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The Use of Modified Cognitive Therapy to Eliminate or Reduce Depression among Persons with Intellectual Disabilities: A Case Study

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Abstract

There is a high prevalence rate of depression among persons with intellectual disabilities. However, persons with intellectual disabilities can benefit from appropriate cognitive interventions, an effective treatment for depression, despite their cognitive limitations. One such applicable intervention is a modified cognitive intervention that separates false ideas from reality (S), then puts things into perspective (PP), and finally aids the client retain healthy thinking (R) and discard faulty thinking (D) (SPPRD). This case study investigated SPPRD's outcome in reducing depression in a client with intellectual disability. The SPPRD frame was used to correct the participant's faulty thinking in a weekly session, about one hour every week for five weeks. Results of the weekly depression evaluations and one time QOL- related evaluation at the fifth week indicate the participant's level of depression was reduced and his QOL improved after the intervention.

Keywords: Intellectual disabilities; Depression; Modified cognitive interventions

Case Presentation

This case study's purpose is to investigate the outcome of a modified cognitive approach, based on a novel frame – SPPRD - in reducing or eliminating depression. SPPRD signifies separate false ideas from reality (S), then put things into perspective (PP), and finally aid the client retain healthy thinking (R) and discard faulty thinking (D) (SPPRD). Depression, one of the most common psychiatric illnesses, [1,2], affects about 16 % of the US population at some point in their lives [3]. Experts define depression as an organic or reactive psychological state which is a genuine response to adverse life and frustrating circumstances [4]. Some of the symptoms of depression include difficulties thinking, concentrating, and making decisions, hopelessness and feelings of worthlessness, and decreased energy [5]. The co-occurrence of depression has been linked to suicide; sixty percent of victims were depressed prior to suicide. Because of the above issues, depression remains among the top researched topics [3].

While depression affects all populations, persons with intellectual disabilities (ID) are more prone to this mental illness. According to the *Diagnostic and Statistical Manual of Mental Disorder-Fifth Edition-Text Revision* [5], ID is a developmental disability that includes intellectual and adaptive functioning limitations in conceptual, practical and social areas. Persons with Intellectual disabilities (ID)'s risk for depression (between 44% and 57%) is higher than that of the general population. They have higher prevalence rates (6–30%) (despite the underreported rate among this population) than women (5-9%), men (2-3%), and persons with disabilities in general (25%) [6]. Persons with IDs face negative circumstances (discrimination, poverty, poor health, past failure) that are related to depression. Also relating to depression is faulty thinking [7,8]. According to CT individuals are depressed because they hold a negative triad with false beliefs about themselves, the world, and the future [9]. In addition to sharing the general susceptibility to negative thinking, persons with ID have had many past failures (because of discrimination and other factors) that reinforce already held and/or causes negative beliefs (e.g., I am an unworthy person or I am a failure); so, persons with ID are additionally vulnerable to depression [1,2].

An individual's false thoughts may not be limited to deprecating negative beliefs about the self; they may extend to important life's activities (e.g., employment and education), resulting in and/or compounding depression [2]. For example, if an individual believes his/her failure in an activity means an inability in other activities or failures in other areas or tasks, that is global and stable [10], he/she may avoid engaging in activities. These universal and stable views of failure by individuals with ID can mean dodging education, employment, and other important life activities, ultimately leading to depression related issues, such as unemployment and poverty. Consequently, persons with ID can become stuck in a cyclical process: depression leads to lack of employment; employment, to depression [6].

Cognitive Therapy (CT) to treat depression due to negative beliefs is, like any other psychotherapy endeavor, a complex activity, subject to limitations, not always used properly, and frequently misapplied to and inappropriate for individuals with limited cognitive abilities [1].

