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THE INTERPLAY OF RESOURCEFULNESS AND RESILIENCE IN RECOVERY: A SIX SESSION APPROACH IN TREATING ADDICTIVE BEHAVIOUR

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ABSTRACT

A core goal in treating addictive behaviour is reducing cue reactivity. Treatments that fail to reduce craving predict a higher rate of relapse than treatments that successfully reduce craving. Resilience involves being exposed to substance related cues and then inhibiting the habitual response (which is generally substance use). Resilience is a potential; a highly resilient patient predicts risk events and knows to switch between affect management and help seeking behaviour. Resourcefulness is an operational skill; resourcefulness means being exposed and reacting differently to substance related cues; a highly resourceful person comprehensively diminishes the habitual response to substance related cues. This approach emphasizes the interplay of resilience and resourcefulness and contains six sessions with different topics (e.g., "Rewards of sobriety", "Support of relatives and friends", "Irrepressible commitment to sobriety"). In each session with seven steps, direct and consecutive exposure to substance and high-risk triggers (Affect Activation) alters with the rapid installation of coping skills (Sensory Stimulation) when craving peaks. Initial promising results of this method in aftercare treatment are noted.

Keywords: Addiction, Cue Exposure Treatment, State Dependent Learning, Cue Reactivity, Ideodynamic Resources

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INTRODUCTION

"If a man does not know to what port he is steering, no wind is favorable to him."
Seneca *(5 BC – 65 A)*

The approach taken in this chapter is that resilience is a potential, whereas resourcefulness is an operational skill. If you own a fast and well-cruising sailboat then you need to adapt your sailing skills. If you do not improve your sailing skills and you do not know how to steer the boat properly, then when the wind changes you may become a danger to yourself and others. In a similar way, highly resilient people (or those who wish to be resilient) need to improve their coping skills in order to make full use of that resilience. Much of the potential of high resilience is otherwise wasted.

If you own a minor sailboat, then you need to achieve a wide range of sailing skills and train and improve them constantly. Due to the lower cruising capacity, you will have to be aware of the proximity of the desired port so that you can rapidly access help in stormy weather. In a similar way, those who do not consider themselves to be highly resilient need to enhance their performance even more by learning, training and upgrading coping skills relating to accessible and realistic goals.

According to the definition of the relationship between intelligence and thinking by De Bono (Moseley et al., 2005), thinking is not a matter of intelligence, but is considered to be a skill that can be improved by training and practice. This approach accentuates the positive interaction between resilience and resourcefulness. It is an interaction which strengthens individual willpower and determination. It is an interaction which broadens the pathway of personal development for individuals with addictive behavior and enables them to regain control over the boat they are sailing, even in unpredictable wind conditions.

Rationale

One core goal in treating addictive behaviour is reducing cue reactivity. Cue reactivity is defined as an almost irresistible urge to use, preoccupation with the substance, and a sense of lack of control over intake. It starts up with substance seeking behavior and ends up in substance use to gain relief from the uncomfortable body sensations which can be measured as increased heart rate, salivation and skin conductance (Drobes & Tiffany, 1997). The number of conditioned stimuli, which can evoke cue reactivity, includes exteroceptive stimuli (e.g. sight, smell and look of alcohol), interoceptive stimuli (physical state, emotion and cognitions) and withdrawal symptoms. Before the intake, patients experience intense feelings of craving, and after the intake they feel guilty, disgusted with themselves and depressed (Jansen, 1998). Treatments that fail to reduce craving predict a higher rate of relapse than treatments that are successful in the reduction of craving (Cooney et al., 1997; Rees & Heather, 1995).

While experiencing craving as a threat during the recovery process, patients report being in a state of hyperarousal in keeping with the polyvagal theory (Porges, 1995). The polyvagal theory helps to understand the interplay between the sympathetic and parasympathetic branches of the nervous system. During times of threat, the ventral vagal system (which is in charge during non threatening situations) is overridden by the sympathetic system activation. The alarm is triggered by the amygdale, and subsequently the hypothalamus releases a cascade of hormones including cortisol, epinephrine and adrenaline. This results in decreased blood flow to the brain cortex and increased vigilance. Normally this process elicits active avoidance and fight - flight mobilization.

Patients experience flooding of negative emotional and sensate states, intrusive thoughts and multi sensory flashbacks due to classical conditioning of the craving cue to negative experiences. In the face of complete helplessness, the response to the threat can be dominated by the dorsal vagal system. In such an instance, the immobility response arises, shutting down many functions of the body leading to decrease in heart rate, decreased respiration, and a state of numbness. This behavioral shutdown can be considered as the psychobiological engine of dissociation. Patients describe freezing - dissociation and numbing. There is a whole body constriction and/or disconnection (Austin et al., 2007; Porges, 2007).

Before treatment, the habitual response to the distress of cue reactivity is a short-term reduction of these reactions by substance intake, as well as avoidance or withdrawal from places, persons and situations with a high likelihood of cue-presence.

