The Potential Role of Dependency in the Weaning Process: The Case of a 57-Year-Old Woman Connected to a Mechanical Ventilator

Liat Ayalon

Clinical Case Studies 2007 6: 459
DOI: 10.1177/1534650107296819

Clinical Case Studies
Volume 6 Number 6
December 2007 459-467

10.1177/1534650107296819
http://ccs.sagepub.com
hosted at
http://online.sagepub.com

The Potential Role of Dependency in the Weaning Process

The Case of a 57-Year-Old Woman Connected to a Mechanical Ventilator

Liat Ayalon
Bar Ilan University, Ramat Gan, Israel

Weaning from the mechanical ventilator is considered a difficult task, with the majority of patients remaining permanently connected to the machine. This case report demonstrates the role of dependency and denial as important factors in the weaning process from the mechanical ventilator. Supportive psychotherapy and relaxation training were provided to Rebecca (pseudonym), a 57-year-old woman connected to the mechanical ventilator. After numerous failures to wean, it was decided that Rebecca would leave the rehabilitation hospital to an assisted-living facility, connected to the mechanical ventilator. However, following a repeated discussion of Rebecca's prognosis and discharge plans, Rebecca weaned off the mechanical ventilation and made "a miraculous recovery" within days. This case study demonstrates the significant role that psychological factors play in the patient's ability to wean off the mechanical ventilator. Integrating psychology and medicine can result in better health care outcomes.

Keywords: *dependent personality disorder; therapy; psychosomatic; denial; mind-body distinction; respiratory illness*

1 Theoretical and Research Basis

Mechanical Ventilation

Mechanical ventilation is often indicated in case of respiratory or cardiac failure. There are approximately 11,419 patients chronically connected to mechanical ventilators in hospitals in the United States (American Association for Respiratory Care, 1991). While the intention in most cases is to provide temporary respiratory support with the hope of eventually restoring capacity for independent breathing, the outcomes are quite disappointing. Esteban et al. (2004) found that about 55% of older adults and 45% of younger adults connected to a mechanical ventilator die during their hospital stay and many remain permanently connected to the ventilator machine and fail to wean off. Research also found that many patients connected to the mechanical ventilator report high levels of anxiety and fear and relatively low quality of life (Arslanian-Engoren & Scott, 2003; Chlan, 2003; Kaub-Wittemer, Steinbuchel, Wasner, Laier-Groeneveld, & Borasio, 2003). There is some evidence that relaxation training, biofeedback, and music can ease the anxiety experienced by patients connected to the mechanical ventilation, but research is limited (Chlan, 1998; Hannich et al., 20004; Lee, Chung, Chan, & Chan, 2005).

Medical Hospitalizations and Co-Morbid Psychiatric Diagnosis

The traditional mind–body dichotomy does not apply well given research that found that patients admitted to a medical hospital had a four-fold risk of having been admitted to a psychiatric hospital. This risk further increases as the number of medical hospitalizations increases (Fink, 1990). Interestingly, this association was found in a country that has a universal health care insurance and, thus, financial limitations that may prevent people from seeking timely mental health services cannot explain the association. Somatoform and factitious disorders capture a significant portion of hospitalized medical patients (Fink, 1992), but many other psychiatric conditions, such as depression, anxiety, and personality disorders, also are prevalent among medical patients (Ghose, Williams, & Swindle, 2005; Hansen, Fink, Frydenberg, & Oxhoj, 2002). Research also has shown that presence of mental illness is associated with increased mortality and morbidity and with a longer and more complicated hospital stay (Beekman, Penninx, Deeg, de Beurs, Geerling, & van Tilburg, 2002; Unutzer, Patrick, Marmon, Simon, & Katon, 2002). Obviously, the relationship between medical and mental illness can go both ways, such that the struggle with multiple medical conditions may leave its mark on psychological functioning or that impaired psychological functioning may result in compromised physiological functioning.