However, clients' negative thoughts are not incontrovertible and indissoluble despite past failed experiences that appear to support them. In fact, research indicates CT is effective in changing negative thoughts among persons with ID. Nevertheless, research has focused more on cognitive skills limitation rather than on

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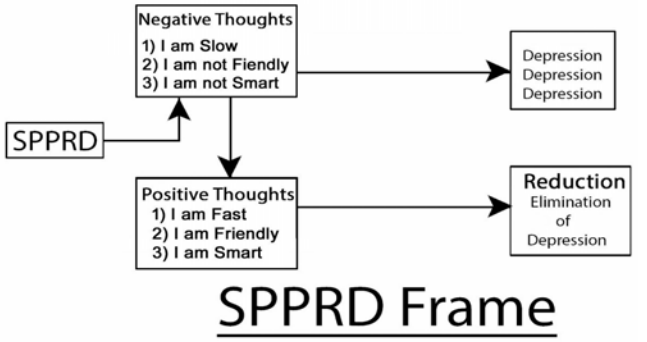

Figure 1: SPPRD Frame.

cognitive distortions [11,12]. Research that tackles cognitive issues is paramount given that distorted thoughts are likely to prevail, despite reduction or elimination of cognitive skill limitations [11]. Addressing cognitive related problems among persons with cognitive challenges can be daunting. How then can persons with ID profit from CT interventions (which require cognitive abilities) that focuses on their cognitive limitations?

CT interventions based on concrete and facile models allows persons with ID to benefit from CT [13]. The complex nature of CT's abstract procedure should drive practitioners to facile and concrete models so persons with ID with limited cognitive abilities can comprehend and digest information provided to them. Studies that have focused on cognition to reduce or eliminate depression among persons with ID, though they exist, are scant, despite consensus among practitioner and researcher regarding CT's potential in treating depression among the ID population. CT interventions that have been efficacious are those that have concretized the abstract aspects of traditional CT. Such studies include Dagnan& Chadwick (1997), and Lindsay (1999) case studies, and Ross et al. (2000) intervention studies [13-15]. To contribute to knowledge in this area, this case study utilizes a modified CT within the SPPRD model [6]. This is the first modified CT study done using the SPPRD frame.

SPPRD Model

In the SPPRD model (See Figure 1 above), knowledge about the client or his/her situation (to dispute negative thoughts) is crucial, so story-telling, a narrative therapy strategy, can be used to acquire information about the client, including positive attributes (e.g., affability). These positive characteristics are used to counter and dominate the client's negative thoughts. Disassociating the client from his/her negative thoughts (e.g., I am unintelligent) is also used to counter them. An appropriate strategy in this regard is McFarlane and Lynggaard's (2009) narrative strategy of externalization, in which problems are associated with external sources [16]. In SPPRD, the client's negative beliefs are associated with external sources, such as discrimination and ineffective teaching strategies.

Because individuals with intellectual disabilities (ID) generally have problems with abstract concepts [17], throughout the process in the SPPRD model abstract concrete and complex concepts are made facile through the use of simple language, drawings, and demonstration. In fact, the SPPRD process is broken down in steps in order to avoid overwhelming the client with an elaborate process: the counselor, for example, helps the client to separate false ideas from reality (S), then put things into perspective (PP), and finally the client retains healthy thinking (R) and discards faulty thinking (D) (hence the acronym SPPRD).

Separate

To separate the client's false beliefs about him/herself from reality (who the client is), the counselors externalize the false beliefs by attributing them to environmental or other external sources [16]. To facilitate understanding, the counselor writes the negative beliefs and positive characteristics on a piece of paper and/or draws pictures of them [1]. Pointing to the drawings, the counselor can signal that it is not the person who is the problem, but rather the external factors. For example, the counselor can say, "This represents who you are" (pointing to a piece of paper with the client's positive attributes), and "your unsuccessful outcome is the result of ineffective teaching" (pointing to a piece of paper with negative beliefs). This contrast has the potential to counter the client's false beliefs.

Putting things into perspective

Putting things into perspective (through teaching) reinforces the separation of false beliefs from positive attributes, which was previously dealt with in the first step. Furthermore, it helps persons with ID understand that past failures are reflective of society's limitations. Separating false beliefs from reality (in the previous step) does not necessarily mean abandoning past failed experiences, which for persons with depression, are stable and universal (Kurtovic, 2012). So, the counselor puts things into perspective through educational intervention (based on the client's level of understanding) by clarifying that the client's past failures do not portend failing in current or future tasks, and that their failure in a specific task does not mean failure in other tasks. Counselors can also use McFarlane and Lynggard's (2009) externalization strategy to educate clients about their failures [16]. For example, the counselors can explain that the client's past failures are due to discrimination and ineffective methods for teaching persons with ID - not the client's inabilities or low intelligence levels. This SPPRD step helps clients recant and revise previously held negative beliefs.

