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An Investigation to the Mourning Process during Narcotic Addiction Recovery through Discourse Analysis

Elias Tamene*

Department of Culture and Society, Boston Graduate School of Psychoanalysis, BGSP is located at 1581 Beacon Street, Brookline, MA 02446, United States.

Corresponding author:

Elias Tamene

Department of Culture and Society, Boston Graduate School of Psychoanalysis, BGSP is located at 1581 Beacon Street, Brookline, MA 02446, United States.

 eatamene@yahoo.com

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Abstract

Past research has suggested that religion and spirituality can increase the effectiveness of drug rehabilitation programs and reduce recidivism among addicts. The purpose of this mixed methods study was to examine the effects of the 12-Step program of Narcotics Anonymous (NA) to determine whether it helps with the mourning process. Narcotics Anonymous was selected on the basis of the program's strong spiritual theme. The study sample included 37 African American participants, resulting in 149 narratives for analysis. Participants with short (0 to 6 months) and medium (7 to 12 months) recovery periods were compared using two instruments: the Linguistic Inquiry Word Count (LIWC) and the Psychodynamic Diagnostic Manual (PDM). The findings of this research indicated that spirituality has a positive influence on recovery from drug addiction, and that the 12-Step Program applied by NA is successful in helping members work through their feelings to mourn their separation with drugs and their old lifestyle.

Keywords: Addiction; Spirituality; Narcotics anonymous; Psychological mindedness; Addiction recovery

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Introduction

Addiction recovery is a challenging and resource-intensive journey for addicts as well as recovery workers. Substance addiction is a significant problem in the United States [1]. Substance abuse is considered of complex and interdisciplinary nature, and its treatment is dynamic, complicated and painful [2]. Addicts who require recovery services typically manifest emotional, psychological, and physiological needs [3]. Recovery facilitators strive to develop recovery strategies that meet all of the needs of the individual in recovery in a manner that reduces stress and promotes equilibrium. Minorities are more likely to suffer the negative effects of crack cocaine use since crack cocaine is more likely to be available in minority communities and the economic conditions found in these communities are conducive to the creation of cocaine-centered economies [4].

Religion and spirituality have long played an important role among minorities, especially in African American communities. Researchers have investigated the effects of spirituality in treating addiction. Findings have indicated that participants experience deeper meaning in life as well as a gradual reduction in the intensity of negative emotions (anxiety, depression, and hostility; [3,5]. Furthermore, addicts who participated in an opiate

recovery program and were encouraged to develop their spiritual backgrounds, improved their hopefulness and their willingness to continue ongoing recovery work (Williams Woodson et al.,). The goal of recovery is to help patients recognize the influences of addiction and give them the tools necessary to overcome these influences [3]. Unfortunately, research on recovery services suggests that treatment strategies are often ineffective, as former patients experience a high rate of recidivism and relapse back to established behaviors, often resuming the same habits that led them to addiction [2]. Additional research is required to clarify the influence of spirituality in addiction recovery programs.

Past research has suggested that religion and spirituality can increase the effectiveness of drug rehabilitation programs and reduce recidivism among addicts. The purpose of this mixed methods study was to examine the effects of the 12-Step program of Narcotics Anonymous (NA) to determine whether it helps with the mourning process. Narcotics Anonymous was selected on the basis of the program's strong spiritual theme. Narcotics Anonymous help addicts to develop a triangle of self-obsession toward their addiction, and by moving past anger, the addict can recognize that he or she has lost his or her emotional, psychological, and physiological connection to the addictive

substance of the addict's choice [5]. The effectiveness of the 12-Step program can be improved if its influence on addicts is explored, and the theoretical background of the program is isolated. This research aimed to identify how the spiritual component of NA affects addicts and influences the outcome of their treatment.

Background

Alcoholism was one of the first types of addiction to be addressed from a religious perspective in the early 19th century [6]. Alcoholism was also defined as a disease in which the patients completely lose control over their addiction, which led to the establishment of the temperance movement, whose primary objective was to encourage addicts to seek sobriety. The core concepts of this movement included the values of fellowship, confession, service, and a focus on alcoholism. These fundamental concepts also currently form the framework on which the modern-day AA is based [5,6].

In the 1930s, a Protestant evangelical movement called the Oxford Group sought to help alcoholics gain sobriety, and its activities greatly influenced the establishment of Alcoholics Anonymous (AA). Alcoholics Anonymous was founded in 1935 by Dr. Bob Smith and Bill Wilson; at the time, Bill Wilson was a member of the charismatic Oxford Group [7]. However, the AA later decided to break away from the Oxford Group because the founders wanted to distance AA members from the latter's very strict religious views including their insistence on absolute honesty, love, purity, and unselfishness, which was thought too harsh for the recovering addicts [8]. In 1939, the founders launched *The Big Book*, which stipulated the core philosophy of recovery using the spiritual method; the 12-Step Program and the 12 traditions form the focal point of a spiritual road map to successful recovery.

Derived from AA, NA meetings have been taking place since the 1950s, and their increased popularity can be contributed to their effectiveness in facilitating addict rehabilitation. Spirituality is at the core of NA, and the 12 Steps are a spiritual prescription that helps addicts recover from addiction. Typically, addicts meet in small groups for mutual support, fellowship, sharing stories, community service, reading, and writing to attain complete healing of the mind, body, and soul [9]. The approaches used vary from group to group, although all are geared toward achieving recovery and ultimate freedom from substance abuse. The NA philosophy refers to addicts and how addicts differ from developed persons, who demonstrate a stable emotional, psychological, and physiological equilibrium. To overcome these negative emotions and eliminate self-obsession, NA emphasizes the transition between an addict's past life, the present, and opportunities found in the future [10].

The spiritual component in the NA 12-Step Program has been the most difficult to define or measure, and in most instances, it has caused controversy regarding its effectiveness in the field of addiction. Spirituality is a complex construct, and individuals tend to perceive and experience it in different ways. Fundamentally,

NA aims to provide an ideal place for the emergence of a coherent narrative about the addict's total affective experience. The ability to tolerate affect generated within the group context often increases when the experience is anchored to a spiritual framework. The mourning process is considered fundamental for recovery and is therefore given the utmost consideration during meetings. Once the addict gains the ability to contain narcissistic rage and enter the mourning phase, spirituality allows the emergence of a new center of reference that enables the addict to organize affective experience adaptively to manage current needs.

Alternatively, researchers have criticized the constructs of the AA and NA programs, highlighting a lack of medical care, medical requirements, as well as the misperception of the causes of addiction [11]. These researchers also posited that the programs relying too much on spirituality are likely to fail [9]. While researchers have challenged the tenets of self-help programs such as AA and NA, one of the foremost arguments in favor of these programs is that individuals who participate in such programs demonstrate the desire to overcome addiction. Indeed, a central AA and NA philosophy is that admitting a problem exists is the first step toward recovery. As such, other researchers have also found that NA programs that incorporated spirituality were more likely to have a positive influence on addicts than NA programs that did not have a spiritual component [12]. Recovery programs that incorporate a spiritual element that helps addicts imagine themselves as they would like to be help cultivate feelings of self-reliance and reduce the likelihood that addicts will engage in high-risk [13].

