW.docx”.

Wait-list control. Control group participants will be assigned to a wait-list. Participants will engage in their usual well-being care.

Study Procedures

As previously mentioned, the study design is a prospective, double-blind, longitudinal randomized controlled trial (RCT). Well-being and self-efficacy measures will be administered at baseline (T1), 30 days-post baseline (T2) and 60 days -post baseline (T3). Approximately 1,000 University of Miami Health System (UHealth) patients from the UM Lennar Medical Center will be invited to participate in the study. A maximum of 500 patients will be enrolled. Recruitment will take place on-site through distribution of IRB approved study flyers at the UM Lennar Center. Eligibility verification, data collection, randomization, intervention/control group activities, and incentive distribution will take place entirely online. A secure website will be the sole location where all research activities will take place.

Data Collection Plan

At each individually scheduled data collection point, participants will have a 7-day window to return to the website and provide their survey data (see Battery below) in order to receive an incentive. If they do not return within the 7-day timeframe to provide survey data, this will be considered missing data. All participants must complete/participate in each survey battery set to be credited money in the study’s Amazon electronic gift card account. Completion of each

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survey will be marked by a final SUBMIT button for the participant to click on when they are ready to submit each survey as completed. During each data collection time (i.e., T1, T2, T3), each participant will be able to see how far he/she has progressed toward completion of a survey battery set in order to be eligible for the assigned incentive value for that particular data collection time (i.e. \$5, \$10, \$15). This will be accomplished by providing each participant with a progress bar that will be visually represented on the participant's data collection page. The participant will be able to view how many surveys and items he/she has to complete to achieve completion.

Remuneration Plan

Throughout participation in the Patient Well-Being Research Project, each participant will be credited in the study to receive Amazon electronic gift cards as a thank you for completing/submitting each set of surveys (i.e. battery), for each of the three data collection times. They will need to submit the final answers of each survey before moving onto the next survey of the battery. The computer program offers the participant an opportunity to leave items blank or click on an item response if they wish by presenting a one-time pop-up reminder that states, "Are you sure you want to leave this item blank?" Therefore, a participant may skip items by choice during a particular survey answering experience, but in order to get the Amazon gift credit for that data collection time, the participant must submit each survey to complete participation in the full battery set for each data collection time. Intervention group participants will also have the opportunity to earn Amazon gift cards in addition to those earned by survey completion, based on their participation in the online intervention.

At the very start of participation by completing the first set of surveys, each participant will be credited \$5 toward an Amazon electronic gift card. For participants in both groups, when

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30 days has passed from the day each participant was randomly assigned to their group (intervention or control), she/he will be sent an e-mail reminding her/him to return to the website to complete some more surveys and receive an additional \$10 electronic gift card credit. For intervention group participants, those participants who completed at least 50% of each of the 15 modules will also be credited \$15 of Amazon electronic gift cards in their account. After an additional 30 days, each participant will be e-mailed again to return to the website for the last time to complete the final set of surveys and receive the final additional \$15 electronic gift card credit. After each participant has completed the final surveys, she/he will be e-mailed codes to redeem the total amount of Amazon electronic gift cards he/she has been credited throughout her/his Patient Well-Being Research Project experience. In total, each intervention participant will have the opportunity to obtain \$45 worth of Amazon electronic gift cards. Control group participants will have the opportunity to obtain a total of \$30 in Amazon electronic gift cards.

The following italicized text is the message participants will be presented immediately after they complete and submit the 3rd battery set of surveys.

“Thank you for completing this set of surveys. Around [Date] we will send you an email with instructions on how to redeem your Amazon electronic gift codes.”

Participant Recruitment Plan

The study aims to consent (i.e. enroll), assess, and randomly assign no more than 500 participants in a rolling fashion in real-time within an online environment. A timeframe of 24-calendar days will be considered the “recruitment window” to achieve this enrollment aim.

During the recruitment window the following research activities will take place simultaneously across multiple participants: 1) participant recruitment; 2) Patient Well-Being Research Project personal account creation; 3) e-mail validation procedure; 4) screening; 5) consenting; 6) data

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collection of baseline (T1) survey battery set; 7) participant incentive #1 credit deposit; 8) participant randomization and condition group assignment; 9) participant-intervention group online program access

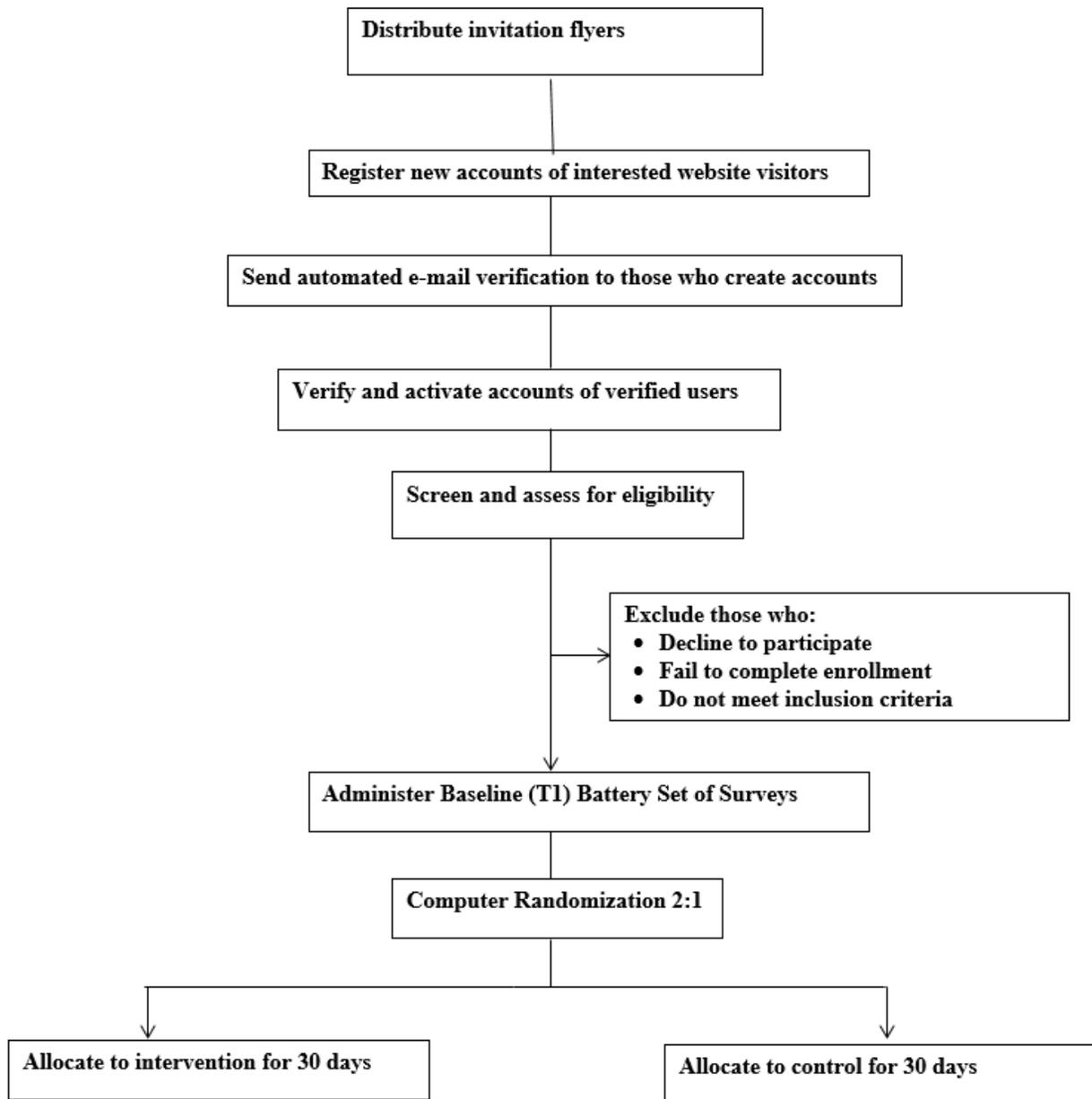
Recruitment Window Procedures

Participants will be recruited by being offered a research study invitation flyer, in-person. They will receive the flyer when checking in for their pre-registered medical appointment at the University of Miami's UHealth Lennar Foundation Medical Center. Upon check-in, a clinical access representative will ask each patient if they are interested in receiving an invitation flyer for a research study.

Participant recruitment. The IRB approved study recruitment flyers will begin to be offered to patients at the UM Lennar Medical Center on day 1 of the 24-day recruitment window. See figure 1 below for a visual overview of the real-time recruitment window procedures and communication components:

Figure 1

Recruitment Window



2) Patient Well-Being Research Project personal account request. Each recruited person who wishes to, will have the opportunity to visit the Patient Well-Being Research Project log-in page. To ensure the probability the project is limiting entry to only UM Lennar Medical Center patients who were handed an invitation flyer while on-site at the medical center, each visitor to the log-in page will be immediately prompted to enter a valid code that was printed on the

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invitation flyer they were given, in addition to their email address. They will then create a unique username and their own password for their research project account which will be stored in the research project database. All e-mail addresses will be encrypted on the research team's end so the researchers will be blind to the identity of the recruited subjects.

3) E-mail verification procedure and account activation. After respondents have created a personal account, they will receive an automated e-mail delivered to the e-mail address they provided when they created their personal account. They will be prompted to check their e-mail and click on the verification hyperlink to verify their e-mail address and activate the account they created. The salutation field of the automated e-mail verification will be populated with the username the respondent typed in when they requested an account. As soon as they click on the e-mail verification hyperlink, their account will become activated.

4) Screening. As soon as the verified account holder logs-into the Patient Well-Being Research Project, the respondent will be presented with 3 screening questions to assess inclusion/exclusion criteria. The respondent needs to answer both questions affirmatively to be qualified to move on and read the consent form. Respondents who do not affirm the first two screening questions and/or affirm the third, will be terminated from the study and locked out of further access to the research project website. Below are the screening questions and the messages excluded respondents will receive:

a) Respondent is first asked:

i) Are you at least 18 years old?

yes = will continue to second inclusion/exclusion criterion question

no = will be excluded and blocked from further access to the website and presented with the following message:

“Thank you for your help. At this time it appears you do not meet criteria for the current study. However, future studies and software development

testing will be occurring. Please visit us again at the next opportunity. We sincerely appreciate your time and effort. ”

b) Continuing respondents are asked:

ii) Are you currently a patient at the University of Miami Lennar Foundation Medical Center?

yes = will continue to Consent page

no = will be excluded and blocked from further access to the website and presented with the following message:

“Thank you for your help. At this time it appears you do not meet criteria for the current study. However, future studies and software development testing will be occurring. Please visit us again at the next opportunity. We sincerely appreciate your time and effort. ”

c) Continuing respondents are asked:

iii) Are you now, or have you ever participated in activities of the Fun For Wellness online program?

yes = will be excluded and blocked from further access to the website and presented with the following message:

“Thank you for your help. At this time it appears you do not meet criteria for the current study. However, future studies and software development testing will be occurring. Please visit us again at the next opportunity. We sincerely appreciate your time and effort. ”

no = will continue to Consent page

Information from excluded respondents will be noted by a frequency count that the screening page was accessed to screen a recruited individual to track numbers of screened potential participants. Only respondents who meet the study’s inclusion criteria will be automatically directed to the consent page screens. Those subset of respondents who meet inclusionary criteria who log out of their Patient Well-Being Research Project account without logging back in to read the consent form and formally decline participation before the end of the 24th day of the recruitment window will be denied further access to their account.

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Patient Well-Being Research Project validated account holders who created an account but never completed the screening, and/or consent and/or the T1 battery before the end of the 24-day recruitment window, will be presented with the following message if they attempt to log in:

“Thank you for visiting the Patient Well-Being Research Project! Unfortunately, the deadline for participant enrollment and completion of initial study research activities has passed. We appreciate your interest in the project.”

5) Informed Consenting. We are requesting a waiver of signed consent because consenting will be done online. Research participants will not be physically present with the researchers, as the participants will complete the consent process at their computer location. Therefore, the consent form will be in an electronic format. Those who click "decline to consent" will be locked out of the remaining program activities. No other data will be collected for these participants.

The study will be monitored only by the study investigators and/or sponsor. Immediately after passing the inclusionary criteria, the screened respondent will be presented with the IRB approved consent form to read and sign electronically.

Respondents who intend to give consent to participate in the study will be required to provide the same valid e-mail address that they used to create an account. This contact e-mail address will be used for sending data collection reminders and to deliver any earned electronic gift card incentive codes for the participant to redeem through Amazon. Respondents who intend to decline participation in the study will be informed to leave the personal e-mail address line blank. At the bottom of the consent form, the respondent will click of one of two following buttons:

a) **CLICK TO GIVE CONSENT TO PARTICIPATE IN STUDY**- As soon as a respondent clicks on this button, she/he will be automatically presented with a printable screen

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of the electronically signed IRB approved consent form. They will be presented with a message that states:

“Please print or save this electronically signed consent form and keep a copy for your records.”

After leaving the print consent page screen, each consented participant will be immediately directed to the medical disclaimer statement page. Those who provide consent will be allowed to proceed with reading the medical disclaimer statement which was drafted by the legal team at the University of Miami for the purpose of being displayed throughout the research project’s web pages.

b) CLICK TO DECLINE PARTICIPATION IN STUDY- As soon as a respondent clicks on this button, she/he will be automatically presented with the following message:

“You have declined to participate in the Patient Well-Being Research Project. Thank you for taking the time to consider this.”

Screened respondents who decline participation will be excluded and blocked from further access through their established Patient Well-Being Research Project account. If the respondent has mistakenly entered an e-mail address on the contact line the computer will not save this information. Similarly, participants who log out of their account during the presentation of the consent screens without clicking either button above will be considered to have “passively declined” consent.

6) Medical Disclaimer Statement agreement

The informed consent form under the section labelled “Procedures”, states participants will be required to read and agree to a medical disclaimer statement. The medical disclaimer was

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approved by legal counsel at the University of Miami. The informed consent form clarifies that their agreement of this medical disclaimer statement is one of several steps they will need to complete to eventually gain access to the online program and earn incentives.