Retain and Discard

Separating false beliefs from reality and understanding depression-related issues can lessen or contradict false beliefs, but these thoughts can persist and become recipes for depression if left hovering around. Unlike other CT interventions, SPPRD does more than merely assist clients in disputing negative thoughts; it also helps clients to discard them. The clients' positive characteristics are retained and used to replace negative thoughts.

Since this abstract process can be difficult for a person with ID, demonstration can be used to concretize the process: the counselor encourages the client to write positive and negative views about him/herself, with the counselor's help if necessary [16]. Then, the counselor hands the piece of paper with the positives attributes to the client (as he reminds the client the positive attributes written on the piece of paper are reflective of him/her) and encourages the client to embrace the positive attributes verbally (e.g., "I am intelligent, I am smart"). Similarly, the counselor gives the piece of paper with the negative beliefs to the client (as he reminds him/her the negative statements

on them reflect external factors) and encourages him/her to disown the negative beliefs written on the paper by putting the paper in the trash while verbally stating "the beliefs written on this paper do not represent me."

Since the aim is for the client to overcome negative thought patterns in real life situations, in SPRRD (as in CT in general) follow up sessions to discuss the client's use of knowledge gained in the session (in dealing with challenging negative thoughts in daily life) are crucial. The counselor and the client can discuss strategies to remind the client about his positive attributes and other knowledge gained in the sessions. Direct care workers, guardians, and others can be invaluable; they can support the client in utilizing SPPRD-related strategies in daily life activities.

Method

Instrument

The Patient Health Questionnaire depression scale (PHQ – 9) was used in this study. The PHQ – 9 is a depression detection instrument based on the DSM-1V criteria for the diagnosis of depression [18]. It is reliable and valid across many disability groups, including persons with limited literacy education. It measures depression symptoms' severity. It takes 4 -6 minutes to complete, is easy to administer and score, and can be used both in clinical and research settings [19]. It is appropriate for those with cognitive/intellectual disabilities (Chan, personal communication, 6/15/2013; [20]) and Latinos [21]. In relation to monitoring treatment outcomes of depression, it has shown success, making it an appropriate match for our case study on depression [19]. With the PHQ – 9, patients rate their frequency of depression from "0" (not at all) to "3" (nearly every day). It consists of nine questions that yield four depression scores: 5, mild, 10, moderate, 15, severe, and 20, very severe [18].

Our rational for choosing the PHQ – 9 as opposed to the Zung depression scale makes sense because the PHQ – 9 is short and easy to understand, has shown success in research in general and in intervention studies in particular and is appropriate for persons with moderate cognitive abilities and for Hispanics in general [21].

Procedure

The client has moderate intellectual disability and depression. The SPPRD frame was used to correct the participant's faulty thinking. This was accomplished by using "narrative" or "life story," in which the participant told his story and by doing so revealed positive attributes about himself. These attributes were then used to counter his false thoughts. As the participant told his story, he was helped to separate false from real thoughts (S), put things into perspectives (PP), and finally retain his positive attributes (R) and discard his faulty beliefs (D) (as explained in the introduction).

The participant attended five weekly sessions (see below for an example of a session). Each session started with an assessment followed by the intervention, except for week 5. On Week 5, the intervention was not performed. The participant's depression level was assessed with the PHQ-9 depression scale every week. The counselor and the participant discussed the result to make sure it represented how the he was feeling both during the week and at the present moment. The participant was also assessed regarding other domains (QOL and daily activities, and effect of depression with family and others through verbal discussion).

Example of a session

The participant believed his depression was a result of his unsuccessful effort to gain employment and his academic challenges, such as taking notes and exams, which he attributed to his intelligence and agility inabilities. He used the word "slow" to describe his inabilities. For example, he noted, "I am slow in school, I am slow in running, and I am slow in taking exam."