Theoretical Basis of the Study

The theoretical basis of the study was Bucci multiple code theory (MCT) to explain how members of NA use each other's modes of communication to initiate and facilitate the mourning process [14]. Multiple code theory was proposed as a means of bridging distances in cognitive neuroscience and psychoanalysis; it empowers the researcher with tools that can address information drawn from psychoanalysis and cognitive neuroscience to map out the emotional terrain of the addict. Multiple code theory is "a psychological theory of emotional intelligence and emotional information processing". According to Bucci, this theory concerns "the interactions among diverse sensory, motoric, somatic, cognitive, and linguistic representations and processes, their integration in the organization of the self, and their adaptive or maladaptive functioning in relation to the individual's goals". By exploring these interactions and their subsequent functioning, a clear picture of the patient's background and the influences that shape the patient's decision-making processes is revealed. There is abundant evidence that the spirituality embedded in the 12-Step philosophy plays a prominent role in the recovery process. However, it has not been explored previously from a psychoanalytic perspective. Drugs are sought as a means of controlling overwhelming emotions and alleviating psychological distress. The spiritual dimension of the 12-Step philosophy may be valuable for replacing the self-destructive behaviors that drive addiction with self-esteem and self-care.

Method

Overview

The purpose of this mixed methods study was to examine the effects of the 12-Step program of Narcotics Anonymous (NA) to determine whether it helps with the mourning process. Members of NA verbally identify themselves as addicts, attend NA meetings, and voluntarily call themselves members of the 12-Step program [15]. The criteria for including narrative monologues for analysis were: 1) members who participate in NA on a regular basis; 2) members who share their experiences in the group; and 3) members with varying lengths of recovery.

Data were collected over the course of four months (December 2007 to March 2008) for 147 narrative monologues from participants over the age of 18. Individual narratives are especially well suited for a psychoanalytic investigation, as psychoanalysis can be considered an interactive narrative science [16,17]. where people use imagery and narratives to share novel experiences. The study sample included 37 African American participants, resulting in 149 narratives for analysis. Participants with short (0 to 6 months) and medium (7 to 12 months) recovery periods were compared using two instruments. The Linguistic Inquiry Word Count (LIWC) instrument was employed to measure the overall use of positive and negative effects. In addition to the qualitative data collected by the interviewer, a second instrument derived from the Psychodynamic Diagnostic Manual (PDM) was applied to evaluate two aspects of recovery deemed to be related to mourning, namely the ability to form internal representations (FIR) and psychological-mindedness (PM).

In order to narrow the study questions, the researcher attended weekly NA meetings in the Boston metro area. The weekly census averaged approximately 12 people. The majority of NA participants were African American males who were largely unemployed, underemployed, or involved in the criminal justice system. The narrative monologues were examined in the context of the following questions: How might participation at NA meetings play a role in helping addicts mourn? How might the experience of mourning assist some addicts to give up crack cocaine? How might addicts be using spirituality to recover from crack-cocaine addiction?

The hypotheses for the study were as follows:

1. Addicts who were able to mourn have a greater chance of achieving and maintaining sobriety because mourning engages the addict in learning to bear and work through painful feeling states in the here-and-now, reducing or eliminating the need to numb feelings using drugs. The 12-Step practice allows participants to process a range of feelings in the here-and-now to facilitate the mourning process.
2. The initiation of the mourning process was a result of gaining the capacity to tolerate negative emotion and especially the ability to modulate anger well enough to maintain clean time. As such, increased psychological-mindedness correlates with the length of sobriety.
3. Addicts with a longer recovery period express more positive-related emotions and increasingly use the spiritual

concepts of letting go, making amends, and forgiveness in their narratives.

By comparing these two narrative data sets (0-to-6-months recovery versus 7-to-12-months recovery), it was possible to differentiate patterns of mourning from the way the narratives were constructed. It was assumed that a successful mourner would construct narratives with higher usage of spiritual concepts, such as letting go, forgiveness, or making amends. Such concepts were collectively identified as positive affect, leading to psychic homeostasis.

Differences were also noted in access to emotional content, especially feelings of sadness, regret, and anger associated with drug use and its consequences. Working the 12 Steps helped addicts to mourn the loss of their relationship with crack cocaine. Further, it was postulated that the NA therapeutic experience of "one addict helping another" involved a mutual mourning process [10].

Goldwater proposed a model for understanding and treating impulsive patients by understanding the cycle of addiction. In a normal individual, a perceived stress results in generating an impulse, which leads to action and the eventual stress reduction or removal. However, the addict experiences a negative feedback loop, where craving can lead to an impulsive action, leading to "panic, shame, guilt" in a vicious cycle that leads to another impulsive action. This has long-term effects on the addict's ability to tolerate perceived stress [18].

As such, addicts give in to impulse-driven action to use drugs primarily due to a sense of helplessness. The drug serves to temporarily reduce or remove psychic pain. However, at a self-help group, the addict works through psychic pain systematically, which is the perceived stress in the model. This transforms "impulsive actions into thinking and feeling states" [18].

The following concepts were explored in this study:

Mourning: One of the concepts explored in this research was 'mourning', however, mourning is generally a complex concept and therefore our focus was on the elements as described below. This paper uses Freud's definition of mourning as "(a) reaction to the loss of a loved person, or to the loss of some abstraction which had taken the place of one, such as one's country, liberty, an ideal, and so on" [19]. Without mourning their addictive substances, NA members may not form a relationship with a Higher Power or give up their substances (Jones, 1955). The process of mourning employs Kaveler-Adler's phenomenological theory of mourning as developmental: "Psychic change and growth come when the individual experiences trauma and conflict in tolerable doses through the modifying presence of the other, who helps give words to this experience of both trauma and conflict" [20]. Thus, in normative mourning, psychic homeostasis is eventually restored. Conversely, if mourning is stuck in its developmental trajectory, the individual fails to achieve resolution and psychic balance, and may thus enter into complicated mourning. The mourning process may be undertaken in earnest with the spiritual engagement of NA, specifically related to the concepts of letting go, forgiveness, and making amends [10]. The mourning

process includes the ability to feel genuine remorse. The addict must mourn the loss of the life he or she might have lived but did not due to the self-sabotaging effects of drug misuse. For the purpose of this study, language segments which refer to these concepts were operationalized as aspects of working through the mourning process.

