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I-Sharing in Group Therapy: An Approach to Improve Client Outcomes for Depression

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Depression is the leading cause of disability and productivity loss worldwide (Ibrahim, 2013). Roughly 8.4% of the United States' population each year suffers from depression, with young people aged 18-25 having the highest rates of depression at 17% (NIMH, 2020). Depression is identifiable by a variety of burdens it places upon those diagnosed, including anhedonia, insomnia, an inability to concentrate, hopelessness, social isolation and suicidal thoughts/actions (American Psychiatric Association DSM-5, 2021). Beyond the mental toll depression takes on individuals, it is estimated to cost the United States' economy $210 billion dollars per year (Greenberg et al, 2015). Further, the prevalence of depressive disorders has steadily increased in recent years (Mojtabai et al., 2016), indicating that these figures are likely underrepresenting the current economic toll depression takes on America. Importantly, little more than half (54%) of those suffering from depression are adequately treated (Cuijpers, 2018), suggesting that current paradigms need to be improved to treat those unaffected by existing treatment methods.

This thesis aims to explore potentially new and improved group therapy methodologies emphasizing the social aspects of depression. There is a gap in the research of using group therapy to specifically target the social and existential isolation factors of depression. I-sharing, a social-psychological phenomenon which directly addresses existential isolation, could potentially be employed as a means to treat the isolating factors of depression. By incorporating social-psychological perspectives into unipolar depression treatments, this thesis will explore how future research and clinical practice could improve the efficacy of existing treatment methodologies for depression.

Depression

A variety of theoretical models have been developed to conceptualize the etiology and treatment of depression. These models include viewing depression as a biological disorder, a psychological disorder, a physical disorder, and/or a social disorder (Khan et al., 2016; Nemeth et al., 2021), with some models placing more emphasis than others on each of these aspects of depression.

Biological Models of Depression

Some theories focus on the biological aspects of depression (Alejandra Ramirez et al., 2018). These theories postulate that certain neurochemical imbalances or genetic expression/repressions are primary pathways for depression and/or depression's symptomology (Andreasen, 1984). Dr. Andreasen, a psychiatrist and early proponent of the biological perspective of depression, wrote "because these diseases [psychological disorders] are considered to be of biological origin, the therapy is seen as correcting an underlying biological imbalance" (Andreasen, 1984, p. 30). Importantly, contemporary biological models of depression do not postulate that psychosocial factors do not play a role in depression, but rather that certain genetic predispositions and/or neurochemical imbalances are the greater culprits. Further, some argue that the psychosocial factors of depression can be adequately treated via medications (Mulinari, 2018).

Following this perspective, the most popular treatment for unipolar depression is medication, generally in the form of Selective Serotonin Reuptake Inhibitors (SSRIs) and Selective Noradrenaline Reuptake Inhibitors (SNRIs) with 12.7% of the U.S. population currently being prescribed them (Pratt et al., 2011). SSRIs and SNRIs, although effective forms of treatment, commonly have side-effects that dissuade users from continuing their use or cause

clients other undue mental stress. These side effects include loss of appetite, weight loss, weight gain, drowsiness, dizziness, fatigue, headaches, increased suicidal thoughts, nausea/vomiting, sexual dysfunction, and increased risk of cardiovascular problems (Braund et al., 2021; Wang et al., 2018). In a study reviewing the impact of antidepressant-associated sexual disfunction (AASD) in Germany, Spain and the Netherlands, 46.4% of males and 52.1% of females prescribed SSRIs or SNRIs for unipolar depression experienced AASD. Further, those with AASD reported having a significantly worse quality of life, mood, lowered self-esteem, and worse romantic relationships with their partner (Williams et al., 2010). Thus, research indicates that although antidepressants may treat depression, they run the risk of causing other side-effects that lower overall quality of life. This can directly impact treatment efficacy, as side-effects are a leading cause for low drug adherence rates (Serna et al., 2010; Bocquier et al., 2014).

Another treatment of depression following the biological paradigm involves aerobic exercise. There are many underlying theories explaining exercise's treatment efficacy. Contemporary research indicates that exercise is responsible for increased serotonin synthesis, a neurotransmitter potentially responsible for depression (Dunn & Jewell, 2010), improved self-efficacy (Barbour et al., 2007), and a reduction in potential physical ailments responsible for depressed mood (Eyre et al., 2013). The mental health benefits of exercise are attributed to the neurochemical changes the brain undergoes under this biological perspective. Biological perspectives, independent of their employment in mental healthcare, place the greatest emphasis on biological/neurochemical imbalances as the underlying causal factor of depression. While the efficacy of biological treatments has been established, there exists a substantial population left undertreated. The existence of this population suggests that the current treatments taking a

biological perspective are potentially overlooking or underemphasizing other important aspects of depression.