The following text is the Medical Disclaimer statement:

Medical Disclaimer

“All materials published by the University of Miami on the Patient Well-Being Research Project website are for educational and informational purposes only. The information provided is not intended to replace medical advice, diagnosis, or treatment offered by professional health care providers. You should always seek the advice of a professional health care provider for any questions you may have regarding a medical or psychological condition, and should never disregard or delay in seeking such advice based on something you read on the Patient Well-Being Research Project website. If you think you may have a medical emergency, call your professional health care provider or 9-1-1 immediately. The Patient Well-Being Research Project website may contain functionality that allows users to upload content via chat rooms and forums (“User Content”), and such User Content is not monitored by the University of Miami. Reliance on any information provided by the Patient Well-Being Research Project website or found in User Content is solely at your own risk. The University of Miami will not be responsible or liable for any direct, indirect, consequential, special, exemplary, or other damages arising from your use of the Patient Well-Being Research Project website.”

As soon as the participant clicks the button under the medical disclaimer statement that reads

“Agree”, they will be provided access to the T1 survey battery set. If a participant clicks

“Disagree” they will be locked out of further access to the study and the following italicized text

will pop up and be presented to them:

“You have disagreed with the Patient Well-Being Research Project’s medical disclaimer statement. Therefore, we are unable to grant you further access to study activities. Thank you for your initial interest in the study.”

7) Baseline (T1) Data Collection. All participants will complete/participate in the demographic questionnaire and all remaining survey assessments for the first battery set of surveys.

Completion of each survey will be marked by a final SUBMIT button. A progress bar will be

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represented visually on the user's page as they complete each assessment to show their level of battery completion. Below is the T1 battery set of assessments that all consented participants will be administered prior to being randomized to a condition group.

1. FFW Demographics Questionnaire (9 items)
2. Self-Efficacy to Comply Measure (1 item)
3. I COPPE Scale- 30-day version (21 items)
4. SEWB Scale- 30-day version (21 items)
5. I COPPE Actions Scale- Revised (19 items, including 1 attention filter item)
6. Chronic Conditions Checklist (20 items)
7. SF-36 v2 (36 items)

On day 14 of the recruitment window, a baseline (T1) data collection battery set reminder e-mail will be sent to all consented participants who have not completed T1 data collection letting them know they have 10 more days to complete the T1 battery set of surveys. Here is the e-mail subject line: ***Patient Well-Being Research Project: Reminder to complete Survey Set #1.***

7) Participant incentive #1 credit deposit. After each participant submits the final survey, a visual and sound action will show the \$5 Amazon electronic gift card credit into the participants' Patient Well-Being Research Project bank account.

8) Participant randomization and condition group assignment. Participants who have completed the full T1 battery will be randomly assigned in real time to either the intervention condition or the wait-list control condition. Randomization and assignment will be done solely by the computer program so researchers will be blind to participant randomization and group assignment. The computer program will use a 2:1 randomization algorithm so that there are twice as many intervention participants as control participants. Participants will be randomly assigned based on their sequential order in the assignment line up which will be established at the exact time of each participant's submission of the battery of the first set of surveys (i.e. T1).

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The first participant who submits their T1 battery will be assigned control or intervention based on a digital coin flip. For each additional participant who submits their T1 battery, if we need another person to fulfill the intervention (2:1) ratio, that person will be assigned to the intervention condition. The same with control, if more control participants need to be assigned to that condition, then the participant will be added to the control group. If we already have an exact 2:1 ratio, the participant will be assigned to one of the two conditions based on a digital coin flip.

9) Participant condition group access. As soon as participants complete the T1 battery set of surveys and are randomized by the computer, they will be sent a welcome e-mail. Here is the e-mail subject line: *Welcome to the Patient Well-Being Research Project*.

Intervention participants will have immediate access to the Fun For Wellness and control participants will be wait-listed. Participants in the intervention group may access the Patient Well-Being Research Project site during all hours of the 30-day access window. Control group participants will be informed they have been randomly assigned to the wait-list condition and will be given eventual 30 days of access to the online well-being program at the end of the 60-day study.

After 30 days, participants in the intervention group will no longer have access to the online program at the Patient Well-Being Research Project site. Participants from both condition groups may still log in to see how much credit they have in their account to redeem Amazon electronic gift card codes. Participants in both groups will be sent reminder e-mails to complete the survey set for the second time (T2: 30-days post baseline). After 30 more days have passed (T3: 60-days post baseline), participants will receive reminder e-mails to complete the survey set for the third time.

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10) Participant e-mail reminder plan. Two types of e-mail reminders will be automatically sent to participants during the 60-day study period. The first type of e-mail will encourage continued participation in the online program. The second type of email will encourage completion of the surveys.

a) Email to encourage continued participation:

We will send one participation e-mail during the intervention participant's 30-day access period. One e-mail will be sent to each participant on day 4 of their 30-day access period.

Here is the day 4 participation encouragement e-mail subject line: ***Patient Well-Being Research Project- 26 more days to keep visiting us during your access time 😊***

b) Email to encourage survey completion:

We will send four of these survey completion emails to participants in both condition groups. For each data collection time (T2; T3), we will send two survey battery reminder e-mails. At T2, immediately after the intervention group participant's 30-day access period, and after 30 days have passed since the T1 baseline for the wait-list control participant (i.e., day 31), we will send one survey battery reminder e-mail. Four days later, we will send another survey battery reminder e-mail to those participants who have still not completed T2 data collection.

Here is the T2 (day 31) initial survey battery reminder e-mail subject line: ***Patient Well-Being Research Project: Reminder 7 days to complete Survey Set #2.***

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Here is the T2 (day 34/day 4 of 7-day window) initial survey battery reminder e-mail subject line: ***Patient Well-Being Research Project: Reminder 3 days to complete Survey Set #2.***

On the first day of T3, which corresponds to 60-days post baseline, we will send one survey battery reminder e-mail that the 7-day window is open for participants to complete the third survey battery set. Four days later, we will send another survey battery reminder e-mail to those participants who have still not completed T3 data collection.

Here is the T3 (60-day post baseline) initial survey battery reminder e-mail subject line: ***Patient Well-Being Research Project: Reminder 7 days to complete Survey Set #3.***

Here is the T3 (60-day post baseline) (day 64/day 4 of 7-day window) initial survey battery reminder e-mail subject line: ***Patient Well-Being Research Project: Reminder 3 days to complete Survey Set #3.***

Battery Set of Surveys Content

Question contexts effects (i.e., where questions are located in a survey, what questions precede an item) have been found to influence respondent survey choices on measures of subjective well-being (Schwarz & Strack, 1999; OECD, 2013) and self-rated health (Lee, McClain, Webster, & Han, 2016). Therefore, to avoid artificial attenuation or inflation in their relationship, the subjective well-being measure (I COPPE Scale) will be presented well before the chronic conditions checklist, and health-related quality of life measures.

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The entire battery set of surveys, consisting of 127 items in total, and the order of how the surveys will be presented to respondents is as follows:

1. FFW Demographics Questionnaire (9 items)
2. Baseline_Self-Efficacy to Comply Measure (1 item)
3. I COPPE Scale- 30-day version (21 items)
4. SEWB Scale- 30-day version (21 items)
5. I COPPE Actions Scale- Revised (19 items, including 1 attention filter item)
6. Chronic Conditions Checklist (20 items)
7. SF-36 v2 (36 items)
8. FFW Experience Survey (15 items) [intervention group only T2]

Battery Administration Schedule

T1 (baseline): both condition groups

- 1) FFW Demographics Questionnaire
-9 items
- 2) Self-efficacy to Comply Measure
-1 item
- 3) I COPPE Scale 30-day version
-21 items
- 4) Self-Efficacy in Well-Being Domains Scale (SEWB) 30-day version
- 21 items
- 5) I COPPE Actions Scale
- 18 items + item #19 attention filter
- 6) Chronic Conditions Checklist
-20 items
- 7) SF36 v2
-36 items

T2 (30-days post baseline): both condition groups

- 1) I COPPE Scale 30-day version
-21 items
- 2) Self-Efficacy in Well-Being Domains Scale (SEWB) 30-day version
- 21 items

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- 3) I COPPE Actions Scale
- 18 items + item #19 attention filter
- 4) SF36 v2
-36 items

T2 (30-days post baseline): intervention only

- 5) FFW Experience Survey
-15 items

T3 (60-days post baseline): both condition groups

- 1) I COPPE Scale 30-day version
-21 items
- 2) Self-Efficacy in Well-Being Domains Scale (SEWB) 30-day version
- 21 items
- 3) I COPPE Actions Scale
- 18 items + item #19 attention filter
- 4) SF36 v2
-36 items

Description of Measures

1. **Demographics questionnaire.** This 9-item questionnaire will collect demographic information on the variables of gender, income, marital status, age, ethnicity, education level, employment type (part-time vs. full-time), and occupation. This measure will be administered once at baseline for all consented participants.

Self-Efficacy to Comply Measure. This 1-item will measure a respondent's self-efficacy to comply with the intervention and may be used as a predictor of a participant's follow-through behaviors to comply with intervention activities. Participants will be asked to rate how confident they are in their current ability to spend at least two hours and complete a minimum of seven

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challenges. This is the amount of time and effort the research team has determined is necessary to considered “compliant” for the purposes of measuring compliance with the intervention.

3. **Chronic Conditions Checklist.** This researcher created 20-item checklist will measure how many, if any, chronic health conditions the respondent self-reports. The number and type of chronic conditions a patient has been found to be related to variable patient outcomes in HRQOL (Alonso et al., 2004; Bayliss et al., 2012) and subjective well-being (Siahpush, Spittal & Singh, 2008). A respondent may self-report zero, one or more chronic medical conditions prompted by the question, “Have you been told by a physician, nurse, or other health care provider that you have any of the following conditions?” The 20 conditions were identified by the Office of the Assistant Secretary for Health (OASH) List of Selected Chronic Conditions (Goodman et al., 2013). The chronic conditions were identified by the multiple chronic conditions (MCC) workgroup with the goal of creating a standard classification structure. The final 20 conditions were derived from multiple health data systems of the National Health Interview Survey (NHIS); National Ambulatory Medical Care Survey (NAMCS); Medical Expenditure Panel Survey; Nationwide Inpatient Sample of the Healthcare Cost and Utilization Project; and Medicare beneficiary enrollment and claims administrative data from CMS (https://www.cdc.gov/pcd/issues/2013/12_0239.htm).

2. **I COPPE Scale.** Participant well-being in I COPPE domains will be self-assessed with this measure using a validated tool called the I COPPE Scale (Myers, Prilleltensky, I., Jin, Dietz, Rubenstein, Prilleltensky, O., & McMahon, 2014; Prilleltensky, I., Dietz, Prilleltensky, O., Myers, Rubenstein, Jin, & McMahon, 2015; Myers, Park, Lefevor, Dietz, Prilleltensky & Prado, 2016). The I COPPE Scale was validated during two online studies testing the theorized seven-factor theory of well-being (six life domains as well as overall well-being) in

both a general population sample of 426 adults (214 women, 212 men), ages 20 to 88 ($M = 50.86$, $SD = 13.57$) and in a sample of 641 English-speaking Hispanic adults (354 women, 287 men), ages 19 to 83 ($M = 41.04$, $SD = 13.97$).

Prilleltensky and colleagues (2015) tested the theorized seven-factor theory of well-being (six life domains as well as overall well-being) using the I COPPE Scale and assessed the scale's construct validity using well established comparison measures. Four hundred twenty-six mostly White/Caucasian (83%) participants (214 women, 212 men) ranging in ages 20 to 88 ($M = 50.86$, $SD = 13.57$) completed the online battery of instruments. Using exploratory structural equation modeling (ESEM), this study fully and reliably assessed the underlying constructs of the **I COPPE Scale**. Findings provided strong empirical evidence of the I COPPE theoretical framework and construct validity of the I COPPE factors with correlations ranging from .43 to .74.

The I COPPE Scale was also tested in a sample of six hundred forty-one English speaking self-identified Hispanic adults (354 women, 287 men), ages 19 to 83 ($M = 41.04$, $SD = 13.97$) (Myers et al., 2016). The participants completed the survey battery of comparison instruments. Both exploratory bi-factor analysis (EBFA) and confirmatory bi-factor analysis (CBFA), were used to assess the underlying constructs of the multidimensional **I COPPE Scale**. Initial validity evidence was found with correlation values ranging from .26 to .63.

Definitions of the seven I COPPE Scale constructs and corresponding items are as follows:

a. Overall Well-being (OWB). Overall well-being (OWB) is a positive state of affairs in an individual's life. Well-being derives from satisfaction of needs in six domains of life:

Interpersonal, Communal, Occupational, Physical, Psychological, and Economic. These six domains form the acronym I COPPE. The better a person feels in any one of these areas, the better his or her overall wellness. They are all interconnected (Cohen, 1999; Gonzalez et al., 2010). A person can take charge of his or her wellness by making small changes in their environment and behavior. Small changes in lifestyle can go a long way in improving well-being and preventing illness and disease.

The three OWB time items (past, present, future) consist of the basic stem sentence with the following wording:

“On the vertical scale below, the top number ten represents the best your life can be. The bottom number zero represents the worst your life can be. When it comes to the best possible life for you, on which number do you stand (now, 30-days ago, 30-days from now)?”

b. Interpersonal Well-being (IWB). Interpersonal well-being (IWB) is about the quality of relationships with others. People are interpersonally well when they communicate effectively and cooperate with others, and when they feel supported and connected to friends, relatives, and peers. Handling conflict well, fostering positive relationships, and having intimacy with loved ones are signs of interpersonal well-being. Getting along well with family members, friends, co-workers and neighbors are examples of IWB. There will always be some conflict as part of any relationship; being able to handle it in healthy ways is vital. Nurturing these relationships to build social support is crucial for well-being. Promoting IWB keeps people connected. These connections help individuals meet their physical and

emotional needs. Building a network of social support helps buffer the effects of daily stress (Lakey & Orehek, 2011).

The three IWB time items (past, present, future) consist of the basic stem sentence with the following wording:

“On the vertical scale below, the top number ten represents the best your life can be. The bottom number zero represents the worst your life can be. When it comes to the relationships with important people in your life, on which number do you stand (now, 30-days ago, 30-days from now)?”

c. Community Well-being (CWB). Community well-being (CWB) is about the health of groups and communities where an individual lives, works, and plays. A healthy community is one where people feel safe, supported, and engaged. Community wellness depends on two important factors: efforts of individuals to build trusting relationships and the presence of structures that encourage community building. CWB is strengthened when neighbors are friendly, supportive, and willing to lend a helping hand. Being helpful and supportive can take different forms: providing information; helping with tasks; or simply listening and showing we care. Celebrating others’ strengths and contributions is just as important as extending help in times of need. Volunteering time and services to help community members who live in different neighborhoods is another way to foster CWB. To support community building, it’s really important to create structures such as mutual help groups and neighborhood associations. Communities with high levels of volunteerism and participation

in civic activities have better educational achievements, less crime, less child abuse, and better health outcomes than communities with low levels of engagement (Putnam, 2000).