Early Retirement

Early retirement is considered a risk factor for medical hospitalizations. Research has shown that early retirees use medical services at disproportionately higher rates even after controlling for their medical conditions (Wallman, Burel, Kullman, & Svardsudd, 2004). Contrary to popular belief, early retirement is associated with ample negative consequences, including increased mortality and morbidity (Tsai, Wendt, Donnelly, de Jong, & Ahmed, 2005). It also is associated with an increase in mental illness and a decrease in quality of life (Buxton, Singleton, & Melzer, 2005).

2 Case Introduction

Rebecca (pseudonym) was a 57 year-old, White, separated woman at the time of hospitalization. She had one son whom she raised on her own. She retired at 55 from a secretarial position and has become increasingly disabled since then. Reportedly, her mobility became increasingly compromised due to “aging” and she started to use a cane and limit her activity level soon after retirement. She did not have any identified disease processes, but frequently suffered from the common cold and the flu. In the winter of her arrival to the rehabilitation hospital, she developed severe pneumonia as a result of flu complications. Because of her respiratory illness, she was intubated and put on ventilatory support. A month following intubation, she was transferred to a rehabilitation hospital in an effort to wean her off the mechanical ventilator. The particular rehabilitation hospital was a 100-bed facility designed to serve individuals who suffer from complex respiratory conditions and to assist them in the weaning process.

3 Presenting Complaints

Initial psychological consultation and evaluation were initiated for all patients at that particular hospital within the first 48 hours. However, following two weeks of failed attempts to wean Rebecca off the ventilator machine, Rebecca was referred once again to a psychology consult to assist in her weaning process.

Rebecca reported sadness, difficulties falling and staying asleep at night, a decrease in her appetite, concentration difficulties, and irritability. She also reported concerns and fears about her lack of ability to wean off the mechanical ventilator. She was pessimistic, yet comfortable, with her slow progress. She stated that her son would have to take care of her at home given her current condition and the likely ongoing impairment she is about to suffer once discharged from the hospital.

4 History

Rebecca reported no significant mental or medical health history. Reportedly, her health started to deteriorate following her retirement. Since her retirement, she was hospitalized four times over a two-year period due to medical complications primarily related to the respiratory system. Reportedly, because she became increasingly concerned about her health, she started limiting her activity level and increasingly relied on her son for assistance with activities of daily living. Decreasing her activity level resulted in impaired mobility to the point of needing a cane for transfers. At that time, her 35-year-old son started dating seriously and talking about the prospects of leaving his mother's house and moving in with his girlfriend. Once she mentioned her son's expected departure, Rebecca quickly burst into tears and started talking about her disapproval of the her son's relationship and her expectations that her son would take care of her even if she is discharged from the hospital in a completely disabled state. According to Rebecca, it was her son's duty to take care of her.

5 Assessment

Rebecca appeared older than her stated age and more disabled than would be expected given her age and medical condition. She tended to reach out to the psychologist's hand even during the first meeting, without any indication from the psychologist that such an act would be welcome. She cried easily and her affect was sad. Rebecca tended to vacillate between extreme sorrow over her misfortunes and passive acquiescence of her condition. She did not present with any delusional or psychotic features and denied suicidal or homicidal ideation.

Rebecca's performance on a brief screening of cognitive functioning (i.e., Mini Mental Status Exam) was within normal limits. Other than this brief cognitive screen, no formal assessment procedure was performed. This was because given the level of disability of the majority of the patients at that particular hospital, formal assessment is discouraged in order to not burden the patients.

6 Case Conceptualization

Rebecca reported many anxiety and mood symptoms. She met criteria for major depressive disorder, single episode, and anxiety disorder not otherwise specified. In addition, many features in her presentation were indicative of the presence of an Axis II dependent personality disorder. These features became more apparent as therapy progressed.

Dependency

Dependency is the tendency to disproportionately seek other's support and reassurance. Research has shown that dependency is associated with eagerness to please, especially authority figures, even at the expense of compromising one's own wishes and needs (Bornstein, 1992). Cognitive theories explain dependency as stemming from a powerless and helpless attributional style (Abramson, Seligman, & Teasdale, 1978), so that those individuals who perceive themselves as powerless and external events as beyond their control resort to dependency on others. The use of denial and avoidance of conflicts often characterizes individuals with dependent characteristics (Millon, 1981).