Psychological models of Depression

Other popular contemporary models to conceptualize depression place greater emphasis on its psychological aspects. While psychotherapy can come in many forms to treat unipolar depression, the most common (Mayo Foundation, 2022) and best evidenced based psychological treatment for depression recognized is cognitive-behavioral therapy [CBT] (National Institute for Health and Clinical Excellence, 2009). CBT is a therapy technique that expressly modifies thoughts and behaviors through the use of dialogue/dialectic therapy (Gautam et al., 2020). In CBT treatments, thought pattern recognition, restructuring, and social skills are taught to the client in order to provide patients with novel perspectives on situations. Central to CBT is Aaron Beck's cognitive model of depression, which attributes cognition, emotion, and physical symptoms as the prevalent factors behind depression (Beck et. al., 2017). The underlying theory behind CBT postulates that clients can fall victim to unproductive and inappropriate cognitive appraisals of situations, which negatively impact client mental wellbeing. CBT involves actively teaching clients behaviors and cognitive skills to improve mood, adjustment, and wellbeing. This often involves "homework" outside of normal therapy meetings (Beck & Emery, 1985).

Ample research supports the effectiveness of CBT. For example, a metanalysis of 6 randomized controlled trials including 847 participants found that CBT was both a fast-acting and long-lasting treatment to reduce depression (Li et al., 2018). In a 3-year longitudinal study of internet-based CBT for depression (ICBT-d), researchers found that depression severity as a result of ICBT-d dropped by 7% overall (Blom et al, 2017). Further, 56% of participants no longer had a diagnosis of depression following treatment, indicating the efficacy of ICBT-d for

certain clients (Blom et al., 2017). While effective, a group of so-called 'treatment resistant' users experienced little to no benefit from ICBT-d. In a separate randomized trial reviewing the effects of ICBT and exercise on depression, both ICBT and exercise had significantly better effects on client outcome, depression and mood as opposed to the treatment as usual group, which received treatments from their primary care physician (including CBT, talk therapy, and/or no treatment, Hallgren et al., 2015). These studies speak to the efficacy of CBT as a viable treatment methodology for depression as well as its ease of access, being both effective online as well as in-person. By adjusting the underlying psychological frameworks which clients use, psychological treatments are able to treat depression.

CBT has been heralded as the hallmark treatment for unipolar depression based on extensive evidence from clinical trials (Li et al., 2018). While CBT has proven effective for many clients, treatment resistant groups present a challenge for which CBT has yet to account. Some mental health problems can be attributable to psychological dysfunction, but treatment resistant groups indicate that perhaps inadequate emphasis has been placed on other causal factors.

Challenges of Treating Depression

While depression has a wide array of clinically viable treatments, many evidenced based treatments are ineffective for most clients. In a study of 10,443 randomly selected Swedes interviewed by psychiatrists to assess their mental health, 42.2% presented with various mental health problems for which treatment was considered to be beneficial. Of those with mental health problems, 70% presented with a psychiatric disorder according to the DSM-IV. Of those for whom mental healthcare would be beneficial, 84% were aware of their needs, but only 17% had their needs met (Forsell, 2006). Similar findings of 'treatment resistant' or 'treatment

ineffective' groups have been found in other western cultures (Blom et al., 2017; Bocquier et al., 2014; Serna et al., 2010).

While stigma against mental health services may partly explain why mental health is so undertreated, treatment methodology can also be held accountable for client outcomes. Popular and evidenced based treatments for depression listed above treat most clients experiencing depression. One important aspect of depression underrepresented by these popular theories is the social influence of depression on clientele. Although these models do not ignore the involvement of social factors in depression, they underestimate social factors as being key contributors to depression. The social factors of depression are similarly undervalued in the language employed by those diagnosed with depression (Nemeth et al., 2021). In this study, Nemeth et al. (2021) analyzed roughly 70,000 depression-related posts from popular health forums and the language used in describing possible treatments to depression. Researchers found that "even if actors are initially aware of the social mechanisms contributing to depression, they neglect these factors when it comes to considering the countermeasures" (Nemeth et al., 2021, p1). Thus, even in populations who are cognizant of their own psychological hardships *and* the impact of psychosocial interventions, the psychosocial aspects of depression are undervalued. This points to the need to further explore psychosocial treatment options and any potential improvements to be made to them.