Resilience is the individual's capacity to withstand stressors by a positive adaptation process. In relation to recovery from addiction, resilience means the ability to know and to withstand the variety of cues and so inhibit strong cue reactivity. A highly resilient patient predicts risk events and knows to switch between affect management and help seeking behavior.

Resourcefulness is the positive adaptation process supporting resilience. In relation to recovery from addiction, resourcefulness means the capability to obtain and maintain comprehensive control over high-risk cues and high risk events. Resourcefulness means systematically utilizing coping skills (in this approach, self-generated resources) to reduce craving rapidly while being exposed to cues. A highly resourceful person will often successfully overcome the temptation, diminishing and later on extinguishing the learned association between substance- related cues and substance intake (Pierce, 2004). A resourceful person, who has permanently and successfully applied coping skills at the peak of craving, facilitates strong effect-expectancy of skill capability, and enlarges the potential of cue- resistant self-efficacy (Bandura, 2001).

The utilizing of skills is determined by "Top-Down" and "Bottom-Up" processes. "Top-Down" methods use cognitions to regulate affect and sensory awareness, focusing on meaning and understanding. The entry point is the patient's story of self-limiting beliefs. "Top –Down" techniques are used to observe and support body awareness and processing. Patients learn to track the influence of thoughts to emotional sensations, and to notice their reactions to thinking. "Bottom Up" methods center on sensation and movement. Body experience is the entry point. A "Bottom Up" focus requires the patient to prioritize sensorimotor experiences and to observe their interplay with emotions and thought processes. Effective capability means integrating these two approaches enabling insight in to how thought and emotion affect the body, and how body experience affects thoughts, beliefs, and emotional responses (Porges, 1997). An empowering skill incorporates both parts and is widely applicable both in the state of high or low resilience during high risk events. The "Bottom-Up" process is more active when the distress of cue reactivity is high and the self-perception of resilience is low. The "Top-Down" process is more active when the distress of cue reactivity is low and the high self-perception of resilience is high. A highly resilient individual is supposed to maintain and upgrade resourcefulness. A less resilient individual should be taught and trained in resourcefulness – and be thoroughly supervised in practicing the right skills where they matter most. The skills taught in this approach adjust both "Top- Down" and "Bottom- Up"[2] processes attuned to individual traits, states and behavior patterns.

Differences from Other Treatment Approaches

Common techniques in the treatment of addiction are biased by two factors that tend to ignore the potential of the interplay between resilience and resourcefulness.

[2]The original meaning of the terms emphazises the bidirectional interactions between the brain and peripheral tissues, including the cardiovascular and immune systems, contributing to both mental and physical health.

Firstly, techniques which emphasize distraction propose avoidance of risk-situations or ignoring them when they occur (i.e., by thinking of something else). In fact, teaching these skills reinforces avoidance behavior. The conditioning model predicts that, by avoiding the cues, craving will be maintained and not be extinguished, and the avoidance patterns will permanently remain and anticipatory fears will expand (Bouton, 2000).

This focus on distraction techniques carries an implication that the individual is not fully capable of resisting craving and neglects the opportunity to strengthen the interplay between resourcefulness and resilience in high- risk situations. The second shortcoming of frequently used techniques is that they are usually taught in a state of normal arousal and not in the state of hyper arousal. This implicates that "Top- Down" methods are applicable in phases dominated by "Bottom- Up" processes. Learning a skill in normal arousal, however, engages the frontal cortex (the part of the brain generally thought to be where higher level thinking, planning, and goal formulation take place). In a real high risk situation with hyper-arousal present, the learned techniques become inaccessible because the normal functioning of the frontal cortex is overridden by the processes of the addiction memory. In the presence of the preferred mood altering substance, there is a loss of cortical control abilities to limit compulsive consumption. At the same time, a hypo-responsiveness of the limbic reward system towards naturally reinforcing stimuli together with a hyper-responsiveness of the memory system, leads to excessive craving as soon as the system is triggered by cue-stimuli (Boening, 2001, Volkow et al., 2004).

This results in highly sensitizing the brain reward system to drugs and to drug related cues. In that state, the likelihood of relapse increases because sobriety intentions are less recallable. Tools that patients are trained in during therapy to withstand "the urge" work superficially and the awareness of long term benefits are not utilized satisfactorily. Therefore it is recommended not only to reduce the superficial (in vitro) cue reactivity with a preference of "Top-Down" interventions, but also to positively and permanently influence the more resistant underlying sensitive neural system with a preference for "Bottom-Up" interventions.

Skills exclusively trained in a state of normal arousal fail frequently when applied in a state of hyper arousal and cause doubt in one's capability of utilizing the interplay of resilience and resourcefulness. The outcome of frequent failure is the reinforcement of uncertainty and anticipatory fear. A positive adaptation process becomes postponed or obviated. In general, individuals "learn" to underestimate the potential of their self-efficacy.