Getting involved in community activities and helping others can make a real difference in the overall wellness of the community.

The three CWB time items (past, present, future) consist of the basic stem sentence with the following wording:

“On the vertical scale below, the top number ten represents the best your life can be. The bottom number zero represents the worst your life can be. When it comes to the community where you live, on which number do you stand (now, 30-days ago, 30-days from now)?”

d. Occupational Well-being (OCWB). Occupational well-being (OCWB) is about the quality of relationships, engagement and productivity at work. Furthermore, it is about an individual’s satisfaction with his or her main occupation, whether he or she works for pay or not. OCWB is strengthened when an individual worker feels connected to others; uses his or her strengths; and experiences personal and professional growth. Good employers understand the relationship between work satisfaction and business outcomes. An employee with an outgoing personality will likely enjoy a position that entails a lot of interactions. A more introverted employee with strong technical skills would likely thrive in a position suitable to her personality. With a supportive employer and a pleasant social environment, workers can make meaningful contributions and experience a high degree of job satisfaction. A healthy workplace is characterized by a culture of mutual support; flexible work arrangements; and

involvement in decision making. Employees in such healthy places of work report high levels of engagement, satisfaction, and happiness. They are less likely to be absent from work due to illness and are more likely to remain at their place of work. OCWB contributes to the health of workers and to work outcomes at the same time (Jacob, Bond, Galinsky & Hill, 2008).

The three OCWB time items (past, present, future) consist of the basic stem sentence with the following wording:

“On the vertical scale below, the top number ten represents the best your life can be. The bottom number zero represents the worst your life can be. When it comes to your main occupation (employed, self-employed, volunteer, stay at home), on which number do you stand (now, 30-days ago, 30-days from now)?”

e. Physical Well-being (PHWB). Physical well-being (PHWB) is about the health of one’s body and level of energy. An individual is physically well when he or she has energy to engage in daily activities and when the person experiences low levels of pain and discomfort. Multiple factors contribute to physical wellness, and many of them are within an individual’s control. Eating a healthy diet, exercising on a regular basis, and managing daily stressors, go a long way in promoting PHWB. PHWB is promoted when a person eats healthy foods and avoids junk food. Making healthy lifestyle choices, such as exercising and maintaining a healthy weight, also contribute to PHWB. Avoiding smoking and excessive drinking contribute to PHWB as well.

Unhealthy diet and inactivity was found to be the second highest cause of premature death in the U.S. (McGinnis & Foege, 1993). Regular exercise is associated with a lower rate of obesity, heart disease and type 2 diabetes. A diet rich in fruits, vegetables, and whole grains is also associated with reductions of type 2 diabetes, coronary heart disease, and stroke. Healthy lifestyle choices like eating well and exercising can go a long way in preventing and managing various chronic illnesses (Ockene, 2009).

The three PHWB time items (past, present, future) consist of the basic stem sentence with the following wording:

“On the vertical scale below, the top number ten represents the best your life can be. The bottom number zero represents the worst your life can be. When it comes to your physical health, on which number do you stand (now, 30-days ago, 30-days from now)?”

f. Psychological Well-being (PWB). Psychological well-being (PWB) is about a person experiencing positive emotions, relatively few negative emotions, feeling satisfied with his or her life, and having a feeling of thriving. Positive thoughts and emotions lead to healthy choices, positive interpersonal interactions, and high levels of happiness and PWB. The ability to manage stress, as well as negative thoughts and emotions is critical to PWB. Minor hassles and stressors are inevitable. How individuals perceive and respond to stressors is very important. When a person feels down he or she has a tendency to perceive the situation in an excessive negative light. This, in turn, will affect his or her actions and mood. Learning to

challenge negative thinking can lead to improved mood and healthy behaviors. In addition, engaging in healthy

behaviors can lead to better mood and more optimistic thinking. There are multiple strategies for combating negative thinking patterns that threaten to bring individuals down. Just as important, a person can act to increase the level of positive emotion in his or her life. Focusing on the things he or she is grateful for, and being kind to others, are two proven strategies for increasing PWB. (Fredrickson, 2009; Lyubomirsky, 2007).

The three PWB time items (past, present, future) consist of the basic stem sentence with the following wording:

“On the vertical scale below, the top number ten represents the best your life can be. The bottom number zero represents the worst your life can be. When it comes to your emotional and psychological well-being, on which number do you stand (now, 30-days ago, 30-days from now)?”

g. Economic Well-being (EWB). Economic well-being (EWB) is about an individual’s actual and perceived financial stability; it is about how secure the person feels in his or her financial present and future. An individual who puts a percentage of his or her monthly paycheck into a retirement account promotes economic wellness by saving for the future. Spending money on experiences that a person can share with others contributes more to happiness than buying materialistic things for his or herself. Studies show that people who

spent their money on donations to charities or on gifts to others experienced greater happiness than people who spent their money on personal bills, expenses, or gifts for themselves (Dunn, Aknin, & Norton, 2008).

The three EWB time items (past, present, future) consist of the basic stem sentence with the following wording:

“On the vertical scale below, the top number ten represents the best your life can be. The bottom number zero represents the worst your life can be. When it comes to your economic situation, on which number do you stand (now, 30-days ago, 30-days from now)?”

4) I COPPE Actions Scale. The I COPPE Actions Scale is a self-report measure created for this study. The measure consists of 18 items which tap behavioral outcomes in the six I COPPE constructs. The creation of this instrument is based on the literature reviewed in the section above named “I COPPE Domains”. Each construct is comprised of three items measuring the frequency of engagement in behaviors aligned with the six constructs. Each item is rated on a scale of 0-4 where the lowest value means “very rarely or never” and the highest value means “very often or always”. The six constructs and their respective definitions follow:

- a) **INTERPERSONAL:** Engaging in activities that promote satisfaction in important relationships in life
- b) **COMMUNITY:** Engaging in activities that promote satisfaction as well as involvement and sense of belonging in one’s community

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- c) OCCUPATIONAL: Engaging in activities that promote satisfaction with main occupation such as work, volunteering, or caring after relatives
- d) PHYSICAL: Engaging in activities that promote physical health and well-being
- e) PSYCHOLOGICAL: Engaging in activities that promote emotional and psychological well-being
- f) ECONOMIC: Engaging in activities that promote economic well-being

***Attention Filter item #19 of the I COPPE Actions Scale.** Given the common problem of random responding on online surveys (i.e. clicking through), the attention filter item, “*Please select number 3*”, has been included at the end of the I COPPE Actions Scale. This is to ensure respondents are providing valid responses. If respondents are paying attention they are expected to select number 3. If a respondent clicks any other answer, the respondent’s data will be considered invalid for that battery time.

- 5) **Self-Efficacy in Well-Being Scale (SEWB).** The SEWB is a 21-item tool created for this study that measures the construct of self-efficacy in the I COPPE well-being domains in three times of present, 30-days ago, and 30-days from now. We define the construct of self-efficacy in well-being domains as the extent to which an individual believes that she/he has the capacity to achieve well-being in different domains of life (i.e. overall, interpersonal, community, occupational, physical, psychological and, economic). Directions on the scale instruct the respondent to rate each item on a 0-4 scale that ranges from no confidence to complete confidence. Each item is a phrase that completes the following stem prompt: “How confident are you in your current ability to achieve well-being in-“. Some item examples are: “your life as a whole”; “your main occupation”; “your physical health and wellness”. All

items are phrased in a positive direction. Seven scores will be derived, one for each item ranging from 0-4 per item. A high score is interpreted to mean the respondent is a person with high self-efficacy within areas of I COPPE functioning.

6) **The SF-36v2® Health Survey.** The SF-36 version 2.0 is considered the international version of the original well-established version 1.0 . Version 2.0 has been used in over 1000 studies with documented psychometric evidence for its use (Ware, 2000). The SF-36v2 measures generic functional health status using eight health-related quality of life subscales tapping: physical functioning, bodily pain, role limitations due to physical health problems, role limitations due to personal or emotional problems, emotional well-being, social functioning, energy/fatigue, and general health perceptions. Additionally, the survey yields two summary measures of physical and mental health along with a health utility index. The eight health subscales consist of 2–10 items each rated on a Likert scale. Responses are scored using scoring software that uses a regression equation and standardizes responses to population norms, yielding both a physical component summary (PCS) and mental component summary (MCS). The eight subscale scores range from 0–100 with higher scores indicating better health status. However, users are encouraged to interpret findings using norm-based scores (Mean = 50, *SD* = 10) rather than the 0–100 scores.

7) **Fun For Wellness Experience Survey.** Only intervention group participants will be administered this self-report survey on one occasion after exposure to the intervention (30-days post baseline). This 15-item self-report survey measures user experience and evaluation across various feasibility and acceptability areas (e.g. enjoyment, usefulness, learning, relevance, modules, games, text, etc.). This data will guide future development of the intervention.

8) Participation measures

We will measure the amount of curriculum exposure by calculating the number of challenges each participant has completed. We will be able to use this measure to determine intervention dosage and compare effects based on dosage amount. Some other measures we will use to determine participant engagement include: time spent on each module, frequency of website visits, number of videos watched, number of games played, number of community forum visits, number of narrated videos observed, and number of overall visits to the online program.

Risk/Benefit Assessment

As far as we can tell, the potential risk to participants is minimal or non-existent. There are no risks that we can detect in participating in the program. The text and contents of the program are not offensive or controversial in any way. Participants may experience wellness benefits through participation in this study. By engaging in the curricular activities, participants will be prompted to focus on their internal awareness of their personal well-being across many areas of their lives. Through these activities, they may benefit by increasing their insight into what their current levels of satisfaction are in these life domains. This insight may potentially act as a motivator for a participant to improve their personal well-being.

Potential benefits of this research to society

The program we are seeking to test through this study will contribute to the promotion of well-being in at least two ways. First, effectiveness of the intervention will be measured using the recently validated I COPPE Scale as a self-assessment embedded in the program experience for each participant. Effectiveness findings will provide the researchers with more information on the sensitivity of the instrument, further informing the psychometric development of this tool.

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Secondly, findings of effectiveness of the FFW program is a step toward promoting well-being using an easily accessible, self-managed intervention that can be utilized for promoting well-being in the public health arena through the Internet.

Why the risk/benefit ratio supports conducting this research

The potential benefits of the proposed research activities outweigh the potential risks to participants. Potentially gathering effectiveness evidence from approximately 500 patients of various ages and ethnicities from a diverse city in the Southeastern United States is an important and necessary step towards promoting patient well-being.

Data storage methods & data security

Data obtained from this research will be stored in such a way that human participants cannot be identified and confidentiality is ensured. All participants are assigned a coded identification number. The list connecting email addresses with id numbers will be kept protected, encrypted, private, and only accessible to authorized research staff. To ensure the security, privacy, and confidentiality of all data, several physical, network, hardware, and software safety precautions are in place. For example, access to servers requires a special password known only to software development staff involved in the development of the online intervention. Moreover, IP filtering restricts access and manipulation to the database from outside the software development computers. When data is saved on the server or exported to data files for statistical analysis, only identification numbers are linked to item responses. No names or other identifying information are accessible. Identifying information needed for participant contact, such as email addresses, is kept in highly encrypted data files with algorithms known only to the software development staff. At all times, industry standard SSL is used to obtain and transmit data during the user experience. No data is ever transmitted across the internet over an insecure connection.

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Hard copy protection

Any confidential data that may be printed in hard copy form (paper) will be kept in the secured offices of the Principal Investigator, Isaac Prilleltensky, Ph.D. and/or Project coordinator, Samantha Dietz, Ph.D. Only authorized research project staff will have access to hard copy data. Dr. Prilleltensky's office is located at 5202 University Drive, Merrick Building #313-E. Dr. Dietz's office is located at 1541 Brescia Avenue, Pick Hall #120F, Coral Gables, FL 33146.

Data Analysis Plan

Data Management & Quality Control Procedures. Procedures to ensure quality control in the collection, verification, and documentation of data have been established by the research team in our prior studies. Data files will be provided for statistical analyses in file formats which can be read by or translated into appropriate formats for the statistical programs that are planned to be used in this study.

Data Preparation & Preliminary Analyses. Testing of distributional assumptions will include statistical tests for univariate and multivariate normality (tests of skew & kurtosis) as well as visual inspections of the empirical distributions for the data at each time point. Should deviations be deemed sufficient for concern, transformation of variables (and/or estimation methods robust to deviations from conditional normality) will be used where possible. Reliability estimates of internal consistency (e.g., Cronbach's α) will be generated for scale scores.

Hypotheses and Methods

H1: Outcome effects: The online well-being program will be more effective than the wait-list control condition in improving: 1) overall well-being 2) domain well-being, and 3) health related quality of life (HRQOL) over time.

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These hypotheses will be conceptualized within the general multilevel structural equation modeling (MSEM; Muthén & Asparouhov, 2008) framework. Analyses will test separately for differences in linear and non-linear trajectories of well-being (overall and domain specific) over the assessment time points among the 2 conditions. Parameter estimates and attrition rates may inform Monte Carlo simulations (Muthén & Muthén, 2002) with 10000 replications to determine power (given sample size) for the regression of the slope growth factor on the dichotomous (i.e., treatment versus placebo control) intervention variable (Cohen, 1988; Raudenbush & Liu, 2001).

H2: Self-efficacy effect: The online well-being program will be more effective than the wait-list control condition in improving I COPPE well-being self-efficacy. This hypothesis will be conceptualized within the general multilevel structural equation modeling (MSEM; Muthén & Asparouhov, 2008) framework. Analyses will test separately for differences in linear and non-linear trajectories of self-efficacy (I COPPE specific) over the assessment time points among the 2 conditions. Parameter estimates and attrition rates may inform Monte Carlo simulations (Muthén & Muthén, 2002) with 10000 replications to determine power (given sample size) for the regression of the slope growth factor on the dichotomous (i.e., treatment versus control) intervention variable (Cohen, 1988; Raudenbush & Liu, 2001).