Psychosocial Models of Depression

The third paradigm employed to treat depression places an emphasis on how psychosocial interventions can be employed to reduce partially or completely depressive symptoms. Psychosocial treatments for depression require clinicians to employ therapeutic techniques while understanding depression as having key causal social factors. Some examples

of psychosocial therapies include family therapy, whereby the family is treated as a social unit rather than only the member(s) presenting with mental health struggles being treated, and CBT when social interventions and skills are explicitly taught. One such psychosocial treatment methodology is group therapy. Group therapy is a type of therapy in which a group of clients undergo treatment together in therapeutic meetings with one clinician overseeing the entire group. Groups can be selected based upon shared commonalities between group members, such as in the case of an Alcoholics Anonymous group, whereby members are alcoholics or their loved ones, or group membership can be randomized. The goal of group therapy typically is to enable clients to receive treatment for their underlying mental health struggles while also receiving social support from their fellow group members. For the purposes of this research project, a group will generally consist of 3 or more biologically unrelated people.

The efficacy of group therapy. Although individual cognitive behavioral therapy is considered the gold standard for treatment of depression (Forand et al., 2019) there are two key reasons that group therapy should be considered. First, there is a growing body of research indicating that group therapy is just as beneficial to client mental health (Santoft et al., 2019) while also providing unique benefits to clients, such as protective factors for depression and reduced mental health stigma. Second, group therapy offers a cost-effective means to treat depression which can lessen the financial toll depression, and its treatment, takes on clients.

In the context of major depressive disorder, group therapy is often employed in combination with cognitive behavioral therapy (Andersson & Cuijpers, 2009; Andrews et al., 2010; Forand et al., 2019). Santoft et al. (2019) analyzed 34 papers performing randomized control trials on a population of depressed patients. Consistent with earlier discussed findings on CBT, Santoft et al. (2019) found that there was no difference in effect based on the delivery

format of psychotherapy (group CBT, individual CBT, mixed group/individual psychotherapy, or self-help with little therapist support). Thus, group therapy is just as effective as individual therapy in the context of using CBT approaches to treat mild to moderate unipolar depression. In a separate study regarding sexually abused girls receiving either individual or group psychotherapy, researchers found that individual therapy and group therapy were both similarly effective (McCrone et al., 2005). While this analysis focused on a target population that is not the focus of this research project, preliminary findings in other research projects also support the utility of group therapy for treating unipolar depression (Fawcet et al., 2020). There is a lack of peer reviewed research definitively answering whether or not group therapy is as effective as individual therapy, as most research is quite novel in this field. This said, other research indicates that group therapy may be as effective (Fawcet et al., 2020), bolstering the earlier discussed findings by Santoft et al. (2019) that group therapy is useful in the treatment of unipolar/major depression..

Treating depression in a group therapeutic setting has unique benefits that individual therapy cannot provide. To quote researcher Dr. Breeskin, “an individual group therapist, no matter how skilled, cannot conceivably keep up with the richness of group experience. Important cues, particularly nonverbal ones, are in danger of being missed” (Breeskin, 2010, p. 5). Group therapy allows participants to take an active leadership role, as many groups are led by both therapists and clients, which has been hypothesized as a reason for improved emotional wellbeing (outside of the treatment of depression) in group members (Weiss & Ruttan, 2016). Further, the existence of group members observing a particular client’s emotional and psychological function is valuable to the therapeutic process (Weiss & Ruttan, 2016). Studies have indicated that group therapy and group membership are uniquely responsible for a

reduction in the stigma surrounding mental health and mental illnesses (Lo Sasso et al., 2006; Yanos et al., 2015).

One unique benefit of group therapy is the social support that the group can provide to clients. In a randomized trial of 63 adolescents, each of whom had multiple suicide attempts, participants received treatment as either group therapy alongside routine care for suicide attempters or just routine care. Depression rates between the two groups did not differ after treatment with both groups significantly improving, but those who had received group therapy had better school attendance and fewer behavioral problems compared to their routine care only peers (Wood et al., 2001). These results speak to the psychological and social benefits group therapy has on clientele outside of the treatment of their mental disorder. Further, social support acts as a protective factor for suicide in the depressed (Babiss & Gangwisch, 2009; Brausch & Decker, 2013). In a study on depressed adolescents in outpatient care, protective and predictive factors for suicide attempts and depression were explored longitudinally. In both the 1-year and 8-year follow-up exams, suicide attempts were predicted by low perceived peer social support. Notably, those whom experienced added depressive and/or anxiety symptoms did not have higher suicide rates, but those with alcohol use/abuse and low perceived social support from friends did (Tuiski et al., 2014). In a metanalysis of group therapy on loneliness, anxiety, and depression, Elias et al. (2015) discovered that group therapy was strongly positively correlated to improvements in perceived social support and loneliness in adults in long-term care (Elias et al., 2015). While the target population was a group experiencing idiosyncratic life challenges, their findings reflect prior explored research that psychosocial interventions (such as group therapy) offer social support as an additional benefit. These studies thus indicate that in addition to

treating depression directly, group therapy provides unique psychological benefits which act as protective factors for suicide and depression.