Letting go: Realizing that one must let go of the drug, along with the feelings and thoughts associated with this drug. The fundamental spiritual practice around letting go may help the addict stay in the present by working through challenges around denial or anger. This concept further refers to the addict's ability to let go of false pride, grandiosity, and inflated ego, which they have often employed as a defense against feelings of shame and narcissistic rage. Narcissistic rage is a reaction to narcissistic injury or a real or perceived threat that impedes the process of letting go [20]. Addicts resort to rage to ward off a sense of powerlessness and vulnerability through defiance and chronic anger, thus reflecting a specific form of narcissistic impairment [22]. The crucial first step in the 12-Step process is for the addict to accept his or her powerlessness over crack cocaine and understand how addiction has caused his or her life to become unmanageable. A loss must be acknowledged if it is to be mourned. Effectively working through the process of letting go is a critical and time-consuming journey. Of course, letting go may also refer to good times, when the addict experienced pleasure that derived from the drug and/or the ritual associated with getting high.

Forgiveness: This concept refers to addicts' ability to lessen or give up resentment, rumination, and any claim of redress, including the wish for retribution. Forgiveness of self and others who have caused injury is a spiritual practice that one masters in Step 8: "Made a list of all persons harmed and became willing to make amends to them all" and "By the time we reach this step, we have become ready to understand rather than to be understood" [10]. In this step, the addict increasingly acquires the capacity to experience vicariously the psychological state of another person. This step is akin to the depressive position in Klein's psychodynamic formulation, where some level of integration is demonstrated [23]. The addict incorporates the capacity to view positive and negative qualities in the same person. However, forgiveness is a long process. Addicts may need to renounce hostility and renew relationships as part of moving forward. The ability to engage in forgiveness involves a higher level of functioning where there is more integrated internal representation of the other. Hence, the loss is more fully understood and processed.

Making amends:

This concept has to do with an act of reparation as a consequence of increased awareness of hate and sadism. Reparation is the primary mechanism in Klein's theories, by which a patient learns to reduce depressive anxiety or guilt. Klein stated, "Feelings of guilt, which occasionally arise in all of us, have very deep roots in infancy, and the tendency to make reparation plays an important role in our sublimations and object relations" [23]. Hence, making amends is an important undertaking if the addict desires to restore severed relationships to become a fully accepted member of a community. Reparation is also an attempt to repair

internalized object representations by means of an external object. In a mature, integrated psychological state, the addict is able to better tolerate anxiety for a genuine connection with others. Making amends may also require an increased capacity to tolerate negative affect (that is, the negative response they could potentially receive from those they are asking for forgiveness).

Feelings and induced feelings

The researcher also recorded the feelings of participants during the recovery meetings, as well as his own induced feelings from an observing point of view. Emotional states are conveyed in bodily states, facial expressions, physical gestures, and so on. Feelings of anger, sadness and guilt often accompany the mourning process. Emotional communication, manifesting in the form of aggression, acting out, regression and so on, may also be part of the addiction dynamic [24]. At some point during treatment, a patient can even benefit from knowing that his or her therapist has experienced the projected emotion without collapsing or retaliating. The working through of this pain and suffering, with the support of the other appears to fit the conceptual developmental model of mourning "along with its aggressive constellations. This engenders the possibility for true psychic change" [23].

Stages of recovery

In NA, "clean" means total abstinence from all drugs that are not prescribed for a medical condition [10]. In this research, the time dimension was expanded to determine stages of recovery. People are acknowledged in meetings for varying lengths of abstinent time, as in 30 days, 60 days, 90 days, 6 months, 9 months, 1 year, 18 months, and yearly from then on (Narcotics Anonymous World Services,). This study identifies early (0-6 months) and later (7-12 months) recovery times. Based on self-reported protocols, I determined whether those with more months of participation also report being clean of drug use.

Instrumentation

Internal representations and psychological mindedness: The Alliance of Psychoanalytic Organizations (2006) has defined psychological mindedness as the capability to observe your internal life and the capacity to form internal representation as the capacity to symbolize affectively meaningful experiences. The capacity to form internal representation and psychological mindedness characterize a higher level of mental functioning, according to the Psychodynamic Diagnostic Manual [25]. The hypothesis advanced in this paper is that working through negative emotions in the group, in the here-and-now, may constitute a mourning process. It is further postulated that effective mourning in the context of NA may likely include the spiritual concepts of letting go, acts of forgiveness, and making amends. Hence, the addict's ability to let go of pride as a defense against narcissistic rage, or the ability to vicariously experience the mind state of the other as in acts of forgiveness, or the desire for making reparation to reduce what Klein termed 'depressive anxiety', may collectively indicate the addict's acquired capacity to tolerate negative or uncomfortable feeling states. A successful mourning process may therefore lead to a higher level of mental functioning, which presumably enables the addict to gain psychic

mastery over his or her internal emotional landscape without numbing these feelings with illicit substances.

The capacity to form internal representations and psychological mindedness was evaluated using two different measuring instruments. The Alliance of Psychoanalytic Organizations (2006) defined levels of internal representation. Similarly, in the Linguistic Inquiry Word Count (LIWC, Pennebaker et al.,) software, the capacity for internal representation has a corollary construct with measurable defined parameters of positive and negative affect. The LIWC was developed to explore the use of language in relation to mental and physical health [26]. The LIWC software has undergone various revisions and expansions, with an increasing number of positive and negative words included in its default dictionary. Psychological mindedness is also a concept with defined criteria on a dimensional scale in the Psychodynamic Diagnostic Manual (PDM; Alliance of Psychoanalytic Organizations) [25]. One criterion has to do with managing impulses, while impulsivity is also a separate measurable category in the LIWC assessment tool.

The Linguistic Inquiry Word Count (LIWC) and mourning

The LIWC instrument was well suited for detecting shifts in the use of language, especially as participants work through pre-mourning or complicated mourning. Pennebaker et al. paid meticulous attention to the language that people used to convey emotions and found that word types and word volumes are associated with different states of mind. The LIWC is a computerized tool for analyzing use of language. It reads text files, which can include transcripts of group discussions or therapy sessions [25].

The Psychodynamic Diagnostic Manual (PDM)

The capacity for internal representation and the capacity for psychological mindedness are both described in the dimensional scales in the PDM [1]. A given narrative can be assessed in terms of where it falls on the PDM dimensional scale. Strong concordance in ratings between two raters demonstrated inter-rater reliability. The raters were two trained mental health clinicians.

Data analysis

The nature of verbal or written communication provides insight into the emotional and cognitive landscape of a person. Moreover, the verbal expressions of deep emotional experiences have now been well established as a recurring aspect of mental health [25]. Thus, large verbal and written texts can be analyzed for target words (that is, the rate of positive and negative words), as well as categories tapping psychological constructs (for example, affect, cognition, and biological processes), personal concern categories (for example, work, home, and leisure activities), and general descriptor categories (total word count, words per sentence, percentage of words captured by the dictionary, and percentage of words longer than six letters – totaling approximately 80 output variables).

