Treatment of Limerence Using a Cognitive Behavioral Approach: A Case Study

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Abstract
Limerence is an underresearched condition of unknown prevalence that causes significant loss of productivity and emotional distress to sufferers. Individuals with limerence display an obsessive attachment to a particular person or “limerent object” (LO) that interferes with daily functioning and the formation and maintenance of healthy relationships. The current study proposes a conceptualization of the condition in a 28-year-old individual and describes a treatment approach using cognitive-behavioral techniques, most notably exposure responsive prevention as used in the treatment of obsessive-compulsive disorder. The number and type of compulsive rituals performed by the treated individual were notably decreased at 9-month follow-up after treatment, and a subjective assessment of dysfunctional thought patterns related to the LO also suggested improvement. A novel screening instrument is presented, as validated screening instruments do not yet exist. Implications for diagnosis and treatment are discussed.

Keywords
cognitive behavioral therapy, obsessive-compulsive disorder, anxiety

Introduction
Psychologist Dorothy Tennov coined the term limerence in the early 1970s after conducting over 300 interviews to gather qualitative data on the experience of romantic love (1). Tennov noted a particular manifestation of “being in love” that many of her interviewees described in a similar way – an involuntary, overwhelming longing for another person’s attention and positive regard. This attachment was typically unrequited, developing for someone unavailable to reciprocate feelings.

Uncertainty is the driving force behind the development and maintenance of limerence (2). The individual experiencing limerence feels an attraction towards a particular “limerent object” (LO) whose willingness to reciprocate is uncertain. The greater the degree of uncertainty, the more intensely the individual ruminates about the LO, and the greater the desire for reciprocation. This pattern of uncertainty about the LO’s feelings and availability may distinguish limerence from the early stages of a typical romantic relationship, in which both partners often experience infatuation or obsession with each other.

Individuals experiencing limerence struggle with near-constant rumination about the LO (3). They may also engage in rituals that interfere with their other responsibilities, such as staring at photos of the LO or repeatedly reading messages from them. Frequently, the sufferer mentally replays past interactions with the LO, searching for indications of how the LO might feel towards them. When the LO shows affection or approval, the limerent individual’s mood soars to ecstatic, and in the face of actual or perceived disapproval, the mood plummets to despair (3).

Wakin and Vo furthered Tennov’s work with a proposed model of limerence that drew parallels with both obsessive-compulsive disorder (OCD) and substance use disorder (SUD) yet distinguished it as a unique condition (3). Due to the presence of both intrusive thoughts and compulsive rituals, individuals experiencing limerence may meet diagnostic criteria for OCD if these thoughts and rituals cause significant distress and impairment in functioning (4). Wakin and Vo further noted that separation from the LO results in withdrawal symptoms such as pain in the chest or abdomen, sleep disturbance, irritability, and depression. Additionally, the compulsive behavior that accompanies limerence is reminiscent of a substance use disorder, namely the amount of time that is spent planning for and gaining access to the LO, even when the limerent individual is fully aware of

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the negative effects of this behavior (3). Fisher et al. further assert that romantic love may itself be a form of addiction, because brain scanning has revealed that feelings of intense romantic love involve the same regions of the brain, referred to as the reward center, that are also activated in behavioral addictions, for example, gambling, or SUD (5).

Tennov reported that limerent episodes may occur just once in a person’s life or sequentially for a series of different limerent objects. Each episode may last for a few weeks or for decades, with the average episode lasting between 18 months and 3 years (1). Individuals of all ages and genders may be affected, and the LO is not necessarily of the same gender to which the individual is sexually attracted, implying that limerence is distinct from sexual attraction (6). As Tennov notes, “sex is neither essential nor, in itself, adequate to satisfy the limerenent need…Limerence is a desire for more than sex…” [emphasis original] (1).

Clinical descriptions of the course and treatment of limerence are extremely scarce outside of Tennov’s seminal book (1) and Willmott and Bentley’s more recent work (6). Therefore, in the absence of established diagnostic criteria and treatment protocols for limerence, clinicians may reasonably use evidence-based treatment for OCD, most notably exposure response prevention (ERP), to treat an individual presenting with limerence. ERP is a behavioral therapy that involves deliberately exposing an individual to a feared stimulus and preventing the individual from engaging in rituals that alleviate their anxiety (7,8). In the case of limerence, one may imagine the feared stimulus as separation from or rejection by the LO.