Group therapy also provides added ease of access to clients, as the cost to entry in group therapy is far lower than in individual therapies. An oftentimes overlooked inhibitory factor towards treating depression, and mental health in general, are the costs incurred for treatment. An analysis of the trends in mental healthcare needs and financial cost as a barrier to health found that the prevalence of seeking mental healthcare grew between 1997 and 2002, but so did the prevalence of those unable due to the cost (Mojtabai, 2011). In addition to similarly effective treatment outcomes, McCrone et al. (2005) found that the average cost of those treated by individual therapy was £1246 ($1,640) more than its group therapy counterpart. Limited research accounting for cost-effectiveness of group therapy versus individual therapy exists, but other research has studied the cost-effectiveness of other psychosocial treatments. Crane et al. (2013) performed a study regarding the cost-effectiveness of psychosocial treatments, in this case family therapy, versus individual therapy on depression. The average cost of an entire course of individual therapy was $391.31 while psychosocial interventions cost only $248.65 [roughly 1.57x more expensive] (Crane et al., 2013). When accounting for the recidivism rate, the estimated cost-effectiveness of an entire course of individual therapy was $453.57 versus $289.48 for family therapy. [roughly 1.56x more expensive] (Crane et al., 2013). As such, group therapy is a more cost-effective means to treat major depression and could help lower the financial barrier towards proper mental health treatment.

Although there is a litany of unique benefits that group therapy offers, group therapy treatments are not always as beneficial as individual therapies. Group therapy, as well as other psychosocial interventions to depression, struggles compared to individual therapeutic means in

attrition rates. Group therapy is only as efficacious as individual therapy if clients complete their therapy courses. In a study of 1,111 primary care patients, 100 of whom were followed longitudinally for 18 months, the adherence rates to treatments were followed. At onset, 82% of patients were offered antidepressant treatments and 49% were offered psychosocial support/interventions. Only 50% of those who were offered antidepressant treatment began and adhered to treatment and only 29% of those commenced and adhered to group treatments (Vuorilehto et al., 2016). Other research has indicated that group/psychosocial treatments have lower adherence rates compared to other treatments of depression (Arvilommi et al., 2013; Gearing, 2014).

Research has examined potential causes of high attrition rates in group therapy. Evidence suggests that lack of group member cohesion (Roback & Smith, 1987) and lack of belongingness to the group (Lieberman, Yalom & Miles, 1973) are in part responsible for earlier than intended client dropout rates. One study on predictors of group therapy dropout rates found that between 20% and 50% of clients quit group therapy early in the course of treatment (MacNair et al., 1994). While these rates are not dissimilar to individual psychotherapies (Roos & Werbart, 2013), group therapy presents idiosyncratic predictive factors for attrition rates. Researchers Gulamani et al. (2020) explicitly explored the predictive factors of attrition rates unique to group therapy. To this end, they selected 52 treatment-seeking or treatment-receiving students at a Canadian university from an ethnically diverse population group (Gulamani et al., 2020). Participants were assigned 12 weekly 2-hour long sessions that included weekly homework assignments, handouts, and skill-based learning. Upon analysis, there were no statistically significant correlations between pretreatment variables such as client age or disorder type (depressive, anxiety, or personality disorder) and percentage of sessions attended. There was,

however, a significant and strong positive correlation between therapeutic alliance and attendance as well as therapy techniques and attendance. (Gulamani et al., 2020). Key to any treatment of depression is actually following through with the prescribed treatment. These findings indicate that current group therapy methods, to be effective in treating depression, ought to actively improve group cohesion and therapeutic alliance with clients so as to increase attendance rates. Thus, by improving therapeutic alliance and/or group cohesion through psychosocial means during treatment, clinicians can further improve client experiences and attendance, and therefore outcomes from group therapy.

Overall, research indicates that group therapy is just as effective at treating depression as well individual therapies when properly implemented. Furthermore, compared to individual therapy, group therapy can provide the added benefit of improved client outcomes, such as greater social support and fewer behavioral problems, which in turn protect individuals from depression and from suicide attempts. But how can we address the issues of low attendance and therapy completion? Two related social constructs which play a key role in depression, loneliness and isolation, may also contribute to group therapy attrition. Finding ways to address loneliness and isolation provide an opportunity to improve poor group therapy experiences and adherence rates.

Loneliness and Isolation as Key Factors in Depression

Loneliness and/or social isolation is one such social mechanism contributing to depression. Further, social isolation and depression are related in a bidirectional fashion (Elmer et al., 2020). That is to say that socially isolated individuals report higher rates of depression (Cohen & Wills, 1985; Santini et al., 2015) and depressed individuals report higher rates of social isolation (Elmer et al., 2017). Social isolation and loneliness also have unique negative

health outcomes both physically and psychologically, including poor heart health (Shankar et al., 2011), alcoholism, depression, and suicidal ideation (Hawkley et al., 2008).