To deal with these thoughts, the counselor used the SPPRD model – separate false beliefs from reality, put things into perspective, retain his positive attributes, and discard his negative thoughts.

Separate false from reality (S): The counselor first encouraged the participant to talk about instances of positive successes. To help separate the participant's thoughts (e.g., I am slow in school) from reality, the counselor reiterated the positive aspects of the participant gathered from his life story (he had told in the beginning) and used them to differentiate the participant from his negative beliefs. For example, the counselor explained that the participant's faulty thoughts and his positive attributes are different and wrote them on two different sheets of papers. Pointing to the paper with the negative thoughts, the counselor noted, "this is not you" and to the paper with the participant's positive attributes, "this is you. The person who was accepted into college and is keeping up his grades is smart. You are in college and passing your classes - this is you, a smart student" (the participant smiled and shook his head).

Further, the counselor used the participant's positive story to connect to the present and future. For example, the counselor noted, "You won an award, and that was a success and this means you are intelligent (present); you can use your intelligence to do well in school and work (future).

In addition, the counselor also externalized the problem (negative thoughts) to potential external factors, such as ineffective accommodations and teaching methods for persons with disabilities.

Put these things in perspective (P): After separating the participant from the problem, the counselor used an educational strategy to "put things into perspective." For example, the counselor clarified that failure is not universal and that failure in one situation does not mean a lack of success in other or future tasks. Specifically, the counselor pointed out that inefficient track runners or examinees are not necessarily inefficient employees or students. The counselor used the Rain Man movie (the participant had watched it) as an example. The client nodded his head, agreeing with the counselor's view point.

Furthermore, the counselor emphasized environmental factors (discrimination) and inappropriate teaching methods as potential causes of unemployment and unsuccessful educational outcomes for persons with disabilities, respectively, while maximizing the client's ability and intelligence.

Anticipating this educational step would be complex for the participant, the counselor provided information bit by bit, slowed the pace, and used language suited for the participant's level. Also, the counselor expressed things in different ways and repeated them to reinforce retention (as noted by Zam, et al, 2012).

Table 1: Depression scale.

USE of SPPRD Intervention	PHQ-9 Measure of Depression in Week 1	PHQ-9 Measure of Depression in Week 2	PHQ-9 Measure of Depression in Week 3	PHQ-9 Measure of Depression in Week 4	PHQ-9 Measure of Depression in Week 5	Qualitative Measure End of Week 5
	Ten (10)	Five (5)	Four (4)	Four (4)	Three (3)	1. Improved QOL and 2. Improved Relationship with others

The counselor also repeated part of the previous step strategy – for example, the counselor differentiated the participant's false beliefs from reality and used the participant's positive attributes to counter his negative view.

Even after successful separation of false thoughts from reality and understanding that failure is not necessarily related to a person's inability, discarding negative thoughts and retaining positive attributes to replace negative thoughts are crucial to avoiding recidivism of negative beliefs.

Retaining healthy thinking (R) and discarding faulty thinking (D)

Thirdly, the counselor assisted the participant with retaining positive views and discarding negative ones (RD) through demonstration. For example, after the client had written positive and negative views about himself on different sheets of paper (as requested by the counselor), the counselor handed the paper with the positives to the client(as he was reminded that the notes on the paper were his attributes). Similarly, the counselor gave the paper with the negative views to the client and encouraged him to put it in the garbage and renounce the views on it, while verbally reminding himself that the notes did not represent his character. The participant denounced the negative views by indicating, "These notes on the paper are not me." He also embraced the positive views by noting, "I am intelligent, I am smart."

Results

The participant's level of depression dropped from 10 to 3, based on the PHQ-9 depression scale. Specifically, it dropped from ten (10) points on day one, to five points (5) on week two, to four (4) on week 3 and week 4 (the depression score did not drop from week three to week four), and three (3) on week 5, indicating a drop from moderate to mild (for one week) to minimum (for three weeks).