The method of choice to optimize the interaction of resilience and resourcefulness seems to be Cue Exposure Treatment, although the results in the field of addiction are controversial (Marissen, 2007; Ucros, 1989). The rationale of Cue Exposure Treatment (CET) is based on the idea that craving and substance intake are mostly cue- controlled. During an exposure, a patient is exposed to conditioned substance related cues while being prevented from engaging in their habitual response (i.e., substance intake) by the therapist. The model predicts that the cue reactivity will diminish when the CS - US bond (CS = cues; US = substance intake) is interrupted by prolonged and repeated non-reinforced exposure to CS. As a result, it is expected that the learned association between substance related cues and the subjective substance related experience will diminish and that the conditioned cues will lose their predictive value and no longer evoke cue reactivity (Pierce & Cheney, 2004).

The controversy about the effectiveness of Cue Exposure Treatment has to take into account the fact that ineffective clinical trials with methodological limitations utilize insufficient therapeutic approaches (Carter & Tiffany, 1999). As an immediate result, the cue reactivity only decreases to a medium level of disturbance. The prolonged exposure takes too long, while the reduction in cue reactivity remains too low. Subsequently, the decreased cue reactivity might be considered as a result of external and coincidental factors and lead to less acknowledgement of one's own capacity

for affect tolerance and management (Marissen, 2007). This, as well as skills which are solely applied in a state of normal arousal, may result in underestimation of self efficacy regarding future risk situations.

Overestimation of self-efficacy, however, may occur as well when exposure is solely performed imaginatively without the presence of the favourite substance (Janssen, 1992). The individual might become overconfident when experiencing frequent reduction of cue reactivity before reaching the peak of craving. The peak, however, can only be activated by exposure to the substance or cues very close to the incitement of addictive behaviour.

Cue Exposure Treatment (CET), in combination with various coping skills, has been shown to provide better treatment outcomes in addicts (Monti et al., 2002). Approaches using in-vivo exposure are considerably more effective than in-vitro exposure utilizing imagination (Foa & Kozak, 1986, Rohsenow et al., 2001). Contrary to what might be expected, short exposures have been shown to be as effective as long exposures (Marks, 1987). The combination of exposure-response prevention (CS without US) in a risk environment and priming dose exposure in a neutral environment (US without CS) have been shown to be highly effective for binge eaters (Jansen, 1992).

Resilience is strengthened by repeatedly and successfully withstanding unpleasant effects while being exposed to substance related cues. Resourcefulness is strengthened by using coping skills at the peak of craving during cue-exposure sessions. The skills must be activated rapidly and diminish craving in realistic high risk situations shortly before substance intake. The effect-expectancy increases by using the coping skill several times to reduce the cue reactivity and becomes extinguished in the long term. The skill gradually becomes activated automatically due to the behavioral principles of state dependent learning and counter conditioning. Basically, a patient who applies a coping skill at a state of hyperarousal will easily recall the skill when the same state of arousal occurs again (Ucros, 1989). The theory of state dependent memory, learning and behaviour suggests that what is learned and remembered is dependent upon one´s mental, emotional and physical state at the time of learning (Bower, 2003). State dependent memory and learning is suggested to be a kind of mental dissociation (Hilgard, 1991) and might be influenced by stress hormones released in the brain and body (Rossi, 1993; Shors et al., 1992).

State dependent learning is associated with a specific state of arousal, and learned information can best be recalled or used when the patient is restored to the state that existed when the learning first occurred. Exposure to the former token substance is highly stressful - an ideal platform for learning new patterns of reacting to the cue. Prospectively, the individual, already in an early state of distress, will effortlessly establish the new conditioned response.

Counter conditioning is a process in which a second incompatible response (coping skill) is conditioned to an already conditioned stimulus (trigger). The cue reactivity disappears and is then subsequently replaced by the emotionally supporting coping skill, which is arbitrary and incompatible to the former discomfort of craving (Michael & Ehlers, 2009; Robinson, 1993). By successively using skills at the peak of craving in the “Cue Exposure – Response Prevention” connection, the patient acquires a positive, strong, and stable adjustment of the promising interplay between resourcefulness and resilience. In this example, resilience means being exposed to a mood altering substance (cue) and inhibiting the habitual response, and resourcefulness means being exposed and reacting differently to the cue.

THE SHUTTLE BETWEEN AFFECT ACTIVATION AND SENSORY STIMULATION: SOME PRACTICAL GUIDELINES

The following practical guideline emphasizes successive treatments to deal comprehensively with cue reactivity. Six subsequent sessions are determined by the interaction of Affect Activation and Sensory Stimulation.

Affect Activation

Cue Exposure facilitates even stronger cue reactivity when the exposure of a favourite substance is combined with affect activation. Affect activation is performed by the guided imagery of a potential high- risk event containing negative and capitulating thoughts, awkward emotions and physical tension. The patient is then requested to move the attention between the distress of the imagination and the presence of the cue, thereby vividly reinforcing both the guided imagery of the stressful situation and the cue reactivity caused by the favourite substance. While seemingly irrepressible affects become activated does the patient already benefit at the initial step of treatment; withstanding longer the cue (i.e., the favorite drink), extending the distress of a potential risk situation and concurrently resisting the intake of the substance.