Dependency has been associated with numerous psychological disorders, including increased depression, conversion disorder, substance abuse, and anxiety (Bornstein, 1992). It also has been associated with a variety of medical conditions. It was found that dependent individuals are likely to view their problems somatically and to seek professional help for physical symptoms (Greenberg & Bornstein, 1988). Apparently, physicians are quite aware of the difficulties posed by patients with dependent characteristics; when asked to nominate their most difficult patients, physicians were most likely to select those patients with dependent characteristics (Schafer & Nowlis, 1998).

Rebecca's presentation had many of the characteristics of a dependent individual described above. Her constant attempts to hold the hand of the psychologist, even during the initial evaluation session, the strong emphasis she placed on her son as her "savior" who would and should take care of her even when completely disabled, and the relative ease with which she accepted her failure to wean, all suggested strong dependency needs. She viewed herself as helpless without the support of her son. Furthermore, at the prospect of losing her son's support, she attempted to replace his support with the support of medical professionals and equipment (i.e., the ventilator machine). Similarly to her view of herself as helpless without her son's support, she viewed herself as helpless if disconnected from the mechanical ventilator. Her general response to all these threats to her dependency was increased anxiety and somatic complaints.

7 Course of Treatment and Assessment of Progress

In addition to a supportive approach aimed toward assisting Rebecca in "venting" her feelings of frustration about her lack of ability to wean off the mechanical ventilator and

her son's growing independence, there was an attempt to change Rebecca's view of herself in the world using cognitive techniques. A cognitive restructuring approach focused on changing Rebecca's major schemas of "being helpless" and "being deserted and alone in the world." While Rebecca was able to identify the automatic thoughts that stemmed from these dominant schemas, she struggled with identifying alternative beliefs that promote independence and preferred therapy to be a source of comfort and support rather than change.

Two weeks into therapy, relaxation training aimed toward assisting Rebecca in her weaning process was initiated. Because of her physical limitations and the fact that she was connected to the mechanical ventilator, guided-imagery was selected. Rebecca was instructed to visualize herself in a safe place, surrounded by the support and comfort she was yearning for. She was then instructed to visualize herself breathing on her own and leaving the hospital, disconnected from the mechanical ventilator. While practicing these new skills, Rebecca reported a substantial reduction in her anxiety level. Over a 10-day course, she was able to practice these relaxation techniques 5 times. Reportedly, her average level of anxiety declined from 7 on a 10-point scale, with 10 being the maximum score, to 3. She was then instructed to practice these new skills during her weaning process. Over another 10-day course, during which 5 weaning attempts were made, Rebecca was able to increase her average weaning time by a total of 6 minutes and reported a reduction in her anxiety from an average of 9 in the initial weaning session to 6 at the end of the fifth session.

While encouraging, this progress was inadequate, especially for a rehabilitation hospital that is geared toward a short hospital stay. As a result, two meetings with Rebecca, the medical team, and her son were conducted to explain to her and her son about the prognosis and reach an agreement regarding discharge plans. In the meetings, it was clear that the son had no intentions to take care of his mother at home when she was fully connected to a ventilator machine. It was decided by all that Rebecca was to be discharged to a skilled nursing facility fully connected to the ventilator machine if her condition continued to be stable in the next few days.

Several days following this decision, the psychologist came by Rebecca's room in an attempt to start the process of termination. When the psychologist discussed Rebecca's expected leave, she was in a state of total shock. She started crying adamantly, reaching out for the psychologist's hand, and claiming that she was never before informed about her discharge plans. The psychologist took a supportive role during that time, yet was persistent about her expected leave in the near future. Following this event and because of Rebecca's emotional reaction, a third meeting with the entire medical team was conducted. During that meeting Rebecca began to acknowledge the fact that she was about to leave the hospital. Two days later, during another attempt to wean Rebecca off the mechanical ventilator, she, for the first time, did not ask to be put back on the mechanical ventilator as she did in previous times and reported only minimal anxiety during the weaning process. A week later, she was discharged from the rehabilitation hospital fully weaned from the mechanical ventilator. However, she remained connected to her catheter, stating that she "feels more comfortable this way, as her mobility has become increasingly compromised while at the hospital."