The narratives were analyzed using 90% inter-rater reliability between two raters, which was a very high value. The averages

of the two raters were used when a discrepancy was found in terms of how a narrative was rated. Two different methods were employed to evaluate the narrative data. In the first method, two mental health clinicians were trained on how to rate the narrative data. The second method utilized the LIWC software to compare the two narrative data sets, that is, recovery of 0 to 6 months and recovery of 7 to 12 months, to assess the overall group difference in the usage of negative and positive emotions, including the measure of impulsivity from the compiled dictionary of the LIWC instrument. The narrative data was analyzed using the descriptive statistics software IBM® SPSS® Statistics Version 22.

Results

A total of 37 participants provided a total of 147 narratives. The participants' recovery periods ranged from one month to 12 months. In the shorter recovery group, 2.7% had a one-month recovery period; 13.5% of had a two-month recovery period; 13.5% had a three-month recovery period; 10.8% had a four-month recovery period; and 16.2% had a five-month recovery period. In the longer recovery group, 10.8% had 10 months of recovery; 5.4% had 11 months of recovery, and 13.5% of the group had 12 months of recovery. In terms of the number of meetings attended, 51.4% attended two meetings; 21.6% attended five meetings; 10.8% attended six meetings; and another 10.8% attended 10 meetings. The range of meetings attended was therefore between two and 10.

Capacity to form Internal Representation

Table 1 in appendix A presents descriptive summaries of the ratings on capacity to form internal representations per meetings of persons after participating in NA. The comparison was conducted for each of 10 meetings, since this was the highest number of meetings a participant had attended while attending the NA program. Comparison using the median, the most frequent value, indicated that in meetings 1 to 9, most of the participants were rated "2" for capacity to form internal representations. The "2" rating indicated that the addict may have acquired the ability to experience a full range of emotions but may be overwhelmed by the experience of certain difficult emotions. However, a "3" rating for the capacity to form internal representation indicates a lower level of functioning, where the addict may be operating at a somatic level without the ability to verbalize feelings.

Psychological-Mindedness

Table 2 in appendix A summarizes the ratings on self-observing capacity (psychological mindedness) of the participants in the program. This comparison was also measured for each of 10 meetings, since this was the highest number of meetings a participant had attended. Comparison using the median, the most frequent value, indicates that for those that had attended only one or two meetings, most of the participants rated "3" for self-observing capacity. The "3" rating for self-observing capacity indicated that such a narrative lacks a long-term sense of self and experience. Hence, the "3" rating suggested that the addict is not able to experience the full range of feeling states. However, for those participants who had attended four to nine meetings, their self-observing capacity rating was "2", perhaps

indicating an acquired capability to reflect on the self and others not only for the present experience but also the competence to reflect on future goals or ambitions. This ability to reflect on the present and future may become compromised when strong emotion is evoked. Last, for the participant who had attended 10 meetings, the average self-observing capacity rating was “1”, suggesting not only the ability to reflect on the self and others with reference to present and future goals or ambitions, but a greater capacity to experience feelings across a full range of emotions and relationships.

Test of Difference

An independent sample t-test was conducted to test the hypothesis that the ability to acquire the capacity for increased psychological-mindedness and increased capacity to form internal representations will also correlate with a reduction in impulsive action. This was tested by comparing the two narrative data sets, that is, those in the 0-to-6-months recovery period and those in the 7-to-12-months recovery period: A level of significance of 0.05 was used in the independent t-test analysis.

Table 3 in appendix A presents the test of difference data for ratings on capacity to form internal representations per meetings between the two groups. The t-test results indicate that there was a significant difference in the ratings on capacity to form internal representations between the two groups in four out of the 10 meetings. These included meetings 1 ($t(34) = 3.37, p < 0.001$), 2 ($t(35) = 4.33, p < 0.001$), 4 ($t(15) = 2.43, p = 0.03$), and 6 ($t(6) = 3.00, p = 0.02$).

Those in the 7-to-12-months recovery period had a higher capacity to form internal representations than those in the 0-to-6-months recovery period.

Table 4 (Appendix A) presents the test of difference data for ratings on self-observing capacity (psychological mindedness) per meetings between the two groups. The t-test results revealed that there was a significant difference in the ratings on self-observing capacity between those from the 0-to-6-months recovery period and those from the 7-to-12-months recovery period for three out of the 10 meetings. These included meetings 1 ($t(34) = 3.85, p < 0.001$), 2 ($t(35) = 4.99, p < 0.001$), and 3 ($t(10.96) = 3.50, p = 0.01$).

Based on mean difference, those from the 0-to-6-months recovery period had higher ratings on self-observing capacity than those from the 7-to-12-months recovery period, which indicated lower self-observing capacity. Thus, those from the 7-to-12-months recovery period had a higher self-observing capacity than those from the 0-to-6-months recovery period. The hypothesis that the ability to acquire the capacity for increased psychological mindedness and increased capacity to form internal representations correlated with a reduction in impulsive action was supported.

Linguistic Inquiry Word Count Instrument

Figures (1-3) present the descriptive summaries of the ratings on the LIWC instrument of the addicts after participating in an NA program. These descriptive statistics highlighted the categories for those from the 0-to-6-months recovery period and those from the 7-to-12-months recovery period. The LIWC provides percentages for emotionally laden positive, negative or anxiety words in the narratives being analyzed. The three constructs as analyzed by the LIWC software correlated with the findings in the PDM dimensional constructs for capacity to form internal representation and psychological mindedness. Thus, a higher

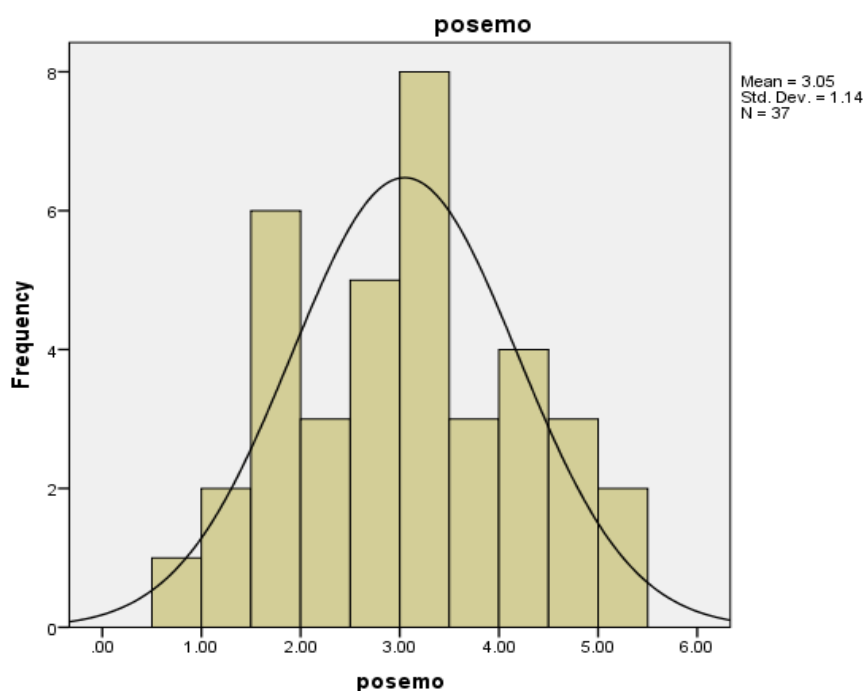


Figure 1 Histogram of posemo.