Sensory Stimulation

Sensory stimulation contains preparation and implementation of coping skills. There are two phases in the process: Preparation phase and implementation phase.

Preparation phase: One initially learns coping skills before launching the Affect Activation. The coping skills in this approach are mainly self-generated (ideodynamic) resources consisting of features of an addictive free lifestyle (e.g. rewards of sobriety, irrepressible commitment to sobriety). These are instructed and trained at a medium level of relaxation using guided imagery. Additionally, the resources become linked to ideodynamic keywords that are meaningful to the patient including positive thoughts, feelings and body sensations (e.g. "insight"- "gratitude" – "warmth"). Finally, the resource becomes linked to bilateral tactile stimulation which the patient considers to be a pleasant rhythm (see below for further elaboration on this practice).

Implementation phase: Sensory Stimulation is defined by successfully applying a coping skill at the peak of craving, targeting an immediate and significant experience of craving reduction. In that crucial state of high limbic arousal, it is suggested that the bilateral tactile stimulation, together with keywords, ensure a rapid activation of the resource when it is needed at the peak. Sensory stimulation means communicating with the parts of the brain which are highly activated, and accelerating the counter-conditioning process even faster and stronger (Davis & Myers, 2002). The successful interplay of Affect Activation and Sensory Stimulation strengthen resilience and resourcefulness in each session. Affect Activation is affiliated with the former unknown ability to sustain increased subjective discomfort. Sensory Stimulation is affiliated with the new experience - the possibility of a remarkable and immediate reduction in emotional discomfort by applying a coping skill at the peak of craving.

Preparation of the First Session

The therapist records the case history from the patient including the cluster of the origins of the disorder, dysfunctional behavior, and symptoms. This concludes with appropriate target selection and target sequencing covering a variety of high-risk situations. Furthermore, the therapist teaches and checks the patient's ability to self-regulate, including the utilization of a safe/secure place and

resource installation. Finally, the pattern of symptoms relating to cue reactivity, becomes documented.

The higher the likelihood of cue reactivity (as gathered from the case history), the more important becomes the process of resource installation (i.e. "Rewards of sobriety") in the preparation phase before the first session. The extensiveness of craving needs to be tested by proving the validity and potency of resources. The patient learns to distract themselves from high levels of disturbance by shuttling back and forth from the state of resourcefulness to the state of cue reactivity in short time intervals, each time starting and ending with the state of resource. At that point, cue reactivity is activated only by inducing high risk events mentally, while the preferred substance is absent (in vitro exposure). A patient who has difficulties leaving the disturbed state of cue reactivity is supposed to train this "shuttle" thoroughly and finish with a strong and multi sensory experience of resource validity. A highly cue-reacting person is trained to remain for a longer time in the state of resource and briefly in the state of in-vitro exposure. A less cue-reacting person is trained to remain longer in the state of in-vitro exposure. In this preparation phase, the individual's readiness for exposure to the favourite substance has to be determined. Making sure that the patient is capable of managing resource installation has to be determined and/or enabled before the first session.

The Topics of the First Three Sessions

The topics of the first three sessions serve as positive references for the alternative mental state needed to cope with the urge to use. They are "Rewards of sobriety", "Support of relatives and friends", and "Irrepressible commitment to sobriety".

The first session "Rewards of sobriety" elaborates all positive effects that would occur if patients refrained from drinking, for example, when tempted - positive outcomes which are especially needed in high risk situations distinguished by negative emotions, lasting conflicts and self blaming thoughts of guilt or shame. Focussing widely on positive outcomes in the beginning is useful because conventional skills in abstaining from substance use are often connected to the fear of failing. Typical examples of coping strategies refer to the worst experiences while drinking in an uncontrolled way. Reminding the individual of the negative consequences of the substance abuse, visualization about physical withdrawal symptoms, and anticipation of the worst case of relapse, serve to inhibit craving. However negative memories might exacerbate the negative mood that occurs frequently in risk situations, and this could lead to resignation and capitulation. Consequently, a strategy focussing on the negative sides may increase, instead of decrease, the likelihood of a relapse and reinforce the habitual attitude of learned helplessness. Focusing on the rewards of sobriety, in the first session, is intended to counteract negative mood states and rebuild a more optimistic perception of intrinsic motivation involving the capability to cope with the urge, in spite of avoiding it. The second session "Support of Relatives and friends" uses relationships with significant others who thoroughly appreciate the patient's efforts on the pathway to robust sobriety.

To note the appreciation by others is useful in building up skills for urge reduction, if the patient doubts that staying abstinent in the long term will have devastating life effects followed by negative moods such as loneliness, failure and abandonment. To be fully aware of the instrumental support from relatives and friends keeps up the commitment to sobriety during hard times and leads to problem solving thoughts and help seeking behaviours.

The third session "Irrepressible Commitment to sobriety" works on self-reinforcing beliefs towards an addiction-free lifestyle.

In a lot of cases, the decision to start treatment is externally caused through credible threats by relatives, traumatic events, or conflict-filled circumstances in patients' lives. The extrinsic motivators undermine intrinsic motivation. Therefore, the patients are asked to pinpoint in short,

punchy sentences the intrinsic motivation to carry out treatment; these forceful sentences use plain and positive words in the present tense.