Description
The current case study describes treatment incorporating exposure response prevention (ERP), cognitive restructuring, and behavioral activation techniques with a 28-year old female reporting a lifelong history of limerence. The individual undergoing treatment was the author (“BW”), and therefore consent to present this case study in article format is assumed. BW began treatment for limerence with a licensed clinical social worker in March 2016 as a 28-year old single, white cisgender female. Consent for treatment was obtained prior to beginning services. BW received individual, 45 min psychotherapy sessions once every 2 weeks throughout the treatment period.

Case History
BW reported a history since the age of 4 years of a series of sequential, non-overlapping LOs. She stated that while she never felt sexual attraction toward the LO, she experienced an intense and unrelenting desire to be closer both physically and emotionally to the LO. Her past LOs were females in a mentoring role, such as camp counselors or teachers. Especially as an undergraduate college student, obsessive thoughts about her LO negatively impacted her academic performance.

Presenting Concerns
When treatment commenced, BW reported spending several hours a day ruminating about the current LO, a coworker, and past encounters with her. She spent time on social media accounts looking at photos of the LO and frequently found ways to mention the LO in conversation with others. She was comforted by reminders of the LO in the environment, for example, passing the LO’s favorite restaurant, and expressed that it was important to her to know how to access the LO if she needed her. BW cited multiple negative clinical consequences of limerence, such as difficulty concentrating at work and intense mood swings in response to contact with LO (euphoria) and separation from LO (depression), consistent with descriptions by Tennov (1) and Wakin and Vo (3). BW further reported difficulty finding the motivation to date available others due to preoccupation with the LO.

Case Conceptualization
A case conceptualization diagram, adapted from Beck (9), is provided in Figure 1. As shown in Figure 1, BW’s automatic thoughts related to limerence centered around idolization of her LO, a desire for reciprocity of feelings, and worries about how well she presented herself in front of the LO. These automatic thoughts led to unpleasant emotional and physical reactions. In response, BW engaged in rituals to increase her closeness to the LO, which brought a relief of anxiety.

Beck asserts that automatic thoughts ultimately derive from core beliefs (9). In BW’s case, 2 core beliefs were identified that related to limerence: “I am not as good as others,” and “I am vulnerable if I lose control.” Beck further explains that individuals cope with negative core beliefs by developing conditional assumptions, also called intermediate beliefs (9). As shown in Figure 1, BW’s conditional assumptions centered around convincing herself that she did not want to be in a committed intimate relationship.

Treatment Approach
Session 1: Baseline assessment of rituals. BW first tracked the time spent on every “limerent ritual” that she experienced during a 2-week period using a form developed for the treatment of OCD (10). During this 2-week period, BW spent a total of over 8 h engaged in all overt rituals, and she estimated that rumination about the LO consumed between 30–90 min per day.

Sessions 2 and 3: Exposure response prevention. After monitoring the frequency of rituals for 2 weeks, BW resisted completing all rituals and tracked slip-ups. Willmott and Bentley advised that sufferers should completely avoid contact with their LO, much like an individual with SUD attempts to eliminate all use of the abused drug (6). BW was not advised similarly, as her current LO was a coworker,
and she was unwilling to consider a change in her work situation for the express purpose of avoiding an LO. Therefore, treatment centered on reducing her compulsions rather than reducing contact with the LO.

Session 4: Cognitive restructuring. Wakin and Vo noted that many sufferers cope with shame over limerence by placing greater importance on the relationship with the LO (3). These idealized thoughts and beliefs serve to maintain the limerent cycle by increasing the urgency for emotional reciprocation.

BW used a list of common cognitive distortions to identify irrational thoughts and beliefs about the LO and constructed more balanced alternative statements, such as “I have had many moments of joy and fulfillment that did not involve her.”

Session 5: Behavioral activation. The remainder of treatment focused on helping BW to develop more adaptive habits that would contradict her previously held belief that she had to rely on limerent rituals for reassurance, a sense of well-being, or alleviation of boredom. BW and the therapist collaborated on a list of activities that would provide both social connection and other benefits such as physical exercise or a sense of mastery.