H3: Mediating effect: The effect of the online well-being program on 1) overall well-being, 2) domain well-being and, 3) health related quality of life will be partially mediated by improvements in I COPPE self-efficacy in well-being over time.

These hypotheses will be conceptualized within the MSEM framework for assessing multilevel mediation (Preacher, Zyphur, & Zhang, 2010). The test of mediation will be based on the product of pathway (a) from the online well-being program to change in self-efficacy and (b) the pathway from change in self-efficacy to change in well-being. The product of the two pathways

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(a)*(b) is the indirect effect of the online well-being program to change in well-being through change in self-efficacy in well-being. We will be testing whether the product (a)*(b) is statistically significantly different from zero by constructing confidence intervals using (1) the distribution of the product method and (2) resampling methods consistent with MacKinnon, Lockwood, and Williams (2004) and Tofighi and MacKinnon (2011). We will also examine more immediate changes in well-being through self-efficacy at each time point. Parameter estimates and attrition rates will inform Monte Carlo simulations using a SAS macro to determine power (given sample size) for a true mediation effect (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002).

Participant e-mail change requests. A function that will allow a consented participant to change their preferred e-mail address to receive research project communications will be built into the Table of Contents section of both online program conditions. This is to account for the possibility that a consented participant may cease to be employed at the University and thus lose access to her/his valid UM e-mail account to retrieve electronic gift card codes for redemption. As stated in the informed consent form section labelled, “Compensation for Participation in the Study”, it will be the responsibility of the participant to change their preferred e-mail on their own; they do not need to contact the research team offline.

In the unlikely event that a participant may wish to unsubscribe from receiving any further e-mails from the research team, we will no longer send them e-mail that they do not initiate. This means that the participant will not be able to receive the electronic gift card codes for any incentives they may be owed. The following required statement and unsubscribe link is embedded in all e-mails the participant will receive from the research team:

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“To prevent future emails regarding Fun For Wellness, please go to the following link: [unsubscribe](#)”

From the computer programming perspective, as soon as the participant confirms that he or she would like to unsubscribe and they submit their request, a backend database will continue to track their unique ID number linked research activities throughout the study and will maintain a log of every electronic gift card code they will be owed at the end of the study. If after unsubscribing and at the end of the 60-day study, the unsubscribed participant would like to obtain the incentives owed to them, they must go in person to the UM School of Education and Human Development to retrieve their incentives. The participant must present their unique ID number to the secretary at the UM School of Education and Human Development and request their owed electronic gift card codes. The secretary will go to a website built specifically for the purpose of retrieving electronic gift card codes for Patient Well-Being Research Project participants who officially unsubscribed from receiving e-mails. The secretary will enter the participants' unique ID number into the website fields and the website will print out a list of all the electronic codes owed to the participant. The secretary will hand the list of electronic gift card codes to the participant. The participant will then be able to enter the codes at the Amazon website to redeem the electronic gift cards.

From the participant's perspective, When they click the unsubscribe link, it will not immediately unsubscribe them. It will first present them with a pop-up message description of the effects of unsubscribing and a button to allow them to unsubscribe if that is their choice (see message below of description of effects of unsubscribing). The description will explain that by unsubscribing they will no longer be able to receive their Amazon electronic gift code(s) via e-mail. The unsubscribe description will inform them that if they truly wish to unsubscribe given the effects of this action (i.e. loss of Amazon gift card code access via e-mail), they will have the

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option to click on the link provided that will present them with their unique ID number and further instructions as to how to retrieve their Amazon gift card codes in person at the School of Education and Human Development. For clarification, each participant's unique ID number is assigned by the computer and maps onto each participant's Patient Well-Being Research Project account for logging into the website. Participants will be informed that if they click on the link, they will be presented with their unique ID number and prompted to make note of this unique ID number to later present it in person to retrieve the electronic gift card codes associated with the incentive amounts they will be owed at the end of the 60-day study.

The italicized text below is the first pop-up message a participant will be presented with when they first click on the button to “unsubscribe” to receive future e-mails from the research team. This e-mail describes the effects of unsubscribing to the participant in relation to the delivery method of study incentives owed to them at the completion of the study.

Unsubscribe pop-up message #1 (clicked Unsubscribe in e-mail)

By unsubscribing you will no longer be able to receive via e-mail any Amazon electronic gift code(s) you may be owed at the end of the 60-day study. If after unsubscribing, and at the end of the 60-day study, you would like to obtain the Amazon electronic gift card codes owed to you, you will need to go in-person to the UM School of Education and Human Development to retrieve the electronic gift codes from the secretary at the front desk. The address for the School of Education and Human Development is 5202 University Drive, Room 312, Coral Gables, FL 33146. The phone number is 305-284-3711.

If you wish to unsubscribe please make note of your unique ID which will be given to you after you confirm that you wish to unsubscribe. At the end of the 60-day study, you will need to present this unique ID in person to the secretary to receive a print out of the electronic gift card codes that will be owed you. After you receive your electronic gift card codes from the secretary you will be able to enter the codes at the Amazon website to redeem the electronic gift cards associated with those codes.

At the bottom of this unsubscribe pop-up message #1 the participant will be presented with the following choice boxes to click on:

[Yes, Unsubscribe me]

[Cancel]

If the participant clicks the choice box, *[Cancel]*, they will remain subscribed and will continue to receive study related e-mails.

If the participant clicks the choice box, *[Yes, Unsubscribe me]*, then the participant will be presented with the second pop-up message below in italics. This second message will present the unique ID number the specific to the unsubscribing participant and further instructions.

Unsubscribe pop-up message #2 *[Yes, Unsubscribe me]*

“You have unsubscribed your email account.

Your code is: <code generated>

You may have Amazon gift cards to redeem. After the 60 day study, if you wish to redeem Amazon gift cards, please take the above code to the UM School of Education and Human Development to retrieve the electronic gift codes from the secretary at the front desk. The address for the School of Education and Human Development is 5202 University Drive, Room 312, Coral Gables, FL 33146. The phone number is 305-284-3711.”

References (Unified)

- Adriaanse, M. A., Gollwitzer, P. M., De Ridder, D. T. D., De Wit, J. B. F., & Kroese, F. M. (2011). Breaking habits with implementation intentions: A test of underlying processes. *Personality and Social Psychology Bulletin*, 37, 502–513. doi: 10.1177/0146167211399102
- Alemi, F., Cherry, F., & Meffert, G. (1989). Rehearsing decisions may help teenagers: An evaluation of a simulation game. *Computers in Biology and Medicine*, 19(4), 283-290.
- Alonso, J., Ferrer, M., Gandek, B., Ware, J.E., Aaronson, N.K., Mosconi, P., ...IQOLA Project Group (2004). Health-related quality of life associated with chronic conditions in eight countries: Results from the International Quality of Life Assessment (IQOLA) Project. *Quality of Life Research*, 13, 283-298.

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

Arch, J. J. & Craske, M. G. (2006). Mechanisms of mindfulness: Emotion regulation following a focused breathing induction. *Behaviour Research Therapy*, 44, 1849-58. doi:

10.1016/j.brat.2005.12.007

Argyle, M. (2001). *The psychology of happiness* (2nd ed.). London: Routledge.

Bandura, A. (1986). *Social foundations of thought and action: A social-cognitive view*.

Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1994). Social Cognitive Theory and exercise of control over HIV infection. In R. J.

DiClemente and J.L. Peterson (Eds.) *Preventing AIDS: Theories and methods of behavioral interventions* (pp. 25-59). NY: Plenum Press.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.

Bandura, A. (1999). A sociocognitive analysis of substance abuse: An agentic perspective.

Psychological Science, 10(3), 214-217.

Barak, A., Hen, L., Boniel-Nissim, M., & Shapira, N. (2008). A comprehensive review and a meta-analysis of the effectiveness of internet-based psychotherapeutic interventions.

Journal of Technology in Human Services, 26(2/4), 109-160.

Bayliss, M., Rendas-Baum, R., White, M.K., Maruish, M., Bjorner, J., & Tunis, S.L. (2012).

Health-related quality of life (HRQOL) for individuals with self-reported chronic physical and/or mental health conditions: panel survey of an adult sample in the United States. *Health and Quality of Life Outcomes*, 10, 154. doi:10.1186/1477-7525-10-154

Bodie, G. D., Vickery, A. J., Cannava, K., & Jones, S. M. (2015). The role of “active listening” in informal helping conversations: Impact on perceptions of listener helpfulness, sensitivity, and supportiveness and discloser emotional improvement. *Western Journal of*

Communication. Advance online publication. doi: 10.1080/10570314.2014.943429

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

- Bond, J., Kaskutas, L. A., & Weisner, C. (2003). The persistent influence of social networks and Alcoholics Anonymous on abstinence. *Journal of Studies on Alcohol*, 64(4), 579–588.
- Bolman, L., & Deal, T. (2003). *Reframing organizations*. San Francisco: Jossey-Bass.
- Botella, C., Gallego, M., Garcia-Palacios, A., Guillen, V., Banos, R., Quero, S., & Alcaniz, M. (2010). An internet-based self-Help treatment for fear of public speaking: A controlled trial. *Cyberpsychology, Behavior, and Social Networking*, 13(4), 423-428.
- Bowen, S., Witkiewitz, K., Clifasefi, S. L., Grow, J., Chawla, N., Hsu, S. H., ... Larimer, M. E. (2014). Relative efficacy of mindfulness-based relapse prevention, standard relapse prevention, and treatment as usual for substance use disorders: A randomized clinical trial. *JAMA Psychiatry*, 71(5), 547-556. doi:10.1001/jamapsychiatry.2013.4546
- Bradley, R. P. C., & Gottman, J. M. (2012). Reducing situational violence in low-income couples by fostering healthy relationships. *Journal of Marital and Family Therapy*, 38, 187-98.
- Brown, T.G., Seraganian, P., Tremblay, J., & Annis, H. (2002). Process and outcome changes with relapse prevention versus 12-Step aftercare programs for substance abusers. *Addiction*, 97, 677-689.
- Cacioppo, J., Reis, H., & Zautra, A. (2011). Social resilience: The value of social fitness with an application to the military. *American Psychologist*, 66(1), 43-51.
- Cameron, L., & Moss-Morris, R. (2010). Illness-related cognition and behaviour. In D. French, Vedhara, K., Kaptein, A., & Weinman, J. (Ed.), *Health psychology* (2nd. ed., pp. 149-161). West Sussex, UK: Wiley-Blackwell.
- Carpenter, M. J., Saladin, M. E., LaRowe, S. D., McClure, E. A., Simonian, S., Upadhyaya, H. P., & Gray, K. M. (2014). Craving, cue reactivity, and stimulus control among early-stage

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

young smokers: Effects of smoking intensity and gender. *Nicotine & Tobacco*

Research, 16(2), 208-215. doi: 10.1093/ntr/ntt147

Chipperfield, A. A., Lally, P. P., & Wardle, J. J. (2008). Healthy habits: Efficacy of simple advice on weight control based on a habit-formation model. *International Journal of Obesity*, 32(4), 700-707.

Cobb, N.K. & Poirier, J. (2014). Effectiveness of a multimodal online well-being intervention: A randomized controlled trial. *American Journal of Preventive Medicine*, 46(1), 41–48.

<http://dx.doi.org/10.1016/j.amepre.2013.08.018>

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Second Edition.

Cohen, E. H. (1999). A facet theory approach to examining overall and life facet satisfaction relationships. *Social Indicators Research*, 51(2), 223-237.

Cohen, S. (2004). Social relationships with health. *American Psychologist*, 59, 676-684.

Commission on Social Determinants of Health. (2008). *Closing the gap in a generation: Health equity through action on the social determinants of health*. Geneva: World Health Organization.

Coote, H. J., & MacLeod, A. K. (2012). A self-help, positive goal-focused intervention to increase well-being in people with depression. *Clinical Psychology & Psychotherapy*, 19(4), 305-315. doi: 10.1002/cpp.1797

Danaher, B.G., Smolkowski, K., Seeley, HJ.R., & Severson, H.H. (2008). Mediators of a successful web-based smokeless tobacco cessation program. *Addiction*, 103, 1706-1712.

doi:10.1111/j.1360-0443.2008.02295.x

Darker, C. D., French, D. P., Eves, F. F., & Sniehotta, F. F. (2010). An intervention to promote walking amongst the general population based on an ‘extended’ theory of planned behaviour:

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

A waiting list randomised controlled trial. *Psychology & Health*, 25(1), 71-88. doi:

10.1080/08870440902893716

DiClemente, R., Crosby, R., & Kegler, M. (Ed.). (2002). *Emerging theories in health promotion practice and research*. San Francisco: Jossey-Bass.

Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2009).

New measures of well-being. *Social Indicators Research Series*, 39, 247-266. NY:

Springer.

Domjan, M., & Grau, J. (2009). *The principles of learning and behavior*: Wadsworth Pub Co.

Donovan, H.S., Kwekkeboom, K.L., Rosenzweig, M.Q., & Ward, S.E. (2009). Nonspecific

effects in psychoeducational intervention research. *Western Journal of Nursing Research*,

31(8), 983-998. doi: 10.1177/0193945909338488

Downs, J.S., Murray, P.J., Bruine de Bruin, W., Penrose, J., Palmgren, C., & Fischhoff, B.

(2004). Interactive video behavioral intervention to reduce adolescent females STD risk: a randomized controlled trial. *Social Science & Medicine*, 59, 1561–1572.

Dunbar-Jacob, J., Gemmell, L., & Schlenk, E. (2009). Predictors of adherence: Patient

characteristics. In S. Shumacker, Ockene, J., & Riekert, K. (Ed.), *The handbook of health behavior change (3rd ed.)*. (pp. 397-410). New York: Springer.

Eid, M., & Larsen, R. (Eds.). (2008). *The science of subjective well-being*. New York: Guilford.

Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An

experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, 84(2), 377-389.

Epstein, J. & McGaha, A.C. (1999). ATOD-TV: evaluation of a multimedia program designed to

educate the public about substance abuse. *Computers in Human Behavior*, 15, 73-83.

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

Erdogan, B., Bauer, T. N., Truxillo, D. M., & Mansfield, L. R. (2012). Whistle while you work:

A review of the life satisfaction literature. *Journal of Management*, 38(4), 1038-1083.