Thereafter, patients are asked to mentally create a beautiful day and subsequently to tie imagination and motivating belief together. The inability to connect 'a beautiful day' to the commitment to sobriety occurs frequently. In this case, the presence of hidden or unconscious wishes to controlled substance use has to be elaborated. The pleasant outcomes of substance use emerge and become prospectively utilized as a high-risk cue.

The Composition of the Sessions

Each session is divided into six steps. The description of the first session "Rewards of sobriety" is a template for the subsequent five sessions.

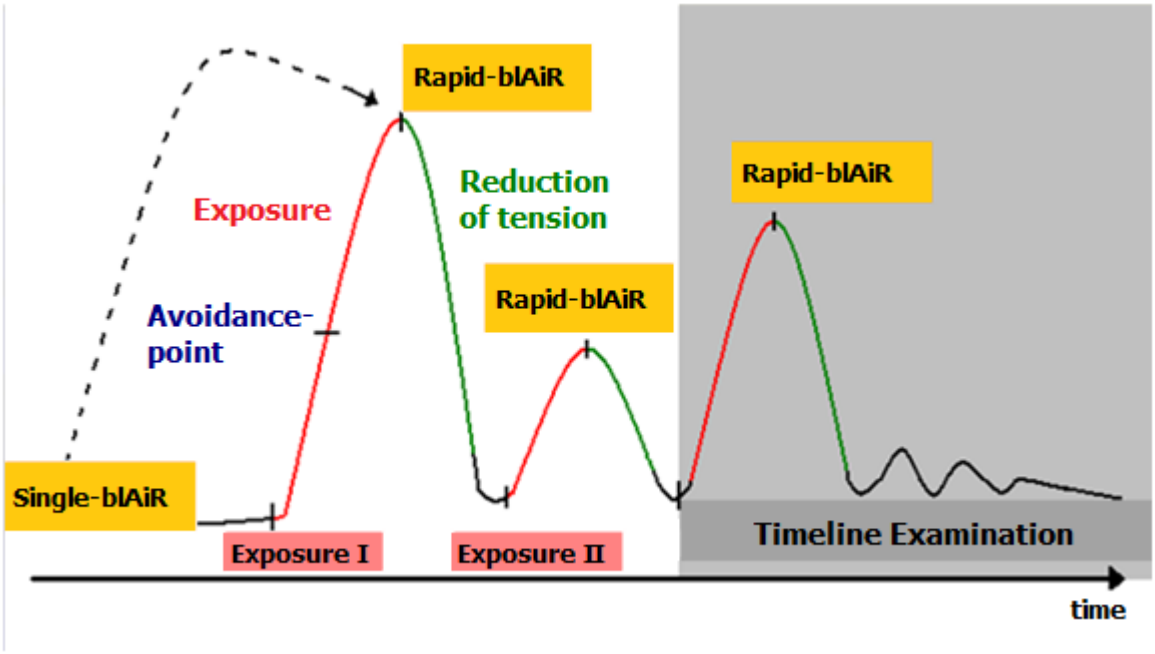

Figure 1:

Key to the Figure and Steps. Step 1: Single –blAiR and Rapid-blAiR: First Activation of inner Resource. Step 2: Exposure I (Cue –related). Step 3: Rapid-blAiR: Second Activation of inner Resource (at the peak of cue reactivity). Step 4: Exposure II (Cue –related). Step 5: Rapid-blAiR: Third Activation of inner Resource (at the peak of cue reactivity). Step 6: Timeline Examination. Step 7: Advanced Approach: Exposure III (affect- related).

Step 1: Single –blAiR and Rapid- blAiR: First Activation of Inner Resource

Single- blAiR utilizes at step one, step three, step five and step six, with the purpose of diminishing cue reactivity at the peak.

Activating the resource begins with extensively discussing the rewards of being sober. If complete sobriety is not the target, then the title is modified (e.g., positive results of moderate drinking). The benefits of sobriety in terms of mental, physical and spiritual health, self esteem, economics, leisure activities, working performance and relational improvements, are discussed. The more the patient has stayed sober, the higher the likelihood of activating the positive outcomes of sobriety. The discussion of rewards is followed with the performance of the "Single bilateral Activation of Resources (single –blAiR)". In the very beginning, one is asked to find a pleasant,

enjoyable rhythm by tapping oneself alternating on the left knee and right knee or left cheek and right cheek, while imagining one listening to a favourite song. One option is to follow a metronome, which provides a consistent and adjustable beat measured in *beats per minute* (BPM). This simple tool generates a steady click track to practice rhythmic skills. By tapping while listening to the beats of a metronome, one gets the opportunity to practise pleasant self-stimulation in a relaxed mental state of inner-directed awareness. Another option to create a more relaxed mental state, and thereby reinforce the conditioning process, is to use a device (Tac/Audioscan from Neuro Tek) which provides gentle bilateral tactile stimulation using small vibrating pulsers.