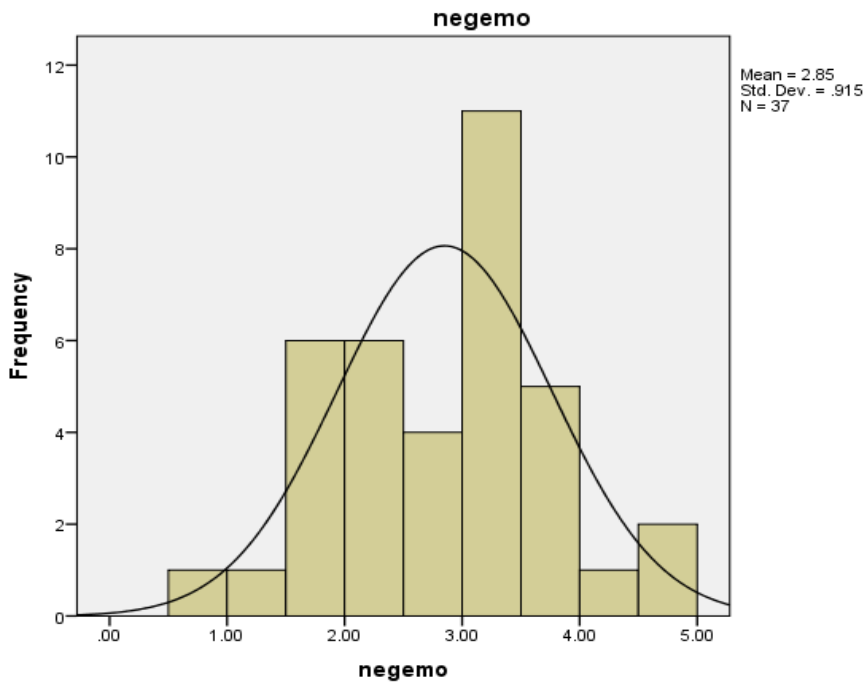


Figure 2 Histogram of negemo.

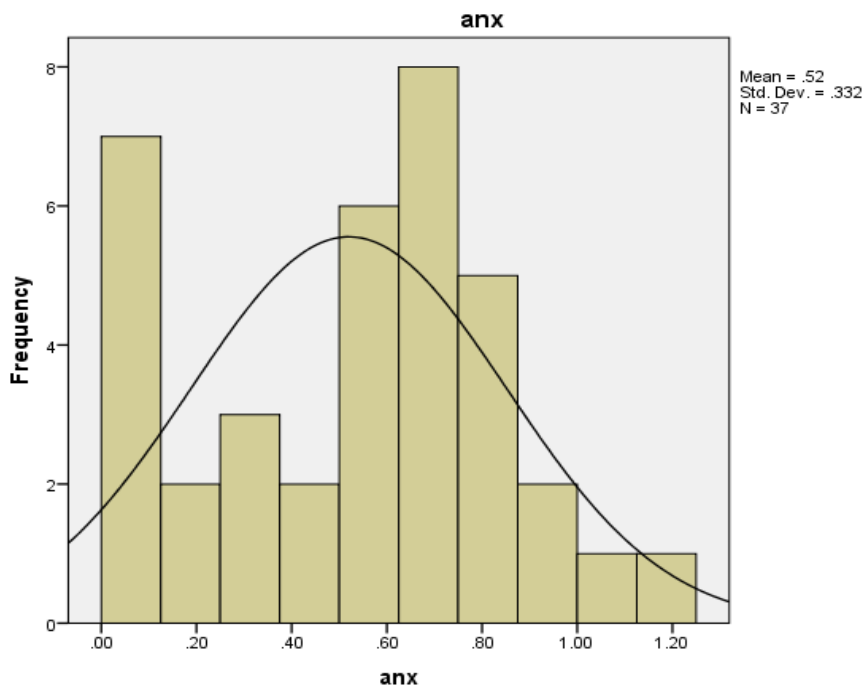


Figure 3 Histogram of ANX.

Histogram: These histograms present the distribution of the responses for each of the categories, indicating whether there are significant deviations from the underlying normality assumption associated with the t-test.

capacity to form internal representation in the 7 to 12-months recovery group seems to correlate with a higher rate of positive emotions measured by the LIWC narrative analysis software. Similarly, a finding of a higher capacity for psychological-mindedness in the 7 to 12-months recovery group also seems

to correlate with a lower impulsivity when the same narratives are analyzed using the LIWC instrument. According to the PDM definition, the capacity for psychological mindedness also includes the ability for impulse regulation. These two, independent means of assessing the narrative data also indicate inter-instrument

reliability. In summary, the hypothesis that the ability to acquire the capacity for increased psychological-mindedness and increased capacity to form internal representations are correlated with the reduction of impulsivity.

Narcotics Anonymous in the Context of this Research

Narcotics Anonymous facilitates mourning over the loss of the relationship with a drug. Whereas rage and shame may block this process, use of spiritual principles is expected to facilitate it. When there are blockages in the mourning process, the individual fails to assimilate and grieve the primal object loss necessary for the “developmental mourning process” [20]. To progress, the person has to work through feelings of rage, shame, and other concomitant distressing emotions. Addicts who have suffered loss may get stuck in a developmental arrest due to traumatic reactions. To relieve distress and anxiety, people develop a need-gratifying, symbiotic relationship with their substance of choice. Narcotics Anonymous assists the addict by removing the “sufficient and necessary cause” (Vaillant) for using drugs and replaces it with the much-needed psychosocial support, as exemplified by empathic attunement and instilling of hope [27].

Through sharing narratives about events and people that trigger destructive activity, members learn practical tips for abstinence from the group. In due course, members come to realize that they do not need drugs to escape from unwanted thoughts and feelings. Some members reported that their spiritual awakening grew as they started sharing personal struggles with addiction, especially when accompanied by emotional displays such as uncontrollable sobbing, and expressions of regrets and sorrow. For instance, a member shared the same story over the course of several meetings. The last time he told the story, the depth of the emotional pain shared seemed intense and palpable to the group. Just as in an analytic group, “no attempt is made to be therapeutic” at NA – a less demanding, non-directive approach was utilized to prevent defensive regression. The leader often provided “minimal verbal nourishment” to encourage addicts to verbalize areas of specific distress. Minimal group pressure in the group and the selective recollection of memories were a response to the addict’s contacts functioning.