Figure 1. Case conceptualization for development and maintenance of limerence.
Follow-Up

The self-monitoring form was repeated 9 months following its initial administration prior to the intervention. As in the first assessment, all limerent rituals were tracked for a period of 2 weeks. At follow-up, BW reduced the amount of time spent engaged in rituals from about 8 h to just 10 min, and she reduced the number of occurrences from 225 to 10 rituals.

In addition to a decrease in the number of limerent rituals that she engaged in, BW reported at 9-month follow-up that her thinking patterns about the LO had changed. While she continued to feel drawn to the LO and thought of her often, she was able to recognize her thoughts and emotions as the product of her limerence.

Validated screening instruments do not currently exist for limerence. In the weeks following her treatment for limerence, BW developed a questionnaire (see Appendix A) to assess whether her treatment gains were maintained. She self-administered the screening tool about once every 2.5 weeks for a 7-week period in August-September 2016. Results are shown in Table 1.

Lessons Learned

Results from this case study demonstrate that exposure-response prevention, cognitive restructuring, and behavioral activation techniques were effective in reducing the frequency and number of compulsions as well as distorted beliefs in an individual with self-diagnosed limerence. Without a clinical definition or recognition by the Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), even prevalence estimates of limerence are lacking. Treatment protocols are even more distant; most behavioral health clinicians have never heard the term “limerence,” much less knowingly treated it (3). Treatment approaches for this case were adapted from those used for anxiety disorders such as OCD.

However, limerence is in many ways distinct from OCD. While most with OCD have little ability to tolerate uncertainty, for BW, uncertainty was a driving force of the limerence. BW believed that should the LO express interest in a committed, deeper relationship, the limerence would dissipate, which is consistent with Tennov’s reported observations (1). The attraction of the LO is her unavailability. As Tennov notes, “your degree of involvement increases if obstacles are externally imposed or if you doubt LO’s feelings for you (1).” None of BW’s LOs identified as lesbian or bisexual, and many were too many years older than she was at the time to be viable partners, for example, a 25 year-old teacher when BW was a young teenager. While not a universal experience of all individuals with limerence, BW’s pattern of LOs reflects Tennov’s description of “hero worship” by a young girl or woman towards an older woman (1). In addition to a desire to become physically and emotionally close to the LO, BW also experienced thoughts and feelings of idolization towards her series of LOs, whom she viewed as superior to herself in terms of personality characteristics, physical characteristics, and academic or professional achievements. She sought not only to become close to them but to emulate them. This idolization is a defining feature of limerence, though contrary to expectation, Bringle et al found that learning more information about a desired love object did not decrease obsessiveness (11).

Individuals with limerence experience a chronic, debilitating need to ruminate, idealize, and connect to the LO through rituals and compulsions. BW would often walk past or drive past an LO’s home or workplace when she felt restless due to anxiety, boredom, or both. She explained that this ritual made her feel reassured that she knew how to reach the LO “if I needed her” and that her objective in walking or driving past was not to “stalk” the LO by taking note of whether she was present and what she might be doing.

BW initially demonstrated little interest in a romantic relationship, expressing a fear of losing her independence. Later in treatment, she acknowledged that her reluctance to seek out a reciprocal relationship was partly due to the sense of safety and euphoria that thoughts of the LO offered her. BW struggled to give up various safety behaviors throughout treatment, as perceived access to an LO had been consistent and reassuring throughout her life.

Limerence is distinct from the romantic or sexual attraction typically experienced by most individuals. Willmott and Bentley refuted Tennov’s claim that the LO must be a potential sexual partner, noting that many limerent individuals deny sexual attraction to their LOs and experience sexual attraction to the opposite gender of the LO (6). Despite her limerent objects always having been female, BW noted that she had experienced romantic interest for males throughout her adolescence and adult life. She recounted a few specific instances of having a “crush” on an available male around her same age at the time. In each of these instances, limerence existed simultaneously for a female LO, and the thoughts and emotions associated with limerence far exceeded the intensity of her feelings of attraction for the male on which she had a crush. She would spend time fantasizing about a potential interaction with an LO in which she received a simple kind word in a passing conversation, while ignoring the potential for a more fulfilling relationship with an available partner in whom she was interested.