Instructions for single -blAiR

> "Find the most pleasant rhythm between the slowest and the fastest beat of the metronome. Check it out while the rhythm is changing from the slowest to the fastest speed. Meanwhile, your eyes are resting in the centre of your visual field." [Thereafter, you fine-tune the speed until the patient feeds back to you that a stabile pleasant rhythm has been established. Then guided imagery is used. The Activation of Inner Resource is based on the focus of the session: "Rewards of sobriety". The grounding instructions at the start specify]: "Feel your body on the chair. Feel your backbone commencing at your tailbone and then up to your head. Feel your feet on your ground. Be aware of any body movements while you are breathing. Feel the rhythm of your breathing. Breathe in calmly, breathe out with harmony. Is the bilateral rhythm still pleasant for you? Your eyes are resting in the centre of your visual field. You are in complete control as to how deep you are relaxing, and you are in control of how soon you will reach your inner balance. Now get in contact with the rewards of sobriety. The positive effects on your health, of being sober, and waking up in the morning fresh and alive, are coming forward. Remain sober and enjoy your work performance. Do you need more time? Each time you breathe and feel the rhythm, it is easier and easier to get in contact with the resource. Lean back in your mind and allow yourself to use time and space to be in contact with the rewards of sobriety. Notice the pleasant state of calmness, harmony, energy, spill-over, pride, being in control, warmth, love and care, clarity of mind, and awareness of your possibilities and skills. Conclude the exercise by finding three key words that best summarise your pleasant state of being sober. Find key words that relate to a positive thought, a positive feeling and physical well-being".

Instructions for rapid –blAiR[3]

After the patient has enumerated appropriate key words, the therapist then launches rapid activation of the resource. Rapid bilateral Activation of inner Resources (rapid –blAiR) means activating of resource by five key terms, one headline, and three key words connected to bilateral tactile stimulation. Rapid activation of inner resources takes off by prompting key terms and key words in infinite loops. The five key terms are recurrent and consistent words, preliminary to the headline, and the individual key words. Key terms are "Pleasant Rhythm" – "Eyes resting in the Centre" – "Chair" – "Ground" – "Breathe" subsequently followed by the headline of the resource "Rewards of sobriety" and finally completed by the self-generated three key words "Key word A" – "Key word B" - "Key word C" (e.g., "Insight" – "Gratefulness" – "Warmth"). The infinite loop is

[3] In 2011, a website will be launched and will provide further information to both therapists and clients. Website: www.jorgalbers.com

defined by repeating key terms, headline, and key words for as long as necessary. Each time the patient loses track, the instruction restarts with the first word in the loop, "Pleasant Rhythm". The infinite loop creates high predictability of resource installation. The infinite loop is supposed to be repeated until the patient is familiar with the procedure. Any other key words that improve the resource installation ought to be checked. On the "Validity of Resource Scale (VoR)" ranging from 1-7, the availability of the resource is established. A value of 1 represents a superficial experience of the resource. A value of 7 represents a clear, stabile and multisensory experience of the resource. The session continues when the validity of the resource is perceived as a value of 5 and more.

Step 2: Exposure I (Cue –related)

At this stage, a relevant risk situation linked to a negative mood (the most present, the most intense or the original one) is activated. The therapist introduces and checks the "Level of Urge (LoU)" before starting exposure. A value of 0 represents a superficial experience of urge; a value of 10 represents a nearly irresistible experience of urge. After exploring anticipatory fear, the patient gradually becomes exposed to the cue which is connected to intake, for example the favourite beverage. In practice, this is operated, for instance in the case of alcohol, by opening a bottle, by filling the glass and by smelling the alcohol.

The therapist is consciously passing the avoidance point. The avoidance point is defined as the level of urge where the patient habitually starts drinking and obtaining a short-term relief, or where he/she uses distraction strategies to suppress the urge.

During that intense phase of exposure, from avoidance point to peak of discomfort, the hyper aroused or paralysed patient may seem to lose control. Good intentions become overridden and skills learned at a normal level of arousal cannot be applied. The therapist continues to examine the spontaneous appearance of burdening memories, self limiting beliefs, troublesome feelings and body tension. Relevant issues might be disclosed that are evoked by state dependent memories, and may contain high diagnostic and therapeutic value. The session is designed to be continued when the Level of Urge (LoU) reaches its peak and is at least more than a value of 7.

Step 3: Rapid-blAiR: Second Activation of Inner Resource (at the Peak of Cue Reactivity)

The patient now is requested to rapidly activate the resource with only moderate support from the therapist who prompts the infinitive loop for Single bilateral Activation of Resource (single – blAiR) with key terms, headlines, and keywords connected to bilateral tactile stimulation.

Usually during the first time, the patient experiences that the "exposure –habitual response" bond is clearly broken. The habitual response of avoidance or substance use changes into accessing the resource. Due to state dependent learning, the positive outcomes consequently appear at the peak of cue reactivity, while the successful reduction of cue reactivity is experienced then or immediately after. The therapist then continues the session until the Level of Urge (LoU) declines to value of 3 or less.