Evers, A., Klusmann, V., Schwarzer, R., & Heuser, I. (2012). Adherence to physical and mental

activity interventions: Coping plans as a mediator and prior adherence as a moderator. *British Journal of Health Psychology*, 17(3), 477-491. doi: 10.1111/j.2044-8287.2011.02049.x

Fogg, B. J. (2003). *Persuasive technology: Using computers to change what we think and do*.

New York: Morgan Kaufmann.

Fogg, B.J., & Adler, R. (Ed.). (2009). *Texting 4 health: A simple, powerful way to improve lives*.

Stanford, CA: Captology Media.

Fogg, B.J. , & Eckles, D. (Ed.). (2007). *Mobile persuasion*. Stanford, CA: Stanford Captology

Media.

Franklin, P., Farzanfar, R., & Thompson, D. (2009). E-Health strategies to support adherence. In

S. Shumacker, Ockene, J., & Riekert, K. (Ed.), *The handbook of health behavior change (3rd ed.)*. (pp. 169-190). New York: Springer.

Fredrickson, B. (2009). *Positivity*. New York: Crown Publishers.

Gable, S. L., Gonzaga, G. C., & Strachman, A. (2006). Will you be there for me when things go

right? Supportive responses to positive event disclosures. *Journal of Personality and Social Psychology*, 91(5), 904-917.

Gander, F., Proyer, R. T., Ruch, W., & Wyss, T. (2013). Strength-based positive interventions:

Further evidence for their potential in enhancing well-being and alleviating depression. *Journal of Happiness Studies*, 14(4), 1241-1259.

Gilchrist, L.D. & Schinke, S.P. (1983). Coping with contraception: Cognitive and behavioral

methods with adolescents. *Cognitive Therapy and Research*, 7(5), 379-388.

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

- Glanz, K., Rimer, B., & Viswanath, K. (Ed.). (2008). *Health behavior and health education* (4th ed.). San Francisco: Jossey-Bass.
- Gonzalez, M., Coenders, G., Saez, M., & Casas, F. (2010). Non-linearity, complexity and limited measurement in the relationship between satisfaction with specific life domains and satisfaction with life as a whole. *Journal of Happiness Studies, 11*, 335-352.
- Good, C., Aronson, J. & Inzlicht, M. (2003). Improving adolescents' standardized test performance: An intervention to reduce the effects of stereotype threat. *Applied Developmental Psychology, 24*, 645-662. doi:10.1016/j.appdev.2003.09.002
- Gottman, J. M., Gottman, J. S., & Atkins, C. (2011). The comprehensive soldier fitness program: Family skills component. *American Psychologist, 66*(1), 52-57.
- Graham, C. (2009). *Happiness around the world: The paradox of happy peasants and miserable millionaires*. New York: Oxford University Press.
- Hershfield, H. E., Goldstein, D. G., Sharpe, W. F., Fox, J., Yeykelis, L., Carstensen, L. L., & Bailenson, J. N. (2011). Increasing saving behavior through age-progressed renderings of the future self. *Journal of Marketing Research, 48*, S23-S37. doi:10.1509/jmkr.48.SPL.S23
- Hofmann, S. G., Heering, S., Sawyer, A. T., & Asnaani, A. (2009). How to handle anxiety: The effects of reappraisal, acceptance, and suppression strategies on anxious arousal. *Behaviour Research and Therapy, 47*(5), 389–394. doi:10.1016/j.brat.2009.02.010
- Husson, O., Mols, F., & van de Poll-Franse, L. V. (2011). The relation between information provision and health-related quality of life, anxiety and depression among cancer survivors: A systematic review. *Annals of Oncology, 22*, 761-722. doi:10.1093/annonc/mdq413
- Inglehart, R., Foa, R., Peterson, C., & Welzel, C. (2008). Development, freedom, and rising happiness. *Perspectives on Psychological Science, 3*(4), 264-285.

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

- Inoue, A., & Kawakami, N. (2010). Interpersonal conflict and depression among Japanese workers with high or low socioeconomic status: findings from the Japan Work Stress and Health Cohort Study. *Social Science & Medicine*, *71*(1), 173-180. doi: S0277-9536(10)00275-3 [pii]
- Janse Van Rensburg, K., Elibero, A., Kilpatrick, M., & Drobles, D. J. (2013). Impact of aerobic exercise intensity on craving and reactivity to smoking cues. *Experimental and Clinical Psychopharmacology*, *21*(3), 196-203. doi:10.1037/a0032768
- Jardin, B.F. & Carpenter, M.J. (2012). Predictors of quit attempts and abstinence among smokers not currently interested in quitting. *Nicotine & Tobacco Research*, *14*(10), 1197–1204. doi: 10.1093/ntr/nts015
- Jayanti, R.K. & Burns, A.C. (1998). The antecedents of preventive health care behavior: An empirical study. *Journal of the Academy of Marketing Science*, *26*(1), 6-15.
- Judge, T.A., & Bono, J.E. (2001). Relationship of core self-evaluations traits-self-esteem, generalized self-efficacy, locus of control, and emotional stability-with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, *86*(1), 80-92. doi: 10.1037//0021-9010.86.1.80
- Kadden, R.M., & Litt, M.D. (2011). The role of self-efficacy in the treatment of substance use disorders. *Addictive Behaviors*, *36*, 1120-1126. doi: 10.1016/j.addbeh.2011.07.032
- Kemeny, M. E., Foltz, C., Cavanagh, J. F., Cullen, M., Giese-Davis, J., Jennings, P., ... Ekman, P. (2012). Contemplative/emotion training reduces negative emotional behavior and promotes prosocial responses. *Emotion*, *12*(2), 338-350. doi:10.1037/a0026118
- Keyes, C. (2007). Promoting and protecting mental health as flourishing. *American Psychologist*, *62*(2), 95-108.

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

Kiernan, M., Brown, S. D., Schoffman, D. E., Lee, K., King, A. C., Taylor, C. B., ... Perri, M. G.

(2013). Promoting healthy weight with “stability skills first”: A randomized trial. *Journal of Consulting & Clinical Psychology, 81*(2), 336-346. doi:10.1037/a0030544

Korte, J. J., Bohlmeijer, E. T., Cappeliez, P. P., Smit, F. F., & Westerhof, G. J. (2012). Life

review therapy for older adults with moderate depressive symptomatology: A pragmatic randomized controlled trial. *Psychological Medicine, 42*(6), 1163-1173. doi:

10.1017/S0033291711002042

Kroeze, W., Werkman, A., & Brug, J. (2006). A systematic review of randomized trials on the

effectiveness of computer-tailored education on physical activity and dietary behaviors.

Annals of Behavioral Medicine, 31(3), 205-223.

Lai, H. & Good, M. (2005). Music improves sleep quality in older adults. *Journal of Advanced*

Nursing, 49(3), 234-244. doi:10.1111/j.1365-2648.2004.03281.x

Lane, C., & Rollnick, S. (2009). Motivational interviewing. In S. Shumacker, Ockene, J., &

Riekert, K. (Ed.), *The handbook of health behavior change (3rd ed.)*. (pp. 151-168). New York: Springer.

Lange, D., Richert, J., Koring, M., Knoll, N., Schwarzer, R., & Lippke, S. (2013). Self-regulation

prompts can increase fruit consumption: A one-hour randomised controlled online

trial. *Psychology & Health, 28*(5), 533-545. doi:10.1080/08870446.2012.751107

Levy, B., & Sidel, V. (Ed.). (2006). *Social injustice and public health*. New York: Oxford

University Press.

Lin, Y., Shiah, I., Chang, Y., Lai, T., Wang, K., & Chou, K. (2004). Evaluation of an

assertiveness training program on nursing and medical students' assertiveness, self-esteem,

and interpersonal communication satisfaction. *Nurse Education Today, 24*, 656-665.

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*.

Englewood Cliffs, NJ: Prentice Hall.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, *57*, 705-717.

Luszczynska, A. & Gutierrez-Dona, B. (2005). General self-efficacy in various domains of human functioning: Evidence from five countries. *International journal of psychology*, *40*(2), 80-89. doi: 10.1080/00207590444000041

Lyubomirsky, S. (2008). *The how of happiness: A scientific approach to getting the life you want*. New York: Penguin Press.

MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediated and other intervening variable effects. *Psychological Methods*, *7*(1), 83-104.

MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, *39*, 99-128.

Manios, Y., Moschonis, I., Katsaroli, E., Grammatikaki, E., & Tanagra, S. (2007). Changes in diet quality score, macro- and micronutrients intake following a nutrition education intervention in postmenopausal women. *Journal of Human Nutrition & Dietetics*, *20*(2), 126-131.

Markham, C.M., Shegog, R., Leonard, A.D., Buia, T.C., & Paul, M.E. (2009). + CLICK: harnessing web-based training to reduce secondary transmission among HIV-positive Youth *AIDS Care*, *21*(5), 622-631. doi: 10.1080/09540120802385637

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

- Marmot, M. G. (2004). *The status syndrome: How social standing affects our health and longevity* (1st American ed.). New York: Times Books.
- Martins, C. M. & Vallen, B. (2014). The impact of holiday eating cues on self-regulatory bolstering for dieters and non-dieters. *Psychology & Health, 29*(4), 999-1013. doi: 10.1080/08870446.2014.900682
- Martins, R. K., & McNeil, D. W. (2009). Review of Motivational Interviewing in promoting health behaviors. *Clinical Psychology Review, 29*(4), 283-293. doi: S0272-7358(09)00009-9 [pii]10.1016/j.cpr.2009.02.001
- Meichenbaum, D. (1977). *Cognitive-Behavior Modification: An integrative approach*. New York: Plenum Press.
- Meichenbaum, D. (1985). *Stress inoculation training: A clinical guidebook*. Elmsford, New York: Pergamon Press.
- Mols, F., & Denollet, J. (2010). Type D personality in the general population: a systematic review of health status, mechanisms of disease, and work-related problems. *Health and Quality of Life Outcomes, 8*, 9. doi: 1477-7525-8-9 [pii]
- Morisano, D., Hirsh, J. B., Peterson, J. B., Pihl, R. O., & Shore, B. M. (2010). Setting, elaborating, and reflecting on personal goals improves academic performance. *Journal of Applied Psychology, 95*(2), 255-264. doi:10.1037/a0018478
- Morokuma, I., Shimodera, S., Fujita, H., Hashizume, H., Kamimura, N., Kawamura, A., ... Inoue, S. (2013). Psychoeducation for major depressive disorder: A randomized controlled trial. *Psychiatry Research, 210*(1), 134-139. doi: 10.1016/j.psychres.2013.05.018
- Mustanski, B., Garafolo, R., Monahan, C., Gratzner, B., & Andrews, R. (2013). Feasibility, acceptability, and preliminary efficacy of an online HIV prevention program for diverse

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

young men who have sex with men: The Keep It Up! Intervention. *AIDS and Behavior*.

Advance online publication. doi 10.1007/s10461-013-0507-z

Muthén, B. & Asparouhov, T. (2008). Growth mixture modeling: Analysis with non-Gaussian random effects. In Fitzmaurice, G., Davidian, M., Verbeke, G. & Molenberghs, G. (eds.), *Longitudinal Data Analysis*, pp. 143-165. Boca Raton: Chapman & Hall/CRC Press.

Muthén, L.K., Muthén, B.O., (2002). How to use a Monte Carlo study to decide on sample size and determine power. *Structural Equation Modeling*. 9, 599-620.

Myers, N.D., Park, S.E., Lefevor, G.T., Dietz, S., Prilleltensky, P. & Prado, G.J. (2016) Measuring Multidimensional Subjective Well-Being with the I COPPE Scale in a Hispanic Sample, *Measurement in Physical Education and Exercise Science*, 20(4). 230-243, doi: 10.1080/1091367X.2016.1226836

Myers, N.D., Prilleltensky, I, Jin, Y., Dietz, S., Rubenstein, C. Prilleltensky, O., & McMahon, A. (2014). Empirical contributions of the past in assessing multidimensional well-being. *Journal of Community Psychology*. 42(7). 789-798. doi: 10.1002/jcop.21653

Myers, N.D., Prilleltensky, I, Prilleltensky, O., McMahon, A., Dietz, S. & Rubenstein, C.L. (submitted). Effectiveness of the Fun For Wellness Online Intervention to Promote Multidimensional Well-Being: A Randomized Controlled Trial

Norman, G., Zabinski, M., Adams, M., Rosenberg, D., Yaroch, A., & Atienza, A. (2007). A review of eHealth interventions for physical activity and dietary behavior change. *American Journal of Preventive Medicine*, 33(4), 336-345.

O'Leary, A. (1992). Self-Efficacy and Health: Behavioral and stress-physiological mediation. *Cognitive Therapy and Research*, 16(2), 229-245.

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

- Oei, T.P.S., Hasking, P., & Phillips, L. (2007). A comparison of general self-efficacy and drinking refusal self-efficacy in predicting drinking behavior. *The American Journal of Drug and Alcohol Abuse*, 33, 833-841. doi: 10.1080/00952990701653818
- Ogden, J. (2010). *The psychology of eating* (2nd. ed.). West Sussex, UK: Wiley-Blackwell.
- Organisation for Economic Cooperation and Development (OECD). (2013). OECD guidelines on measuring subjective wellbeing. OECD Publishing. Retrieved from <http://dx.doi.org/10.1787/9789264191655-en>.
- Ouweneel, E., Le Blanc, P. M., & Schaufeli, W. B. (2014). On being grateful and kind: Results of two randomized controlled trials on study-related emotions and academic engagement. *The Journal of Psychology: Interdisciplinary and Applied*, 148(1), 37-60. doi: 10.1080/00223980.2012.742854
- Paperny, D. & Starn, J.R. (1989). Adolescent pregnancy prevention by health education computer games: Computer-assisted instruction of knowledge and attitudes. *Pediatrics*, 83(5), 742-752.
- Papies, E. K., & Hamstra, P. (2010). Goal priming and eating behavior: Enhancing self-regulation by environmental cues. *Health Psychology*, 29(4), 384-388. doi:10.1037/a0019877
- Powers, M., & Faden, F. (2006). *Social justice: The moral foundations of public health and health policy*. New York: Oxford University Press.
- Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods*, 15, 209–233
- Prilleltensky, I. (2012). Wellness as fairness. *American Journal of Community Psychology*, 49, 1-21.