Loneliness, as a cause for depression, can be treated via psychosocial means. People experiencing stress are disproportionately lonely (Hawkley et al., 2008), and stress associated with one's social life contributes to loneliness (Mahon et al., 2006). Social support acts as a protective factor against stress induced loneliness (Lee & Goldstein, 2016). In a Lee and Goldstein study reviewing how loneliness, stress, and social support interact in young adults, researchers found that only social support from friends offered a buffer between perceived stress and loneliness. Romantic partners and friends both reduced levels of loneliness, but support from one's family did not impact levels of loneliness regardless of the levels of perceived stress (Lee & Goldstein, 2016). Thus, loneliness is a key predictive factor of depression, and by lowering levels of perceived loneliness, treatments for depression can be more effective. Group therapy presents a social space whereby clients can address their loneliness in a therapeutic setting. By doing so, clients can form social bonds by having a supportive social environment which in turn could protect themselves against depression.

Existential Isolation

A related construct to loneliness is existential isolation (Yalom, 2020). Existential isolation can be defined as the "unbridgeable gap between oneself and any other being" (Yalom, 2020, p.355). Existential isolation is the subjective experience that one's experience with the world is totally idiosyncratic and alienated from everyone else's. While loneliness and existential isolation are unique constructs, they share a moderate positive correlation with one another (Pinel et al., 2017).

High levels of existential isolation are predictive of negative socioemotional health outcomes. Trait-based existential isolation, the personality trait increasing one's propensity to experience existentially isolating events, is associated with higher levels of social withdrawal, feelings of hopelessness, less perceived meaning in life, and higher rates of depression (Helm et al., 2019; Pinel et al., 2017). Research has indicated that existential isolation is also negatively correlated with empathy, humanitarianism, lower self-liking, and other prosocial attitudes/behaviors (Costello & Long, 2014; Pinel et al., 2017). In a study examining the links between depression and existential isolation, Helm et al. (2018) found that existential isolation is associated with both higher rates of depression and suicidal ideation. Further, depressive symptoms were especially high when loneliness and existential isolation co-occurred (Helm et al., 2018).

Beyond the psychopathological outcomes associated with existential isolation, existential isolation is also negatively correlated with a client's psychotherapeutic outcome (Constantino et al., 2019). In a study of 631 adults, researchers found that, consistent with prior research, existential isolation was significantly positively correlated with stress, depression and anxiety. In addition, higher levels of existential isolation were linked with lower likelihood to seek therapy, negative thoughts about their therapist, and lower perceived expertness in their therapist even after controlling for depression and anxiety. Existential isolation was uniquely responsible for between an 8% and 16% reduction in each of these three categories (Constantino et al., 2019). Existential isolation has also been found to be negatively correlated with need fulfillment (Pinel et al., 2014), meaningfulness (Antonovsky, 1983), and basic life needs and autonomy (Gagné, 2003). Such correlations have been used as evidence for the need for existential psychotherapies, which claim that psychological distress can arise from the distress caused by

feelings of existential isolation and similar constructs. Similar to loneliness, existential isolation is a social phenomenon responsible for detrimental mental health effects. Thus, a therapeutic and positive social environment which addresses existential isolation, such as group therapy, could improve client outcomes.

The clinical implications of existential isolation are well documented to the point that specific therapeutic techniques exist to treat mental disorders from an existentialist perspective. Existential psychotherapy is a form of therapy that acts on the underlying hypothesis that existential concerns, such as questions about one's own mortality, cause the anxieties responsible for psychopathology (Yalom, 2020). In a metanalysis of 15 studies and 1,792 participants reviewing the efficacy of existential treatments for psychopathology, researchers found that existential interventions in general produced large improvements to patient outcome (Vos et al, 2015). They also found that group existential therapy had positive outcomes on client wellbeing and subjective feelings of purpose in life (Vos et al., 2015).

Although solely treating existential isolation does not cure one's depression, research does indicate that when existential isolation is treated alongside other contemporary treatments for psychopathology, further psychological benefits can be reaped. Existential isolation is a psychosocial factor of depression that ought to be targeted via treatments for depression. The benefits of treating existential isolation in the context of depression include providing protective factors against depression, improving client outcome and improving client wellbeing. As existential isolation is a psychosocial phenomenon, group therapy presents a unique therapeutic space in which individuals can address their isolation and loneliness. Social psychological perspectives have developed I-sharing as a direct means to reduce levels of perceived existential isolation in individuals, regardless of mental health background.

I-Sharing

I-sharing is phenomenon whereby two or more people experience the "same in-the-moment subjective experience" (Long et al., 2017, p.389). This could include experiences such as seeing the same animals in clouds, having identical experiences to an abstract artwork, or answering obscure questions similarly. I-sharing is distinct from me-sharing, whereby two or more people experience similar objective characteristics, such as race, gender, culture, etc. To induce I-sharing moments, researchers Pinel & Long (2012) asked research participants the question "if Oprah was a plant, which plant would she be?" and those who responded identically were considered to have I-shared.

