CHAPTER 14

Changes of Personality and Depression During Treatment of Drug Addicts

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INTRODUCTION

The question of to what extent drug addicts can be characterized by specific personality factors is relevant for treatment in various ways. The evidence of specific personality traits would have consequences for therapy indication, the course of treatment, and evaluation of therapeutic effects. For the therapist, prediction of (1) motivation for change, (2) course of therapeutic progress, and (3) risk for relapse on the basis of personality measures would be valuable. Moreover, information on personality aspects could help to further develop hypotheses about the psychological origin of addiction. From these, specifically adapted goals for therapy of the individual could be derived. For patients, knowledge of their personality traits could help them to achieve an integrated view of their own situation and thus reach a better understanding of themselves. The goal of this chapter is to examine stable and variable aspects of personality in drug addicts. With this, the use of commonly applied psychological instruments for treatment evaluation will be investigated.

According to our present knowledge, the question whether there are personality traits which may be considered (1) being especially pronounced or (2) being even specific for addicts can be answered as follows. Various studies, partly covering samples of several thousand

individuals, found a tendency in drug addicts for emotional lability, depressive tendencies, and vegetative disorders (Müller-Oswald, Ruppen, Baumann and Angst 1973; Spille and Guski 1975; Bachman and Jones 1979; Sieber 1981; Labouvie and McGee 1986). However, as is also asserted by various authors, these effects can rarely be considered as very strong. Thus Sieber (1981) reports correlations of about $r = .20$, meaning that only a small proportion of variance (about 4%) is explained by personality measures. Data reported recently by Shedler and Block (1990) from the Berkeley longitudinal study pointed out a tendency for lack of impulse control in 11-year-old subjects who became heavy marijuana smokers later, at the age of 18. Nevertheless, the group differences reported do not allow any individual prediction whether a young individual will become an excessive user of drugs as an adult.

In no case could a valid individual prognosis be warranted on the basis of personality measures. According to Wanke (1987) a valid prognosis of which person will become addicted was not possible at any time. Moreover, "The major conclusion to be drawn from studies of personality variables in heroin addicts is that there is little basis for assuming commonality of such traits among addicts. This is true for such commonly observed traits as psychopathy as it is for more specific traits such as temporal perspective or locus of control" (Platt and Labate 1976). There is little to add to this conclusion, even when the evidence of the recent literature is included. Various questions, however, remain open, given this negative statement:

— Could it be that our clinical experience misleads us when it suggests more commonality than is genuinely present? Are we misled by our perceptual tendencies, selective perception, and biases for categories in assuming characteristic personality traits in addicts where in fact a variety of personalities is present?

— Could it be the case that our instruments used to assess personality are insufficient? Or are our concepts of stable, persisting, and thus predictable behavioral tendencies inadequate?

Rather than searching for the "addictive personality," it could be more fruitful to ask for a development of personality aspects during the process of addiction. Wanke (1987, pp. 33ff.) refers to results indicating that therapists are less able to adequately predict the behavior of drug addicts shortly before relapse. On the other hand, changes in personality become apparent during the progression of dependency. These are, according to Wanke, characterized for drug addicts by a triad of euphoric mood, apathy, and passivity. For alcohol addicts, a reduction in activity and spontaneity, unreliability, loss of critical thinking and responsibility, lack of concentration, and reduced motor skills become predominant. Thus, instead of

searching for persisting, predisposing traits for a dependency, attention should be given to changes during the course of dependency and especially those changes occurring contingent upon therapeutic interventions.

This, however, reveals a dilemma: Personality theory and treatment differ with regard to their assumptions about stability and change. Therapy aims at changing behavioral tendencies and cognitive structures, including those covered by personality constructs. Personality theory, in contrast, has to assume a certain stability of personality factors over time. Instead of postulating *either* stability *or* change, the following could be considered: Especially over the course of treatment, stable and changeable components of personality aspects should be differentiated. Thus stable components of neuroticism could describe an individual disposition, whereas its variable components could be tested as criteria for therapeutic effects. Mainly variable components would be targets for therapeutic change.

METHOD

The longitudinal study on the treatment of drug addicts reported here was conducted in a treatment center of the "Prop Alternative Aiglsdorf."* There were 181 drug addicts (79% male and 21% female) treated in two centers of the institution who took part in this study. The average age was 24 years (range: 17–32 years); 98% of the patients were opiate addicts, and 2% amphetamine addicts. Addiction lasted on the average 10 years for "soft drugs" and 8 years for "hard drugs." Seventy-four percent of the patients had their therapy as part of a sentence with legal conditions imposed by the court. Treatment in one of the two centers was behaviorally oriented; in the other center therapy was mainly humanistic (Vollmer, Ellgring, and Ferstl, submitted for publication). A regular release after about 26 weeks (i.e., a planned duration of 6 months of treatment in the therapeutic community), was reached by 81 patients (45%). Thirty-seven patients (21%) had an early discharge from treatment because of disciplinary measures, 63 patients (34%) prematurely terminated treatment on their own.