The present study has a few limitations. At the time of the treatment described here, no published screening instruments

| Table 1. Limerence Symptom Severity as Measured by Novel Screening Instrument. |
| Days following initial administration | Score | Proportion of total points (60) |
|--------------------------------------|-------|-----------------------------|
| 0                                    | 43    | 71.7                        |
| 12                                   | 38    | 63.3                        |
| 30                                   | 30    | 50.0                        |
| 49                                   | 23    | 38.3                        |
existed for limerence. Since then, Wolf has proposed a tool to measure limerence and conducted initial work towards validation (12). Carswell and Impett point to the lack of a consistent measure of attraction as a key limitation in the existing research on limerence (2). As this is a single case study, generalization of the results to other patients with limerence cannot be assumed before interventions are demonstrated effective in multiple trials. Additionally, a standard diagnosis of limerence does not yet exist, as it does not appear in the DSM-V. Finally, assessments of both the behavioral and cognitive symptoms of limerence were self-reported by BW and therefore subject to reporting bias and possible placebo effect.

Conclusions

This case study describes the experience of an individual experiencing obsessive thoughts and compulsive rituals intended to maintain real or imagined proximity to an attachment figure, a condition that has been called “limerence” in prior work. The individual benefitted from outpatient psychotherapy utilizing cognitive behavioral techniques, as evidenced by a subjective report of improved functioning.

Multiple descriptions of limerence’s debilitating consequences exist in popular media, self-help books, and in Internet-based self-help groups (3). Despite increasing attention to the condition in recent years, the clinical community lacks validated screening instruments and treatment protocols. In fact, many mental health clinicians are largely unaware of even the concept of limerence (3). Further research is imperative to address this gap as well as to estimate the burden of limerence to society, as the financial cost of lost productivity when individuals with the condition remain untreated. Neuroimaging studies would provide evidence regarding the hypothesized similarity between limerence and substance abuse disorder. The intention of sharing this case study is to encourage these critically needed research studies as well as provide a resource for clinicians and individuals who struggle with limerence, a condition that has previously remained almost invisible to the behavioral health community.

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The author acknowledges that the work is the author’s own. This manuscript has not been previously published and is not under consideration for publication elsewhere. As this is a single case study, approval from an Institutional Review Board was not necessary. Because the patient in this case study was the author, no steps to ensure confidentiality were necessary.

Appendix A

Original Screening Tool to Assess Symptoms of Limerence.

As you answer questions #1–8, think about the past 2 weeks.

For items #9–20, indicate how strongly you agree with the statement.

1. Do you think of the person many times each day? N (0) Y (3)
2. More often than not, do you think of the person for reassurance when you are anxious or stressed? N (0) Y (3)
3. Have you searched the Internet or another source for photos of the person or other personal information about him/her, without a distinct purpose for doing so? N (0) Y (3)
4. Have your friends or family members asked you why you like the person so much or why you talk about him/her so often? N (0) Y (3)
5. Have you tried to stop talking about or thinking about the person? N (0) Y (3)
6. Do you usually feel nervous when you are about to see the person? N (0) Y (3)
7. Have you attempted to get close to the person by driving or walking by places that are associated with him/her, even if you know that you will not see him/her there? N (0) Y (3)
8. How often do you have trouble concentrating on work, school, or other daily activities because you are thinking of the person? Every day (3) Most days (2) Some days (1) Rarely or Never (0)
9. My interactions with the person change my mood. Positive interactions cause positive changes in my mood, and negative interactions cause negative changes in my mood. These mood changes are extreme or feel out of control.

Strongly agree (3) Agree (2) Neither agree nor disagree (1) Disagree (0) Strongly disagree (0)

10. I crave physical closeness with the person but feel that I cannot ask for as much as I would like.

Strongly agree (3) Agree (2) Neither agree nor disagree (1) Disagree (0) Strongly disagree (0)
11. I worry that I will not present myself well enough, in terms of my physical appearance and behavior, when I am around the person. 

12. I would rather be the person than be myself.

13. I spend time thinking about the person when I should be thinking about other things.

14. Many times each day, I think about experiences that I have had with the person in the past.

15. I am often afraid that I will say or do something that will make the person view me unfavorably.

16. I care about the person so much that it would be difficult for him/her to care about me just as much.

17. The person is unaware of how much I care about him/her.

18. When I miss an opportunity to spend time with the person, I become more angry or sad than I would with other important people in my life.

19. Objects associated with the person (gifts from him/her, items that he/she has touched) have special meaning to me.

20. I wish that the person liked or admired me just as much as I like and admire him/her.

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