I-sharing is predictive of a host of positive social and psychological outcomes. One notable outcome of I-sharing is group cohesion and group belonging (Long et al., 2017). Long et al. (2017) sought to explore potential methods to alleviate the problem of ingroup favoritism, defined as a tendency to favor members of one's own group over members of a perceived outgroup. These groups can be based on real distinct differences, such as those based on political affiliations or nationality, or can be so-called minimal groups. Minimal groups are groups whereby group identity is determined by a ridiculously insignificant characteristic. In one famous research paradigm, a minimal group was created by asking participants if they preferred paintings by artist Klee or artist Kandinsky, both of whom made comparable abstract paintings (Tajfel et al., 1978). Those who preferred Klee over Kandinsky, or vice versa, expressed favoritism towards their fellow Klee-lovers at the expense of their Kandinsky-loving peers, despite artist preference being of no actual importance to who one is as a person (Tajfel et al., 1978).

In Long et al.'s (2017) study, researchers created minimal groups based upon participants' preferences towards one of two fictional artists. Participants were then assessed on their assumptions of ingroup and outgroup I-sharing and me-sharing. I-sharing was assessed via an inkblot task from which participants would indicate on a 10-point scale how much their fellow art-fans "would think the same thing you thought upon viewing the inkblots" (Long et al., 2017, p392). Assumed me-sharing was assessed via the extent to which they believed ingroup and outgroup members would have similar backgrounds and features. In those who I-shared with an assumed outgroup member (based on background characteristics), ingroup favoritism was not observed. That is to say, people overlooked perceived differences in others when they believed they had I-shared with them. One additional observation discovered was that ingroup favoritism occurred most commonly when participants believed that they would I-share, not me-share, with their fellow ingroup members.

I-sharing has further applications beyond ingroup favoritism. I-sharing has also been found to promote liking of members of an outgroup, specifically members of the other sex, race, and other social identities (Gaither et al., 2016; Pinel & Long, 2012; Pinel et al., 2019). Heterosexual men tend to prefer other heterosexual men with shared salient characteristics even when presented with a homosexual partner with otherwise identical characteristics (Pinel et al., 2019). Heterosexual participants further disliked their homosexual partner if they experienced a gender threat, that is they were assessed and, erroneously, told that they were below average for males in masculinity. Notably, in both scenarios there were zero interactions between the two partners; the only information shared between the two were their poll responses. In a continuation of this study, participants were then manipulated to either I-share with their partner or to not. When participants I-shared with their partner, once again measured by an inkblot task,

the act of I-sharing caused participants to overlook other salient factors, in this case sexuality, and to like their partner (Pinel et al., 2019). I-sharing was strongly correlated with participants overlooking perceived biases and creating stronger bonds with perceived outgroup members (Pinel et al., 2019).

Similar findings have been found outside of interactions between members of different sexual orientations. In one study of the interaction effects of I-sharing on interactions between members of different racial groups, researchers found that I-sharing was responsible for a reduction in anxious behavior toward the racial outgroup member and towards positive interactions with the outgroup member (Gaither et al., 2016). The effects of I-sharing on group membership and outgroup attitudes is amplified in those who score high in existential isolation (Pinel & Long, 2012). Further, I-sharing counteracts the human tendency to favor ingroup members over outgroup members (Pinel & Long, 2012). Studies such as this indicate the flexibility of implementing I-sharing as it can have beneficial effects regardless of what salient characteristics divide ingroups and outgroups (race, sexuality, etc.).

Empirical research has documented positive outcomes associated with I-sharing outside of its impacts on group membership. Pinel et al. (2017) have also explored the prosocial benefits of I-sharing. In a bipartite study that measured participants' tendencies to humanize or dehumanize a confederate whom they imagined was a fellow participant, researchers found that I-sharing encouraged humanization. Dehumanization is the action of applying animal characteristics to a person in an attempt to diminish their humanity; humanization, in turn, is the act of attributing another individual with enlightened or human characteristics as a means to consider them an equal. Humanization of an outgroup member, for example a racial outgroup, is associated with less violent actions and more prosocial behaviors with that person (Cuddy et al.,

2007). In Study 1, researchers discovered that white participants humanized white confederates. White participants only humanized black confederates when they had I-shared via an inkblot interpretation task and dehumanized them when they had not I-shared (Pinel et al., 2017). A similar study was performed in Study 2 where the salient characteristic was socioeconomic class rather than race. I-sharing did not cause participants to humanize their perceived ingroup members any differently than had they not I-shared, but did cause participants to humanize perceived outgroup members (Pine et al., 2017). This study expresses the power that I-sharing interactions have towards creating positive group interactions between members of different perceived groups, in this case socioeconomic and racial groups.