For the verbal assessments immediately after each intervention, the participant noted his depression was better (low) than his depression level before the day's intervention (the participant was asked to compare his current depression to his depression scored measure before the intervention). There was no intervention the fifth week and so he was not verbally assessed regarding his depression after the intervention. About a month later, the agency staffs stated the client was not showing signs of depression or complaining about his relationship problems.

The client was also assessed regarding other domains (QOL and daily activities, and effect of depression with family and others through verbal discussion). Compared to the first session, the participant indicated positive results (i.e., improvements of his QOL and relationship with others), except his relationship with his friend on the fourth week. However, his relation problem with his friend was positive on week five (Table 1).

Discussion

This case study shows that modified CT within a SPPRD frame may be effective in reducing depression for a person with intellectual disabilities, despite their cognitive limitations, by disputing negative beliefs. More research, especially control studies with large samples, is needed to make generalizations regarding the effectiveness of CT within a SPPRD frame. This study corroborates other studies, such as [13,14] case studies, and McCabe et al. (2006), that indicates persons with ID can benefit from modifies cognitive interventions [2].

The drop in depression score based on the PHQ and the participant himself and the participant's emotions based on the participant during the sessions, and the direct care and manager's evaluation about a month and a half after the session indicated a reduction in depression.

It is worth noting other aspect of the intervention. The client commented on the effectiveness of the intervention, indicating he preferred it to the other interventions he had participated in, appreciated the sessions, and that the session helped him. Unlike his initial lack of confidence, as the session progressed he was gaining confidence; he was revealing more positive views about himself. He showed many positive external expressions. For example, unlike the sad mood he presented in the beginning, he seemed happy toward the middle and end of the sessions. He smiled frequently, looked happy, and nodded his head several times when he was reading positive notes about himself on the chart and when the counselor was countering negative views and pointed out his positive attributes. In addition, he seemed relieved and happy about continuing his life alone at the end (in the beginning he seemed worried about life without the friend he was not getting along with).

Although he did not secure the employment (he was looking for a place to work) and did not plan to seek employment (because of his school schedule), he was determined to continue school and perform well in order to pursue a career. He was determined to continue his education.

Disputing false beliefs is a core CT strategy. In this study, to overcome CT's limitation in regards to persons with ID – the demanding high level of comprehension, attention and mental abilities required - the SPPRD model, in which focus shifts from a complex and abstract approach to a step by step and concrete process, combining verbal communication and demonstration, was used.

SPPRD and Reinforcement and Concreteness

Firstly, separating the participant's false beliefs from his positive attributes can help the participant realize the dissociation between the two, an important step in clarifying his false beliefs are separate from him or who he is and setting the stage for changing his false beliefs.

Secondly, this "putting things into perspective" not only

reinforces the previous step (as mentioned above), it can also lead to action on the part of the participant. Educating persons with ID - who collectively have had past failures (due to external circumstances) that can reinforce their negative beliefs and therefore hold them back from trying our activities – that failures are not stable or universal can change negative beliefs. With such knowledge the person can overcome lack of confidence due to past failures and possibly start engaging in employment and other activities. Finally, retaining positive characteristics and discarding false beliefs can empower the participant to maintain positive views of him/herself, an important aspect of CT.

The steps, demonstrations, drawings, stating information in different ways, etc. help reinforce previously learned concepts, concretize abstract concepts, and transform complex communication into simple ones - essential components that facilitate engagement with persons with ID.

Reinforce men

Putting things into perspective by educating the client about failure, including externalizing the sources of the failure after separating the participant's false beliefs from reality, can reinforce previous knowledge (I am not "slow), an aspect of learning appropriate and meaningfully for persons with ID [1].

Conversely, writing on a piece of paper and retaining (holding on to the paper) and discarding (putting the paper in the garbage) while verbally rejecting the negative beliefs and accepting the positives attributes can reinforce the concept of "I am smart."

Concreteness

Separating the participant's false thoughts from reality (who he is) by writing the false thoughts and his positive attributes and drawing pictures of these aids the participant visualize and concretize the verbal and abstract aspects. According to McFarlane and Lynggard (2009), physical representation of a problem through drawing can separate a person from a problem [16].