8 Complicating Factors

Dependent Personality

Medications often are ineffective in the treatment of personality characteristics and, thus, psychotherapy remains the treatment of choice (Stone, 1993). However, the tendency of individuals with dependent characteristics to be compliant and to please authority figures often makes therapy difficult and the prospects of change slim. Thus, the goal of therapy should be set on encouraging independence and self-sufficiency. This goal often is in contradiction to the nature of therapy that encourages at least some dependency and reliance on the therapist. In the therapy of dependent personality disorder, it is recommended to stick to a very short and problem-focused course to decrease dependency. In addition to the acquisition of social skills and the focus on assertiveness training, therapy can focus on changing faulty cognition about self in relation to others (Beck & Freeman, 1990).

In the case of Rebecca, the hospital setting dictated a short and problem-focused course of therapy. However, hospital settings tend to encourage obedience, sickness, and dependency. These are counter indicated in the case of individuals with dependent personality characteristics. Thus, doing bedside counseling with a patient with dependent characteristics that actively attempts to challenge the therapeutic boundaries can be a difficult task.

Balancing Between Motivating Individuals to Change and Accepting Stability

It is very difficult to draw the line between motivating an individual to change and accepting one's lack of willpower or ability to change. This is a difficult task in psychotherapy in general. However, the issue becomes even more difficult when a psychotherapist is asked to encourage a medical change in the absence of medical tools to evaluate the individual's ability to change. Differentiating between psychological and medical factors that hamper change is a difficult task that requires a strong collaboration between medical and mental health professionals. Naturally, in a medical setting, medical problems receive priority over mental health problems even if the latter play a major role in the medical condition of the individual.

The transtheoretical model of change identifies five stages people go through when changing problem behaviors (Prochaska, DiClemente, & Norcross, 1992; Prochaska, Velicer, DiClemente, & Fava, 1988). The *precontemplation* stage is when the individual has no intention of changing one's behavior in the near future. This is followed by c*ontemplation* in which awareness of the problem is developed, but no specific decision to make a change is made. In the *preparation* stage, individuals are ready to take action toward change. This is followed by the *action* stage in which behavioral modification takes place. Last is the *maintenance* stage in which individuals work toward preventing relapse and preserving behavioral change.

Throughout most of her course at the hospital, Rebecca was at the precontemplation stage. Only when it was clear that her stay at the hospital was about to end did she respond in sincere efforts to wean from the mechanical ventilator. The fact that the psychologist was

the one who communicated the message of transfer from the rehabilitation hospital in a way that it was finally "heard" by Rebecca is perplexing, as this message was delivered to Rebecca several times before by the medical team, her son, and the social worker. Possibly, the opportunity to express her emotions in a safe environment allowed Rebecca to move so dramatically through the stages of change from precontemplation to action. This is supported by the transtheoretical model that has argued that dramatic relief (i.e., when the individual expresses his or her feelings about the problem behavior and its potential solutions) is a major source of change.

Once the message finally reached Rebecca, it made a huge change in her level of motivation and subsequently resulted in her weaning off the mechanical ventilator. Apparently, however, the message was not strong enough to motivate Rebecca to get off the catheter and when leaving the rehabilitation hospital, she remained physically connected to one medical device with the subsequent prognosis of eventually becoming connected to other devices as a result. This case serves as a good demonstration of how difficult it is to assist individuals in the direction of change and in maintaining change over time. The challenges are mainly due to the constant tension between taking on a supportive role by assisting the patient to accept stability versus taking on the role of a catalyst that motivates change.

9 Follow-Up

No follow-up information was available. However, based on Rebecca's decision to stay connected to the catheter, her medical prognosis appeared rather gloom as she remained susceptible to future infections and complications.