There are practical applications for I-sharing beyond a laboratory inkblot interpretation task. A study on cohabiting couples asked couples to argue about the distribution of chores in their household. Before discussing, participants completed an I-sharing task with their partner/spouse and were manipulated into either I-sharing or not. Originally, romantic partners disagreed greatly in the distribution of chores, with participants understating their partners aid while overstating theirs. Couples who were made to believe they had I-shared with one another understated their partner's household help less than those who did not. After compromising on chore distributions, couples who had I-shared were more likely to change their behaviors in line with their compromise than those who had not (Pinel et al., 2014). Another study including averaged-weight individuals measured I-sharing's ability to encourage friendliness towards a person of a stigmatized group. First, participants were either made to I-share, did not I-share, or were not presented with the I-sharing task. Participants were then matched with an overweight woman and completed a series of tasks which secretly assessed partner liking. Those who had I-shared with their partner were found to have greater partner liking and to have expressed more

inclusive behaviors than either the non-I-sharing or control conditions. If said participant had scored high in existential isolation, these effects were increased (Pinel et al., 2014).

In summation, I-sharing provides opportunities to create minimal groups and fosters positive bonds with outgroup members. I-sharing encourages friendly behaviors, encourages cooperation in couples, and can reduce prejudicial attitudes towards members of different salient characteristics (sex, race, weight, etc.). Unique to all of these studies on the power and effects of I-sharing on social interactions was the importance of existential isolation. Those who scored high in existential isolation measures had even more pronounced prosocial attitudes towards members of perceived outgroups when they had I-shared. The hypothesized mechanism for this is that existential isolation creates feelings of psychological discomfort. I-sharing directly minimizes feelings of existential isolation, as when one I-shares, they experience existence in the same manner as another person, thus reducing feelings of aloneness in both individuals. As depressed individuals are almost unilaterally experiencing higher rates of existential isolation and loneliness, these explored prosocial benefits of I-sharing ought to be similarly beneficial to those with unipolar depression as those with high levels of existential isolation.

Clinical Applications: Incorporating I-Sharing into Group Therapy for Depression

Contemporary understandings of unipolar depression understand it as a biopsychosocial disorder. That is to say there are biological, psychological and social factors to depression, each of which can be responsible for depression. While this is clear to both clients and clinicians, as evidenced by contemporary research and layperson understanding (Khan et al., 2016; Nemeth et al., 2021), treatment approaches do not place adequate emphasis on the social factors influencing depression.

One psychosocial treatment methodology with strong potential to address social factors of depression is group therapy. Group therapy is the process of conducting therapy with one clinician overseeing generally 3 or more clients who, outside of their relationship to their clinician, have minimal relationships with their fellow group members. Group therapy, for all its benefits to client outcome, suffers in attrition rates compared to individual therapy. When attrition rates are accounted for, group therapy outcome metrics compare similarly/favorably to individual therapy outcomes. Group therapy relies upon the creation of a minimal group of semi-random participants who then work in tandem towards the treatment of their mental health problems. Preventing high attrition rates requires clients to feel high levels of group cohesion and group belonginess. Encouraging I-sharing events in group therapy, or convincing clients that they had I-shared with their fellow group mates, is a potentially fruitful means to increase group therapy's efficacy as a treatment methodology. I-sharing events help to create group cohesion, which in turn could improve attrition rates (thus overall efficacy) to group therapy.

Participants in a group may also come from diverse backgrounds. I-sharing can help foster prosocial attitudes between people of perceived in and outgroups, which in turn can strengthen group bonds by increasing group cohesion. Further, in the event a new group member joined a group, I-sharing fosters feelings of inclusivity towards outgroup members and thus could help expedite a new group member's feeling of belongingness and reduce their feelings of being an outgroup member. These prosocial and beneficial health effects of I-sharing are most pronounced in those who score high on existential isolation measures. As existential isolation and depression are strongly positively correlated with one another, those being treated for depression in group therapy with I-sharing potentially could have even more beneficial outcomes. In addition, a protective factor for loneliness, which is associated with its own

negative health outcomes as well as depression, is social support. Through fostering strong group cohesion and friendliness, I-sharing presents a method to increase the social support depressed clients have which in turn could further protect them from the adverse effects of loneliness.