The NA group served multiple functions. Members’ feelings of rage were amplified at optimal level, without destroying the group. Some also experienced vicarious relief when common group frustrations were being discussed. The group culture provided a “holding environment” where negative emotions were safely processed. The group provided a conduit where “toxic emotions” were ritualistically discharged in the context of the 12-Step practice and principles. It is this author’s hypothesis that the slow and repetitive discharge of these distressing emotions may have facilitated the mourning process. An addict who has successfully mourned appears less likely to take “flight, mentally or physically” via illicit drugs. The study suggests that a successful mourner is in a psychological state of mind to tolerate a wide range of feelings. The present study was unique in focusing on young and indigent African American addicts facing similar socioeconomic factors. Feeling states were also intensified and processed in the group, partly due to shared sociolinguistic

references, for example the usage of urban dialects, geographic location, and financial and legal burdens the group experienced.

The group seemed to put primacy on the value of the “authenticity” of shared experiences. “Keeping it real” was an expression that was often heard among members to describe lived experience with its faults and glories. Hence, cohesion achieved through this shared experience further facilitated addicts’ willingness to explore uncomfortable emotions. The group also provided containment when addicts were engaged in exploring distressing feeling states. The “safe space” created was an important venue to demonstrate support. This could be provided by a gesture of affirmation with a nod when members were speaking, and even occasional thunderous applause when a member tearfully revealed sensitive information.

The group frequently used the “call-and-response” format from traditional African American church practice to interact with a speaker with punctuated responses. The author maintains that familiar sociolinguistic and sociocultural factors helped to facilitate the expression of feelings in a subculture where the expression of feelings, especially those related to vulnerability, is considered a sign of weakness. Therefore, mourning occurred in affective “working through” of both positive and negative feelings associated with drug use.

Often members encouraged each other, recalling meaningful slogans and affirmations, when they encountered life difficulties that could put them at risk of relapse. The coins, which were given at the anniversary of achieving abstinence for three months, six months and 12 months, met the mirroring need of these participants. Members benefited from being validated in the group in front of peers. This appeared to increase self-worth and further reinforced a commitment to continuing abstinence. These coins also seemed to serve as transitional objects, acting as a physical reminder about what has been accomplished and future goals to be achieved.

Spirituality

Researchers who have explored the relationship between spirituality and substance abuse programs have found that incorporating spirituality into these programs has positive effects among the African American population [28,29]. The receptiveness of different racial, cultural, and ethnic groups to spiritual and religious therapy suggests that certain groups may be more likely to be receptive to psychological or psychosocial therapies that incorporate these elements [11]. According to existing research, religious practice and spirituality can increase the effectiveness of drug rehabilitation programs and reduce the rate of recidivism. One question explored in this research study was whether working through resentment, anger, and fear, endorsed by Narcotics Anonymous (NA), could be classified as a component of spiritual growth. In this study, for instance, “turning it over” to a Higher Power implied that members’ emotional pain and regrets were openly shared during spiritual practice, as codified in the 12 Steps. Spiritual growth was interpreted as a gradual process that decreased the compulsion to use in order to achieve abstinence and sustained recovery. The author held the view that the concept of spirituality at NA functions much like a projective test, with one crucial difference: spirituality almost

uniformly conjured up something positive and all-containing in the minds of the members.

Even though distressing emotions were processed in the group, the spiritual practice, as concretized in the 12 Steps, focused primarily on behaviors rather than emotions. For this reason, new members were encouraged to attend meetings, get sponsors, and start step work. Narcotics Anonymous recognizes that active exploration of emotions could be a trigger for relapse. Thus, the 12 Steps served as a practical tool to diminish obsessive thinking that would have interfered with abstinence. Although the ultimate goal was sobriety, NA encouraged participants to focus on a daily commitment to abstinence as encapsulated in the aphorism, "One day at a time."

Predictable meetings scheduled by day, time, and location and the reading of the Serenity Prayer, including participants introducing themselves with "My name is _____ and I am an addict" seemed to shift focus away from the individual and increase immersion in the experience of the group. Another component of NA spiritual practice has to do with the new member becoming part of a sponsor relationship. A sponsor is a person who has achieved sobriety for a sustained period of time. The sponsor serves as a source of information; the sponsor educates, encourages, and motivates the new member to have faith in the recovery process. Although there is no one accepted definition of a sponsor, generally this person is willing to build a supportive, one-on-one relationship with the new member.

Coherent narrative construction and the power of repetition

In the early stages of recovery, personal narratives appeared rooted in false assumptions and projections based on grandiosity, characterized by false pride and self-centeredness. However, after working through step 1, "We admitted we were powerless over alcohol and that our lives had become unmanageable" some participants began to demonstrate willingness to give up the pretense of control over their drug use. New members witnessing other members empathically relating to each other seemed to normalize their own thoughts and feelings [15]. It also seemed to give them the encouragement and emotional security to verbalize their experiences in an atmosphere of unconditional acceptance and support.

A great deal of what transpired at NA meeting pertains to personal reflections on the impact of addiction and the struggle to maintain abstinence. Consistent with the position of "not knowing" assumed by therapists who promote a mentalization-informed approach devoid of guidance and interpretation, the NA group leader also used a non-expert stance to facilitate communication. This kind of unmediated group communication helped to allow participants "to experientially penetrate the world of the other by means of a direct, automatic, and unconscious process" [30]. There was a dialectic exchange of information, both verbal and nonverbal, that can influence the emotional state of the other.

The ability to sit through uncomfortable feelings

The major hypothesis advanced here was that the ability to mourn may be an important marker for achieving sustained

sobriety. The participant's ability to consciously and non-defensively experience his or her embodied emotional world with the full range of feeling states constitutes the mourning process. The correspondent translation of bodily feelings into language appeared to be one of the primary functions of the group. Most participants seemed to lack emotional awareness concerning how their feelings were connected to their struggles with addiction. Of course, there is a component to their addictions that is also physical, but the emotional perspective is the primary subject of the present study.

Emotional exploration was made possible because NA functioned as a holding environment. Participants gained confidence over time to reveal sensitive information about themselves; they were also assured that "What is said in this room stays in this room", according to the popular NA motto. Participants were provided with the emotional steadiness that they may have lacked from their families and close associates. Their thoughts and feelings were acknowledged, validated, and received. Over an extended period of time, some participants were able to internalize the emotional self-regulation skills necessary to process induced feelings without suffering substantial mental conflict and resorting to primitive defense mechanisms.