Step 4: Exposure II (Cue –related)

Return to the earlier reported risk situation. There might be a similar situation with higher therapeutic relevance. Check the Level of Urge (LoU) before you continue to expose the patient to the cue.

Then (in the case of alcohol) gradually expose the patient to the favourite beverage by opening the bottle, filling the glass and smelling the alcohol. Increase the Level of Urge (LoU) until it reaches a value of 7 or more. Maintain the dialog about the appearance of annoying memories, self limiting beliefs, troublesome feelings and body tension, while the patient is in the state of increased exposure. Usually the cue reactivity is less strong in the second exposure and is more difficult to

force up to a high level (which already indicates the influential presence of resilience). Continue the session when the Level of Urge (LoU) is perceived as a value of 7 or more.

Step 5: Rapid-blAiR: Third Activation of Inner Resource (at the Peak of Cue Reactivity)

It is not unusual that patients by this time are empowered in activating the resource without external help. Reported sensations such as "feeling the resource in one's backbone", "positive thoughts and feelings are appearing automatically and effortless" indicate the consolidation of resourcefulness.

Only if the Level of urge remains at a medium level by self-activating, does the use of the infinitive loop have to be emphasized by the therapist externally. Continue when the Level of Urge (LoU) declines to a value of 1 or less. Provide the opportunity to transform self-devaluating beliefs concerning the cue reactivity into self-confident conclusions and beliefs. A third exposure is optional but not mandatory.

Step 6: Timeline Examination

Continue the session by applying single-blAiR to one future risk situation, one memory of failure and one current risk, while exposing the patient to the substance. Complete the session when the "Validity of Resource Scale (VoR)" is more than a value of 5 for past, present and future on the timeline. When resourcefulness is applied, encourage the patient to pour the favourite beverage. Finally, a state of affect tolerance and management, performance enhancement and self- confidence is reinforced and overrides negative memories of the past and concerns for present and future.

Rapid- blAiR represent resourcefulness. Each of them becomes a conditioned stimulus (CS) at steps three, five and six boosting the process of overcoming cue reactivity. The tension reduction becomes a conditioned response (CR). It is suggested that the bilateral tactile stimuli reinforce the process by positively influencing the overactive parts of the brain while experiencing high cue reactivity.

Advanced Approach

Step 7: Exposure III (affect related)

After successful performance in the session, it seems reasonable to take the opportunity of treating any underlying emotional issues. Burdening memories frequently appear during the exposure steps including suppressed issues that have contributed to the onset and maintenance of substance abuse. By experiencing three times the benefits of resources and the capability to withstand craving, the patient has more trust in resilience and resourcefulness and this can enable the comprehensive resolution of relevant underlying issues.

Emotional arousal is noted as influencing memory consolidation. In particular, stress hormones, such as cortisol, mediate much of the effects of emotional arousal on subsequent retention of the event. These hormones, in turn, activate a variety of brain structures, including the amygdala, which appears to play a key role in modulating memory consolidation. The amygdala, when activated, influences a variety of other brain structures, such as the hippocampus and the nucleus accumbens that process information for memory. It is through this "orchestra" of brain structures that memories are eventually formed and stored, although the exact nature of memory storage still remains elusive (McGaugh, 2003). Affect Activation at Step 7 is conducted by framing and freezing the issue in terms of the most disturbing picture, the most disturbing negative belief, the most unpleasant emotion and the most annoying body sensation. Introduce the level of affect- disturbance scale which is similar to the former applied scales of inner perception. A value of 0 means no disturbance is perceived. A value of 10 means extreme level of disturbance in affect is perceived. Thereafter, the patient is encouraged to increase the general discomfort by passing the avoidance point. The

avoidance point is defined as the level of discomfort, where the patient habitually uses distraction strategies and thus inhibiting or neglecting the distress of the burdening memories.

At the peak of discomfort characterized by a self perception of loss of control, Rapid-blAiR is used. Perform five sets of Rapid-blAiR, each of 20 seconds length, without offering the infinitive loop – just the pleasant bilateral tactile stimulation. In general, the state of resourcefulness is already confirmed as a CR to the bilateral stimulation. The resource becomes activated without prompting the infinitive loop and is meant to reduce significantly the level of discomfort.

Complete the session by applying a voluntary state of resourcefulness when the level of disturbance is perceived as lower than a value of 3. If affect activation does not decrease after five sets, the cue has to be removed for a while, using the interruption technique for mapping across mental and emotional states and to discuss the application of varying strategies. If the session remains incomplete, continue support and advise the patient to engage in help seeking actions in his environment.

The Consecutive Sessions

When the first three sessions are successfully completed, the process of counter conditioning continues by applying three consecutive sessions with the topics "Subsequent damage of substance abuse", Biofeedback" and "Waiting out".

The topic of the fourth session "Subsequent damage of substance abuse "elaborates the broad damage that substance use has caused for the patient, his/her relatives and the environment. Being able to activate distressing pictures, thoughts and feelings is essential in high risk situations with prospects of pleasant impacts by substance intake.