Actually focusing the source of the problem on external problems and drawing them (drawing pictures of the participant's negative beliefs and his positive attributes on pieces of paper), in addition to verbalizing them, concretizes the abstract. This according to Mc Farlland and Lynggaard (2009), can give shape to the problem and as a result makes it easy to separate the client from the problem [16]. It is worth stating, externalizing the problem is appropriate, giving research findings on environmental factors (e.g., discrimination) as culprits to negative outcomes for persons with disabilities.

Assisting the client to retain positive attributes and discard negative thoughts through demonstration, first by writing the client's negative and positive attributes on different pieces of paper and then putting the negative thoughts into the dust bin, while stating, "this is not me" makes the abstract concrete.

Simplicity

Simplicity is crucial for persons with ID [22]. In SPPRD (as in narrative therapy), the participant's false beliefs are disputed by utilizing the participant's story or narrative, this means the use of language and experiences familiar to the participant. This in turn can transform an otherwise complex communication to a facile one and ultimately makes it less difficult to dispute negative thoughts the client possesses about himself. It is worth mentioning, for persons with limited language ability who cannot tell their stories, that information from others can be invaluable.

Breaking down the procedure into small steps in SPPRD – (1) separating false thought from real self, (2) putting things into perspective in order to dispute false thoughts, and (3) discarding and retaining – is transforming the complex process in to a simple, manageable one. Breaking down the process includes providing information bit by bit and slowing down the pace. It is crucial to use language appropriate to the client's level and to use short sentences, which can help the client engage in the CT process [1].

SPPRD and direct are workers

The use of direct care staff was helpful in this study in relation to homework. The direct care staff member who was present for the session was instructed to remind the participant to use what he learned in the session during the week. The participant indicated it was helpful that the direct care worker kept him on track with his assignments. With homework assignments, an effective CT component, clients can practice news skills and apply them in their daily lives, with or without the support of others [1]. Persons with ID assisted by staff make this possible as staff can provide continuity between sessions, including helping persons with ID practice necessary skills outside therapy sessions. In fact, Rose, et al. (2005) found clients accompanied by their direct care staff showed greater improvement in CT therapy than those who were not. Research on the use of CT within a SPPRD model by direct care is needed [15]. The use of a manual can facilitate SPPRD use by direct care workers. It will allow for uniformity or consistency and facilitate training and supervision by therapist [1].

Practitioners need not shy away from utilizing cognitive interventions for persons with ID. They can use adaptive CI interventions, such as the modified CT based on SPPRD used in this study. It is worth noting, the results of this case study cannot be generalized to other individuals. However, this study could set the stage for research projects. Research could extend this case study to include larger, randomized samples and randomized trials. Such studies could shed light regarding the effectiveness of modified CT based on SPPRD. Research could investigate the effects of SPPRD-based modified CT on reducing depression: Using SPPRD-based modified CT in reducing depression among individuals with intellectual disabilities with or without other disabilities and depression; the influence of mediators and moderators effects in reducing depression among individuals with ID; and how direct care providers and workers performed the SPPRD-based modified CT interventions [23]. Employment has been shown to relate to depression; so, it would be crucial to investigate the effects of SPPRD-based modified CT in helping persons with ID seek and acquire employment (by reducing or eliminating their depression). Structural Equation Modeling could be used to identify a factor structure that could explain direct effects between the factors (separates false ideas from reality (S), puts things into perspective (PP), retain healthy thinking (R) and discard faulty thinking (D)). It is worth noting, while a casual chain analysis is important, understanding the SPPRD process is also crucial. Understanding the how and why of SPPRD's outcome is paramount.

Summary

SPPRD, a modified CT intervention, has the potential of reducing depression among individuals with intellectual disabilities. Through separating false ideas from reality, then putting things into perspective and finally aiding the client in retaining healthy thinking and discarding faulty thinking, the abstract elements of cognitive therapy become non-abstract. As a result, individuals with intellectual disabilities may benefit from the depression "reduction effects" of cognitive therapy. This may mean for many individuals with intellectual disabilities who have depression, that a reduction in depression and potential improved quality of life become possible.

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