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

- Prilleltensky, I, Dietz, S., Prilleltensky, O., Myers, N.D., Rubenstein, C., Jin, Y., & McMahon, A. (2015). Assessing Multidimensional Well-Being: Development and Validation of the I COPPE Scale. *Journal of Community Psychology*, 43(2), 199-226. doi: 10.1002/jcop.21674
- Prinsen, S., de Ridder, D. D., & de Vet, E. (2013). Eating by example. Effects of environmental cues on dietary decisions. *Appetite*, 70, 1-5. doi:10.1016/j.appet.2013.05.023
- Raja, S., Ball, M., Booth, J., Haberstro, P., & Veith, K. (2009). Leveraging neighborhood-scale change for policy and program reform in Buffalo, New York. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S352-360. doi: S0749-3797(09)00555-8 [pii]
- Rath, T., & Harter, J. (2010). *Well-being: The five essential elements*. New York: Gallup Press.
- Raudenbush, S. W. & Liu, X. (2001). Effects of Study Duration, Frequency of Observation, and Sample Size on Power in Studies of Group Differences in Polynomial Change. *Psychological Methods*, 6(4), 387-401.
- Roberto, A.J., Zimmerman, R.S., Carlyle, K.E., Abner, E.L. (2007). A computer-based approach to preventing pregnancy, STD, and HIV in rural adolescents. *Journal of Health Communication*, 12, 53-76. doi: 10.1080/10810730601096622
- Robins, C. J., Keng, S. L., Ekblad, A. G., & Brantley, J. G. (2012), Effects of mindfulness-based stress reduction on emotional experience and expression: a randomized controlled trial. *J. Clin. Psychol.*, 68, 117–131. doi: 10.1002/jclp.20857
- Rodebaugh, T. L., Jakatdar, T. A., Rosenberg, A., & Heimberg, R. (2009). Thinking about social situations: The moderated effects of imposing structure. *Behaviour Research and Therapy*, 47(2), 158-163. doi: 10.1016/j.brat.2008.10.019

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

Samoocha, D., Bruinvels, D. J., Elbers, N. A., Anema, J. R., & van der Beek, A. J. (2010).

Effectiveness of web-based interventions on patient empowerment: a systematic review and meta-analysis *Journal of Medical Internet Research*, *12*(2), e23. doi: v12i2e23 [pii]

Schmiege, S.J., Broaddus, M.R., Levin, M., & Bryan, A.D. (2009). Randomized trial of group

interventions to reduce HIV/STD risk and change theoretical mediators among detained adolescents. *Journal of Consulting and Clinical Psychology*, *77*(1), 38-50. doi:

10.1037/a0014513

Schroder, H. S., Moran, T. P., Brent Donnellan, M., & Moser, J. S. (2014). Mindset induction

effects on cognitive control: A neurobehavioral investigation. *Bio Psychology*, *103*, 27-37.

doi: 10.1016/j.biopsycho.2014.08.004

Schwarz, N., & Strack, F. (1999). Report of subjective wellbeing: Judgmental processes and

their methodological implications. In D. Kahneman, E. Diener, & N. Schwarz (Eds.),

Wellbeing: The foundations of hedonic psychology (pp. 61–84). New York, NY: Russell Sage Foundation.

Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-*

being. NY: Free Press.

Shilts, M., Horowitz, M., & Townsend, M. (2004). Goal setting as a strategy for dietary and

physical activity behavior change: A review of the literature. *American Journal of Health*

Promotion, *19*(2), 81-93.

Shumacker, S., Ockene, J., & Riekert, K. (Ed.). (2009). *The handbook of health behavior change*

(3rd ed.). New York: Springer.

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

Shurick, A. A., Hamilton, J. R., Harris, L. T., Roy, A. K., Gross, J. J., & Phelps, E. A. (2012).

Durable effects of cognitive restructuring on conditioned fear. *Emotion, 12*(6), 1393–1397.

doi: 10.1037/a0029143

Siahpush, M., Spittal, M., & Singh, G.K. (2008). Happiness and life satisfaction prospectively

predict self-rated health, physical health, and the presence of limiting, long-term health

conditions. *American Journal of Health Promotion, 23*(1), 18-26.

Sisodia, R., Wolfe, D., & Sheth, J. (2007). *Firms of endearment: How world-class companies*

profit from passion and purpose. Upper Saddle River: Wharton.

Spek, V., Cuijpers, P., Nyklicek, I., Riper, H., Keyzer, J., & Pop, V. (2007). Internet-based

cognitive behaviour therapy for symptoms of depression and anxiety: a meta-analysis.

Psychological Medicine, 37, 319-328.

Strecher, V.J., DeVellis, B.M., Becker, M.H., & Rosenstock, I.M. (1986). The role of self-

efficacy in achieving health behavior change. *Health Education Quarterly, 13*(1), 73-91.

doi: 10.1177/109019818601300108

Sutton, S. (2010). Using social cognition models to develop health behaviour interventions: the

theory of planned behaviour as an example. In D. French, Vedhara, K., Kaptein, A., &

Weinman, J. (Ed.), *Health psychology* (2nd. ed., pp. 122-134). West Sussex, UK: Wiley-

Blackwell.

Thomas, R., Cahill, J., & Santilli, L. (1997). Using an interactive computer game to increase skill

and self-efficacy regarding safer sex negotiation: Field test results. *Health Education &*

Behavior, 24(1), 71-86.

Tofighi, D., & MacKinnon, D.P. (2011). RMediation: An R package for mediation analysis

confidence intervals. *Behavior Research Methods, 43*, 692-700.

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

Tortolero, S.R., Markham, C.M., Peskin, M.F., Shegog, R., Addy, R.C., Escobar-Chaves, S.L. &

Baumler, E.R. (2010). It's Your Game: Keep It Real: Delaying Sexual Behavior with an Effective Middle School Program. *Journal of Adolescent Health, 46*, 169-179.

Turk, M. W., Elci, O. U., Wang, J., Sereika, S. M., Ewing, L. J., Acharya, S. D., ... Burke, L. E.

(2013). Self-monitoring as a mediator of weight loss in the SMART randomized clinical trial. *International Journal of Behavioral Medicine, 20*(4), 556-61. doi: 10.1007/s12529-012-9259-9

Uskul, A. (2010). Sociocultural aspects of health and illness. In D. French, Vedhara, K., Kaptein,

A., & Weinman, J. (Ed.), *Health psychology* (2nd. ed., pp. 347-359). West Sussex, UK: Wiley-Blackwell.

Verduin, M.L., LaRowe, S.D., Myrick, H., Cannon-Bowers, J., & Bowers, C. (2013). Computer

simulation games as an adjunct for treatment in male veterans with alcohol use disorder. *Journal of Substance Abuse Treatment, 44*, 316-322.

Wansink, B. & Payne, C. R. (2007). Counting bones: Environmental cues that decrease food

intake. *Perceptual and Motor Skills, 104*, 273-276. doi: 10.2466/pms.104.1.273-276

Wansink, B. & van Ittersum, K. (2012). Fast food restaurant lighting and music can reduce

calorie intake and increase satisfaction. *Psychological Reports, 111*(1), 228-232. doi: 10.2466/01.PR0.111.4.228-232

Ware, J.E., Jr., & Sherbourne, C.D. (1992). The MOS 36-Item Short-Form Health Survey

(SF-36): I. Conceptual Framework and Item Selection. *Medical Care, 30*, 473-483.

Ware... User's Manual for the SF-36v2 Health Survey, Second Edition

Ware, J.E. (2000) SF-36 Health Survey Update. *SPINE 25*(24), 3130-3139.

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

- Warren Brown, K., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*(4), 822-848. doi: 10.1037/0022-3514.84.4.822
- Watson, D., & Tharp, R. (2007). *Self-directed behavior* (9th ed.). Belmont, CA: Thomson Wadsworth.
- Webb, T. L., Joseph, J., Yardley, L., & Michie, S. (2010). Using the internet to promote health behavior change: a systematic review and meta-analysis of the impact of theoretical basis, use of behavior change techniques, and mode of delivery on effectiveness. *Journal of Medical Internet Research*, *12*(1), e4. doi: v12i1e4 [pii] 10.2196/jmir.1376
- Weger, H. J., Bell, G. C., & Robinson, M. C. (2014). The relative effectiveness of active listening in initial interactions. *International Journal of Listening*, *28*(1), 13-31. doi: 10.1080/10904018.2013.813234
- Wiebe, D., Drew, L., & Croom, A. (2010). Personality, health and illness. In D. French, Vedhara, K., Kaptein, A., & Weinman, J. (Ed.), *Health psychology* (2nd. ed., pp. 294-302). West Sussex, UK: Wiley-Blackwell.
- Wiedemann, A. U., Lippke, S., Reuter, T., Ziegelmann, J. P., & Schwarzer, R. (2011). How planning facilitates behaviour change: Additive and interactive effects of a randomized controlled trial. *European Journal of Social Psychology*, *41*(1), 42-51. doi:10.1002/ejsp.724
- Wilkinson, R., & Pickett, K. (2009). *The spirit level: Why more equal societies almost always do better*. London: Penguin.
- WILL & Navy's Center for Personal Development (2013). *Interactive Nights Out I™*. Retrieved January 29, 2013 from <http://pweb1.rwjf.org/reports/grr/031397.htm>

IRB Study Number: TBD

Title: Patient Well-Being Research Project 01-23-17 to IRB

- Williams, S., DiMatteo, R., & Haskard, K. (2009). Psychosocial barriers to adherence and lifestyle change. In S. Shumacker, Ockene, J., & Riekert, K. (Ed.), *The handbook of health behavior change* (3rd ed.) (pp. 445-462). New York: Springer.
- Williams, R., Kiecolt-Glaser, J., Legato, M. J., Ornish, D., Powell, L. H., Syme, S. L., & Williams, V. (1999). The impact of emotions on cardiovascular health. *Journal of Gender-Specific Medicine*, 2(5), 52-58.
- Wilson, K., & Brookfield, D. (2009). Effect of goal setting on motivation and adherence in a six-week exercise program. *International Journal of Sport and Exercise Psychology*, 7(1), 89-100. doi: 10.1080/1612197X.2009.9671894
- Wing, R. R., & Jeffery, R. W. (1999). Benefits of recruiting participants with friends and increasing social support for weight loss and maintenance. *Journal of Consulting and Clinical Psychology*, 67(1), 132-138. doi:10.1037/0022-006X.67.1.132
- Yu-Hsin Liao, K., Wei, M., Russell, D. W., & Abraham, W. T. (2012), Experiential self-focus writing as a facilitator of processing an interpersonal hurt. *Journal of Clinical Psychology*, 68, 1089–1110. doi: 10.1002/jclp.21886
- Zimmerman, R. S., & Connor, C. (1989). Health promotion in context: the effects of significant others on health behavior change. *Health Education Quarterly*, 16(1), 57-75.

Appendix

BET I CAN Studies

Drivers of Change	Skill	Study	Description	Key Outcomes
Behaviors	Set a goal	Coote & MacLeod (2012)	<ul style="list-style-type: none"> • Effect of brief, self-help positive goal-focused intervention—Goal-setting and Planning (GAP) Skills training—on well-being in people with depression • Randomization (GAP or wait-list control) <ul style="list-style-type: none"> • Groups assessed pre-intervention, post-intervention, and 5-weeks after completing intervention 	<ul style="list-style-type: none"> • Compared to wait-list control group, intervention group showed significant improvements overall (decrease in negative affect, depressive symptoms; increase in positive affect and life satisfaction) post-intervention and at 5-week follow up.
Behaviors	Set a goal	Morisano et al (2010)	<ul style="list-style-type: none"> • Effect of online goal-setting program (one session) for college students with academic difficulty on academic achievement • Eight step goal-setting “package” designed to involve number of factors related to effective goal pursuit; Eight steps: <ul style="list-style-type: none"> • (1) Contemplate desired future; (2) Identify goals; (3) Prioritize goals; (4) Explore positive goal outcome expectations; (5) Determine subgoals; (6) Identify potential obstacles and strategies for overcoming; (7) Set benchmarks for goal attainment; (8) Evaluate goal commitment 	<ul style="list-style-type: none"> • After four months, goal-setting group had significant improvements in academic performance compared with the control group. • Specificity of goal (number of words used to describe ideal future) was significantly related to greater academic improvements.

			<ul style="list-style-type: none"> • Randomized, controlled intervention with two groups: goal-setting group and control group 	
Behaviors	Set a goal	Wilson & Brookfield (2009)	<ul style="list-style-type: none"> • Effect of goal setting on motivation and adherence in a six-week exercise program • Random assignment (3 groups: process goal, outcome goal, no goal) <ul style="list-style-type: none"> • Process goals focus on the processes to engage in (e.g., maintain certain heart rate for 30 minutes of 40 minute exercise session) • Outcome goals focus on the end point (e.g., lose 5 pounds) • Motivation measured at baseline and at end of program (6weeks); Adherence measured throughout, 3 months post and 6 months post 	<ul style="list-style-type: none"> • Motivation and adherence significantly greater for process goal group compared to outcome goal and no goal groups. • During intervention, process goal and outcome goal had greater adherence than no goal group. Post-intervention (3 and 6 months), process goal group had greater adherence than outcome and no control groups.
Behaviors	Create positive habits	Adriaanse et al (2011)	<ul style="list-style-type: none"> • Three experiments examined the cognitive effects of implementation intentions specifying replacement of habitual response with alternative response on breaking habits • Implementation intentions specify an intention and can be used to link a new desired behavior to a situation that triggers a habitual behavior (e.g., If I am in situation X, then I will perform goal-directed behavior Y) 	<ul style="list-style-type: none"> • Implementation intentions eliminated the advantage of habitual response in a triggering situation.
Behaviors	Create positive habits	Chipperfield et al (2008)	<ul style="list-style-type: none"> • Efficacy of habit-based intervention on weight for overweight adults 	<ul style="list-style-type: none"> • Intervention condition lost significantly more weight over 8 weeks than the control condition.