Sociocultural factors to promote and intensify mourning (Narcissistic Identification)

Cross talk was not permitted, and participants had to practice restraint. Group cohesion was possible by each participant learning to practice restraint when a member was speaking, as well as observing all other explicit and implicit communication etiquette rules. This type of interaction seemed to foster group cohesion and provide a relational corrective emotional experience. Unlike a psychotherapy group, members tended not to give advice to each other. Instead, they talked about what worked for themselves to maintain abstinence. Members frequently gave each other feedback and encouragement after meetings. It was not unusual for participants to linger around to chat, to provide or receive encouraging words, or to hug each other. Members who may have felt discouraged and despondent prior to a meeting frequently reported feeling optimistic and hopeful about their ability to stay abstinent.

Induced feelings

As a participant observer, a range of feelings including boredom, fear, and anger impacted the author during the meetings. The author recollected his feelings of frustration, meaninglessness, and powerlessness when one participant after another described in detail their sense of profound distress, serial losses, or rage. Although the author was of a different national origin (but of the same racial makeup as the participants), he found it easy to immerse himself deeply into the participants' emotional landscape. When participants shared experiences of neglect and abandonment, the author's sense of loss and separation was reactivated, as the author had relocated to a different culture at a relatively young age.

Discussion

The results indicated significant improvement for the capacity to form internal representation and capacity for psychological

mindedness after undergoing the 12-Step program. These psychodynamic constructs described the capacity to process a range of emotions and the ability to experientially understand and reflect on the thoughts and feelings of the other, respectively. Both constructs indicated that impulse regulation may be achieved with the capacity to tolerate a full range of emotions. The overall analysis revealed that the ability to acquire the capacity for increased psychological mindedness and increased capacity to form internal representations correlated with the reduction of impulsivity. Therefore, the reduction of impulsive action may be achieved through an increased ability to tolerate negative effects. The results of the LIWC supported the hypothesis that the 0-to-6-months recovery group's narratives contained more negative emotion words and words suggesting impulsivity compared to the 7 to 12-months recovery group. This was also consistent with the hypothesis that modulating negative emotions may be crucial to engaging the addict in the mourning process.

Khantzian has explicitly framed addiction as a disorder of self-regulation. Drawing on 40 years of experience working with addicted clients, he outlined four self-regulation problems that underlie vulnerability to addiction: 1) lack of ability to recognize and regulate feelings; 2) inability to create and maintain a coherent, comfortable sense of self and self-esteem; 3) lack of ability to establish and sustain adequate, comforting, and comfortable relationships; and 4) inability to establish and maintain adequate control or regulation of behavior, particularly in the realm of self-care. Several of these self-regulation factors grew as participants progressed through the program. Furthermore, a t-test revealed that the group participants who were the most successful in their recovery 7-12 months clean displayed a higher capacity to form internal representations compared to those who participated in the 0-to-6-months recovery period. Members of the group that had been clean for 7-12 months were therefore more equipped to self-regulate emotions and contain their behavior.

Addiction treatment that does not grasp intense painful emotions, including a grief reaction provoked by giving up an addiction is likely to be unsuccessful. A strong grief reaction coupled with the desire to be reunited with the lost object is characteristic of mourning. In the 12-Step Program, acknowledging powerlessness to the addiction was the first step in the mourning process. Not acknowledging helplessness leads to rage towards the addictive substance [22]. The addict cannot act out his or her rage and therefore suppresses it, which hinders mourning and arrests progress. The addict both wants to use and be separated from the drug— often symbolizing the source of nurturance withheld by caregivers [30-32]. The aim of therapy is to develop a cohesive, organized sense of the self that negates the need for an external object representation to mediate feeling states, which the 12-Step Program successfully achieves.

There is a substantial body of research documenting that spirituality, or more accurately, religiosity, has a protective effect on substance use [5,6]. Both adolescents and adults who are more religious are less likely to abuse or become dependent on drugs or alcohol. In the NA program, the strong social norms emphasizing sobriety played a prominent role in how 12-Step involvement aids the recovery process. Involvement helps people recover a

sense of spirituality that they felt was lost while their lives were driven by drugs, which can in turn relieve a sense of uncertainty. The early stages of recovery are fraught with uncertainty and the spirituality and community of 12-Step programs appear to be important resources for allaying stress and anxiety.

Recent advances in cognitive science provided a theoretical framework to understand how people's brains may be impacted by the unobservable mental states of other individuals. The concept of mentalization advances the notion that most "normal" people have the ability to intuit the mental states of others [29]. Thus, a greater capacity for mentalization corresponds to a greater ability to understand the other at the level of affect and cognition. Another concept related to mentalization is the mirror neuron system, namely that watching a task being executed and its underlying motivation activates the same cortical areas in the brain of the observer. This concept has explanatory power for how a group can affect an individual's emotions and behavior. Mirror neurons operate in the motor function in the brain, as well as in affective systems that process emotions and sensations. Thus, when the group is responding to a member in sight, sound, smell, or touch as a form of emotional communication, the members are engaging in "direct experiential understanding" mirrored in their ability for empathic attunement [33,34].

The concepts of mentalization and mirror neurons provide a tantalizing neurobiological explanation for a mental phenomenon. For example, when NA participants surmised what other members may have been thinking or feeling in a given situation, they were likely engaged in acts of mentalizing. Similarly, their neuronal systems may have been impacted by the mere observation of others in action. For instance, empathy has an impact on emotional regulation. It is presumed that mirror neurons provide the neurological underpinnings for empathy and related feeling states such as affection, intimacy, and hope. These collectively comprise important components related to affect regulation [29]. This study contributed greatly to the existing research by applying several divergent methodological approaches to assess the narrative data. The study employed quantitative and qualitative approaches as well as the author's emotional transference reactions to assess the two hypotheses.

Limitations

In qualitative research studies with small samples, generalization of findings to other populations or settings is often a limitation. This study focused on obtaining data during regular NA meetings. Ten meetings were attended, and data could only be obtained from the addicts who voluntarily attended the meetings. It was therefore not possible to predetermine whether the addicts who started with the program would stay. The participants were also primarily of African American descent, which may limit the findings of this research to that population group. The generalizability was further limited by the fact that only one NA group in a specific area was studied. A larger sample, gathered from across the country, would increase the generalizability of the findings. Moreover, members were observed for a relatively short period of time and this study did not address whether abstinence was maintained over a longer period of time.

Narcotics Anonymous members reported on the number of days that they were clean of drug use. Although self-reporting poses a limitation in that it cannot be verified, this is the system used by NA. External verification would intrude upon the members' mutual trust relationship and violate privacy. It was therefore not an option, as these two principles are important in the self-help NA community.

Recommendations

Programs aimed at recovery could benefit from the present research, particularly when dealing with addicts from different backgrounds. Tailoring the nature of therapy to the participants' culture and personality may improve effectiveness and reduce recidivism. Even though this study focused on only one rehabilitation program, further study into other programs may be valuable. As well as the presence of spirituality in other programs. Further research can also be aimed at different religions and how it may influence the rehabilitation process of participants [35].