10 Treatment Implications of the Case

Collaboration Between Mental Health and Medicine

There is ample research demonstrating the effectiveness of collaborative care models in the management of chronic conditions (Bruce et al., 2004; Unutzer et al., 2002). This model advocates the coordination and monitoring of care by a care manager. The care manager works closely with patients and medical providers and is responsible for providing patient education and activation, monitoring progress in treatment, and providing brief psychotherapy as indicated (Pincus, Hough, Houtsinger, Rollman, & Frank, 2003). The present case provides yet another demonstration of the importance of collaboration between mental health and medicine.

11 Recommendations to Clinicians and Students

Conducting psychotherapy in a medical setting can often be quite challenging because many medical settings do not allow for privacy or intimacy. In addition, the role of the

therapist often is unclear, at least in the eyes of the patient that tends to perceive the therapist as a medical doctor or as inferior to medical personnel and as such, the one who is treating the "unreal problems" rather than the important medical problems. Acknowledging these challenges and establishing one's place in the team as well as in the psychotherapeutic relationship are major tasks that need to be achieved in order for a psychotherapeutic relationship to develop. The present case provides a demonstration of how important the therapist's role can be and how a therapeutic relationship can make a tremendous impact not only on psychological factors but also on medical factors. Acknowledging the therapist's role as a potential facilitator of change is the first step in promoting such a change.

References

Abramson, L., Seligman, M. E. P., & Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology, 87*, 49–74.

American Association for Respiratory Care. (1991). *A study of chronic ventilator patients in the hospital: A patient profile and analysis conducted by the Gallup organization for the American Association for Respiratory Care*. Dallas: AARC.

Arslanian-Engoren, C. & Scott, L. D. (2003). The lived experience of survivors of prolonged mechanical ventilation: A phenomenological study. *Heart & Lung, 32*(5), 328–334.

Beck, A. T., & Freeman, A. (1990). *Cognitive therapy of personality disorders*. New York: Guilford Press.

Beekman, A. T., Penninx, B. W., Deeg, D. J., de Beurs, E., Geerling, S. W., & van Tilburg, W. (2002). The impact of depression on the well-being disability and use of services in older adults: A longitudinal perspective. *Acta Pscyhiatrica Scandinavica, 105*(1), 20–27.

Bornstein, R. (1992). The dependent personality: Developmental, social, and clinical perspectives. *Psychological Bulletin, 112*(1), 3–32.

Bruce, M. L., Ten Have, T. R., Reynolds, C. F. 3rd, Katz, I. I., Schulberg, H. C., Mulsant, B. H., Brown, G. K., McAvay, G. J., Pearson, J. L., & Alexopoulos, G. S. (2004). Reducing suicidal ideation and depressive symptoms in depressed older primary care patients: A randomized controlled trial. *Journal of the American Medical Association, 291*, 1081–1091.

Buxton, J. W., Singleton. N, & Melzer, D. (2005). The mental health of early Retirees: National interview survey in Britain. *Social Psychiatry and Psychiatric Epidemiology, 40*(2), 99–105.

Chlan, L. (1998). Effectiveness of a music therapy intervention on relaxation and anxiety for patients receiving ventilatory assistance. *Heart & Lung, 27*(3), 169–176.

Chlan, L. (2003). Description of anxiety levels by individual differences and clinical factors in patients receiving mechanical ventilatory support. *Heart & Lung, 32*(4), 275–282.

Esteban, A., Anzueto, A., Frutos-Vivar, F., Alia, I., Ely, E. W., Brochard, L., Stewart, T. E., Apezteguia, C., Tobin, M. J., Nightingale, P., Matamis, D., Pimentel, J., & Abroug, F. (2004). Outcome of older patients receiving mechanical ventilation. *Intensive Care Medicine, 30*(4), 639–646.

Fink, P. (1990). Mental illness and admission to general hospitals: A register investigation. *Acta Psychiatrica Scandinavica, 82*(6), 458–462.

Fink, P. (1992). The use of hospitalizations by persistent somatizing patients. *Psychological Medicine, 22*(1), 173–180.