I-sharing moments are easy to foster amongst group members and multiple paradigms exist for its employment. Specifically in a group therapy setting, I-sharing could be employed as part of a once-per-meeting "check-in". For example, inkblot or art interpretation tasks could be created and manipulated such that group members believe (or actually) I-share. Further, during the intake process of group therapy whereby a clinician interviews the client to assess just how to treat their mental health needs, interpretation tasks already in use, such as a Rorschach tests, can be used to determine in which group a client ought to be placed. For example, a group of depressed clients could be formed entirely consisting of those who saw a butterfly in a specific inkblot and clients could be reminded of their shared answers during group therapy meetings. I-sharing need not be a major emphasis in the therapeutic process, but rather it could be used as a unique technique to increase group cohesion, social belongingness, and potentially reduce attrition rates. As such, I-sharing could be a particularly useful therapeutic tool as it could benefit clients both by increasing treatment adherence, but also by encouraging other prosocial and beneficial behaviors while reducing rates of existential isolation. Employed in a group scenario, this would allow clients to have positive social interactions with a group that would both benefit their socioemotional health by providing healthy social interaction and reduce loneliness. Individual therapy techniques may benefit from I-sharing as well, but the unique therapist-client relationship could place restraints on the ability to befriend one another as opposed to groupmates who are equal peers.

Future Directions

Future research to test the effectiveness of the clinical applications of I-sharing in group therapy could take one of two directions. The first, and easier, application of I-sharing in a group therapy setting relies upon testing the hypothesis that I-sharing is beneficial. To this end, I propose a study in which therapeutic groups to treat unipolar depression are designed with an I-sharing task at the onset of every group meeting alongside other group check-in activities. Participants would be selected for group therapy if they had met the diagnostic criteria for a depressive disorder as specified by the DSM-5 and would be randomly placed into therapy groups led by the same clinician. Treatment would follow a group-CBT model, as prior evidence has suggested this is an evidenced based treatment. To follow the Klee versus Kandisky paradigm, I-sharing could be presented to all clients via an art interpretation task (only not Klee versus Kandisky for the prevalence of this example may give away the aim of the study). Every instance of I-sharing occurring between 2 or more members would be recorded, thus naturally creating experimental and control groups.

The measured variables of interest of this study would be the prevalence of I-sharing, existential isolation, attrition rates, rates of depression/depressive symptoms at onset and outset of therapy, group cohesion, and socioemotional wellbeing measured via self-report and clinician-report. The aim of this study would be to examine the associations between I-sharing and group therapy outcomes in depressed clients. I hypothesize that there would be a significant and strong positive correlation between the number of I-sharing events and group cohesion and socioemotional wellbeing, as well as a significant negative correlation between depressive symptoms, existential isolation, and attrition rates.

A further study that could test the hypothesis that I-sharing's clinical applications in group therapy would not even require individuals to actively I-share with their fellow group members. In many of Dr. Pinel's studies, I-sharing reaped beneficial prosocial rewards for those who had I-shared with a nonexistent computer program designed to appear as a person. This demonstrates that, for the benefits of I-sharing on mental wellbeing an individual only needs to believe that they had I-shared. As such, a study could be designed whereby participants were placed into one of three groups: an experimental group whereby participants were manipulated into believing they had I-shared with their groupmates, a treatment-as-usual group whereby members were not manipulated, and a control group whereby participants were placed on a waiting list for treatment.

An I-sharing task, such as an inkblot interpretation task, could be given to members of the treatment-as-usual and I-sharing manipulation groups during an intake interview to assess group placement. Truthfully though, group placement would be randomized among both groups regardless of their answers. In the experimental group, group members would be deceived into believing their group identity was predicated upon shared results on the I-sharing task. This would in turn manipulate members into believing that they had I-shared with their fellow participants, with the intention to reduce feelings of existential isolation and increase feelings of group cohesion. From here, both treatment groups would undergo a similar course of group CBT therapy with regular reports on the measurements of the prior proposed study as well. I-sharing could thus be established as a means to increase group therapy's efficacy through improving group cohesion and other predictive factors of positive group therapy outcomes.

This study could provide evidence to whether or not extensive I-sharing manipulations, such as the ones discussed in the first proposed study, are necessary to reap I-sharing's benefits

in group therapy. If participants were convinced that their group identity was based on an I-sharing experience (thus convincing them that they had I-shared), and the same proposed benefits that I-sharing presents clients still were present, evidence for an easy means to increase group therapy's efficacy would be established.

Conclusion

I-sharing presents an extremely simple, yet potentially beneficial means towards treating mental health problems. It is particularly beneficial in those who test high in trait-based existential isolation, which commonly cooccurs with loneliness and depression. Psychosocial treatments, specifically group therapy, for depression exist, yet are undervalued, underutilized and suffer in the form of attrition rates compared to individual therapies. They also present unique benefits which individual psychotherapies cannot provide, namely a low financial cost and a space for positive social interactions. Encouraging I-sharing events in the context of group therapy may be a means to combat the causes of group therapy's lower attrition rates as well as encourage prosocial and otherwise beneficial behaviors in depressed clients.

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