			<ul style="list-style-type: none"> • Randomized to intervention or wait-list control condition • Intervention group received leaflet on habit formation and simple recommendations for eating and activity behaviors • Assessed weight change over 8 weeks for intervention condition compared with control condition and over 32 weeks in the intervention condition 	<p>At 32 weeks, those from the intervention condition who remained in the study showed a pattern of continuing weight loss.</p>
Behaviors	Create positive habits	Turk et al (2013)	<ul style="list-style-type: none"> • Effect of feedback frequency and self-monitoring daily food intake and physical activity on weight loss over 24-months • Randomly assigned to one of three self-monitoring methods with either no daily feedback messages or daily feedback messages (paper diary, no feedback; digital diary, no feedback; digital diary, daily feedback) • All participants received feedback about eating and physical activity on weekly basis for first four months and bi-weekly for the next two months • Daily feedback message based on individual's recorded information (e.g., try a little harder to watch high calorie, high fat foods; nice food choices, this will serve you well) 	<ul style="list-style-type: none"> • Receiving daily feedback messages significantly increased self-monitoring adherence. • Self-monitoring adherence was significantly associated with weight loss. • Feedback frequency significantly related to weight loss but after adjusting for self-monitoring adherence this effect was no longer significant.
Emotions	Collect positive emotions	Emmons & McCullough (2003)	<ul style="list-style-type: none"> • Three studies examining the effect of gratitude on psychological and physical well-being 	<ul style="list-style-type: none"> • Daily gratitude thoughts led to increase in positive emotions, but only weekly gratitude thoughts

			<ul style="list-style-type: none"> In first two studies, participants randomly assigned to 1 of 3 conditions (hassles, gratitude listing, and either neutral life events or social comparison) and kept weekly or daily records; In third study, clinical sample was randomly assigned to gratitude condition or to a control condition 	<p>over longer periods of time led to longer-term states of (physical) well-being.</p> <ul style="list-style-type: none"> In the clinical sample (study 3), daily gratitude notes also resulted in a decrease in negative emotions.
Emotions	Collect positive emotions	Gander et al (2013)	<ul style="list-style-type: none"> Effect of nine strength-based positive interventions on well-being and depression Online randomized placebo-controlled study (9 intervention groups and one placebo control group); degree of happiness and depression measured at five times (pre- and post-test, 1-, 3-, and 6 month follow-up) 	<ul style="list-style-type: none"> Eight of nine interventions increased happiness; depression decreased in all groups.
Emotions	Collect positive emotions	Ouweneel et al (2014)	<ul style="list-style-type: none"> Effect of two positive psychological interventions (focused on thoughts of gratitude or acts of kindness) on enhancing study-related positive emotions and academic engagement for college students Two randomized controlled trials with experimental (thoughts of gratitude or acts of kindness) and control conditions Gratitude condition: prompted to think of people they are grateful for each day in a different domain; Kindness condition: given instructions each week to focus on five acts of kindness per day and report on them in the evening 	<ul style="list-style-type: none"> Gratitude intervention had significant positive effect on positive emotions. Kindness intervention had positive influence on positive emotions and academic engagement.

			<ul style="list-style-type: none"> Monitored on a daily basis during the one-week intervention, and additional pre-, post-, and follow-up assessments 	
Emotions	Cope with negative emotions	Kemeny et al (2012)	<ul style="list-style-type: none"> Effect of an 8-week meditation/emotion regulation training intervention on negative emotions and prosocial responses Randomly assigned to training group or wait-list control group; assessed changes in emotional behavior pre, post, and 5 months after training completion 	<ul style="list-style-type: none"> The training group reported reduced trait negative affect, rumination, depression, and anxiety, and increased trait positive affect and mindfulness compared to the control group. Most effects maintained at follow-up.
Emotions	Cope with negative emotions	Robins et al (2012)	<ul style="list-style-type: none"> Effects of mindfulness-based stress reduction intervention on emotion experience and expression Randomized to intervention or wait-list control group 	<ul style="list-style-type: none"> Compared with WL, intervention completers reported significantly greater increases in trait mindfulness and decreases in absentmindedness, greater increases in self-compassion, and decreases in fear of emotions, suppression of anger, aggressive anger expression, worry, and difficulties regulating emotions.
Emotions	Cope with negative emotions	Yu-Hsin Liao et al (2012)	<ul style="list-style-type: none"> Effects of experiential self-focus writing on negative affect after an interpersonal hurt College students who had experienced interpersonal hurt were randomly assigned to experiential self-focus condition (write about feelings and experiences related to the hurt) or to control writing condition (write about neutral event) 	<ul style="list-style-type: none"> Negative affect resulting from an interpersonal hurt significantly decreased over time among participants in the experiential self-focus writing group compared with the control group.

Thoughts	Challenge assumptions	Hofmann et al (2009)	<ul style="list-style-type: none"> • Effect of reappraisal, acceptance, and suppression strategies on anxious arousal • Randomly assigned to one of three different emotion regulation strategies (Reappraisal, Suppression, or Acceptance) and asked to give an impromptu speech • The Reappraisal group was instructed to regulate their anxious arousal by reappraising the situation; the Suppression group was asked to suppress their anxious behaviors; and the Acceptance group was instructed to accept their anxiety 	<ul style="list-style-type: none"> • Overall, reappraisal was most effective strategy for regulating anxious arousal. • Both reappraising and accepting anxiety was more effective for moderating the physiological arousal than suppressing anxiety. • Reappraising was more effective for moderating the subjective feeling of anxiety than attempts to suppress or accept it.
Thoughts	Challenge assumptions	Rodebaugh et al (2009)	<ul style="list-style-type: none"> • Undergraduate students high in social interaction anxiety divided into high purposeful engagers (tend to purposefully engage with unpleasant thoughts and be open to different perspectives) and low purposeful engagers (tend not to actively engage with unpleasant thoughts or consider alternative views) • Randomly assigned to 25-min unstructured writing condition about social situation or to 25-min structured writing condition with cognitive restructuring prompts 	<ul style="list-style-type: none"> • Low purposeful engagers who did not receive cognitive restructuring prompts reported worsened mood at the end of the study, whereas low purposeful engagers who received the prompts and high purposeful engagers in both conditions did not report as much deterioration in mood.
Thoughts	Challenge assumptions	Shurick et al (2012)	<ul style="list-style-type: none"> • Effect of cognitive restructuring (CR) on conditioned fear responses and whether this effect persists over time (24 hr) 	<ul style="list-style-type: none"> • Compared with control participants, CR participants demonstrated a reduction in fear and EDA across sessions.

			<ul style="list-style-type: none"> • Cognitive restructuring is individually tailored to help individuals better understand their own experience of anxiety and reinterpret stimuli in a less negative way • Conditioned participants using images of snakes or spiders that were occasionally paired with a mild shock to the wrist—obtained subjective fear reports and electrodermal activity (EDA) • Randomly assigned after conditioning to either CR training group (aimed at decreasing emotional response to the shock and the conditioned stimuli) or control group • All participants returned 24 hr later to repeat the conditioning session 	
Thoughts	Write a new story	Good et al (2003)	<ul style="list-style-type: none"> • Effect of an intervention to reduce the effects of stereotype threat on adolescents' standardized test performance • Students in the experimental conditions were mentored by college students who encouraged them either to view intelligence as malleable or to attribute academic difficulties to the novelty of the educational setting; Control group: mentored by college students and taught about the dangers of drug use 	<ul style="list-style-type: none"> • Results showed that females in both experimental conditions earned significantly higher math standardized test scores than females in the control condition. • Students (male and female) in experimental conditions earned significantly higher reading standardized test scores than participants in control condition. • Encouraging students to make nonpejorative attributions for

			<ul style="list-style-type: none"> Participants in study were from a rural school district serving a largely low-income Hispanic population (students who face negative stereotypes about their abilities) 	<p>their difficulties was associated with an increase in achievement.</p>
Thoughts	Write a new story	Korte et al (2012)	<ul style="list-style-type: none"> Effect of life review therapy for older adults with moderate depressive symptomatology Randomly assigned to either life review therapy or care as usual; Assessed depressive symptoms and secondary outcome measures at baseline, post-intervention (3 months after baseline), follow-up (3 months after end of intervention) and intervention group assessed again at 9 months post intervention The intervention has three core elements. First, the integration of difficult life events from the past; second, the development of agentic life stories, which helps the participants to cope with present life events and to formulate new goals; third, the retrieval of specific positive memories, which can serve as building blocks of the new life stories 	<ul style="list-style-type: none"> Life review therapy was effective in reducing depressive symptoms and these effects were maintained at follow-up. It also had a positive effect on well-being.
Thoughts	Write a new story	Schroder et al (2014)	<ul style="list-style-type: none"> Effect of mindset induction on cognitive control brain activity Randomly assigned to either growth-mindset condition or fixed-mindset condition and then completed reaction-time task 	<ul style="list-style-type: none"> Inducing a growth mindset resulted in enhanced attention to task-relevant stimuli, whereas inducing a fixed mindset enhanced attention to responses.

			<ul style="list-style-type: none"> • Growth-mindset: malleability of intelligence • Fixed-mindset: immutability of intelligence 	<ul style="list-style-type: none"> • Despite enhanced attention to responses in the fixed-mindset group, this attention allocation was unrelated to adaptive performance adjustments. In contrast, enhanced attention to errors in the growth-mindset group was related to adaptive performance. • Attention allocation to errors was directly associated with post-error improvement in the growth condition only. •
Interactions	Connect	Bond et al (2003)	<ul style="list-style-type: none"> • The role of changes in Alcoholics Anonymous (AA) involvement and social networks in relation to abstinence following substance abuse treatment • Individuals seeking treatment were interviewed at intake and re-interviewed 1 and 3 years later to collect information about alcohol consumption, dependence symptoms, social support for reducing drinking, number of heavy drinkers in the social network and AA involvement 	<ul style="list-style-type: none"> • Significant predictors of 90-day abstinence at both the 1- and 3-year follow-up interviews included AA involvement in the last year, percentage of heavy or problem drinkers in the social network, percentage encouraging alcohol reduction and AA-based support for reducing drinking.

				<ul style="list-style-type: none"> AA involvement and the type of support (alcohol-specific) received from AA members were consistent contributors to abstinence 3 years following a treatment episode. AA-based contacts supporting reduced drinking were more significant contributors to long-term abstinence than non-AA based contacts supporting reduced drinking.
Interactions	Connect	Bradley & Gottman (2012)	<ul style="list-style-type: none"> Effect of a skill-based couple and relationship education program for low-income, situationally violent couples with children Skills include: functional vs. dysfunctional communication patterns, strengthening communication skills, conflict management, information and skills related to intimate relations/sexual intimacy <ul style="list-style-type: none"> Relationship skills were measured at three time points (baseline, post-intervention and long-term post-intervention) using the Reduced Sound Relationship House Questionnaire (Gottman, 1994, 1999) which is divided into four domains related to relationship skills (friendship, sex/romance/passion, shared 	<ul style="list-style-type: none"> Violence was reduced via an increase in intervention-based relationship skills.

			<p>meaning, and conflict management); Scores from the four domains were summed to create a “healthy relationship skills” score for each time point</p> <ul style="list-style-type: none"> • Couples randomly assigned to a treatment or no-treatment control group; self-reported attitudes reflecting healthy relationship skills and intimate partner violence at multiple time points 	
Interactions	Connect	Gable et al (2006)	<ul style="list-style-type: none"> • Examine experience of sharing successes (talking about a recent positive event in his or her life; e.g., receiving a good grade or being offered a job) with romantic partner • Dating couples participated in videotaped interactions in which they took turns discussing recent positive and negative events • Couples completed self-report measures of relationship well-being; each partner rated how understood, validated, and cared for they felt in each discussion; outside observers coded responders’ behavior (ratings of active-constructive behavior) <ul style="list-style-type: none"> • Active and constructive responses communicate positive information about the event itself and convey positive information about the personal significance of the event for the individual 	<ul style="list-style-type: none"> • Both self-report data and observational codes showed that 2 months later, active and constructive responses to positive event discussions were more closely related to relationship well-being and break-up than were responses to negative event discussions.

Interactions	Communicate	Bodie et al (2015)	<ul style="list-style-type: none"> • Effect of active listening on perceptions of listener helpfulness, sensitivity, and supportiveness and discloser emotional improvement • Undergraduate students randomly assigned to disclose a recent upsetting problem to either a trained active listener or an untrained listener <ul style="list-style-type: none"> • Active listeners: trained to ask open questions, paraphrase content, reflect feelings, use assumption checking and are nonverbally immediate • Nonverbally immediate behaviors include head nods, eye contact and forward body lean 	<ul style="list-style-type: none"> • Both verbal and nonverbal active listening behaviors were rated as signaling more emotional awareness and promoting a greater degree of emotional improvement.
Interactions	Communicate	Lin et al (2004)	<ul style="list-style-type: none"> • Effect of an assertiveness training program on nursing and medical students' assertiveness, self-esteem, and interpersonal communication satisfaction • Assertiveness training focused on several skills: proper assertive behavior, clarification and confirmation of the individual's fundamental rights, confronting criticism, expressing dissatisfaction, refusals, and requests, and communication skills • Longitudinal research design with participants with low assertiveness; assigned to experimental group or comparison group 	<ul style="list-style-type: none"> • The assertiveness and self-esteem of the experimental group were significantly improved in nursing and medical students after assertiveness training.