Ghose, S. S., Williams, L. S., & Swindle, R. W. (2005). Depression and other mental health diagnoses after stroke increase inpatient and outpatient medical utilization three years poststroke. *Medical Care, 43*(12), 1259–1264.

Greenberg, R. P., & Bornstein, R. F. (1988). The dependent personality: I. Risk for physical disorders. *Journal of Personality Disorders, 2*, 126–135.

Hannich, H. J., Hartmann, U., Lehmann, C., Grundling, M., Pavlovic, D., & Reinhardt, F. (2004). Biofeedback as a supportive method in weaning long-term ventilated critically ill patients. *Medical Hypotheses, 63*(1), 21–25.

Hansen, M. S., Fink, P., Frydenberg, M., & Oxhoj, M. L. (2002). Use of health services, mental illness, and self-rated disability and health in medical inpatients. *Psychosomatic Medicine, 64*(4), 668–675.

Kaub-Wittemer, D., Steinbuchel, N., Wasner, M., Laier-Groeneveld, G., & Borasio, G. D. (2003). Quality of life and psychosocial issues in ventilated patients with amyotrophic lateral sclerosis and their caregivers. *Journal of Pain and Symptom Management, 26*(4), 890–896.

Lee, O. K., Chung, Y. F., Chan, M. F., & Chan, W. M. (2005). Music and its effect on the physiological responses and anxiety levels of patients receiving mechanical ventilation: A pilot study. *Journal of Clinical Nursing, 14*(5), 609–620.

Millon, T. (1981). *Disorders of personality: DSM-III, Axis II*. New York: Wiley-Interscience.

Pincus, H. A., Hough, L., Houtsinger, J. K., Rollman, B. L., & Frank, R. G. (2003) Emerging models of depression care: Multi-level ('6 P') strategies. *International Journal of Methods in Psychiatry Research, 12(1),* 54–63.

Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change. *American Psychologist, 47,* 1102–1114.

Prochaska, J. O., Velicer, W. F., DiClemente, C. C., & Fava, J. L. (1988). Measuring processes of change: Applications to the cessation of smoking. *Journal of Consulting and Clinical Psychology, 56,* 520–528.

Stone, M. H. (1993). *Abnormalities of personality, within and beyond the realm of treatment*. New York: W. W. Norton & Company.

Schafer. S., & Nowlis, D. P. (1998). Personality disorders among difficult patients. *Archives of Family Medicine, 7*, 126–129.

Tsai, S. P., Wendt, J. K., Donnelly, R. P., de Jong, G., & Ahmed, F. S. (2005). Age at retirement and long term survival of an industrial population: Prospective cohort study. *BMJ, 29*, 1–4.

Unutzer, J., Katon, W., Callahan, C. M., Williams, J. W. Jr., Hunkeler, E., Harpole, L., Hoffing, M., Della Penna, R. D., Noel, P. H., Lin, E. H., Areán, P. A., Hegel, M. T., Tang, L., Belin, T. R., Oishi, S., & Langston, C. (2002). Collaborative care management of late-life depression in the primary care setting: a randomized controlled trial. *Journal of the American Medical Association*, *288*, 2836–2845.

Unutzer, J., Patrick, D. L., Marmon, T., Simon, G. E., & Katon, W.J. (2002). Depressive symptoms and mortality in a prospective study of 2,558 older adults. *American Journal of Geriatric Psychiatry, 10*(5), 521–530.

Wallman, T., Burel, G., Kullman, S., & Svardsudd, K. (2004). Health care utilisation before and after retirement due to illness: A 13-year population-based follow-up study of prematurely retired men and referents from the general population. *Scandinavian Journal of Primary Health Care, 22*(2), 95–100.

Dr. Liat Ayalon is a clinical geropsychologist and a lecturer at Bar Ilan University, School of Social Work, Israel. Her research interests include mental health services to older adults and their caregivers. This work is written based on the clinical experience of Dr. Ayalon as a geropsychologist in a medical rehabilitation hospital.