Affect activation in session four combines the cue- exposure with guided imagery of high-risk situations promising pleasant outcomes mentally, physically and emotionally. At the peak of craving, the patient is trained in how to maintain the focus on the prospects of subsequent damage until the prospects dismantle early effect expectancy of the diverting substance intake.

Session five, with the topic "biofeedback", involves the opportunity to reduce cue reactivity by just following the simple instruction of calming down while connected to a biofeedback-device (Mc Craty, 2002). Session five is most suitable for patients with a low level of body awareness. It often boosts motivation and perception of self-efficacy, when patients become aware of their new capacity to perform relaxation instructions successfully at the peak of cue exposure.

The concluding session with the topic "Waiting out" encourages the patient not to use a single coping skill at all. The ability of "Waiting out" suggests to the patient just to wait it out until the peak is over. Paradoxically, the therapist has to monitor that patients do not use earlier trained skills gained from session one to five in this session. At least several risk events are mentally activated at the presence of the favourite substance and checked until the resource of "waiting out" is perceived as a stable and general coping strategy. The process of counter conditioning then is complete – the sailor becomes empowered, steering the boat in a predictable manner to the chosen port.

CONCLUSION

Facing the addiction to a substance, or becoming aware of the reality of the trap of addictive behavior, often seems unmanageable for individuals, because craving or compulsive behaviour reveals loss of control over intake and its consequences. Based on the principles of cue exposure and response prevention in behaviour therapy, this approach integrates methods from hypnotherapy (applying ideodynamic resources) where they matter most – close to substance use or the acting out of compulsive behaviour. Individuals are empowered to regain control over cues and addictive

behaviour by six subsequent sessions. Highly resilient individuals with a certain ability to inhibit cue reactivity benefit from utilizing resources, as well as those less resilient individuals who have a low ability to inhibit cue reactivity. Further research on the underlying neurophysiologic mechanisms, effectiveness and adaptability of the treatment approach is required.

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APPENDIX

Brief Report on Jorg Albers Research Results[4]

At **Sydgaarden**, a treatment centre for chemical dependency and addictive behaviour in South-Denmark, the cue exposure treatment as outlined in this chapter was administered systematically for 20 months (Albers, 2005). The structured interplay of resilience and resourcefulness was conducted across six group sessions in aftercare-treatment with 6-8 participants in each group. Each participant had successfully completed a 12 week inpatient program before entering the ambulant aftercare.

After finishing the residential treatment program, patients were randomly divided into an experimental group and a control group. The experimental group participated in the cue exposure treatment, while the control group received the standard aftercare program. Additionally, both groups were compared with patients from a 6 week day care treatment program. Patients from the

[4] Questions regarding the research can be directed to the author at his email address: jorgalbers@aus.sja.dk

control group and the day care completed the questionnaire at least 3 months after discharge from treatment and the project group at least 3 months after ending the aftercare program.

Results below indicate that participants who performed cue exposure treatment could better maintain sobriety compared to participants who participated in common aftercare treatment or day care.

The numbers of patients taken into account for the group were: (1) Number of Experimental group patients: 27 out of an initial 28; 96.5% response rate; (2) Number of Control group patients: 30 of an initial 58; 51.7% response rate; and (3) Number of Day care patients: 34 of an initial 54; 62.9% response rate.

Table 1 shows the number of patients across the three time frames encompassing the period from discharge to evaluation.

Table 1: Number of Patients across Time Frame from Discharge to Evaluation

Number of Patients in Each Group Initially				**Number of Months after Discharge**		
			Total	3-6 months	7-12 months	13+ month
Experimental group	Relapse	NO	**21 (77.8%)**	**4 (14.8%)**	**8 (29.6%)**	**9 (33.3%)**
		YES	**6 (22. 2%)**	**0 (0%)**	**2 (7. 4%)**	**4 (14. 8%)**
			Total	3-6 months	7-12 months	13+ month
Control group	Relapse	NO	**16 (53. 3%)**	**6 (19. 8%)**	**6 (19. 8%)**	**4 (13. 2%)**
		YES	**14 (46. 7%)**	**6 (19. 8%)**	**3 (9. 9%)**	**5 (16. 5%)**
			Total	3-6 months	7-12 months	13+ month
Day Care group	Relapse	NO	**17 (50%)**	**6 (17. 4%)**	**6 (17. 4%)**	**5 (14. 5%)**
		YES	**17 (50%)**	**5 (14. 5%)**	**4 (11. 6%)**	**8 (23. 2%)**

Details of Findings

Results of the comparisons of the relapse quota for the project group, control group and day care group after the treatment are set out below.

A). Participation in after care had a significant positive influence on sobriety. Patients in the experimental group could better maintain sobriety than those from the control group; statistically significant at $p = 0.05$, Chi-Square Test.

B). Patients in the experimental group could furthermore better maintain sobriety than those from the day care group; statistically significant at $p = 0.02$, Chi-Square Test.

C). There was no significant difference in the relapse quota between the control group and the day care group ($p = 0.79$, Chi-Square Test).