Interactions	Communicate	Weger et al (2014)	<ul style="list-style-type: none"> • Effect of active listening in initial interactions on feeling understood • Participants engaged in interactions with confederates trained to respond with active listening messages, advice, or simple acknowledgements 	<ul style="list-style-type: none"> • Participants felt more understood when they received an active listening response.
Context	Read the cues	Carpenter et al (2014)	<ul style="list-style-type: none"> • Effects of both level of smoking involvement (daily vs. occasional smoking) and gender on reactivity to both smoking and alcohol cues • Cue-reactivity paradigm is well suited to examine one marker of dependence: craving related stimulus control (i.e., the ability of environmental cues to elicit craving to smoke) • Smokers (daily and occasional) were exposed to each of three counterbalanced cues: <ul style="list-style-type: none"> • In vivo smoking (sight, smell, lighting of cigarette) • Alcohol (opening, pouring, and smell of preferred beverage) • Neutral cue 	<ul style="list-style-type: none"> • Daily smokers exhibited higher levels of non cue-elicited craving than did occasional smokers. • Both daily and occasional smokers showed significant increases in craving in response to cues (i.e., cue-elicited craving), with little evidence that cue-elicited craving differed between groups. • Females were more cue reactive to both the alcohol and smoking cues than males.
Context	Read the cues	Martins & Vallen (2014)	<ul style="list-style-type: none"> • Two studies examined the presence vs. absence of holiday food cues on consumption of snack food for dieters vs. non-dieters • Study 1 (quasi-experimental design) evaluated snack-food consumption on a holiday vs. a non-holiday • In Study 2 (true experimental design), participants read primes associated with 	<ul style="list-style-type: none"> • In study 1, dieters consumed more of a food item on an ordinary day relative to a holiday; the consumption patterns of non-dieters did not vary based on holiday cues. • Study 2 demonstrated that dieters, but not

			<p>holiday eating, holiday history, or a neutral topic. The bolstering of self-regulatory resources when facing holiday related cues was explored</p>	<p>non-dieters, bolster self-regulatory resources to a greater extent in the presence vs. absence of a holiday food cue.</p>
Context	Read the cues	Prinsen et al (2013)	<ul style="list-style-type: none"> Examines the role of environmental cues in steering people’s dietary decisions in response to food temptations Conformity to environmental cues about food intake was assessed in a local bakery (study 1) and a lab setting (study 2); participants were unobtrusively presented with a bowl of individually wrapped chocolates. The presence of empty wrappers was manipulated, to indicate whether others who had been in the same situation had or had not eaten the chocolates Study 3 assessed conformity to environmental cues about food choice; participants were required to choose between a healthy and an unhealthy snack (food wrappers indicated whether previous participants had chosen the healthy or the unhealthy snack) 	<ul style="list-style-type: none"> Participants were more likely to take chocolates in the presence of an environmental cue that others did too. Participants were more likely to choose a snack that was consistent with the choice of others.
Context	Read the cues	Wansink & Payne (2007)	<ul style="list-style-type: none"> Effect of environmental cues on food intake Examine if people would eat less if they knew how much they had already eaten Tables randomly assigned to be bussed (leftover wings removed) or unbussed (wings left on table) 	<ul style="list-style-type: none"> People at the unbussed tables ate significantly less than people at the bussed tables.

Context	Change the cues	Janse Van Rensburg et al (2013)	<ul style="list-style-type: none"> • Effect of light and vigorous intensity aerobic exercise on cigarette cravings, subjective and physiological reactivity to smoking cues, and affect after overnight nicotine deprivation • Smokers (deprived of nicotine overnight) randomized to one of three exercise conditions (light intensity, vigorous intensity, or a passive control condition) • After each exercise condition, participants engaged in a standardized cue reactivity assessment • Self-reported urges to smoke, affect, and salivary cortisol were assessed at baseline (i.e., before each condition), immediately after each condition, and after the cue reactivity assessment 	<ul style="list-style-type: none"> • Light and vigorous exercise significantly decreased urges to smoke and increased positive affect, relative to the passive control condition.
Context	Change the cues	Lai & Good (2005)	<ul style="list-style-type: none"> • Effect of soft music on sleep quality for older adults • A randomized controlled trial (control group and music group) was used with a two-group repeated measures design • Participants listened to their choice among six 45-minute sedative music tapes at bedtime for three weeks 	<ul style="list-style-type: none"> • Music resulted in significantly better sleep quality in the experimental group.
Context	Change the cues	Papies & Hamstra (2010)	<ul style="list-style-type: none"> • Effect of attractive food cues on eating behavior for dieters and non-dieters • Effect of activating the dieting goal before participants entered the tempting eating situation on self-regulation 	<ul style="list-style-type: none"> • Dieters ate more than non-dieters in the no priming condition. However, dieters reduced their eating behavior when primed with dieting goal, whereas this

			<ul style="list-style-type: none"> Assessed the number of snacks consumed (after primed with dieting goal or not) in a local store where the smell of grilled chicken was present 	manipulation did not affect consumption for non-dieters.
Context	Change the cues	Wansink & Van Ittersum (2012)	<ul style="list-style-type: none"> Effect of environmental cues (lighting and music) in fast food restaurant on food consumption and satisfaction Customers were randomly seated in main part of restaurant or in the converted room (softened lighting and music) 	<ul style="list-style-type: none"> People in the room with softened lighting and music ate less and rated the food as more enjoyable.
Awareness	Know yourself	Arch & Craske (2006)	<ul style="list-style-type: none"> Effect of focused breathing on emotion regulation College students randomly assigned to one of three groups (focused breathing, worry, or unfocused attention) with an induction lasting 15 minutes in all groups Assessed emotional response to affectively valenced picture slides 	<ul style="list-style-type: none"> The focused breathing group maintained consistent, moderately positive responses to the neutral slides before and after the induction, whereas the unfocused attention and worry groups responded significantly more negatively to the neutral slides after the induction than before it. The focused breathing group also reported lower negative affect and overall emotional volatility in response to the post-induction slides than the worry group, and greater willingness to view highly negative slides than the unfocused attention group.
Awareness	Know yourself	Bowen et al (2014)	<ul style="list-style-type: none"> Long-term efficacy of Mindfulness-Based Relapse Prevention (MBRP) in reducing relapse compared with 	<ul style="list-style-type: none"> Compared with TAU, participants assigned to MBRP and RP reported significantly

			<p>standard relapse prevention (RP) and treatment as usual (TAU)</p> <ul style="list-style-type: none"> Individuals who had successfully completed initial treatment for substance use disorder were randomized to MBRP, RP or TAU aftercare (8 weekly sessions) and monitored for 12 months 	<p>lower risk of relapse to substance use and heavy drinking and, among those who used substances, significantly fewer days of substance use and heavy drinking at the 6-month follow-up.</p> <ul style="list-style-type: none"> At the 12-month follow-up, MBRP participants reported significantly fewer days of substance use and significantly decreased heavy drinking compared with RP and TAU.
Awareness	Know yourself	Warren Brown & Ryan (2003)	<ul style="list-style-type: none"> Examines the role of mindfulness in psychological well-being <ul style="list-style-type: none"> Correlational, quasi-experimental, and laboratory studies examine the Mindful Attention Awareness Scale (MAAS) Experience-sampling study examines relationship of mindfulness with self-regulated behavior and positive emotional states Clinical intervention study with cancer patients examines relationship between mindfulness and mood disturbance and stress over time 	<ul style="list-style-type: none"> MAAS measures a unique quality of consciousness that is related to a variety of well-being constructs, that differentiates mindfulness practitioners from others, and that is associated with enhanced self-awareness. An experience-sampling study showed that both dispositional and state mindfulness predicted self-regulated behavior and positive emotional states. A clinical intervention study with cancer patients demonstrated that increases in mindfulness over time related to declines in mood disturbance and stress.
Awareness	Know the issue	Husson et al (2011)	<ul style="list-style-type: none"> Systematic review on relationship between information provision and health-related quality of life (HRQoL), 	<ul style="list-style-type: none"> All five prospective observational studies found a positive relation between appropriate information

			<p>anxiety and depression among cancer survivors</p>	<p>provision (satisfaction with the received information, fulfilled informational needs, high quality and clear information) and mental and global HRQoL and a negative relation between appropriate information provision and depression and anxiety.</p> <ul style="list-style-type: none"> The results of all 12 cross-sectional observational studies are in accordance with the findings of the prospective studies; however, they also found a positive association between appropriate information provision and physical HRQoL.
Awareness	Know the issue	Manios et al (2007)	<ul style="list-style-type: none"> Effect of a nutrition education program on post-menopausal women Randomized to intervention group or to control group Intervention group attended 7 nutrition education sessions over 5 months; Sessions aimed to increase nutritional knowledge self-efficacy to adopt and maintain healthy dietary choices; Control group received no intervention 	<ul style="list-style-type: none"> Intervention group reported decreasing total fat intake and increasing calcium and vitamin D intakes to a higher extent compared with the changes reported by the control group.
Awareness	Know the issue	Morokuma et al (2013)	<ul style="list-style-type: none"> Effect of psychoeducation on preventing relapse for adults with remitted major depression Randomized to either group psychoeducation plus treatment as usual (TAU) or TAU alone (control group) 	<ul style="list-style-type: none"> Time to relapse was significantly longer in the psychoeducation group than in the control group. At 9 months, there was a significantly greater decrease in depressive symptoms in the

			<ul style="list-style-type: none"> • Group psychoeducation (six sessions) consisted of didactic lecture (topics included: recognition of depression and its consequences, causes and risk factors, signs and symptoms, drug treatment, side effects of antidepressants, and course/outcome) and group problem-solving (e.g., how to inform boss of absence, how to respond to family critical attitudes) • TAU consisted of outpatient treatment from psychiatrist (clinical management-assess symptoms and prescribe medication) once every 2 weeks 	<p>psychoeducation group than in the control group.</p> <ul style="list-style-type: none"> • Study demonstrated the effectiveness of psychoeducation on the course and outcome of major depressive disorders.
Next Steps	Make a plan	Darker et al (2010)	<ul style="list-style-type: none"> • Effect of an intervention using theory of planned behavior (TPB) to promote walking • Randomized controlled trial (intervention or waiting list); Both intervention and waiting list filler task were completed in one session in the laboratory (post-assessment occurred one week later and a follow-up assessment one month later) • The intervention consisted of strategies to boost perceived behavioral control (PBC), plus volitional strategies to enact walking intentions; Participants were required to develop up to three action 	<ul style="list-style-type: none"> • The intervention increased PBC, attitudes, intentions, and objectively measured walking from 20 to 32 min a day. • At 6 weeks follow-up, participants maintained their increases in walking.

			<p>plans to incorporate additional walking into the next week</p> <ul style="list-style-type: none"> All TPB constructs were measured, along with self-reported measures of action planning and walking, and an objective pedometer measure of time spent walking 	
Next Steps	Make a plan	Lange et al (2013)	<ul style="list-style-type: none"> Effect of brief online intervention on fruit consumption Randomized to 1-hour online intervention or control group <ul style="list-style-type: none"> Intervention was mainly based on two components: dietary planning skills and dietary action control Control group received a knowledge-based quiz on nutrition (online 1-hour) Assessed fruit intake, planning to consume, and dietary action control 	<ul style="list-style-type: none"> Intervention group participants consumed more fruit than participants in the control condition. Significant effect also emerged for dietary planning and action control for the intervention group.
Next Steps	Make a plan	Wiedemann et al (2011)	<ul style="list-style-type: none"> Better understand the processes by which planning interventions unfold their effects Employees were randomized to either a combined action planning and coping planning intervention or an active control group <ul style="list-style-type: none"> Action plan: implementation intentions (precise description of critical situation in which to perform a behavior) 	<ul style="list-style-type: none"> Action planning and coping planning mediated intervention effects on fruit and vegetable intake not only separately, but also simultaneously (multiple mediation). Action planning and coping planning had main and interactive effects on health behavior change (moderation).

			<ul style="list-style-type: none"> • Coping plan: link anticipated risk situations that may jeopardize behavior with coping strategies for the inhibition of undesired responses or prioritization of desired ones • Control group received general health information and feedback on body mass index • Self-reported changes in fruit and vegetable intake, action planning, coping planning, intentions and self-efficacy were measured after four weeks 	
Next Steps	Make it stick	Evers et al (2012)	<ul style="list-style-type: none"> • Effect of coping plans on adherence to physical and mental activity interventions • Randomized controlled trial (randomized to a physical or a mental activity 6-month intervention) with healthy older women • Intentions, self-efficacy, coping plans, and objectively measured adherence levels were assessed • Adherence defined as time spent on course participation 	<ul style="list-style-type: none"> • Intentions weakly predicted adherence in the first six weeks of the physical activity program. Pre-action self-efficacy predicted adherence in the first six weeks of the mental activity program. • In both groups, coping plans predicted mid-period adherence (10 weeks) and long-term adherence (20 weeks). This effect was larger for participants with lower levels of prior adherence.
Next Steps	Make it stick	Hershfield et al (2011)	<ul style="list-style-type: none"> • Effect of interacting with renderings of future self on saving behavior • In four studies, participants interacted with realistic computer renderings of their future selves using immersive virtual reality hardware 	<ul style="list-style-type: none"> • In all cases, those who interacted with their virtual future selves exhibited an increased tendency to accept later monetary rewards over immediate ones.

			<ul style="list-style-type: none"> • Study 1: used immersive virtual reality to put participants inside a visual representation of their body and face as they approximately will look in the future (one group saw current self and another group saw future self) • Study 2 extends the results of Study 1 by including more implicit dependent variables and rules out demand effects • Study 3a tests whether these interventions can work in field conditions— namely, delivery over the Internet—without special virtual reality hardware and with only a few user photographs as input • Finally, Study 3b assesses the generalizability of the results using a community sample and also examines the extent to which the manipulations enhance future self-continuity • Assess money allocation behavior 	
Next Steps	Make it stick	Kiernan et al (2013)	<ul style="list-style-type: none"> • Effect of learning a novel set of “stability skills” before losing weight on long-term weight management <ul style="list-style-type: none"> • Stability skills were designed to optimize individuals’ current satisfaction with lifestyle and 	<ul style="list-style-type: none"> • Maintenance First participants lost the same percentage of initial weight during the 6-month intervention period as Weight Loss First participants.

			<p>self-regulatory habits while requiring the minimum effort and attention necessary</p> <ul style="list-style-type: none"> Overweight women randomly assigned to one of two 6-month interventions and assessed at baseline and at 6, 12, and 18 months <ul style="list-style-type: none"> Maintenance First intervention group participated first in an 8-week stability skills maintenance module and then in a standard 20-week behavioral weight-loss program The other intervention group (Weight Loss First) participated first in a standard 20-week behavioral weight-loss program and then in a standard 8-week problem-solving skills maintenance module 	<ul style="list-style-type: none"> Maintenance First participants regained significantly less weight during the 12-month follow-up period than Weight Loss First participants.
Next Steps	Make it stick	Wing & Jeffery (1999)	<ul style="list-style-type: none"> Effect of recruiting participants with friends and increasing social support on weight loss and maintenance Randomly assigned to standard behavioral treatment (SBT) for weight loss or SBT with social support strategies <ul style="list-style-type: none"> Group 1: recruited alone and SBT Group 2: recruited alone and SBT plus social support 	<ul style="list-style-type: none"> Participants recruited with friends had greater weight losses at the end of the 4-month treatment and at Month 10 follow-up. In those recruited alone and given SBT, 76% completed treatment and 24% maintained their weight loss in full from Months 4 to 10. Among those recruited with friends and given SBT plus social support, 95% completed treatment and 66% maintained their weight loss in full.

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			<ul style="list-style-type: none">• Group 3: recruited with friends and SBT (all aspects of the program were identical to Group 1)• Group 4: recruited with friends and SBT plus social support (in this treatment condition, 4 people who signed up together became a natural team; received lesson materials identical to the other groups and same social support manipulations as Group 2)	
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