The findings from the study suggested that the 12-Step Program was successful in addressing the members' addiction to drugs. They used the program to mourn the loss of the addictive substance as a source of comfort but also the loss of their former lives because of the drugs. This study operationalized the spiritual component of the program and used multiple measures to assess its use. A follow-up study that spans more than 12 months of sustained abstinence needs to be undertaken. Recovery from addiction lies in sustained sobriety and the client's use of the principles and activities acquired in the 12-Step Program. A narrative analysis could be undertaken to determine how the elements of mourning and letting go function in members' post-addiction lives. The ability to let go and deal with everyday losses in a healthy manner appears instrumental in maintaining sobriety [36,37].

Conclusion

The purpose of this mixed methods study was to examine the effects of the 12-Step program of Narcotics Anonymous (NA) to determine whether it helps with the mourning process. The findings of this research indicated that spirituality has a positive influence on recovery from drug addiction, and that the 12-Step Program applied by NA is successful in helping members work through their feelings to mourn their separation with drugs and their old lifestyle. The strength of this study lay in applying qualitative and quantitative research methods, including analysis of the author's induced feelings as a participant observer, to gain insight into the process of addiction recovery. No single overarching explanatory mechanism was found to account for the multifaceted process of recovery. However, the willingness and ability to engage in mourning were associated with achieving and maintaining, for varying periods of time, sobriety. The observations of the author led to a broader understanding of the recovery process. Different mechanisms played important roles at different stages of the participants' recovery. For instance, at the initial stage of recovery, participants' sense of belonging to the group, their connection to their sponsors and 12-Step friends, and their reading of NA literature were inferred to be important.

Some participants shared how the desire for fast money led them into the drug subculture that subsequently ruined their lives. The young men's fantasy of riches and abundance turned into a veil of tears, incarcerations, and restrictions to personal freedom. Members often talked about feeling powerless and complained of intrusions into their lives by various authority figures. Some members appeared to react to this with anger outbursts and even violence. To counter the feelings of powerlessness, drugs were reportedly used as a calming strategy to manage pent-up frustration and anxiety. Once some of these participants demonstrated a capacity to tolerate feelings induced from the group, particularly negative feelings, they appeared more likely to achieve sobriety than participants who would not express or explore distressing feelings. The author takes the position that the processing of feelings, especially negative feelings, without acting on these constituted mourning and was associated with sobriety. The limitations associated with this study included a small sample size and limited demographic variety amongst the participants. However, this research can lead to further studies and several suggestions were made.

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Appendix

		N	Min	Max	Median	Mean	Std. Deviation
Rate on capacity to form internal representations	Meeting 1	6	1	4	2	2.36	1.02
	Meeting 2	7	1	4	2	2.35	0.95
	Meeting 3	8	1	3	2	1.89	0.76
	Meeting 4	7	1	3	2	1.88	0.93
	Meeting 5	6	1	3	2	1.69	0.70
	Meeting 6	8	1	2	2	1.50	0.53
	Meeting 7	4	2	3	2	2.25	0.50
	Meeting 8	4	1	2	2	1.75	0.50
	Meeting 9	4	1	2	2	1.75	0.50
	Meeting 10	4	2	3	3	2.75	0.50

Table 1: Descriptive statistics summaries of ratings on capacity to form internal representations per meeting.

		N	Min	Max	Median	Mean	Std. Deviation
Rate on self-observing capacity (psychological mindedness)	Meeting 1	36	1	4	3	2.64	0.99
	Meeting 2	7	1	4	3	2.43	1.14
	Meeting 3	18	1	4	1	1.89	1.13
	Meeting 4	7	1	4	2	1.88	1.05
	Meeting 5	16	1	4	2	1.94	0.93
	Meeting 6	8	1	3	1	1.75	1.04
	Meeting 7	4	1	3	2	1.75	0.96
	Meeting 8	4	1	3	2	2.25	0.96
	Meeting 9	4	1	2	2	1.75	0.50
	Meeting 10	4	1	4	1	1.75	1.50

Table 2: Descriptive Statistics Summaries of Ratings on Self-Observing Capacity (Psychological-Mindedness)

Rate on Capacity to Form Internal Representations		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	f	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Meeting 1	Equal variances assumed	0.10	0.75	3.37	34	0.00*	1.05	0.31	0.42	1.68
Meeting 2	Equal variances assumed	0.01	0.94	4.33	35	0.00*	1.14	0.26	0.61	1.67
Meeting 3	Equal variances not assumed	4.86	0.04	1.28	11.14	0.23	0.48	0.37	-0.34	1.29
Meeting 4	Equal variances assumed	0.84	0.37	2.43	15	0.03*	0.96	0.39	0.12	1.80
Meeting 5	Equal variances assumed	0.54	0.48	0.57	14	0.58	0.21	0.36	-0.57	0.99
Meeting 6	Equal variances assumed	4.00	0.09	3.00	6	0.02*	0.80	0.27	0.15	1.45
Meeting 7	Equal variances assumed	.	.	1.00	2	0.42	0.50	0.50	-1.65	2.65
Meeting 8	Equal variances assumed	.	.	1.00	2	0.42	-0.50	0.50	-2.65	1.65
Meeting 9	Equal variances assumed	.	.	1.00	2	0.42	0.50	0.50	-1.65	2.65
Meeting 10	Equal variances assumed	.	.	1.00	2	0.42	0.50	0.50	-1.65	2.65

*Significant difference at significance level of 0.05

Table 3: Independent t-test Results of Differences of Ratings on Capacity to Form Internal Representations per Meeting between Those Who Participated in the 0-to-6-Months Recovery Period and Those in the 7-to-12-Months Recovery Period

Levene's Test for Equality of Variances		t-test for Equality of Means							
	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
							Lower	Upper	
0.48	0.49	3.85	34	0.00*	1.12	0.29	0.53	1.71	
0.08	0.78	4.99	35	0.00*	1.50	0.30	0.89	2.11	
14.51	0.00	3.50	10.96	0.01*	1.38	0.39	0.51	2.24	
2.72	0.12	0.95	15	0.36	0.49	0.51	-0.61	1.58	
0.61	0.45	0.84	14	0.42	0.40	0.47	-0.62	1.41	
54.00	0.00	2.45	4	0.07	1.20	0.49	-0.16	2.56	
.	.	0.45	2	0.70	0.50	1.12	-4.31	5.31	
.	.	-3.00	2	0.10	-1.50	0.50	-3.65	0.65	
.	.	-1.00	2	0.42	-0.50	0.50	-2.65	1.65	
.	.	1.00	2	0.42	1.50	1.50	-4.95	7.95	

Table 4: Independent t-test Results of Differences of Ratings on Self-Observing Capacity (Psychological-Mindedness) per Meeting between Those Who Participated in the 0-to-6-Months Recovery Period and Those in the 7-to-12-Months Recovery Period