As measures of personality and psychological state, the Freiburg Personality Inventory (FPI; Fahrenberg and Selg 1978) Forms A and B, an inventory similar to the MMPI (Minnesota Multiphasic Personality Inventory), was repeatedly given at the beginning and end of therapy, as

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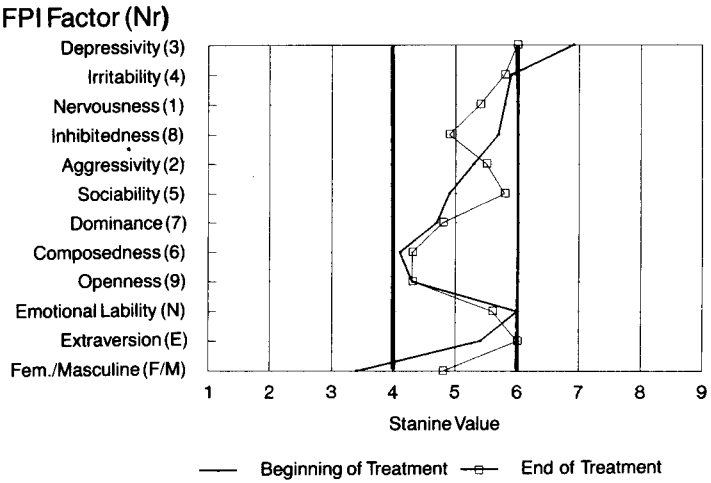

FIGURE 14.1.
Average stanine scores in factors of the Freiburg Personality Inventory (FPI) for drug addicts at the beginning (N = 181) and end (N = 81) of treatment. Bars at stanine scores 4 and 6 indicate the normal range.

was the Beck Depression Inventory (BDI; Beck, Rush, Shaw, and Emery 1981). Only those patients with a regular termination of treatment could be tested at the beginning and end.

RESULTS

From the results reported in this section, the following findings deserve special notice: On the one hand, only *minor deviations from the norm* were found in personality factors for the total group of drug addicts, and this at the beginning of treatment only. On the other hand, regarding individual cases, a considerable number of the patients revealed *extreme stanine values* in single personality factors. Moreover, a factor analysis of *changeable components* within personality factors revealed a number of factors indicating specific effects of treatment. With regard to the initially increased *depression scores*, clear changes in motivational and emotional aspects as well as in self-image became apparent during therapy.

TABLE 14.1

Proportion of Extreme Stanine Values in Factors of the FPI and Their Change during Treatment
Proportion (%) of Stanine Values 7–9 (resp. 1–3*).

FPI Factor (Nr.)		*Treatment* *Beg.* %	*End* %	*Diff.* %
Depressivity	(3)	60	34	−26
Inhibitedness	(8)	40	15	−25
Nervousness	(1)	61	46	−15
Sociability*	(5)	36	23	−13
Irritability	(4)	42	30	−12
Composedness*	(6)	36	30	− 6
Aggressivity	(2)	33	31	− 2
Openness	(9)	29	27	− 2
Dominance	(7)	23	26	+ 3

Deviation from the Norm

In general, only minimal deviations from norm values were found in the average personality profile of drug addicts (see Figure 14.1). At the beginning of treatment, patients had augmented values in depressivity and emotional lability (irritability, nervousness) only. All other averages were located within the norms. It should be noted that the dimensions "extraversion (E)," "emotional lability (N)," and "masculinity/femininity (M/F)" are assembled from items also contained in the first eight FPI factors. Thus the factor "emotional lability" closely resembles "nervousness (1)." Since results from Form B were nearly identical, only those of Form A will be depicted here.

Comparison of these scales from the beginning and end of therapy revealed significant improvements in the following aspects: Patients expressed less depressivity, emotional lability, and composedness as well as increased sociability, extraversion, and masculinity (Wilcoxon-Test: $p < .01$). Although an error of central tendency has to be taken into account, the significant changes on the basis of minor deviations from the norms were in accordance with therapy goals. These changes also become apparent in the proportion of patients showing extreme values in single factors (Table 14.1). The proportion of patients with extreme stanine values from 7 to 9 (1–3 in factors "sociability" and "composedness") decreases about 25% for the factors "depressivity" and "composedness" and about 15% to 12% for the factors "nervousness," "lack

of sociability," and "irritability." There were no significant differences between groups with various forms of treatment termination with regard to these personality measures. Thus, personality measures in our case did not allow for prediction of the regular or irregular course of treatment.

Factors of Change

As can be derived from Table 14.1, personality factors differ considerably with regard to their stability and variability. Since changeable components are especially important for treatment, those items of the FPI were factor-analyzed which were responded to differently by at least 25% of the patients at the beginning and end of therapy. Because of lack of space, a corresponding analysis of stable components cannot be reported here. Items from Forms A and B of the FPI were analyzed together because data from the beginning and end of treatment were available for both. A total of 35 (16%) of the 224 items met the criteria set. A principal component factor analysis with consecutive Varimax rotation produced a proportion of 50% variance explained, given a 7-factor solution. With 12 factors this proportion was 63%. Reliability of the seven factors was at the median r = .65.

In general, the resulting factors point to areas of change which are in accordance with the goals of treatment. Emerging out of the different factors, three domains with a potential for change can be described (Item examples with number from Forms A and B of the FPI and their factor loadings are given in parentheses):

1. Action Regulation

Factor I: Pleasure with Activity and Decisions.
(B33: "I am generally able to make firm and fast decisions." r = .74).

Factor II: Control of One's Own Activity.
(A85: "I frequently make deliberate remarks which I later regret."r = .79).

Factor III: Sociability.
(A99: "I would describe myself as talkative." r = .82).

2. Dysfunctional Thinking

Factor IV: Despair and Resignation.
(B24: "Sometimes I feel quite miserable without reason." r = .61).

Factor V: Daydreaming.
(B16: "I daydream more often than is good for me." r = .75).

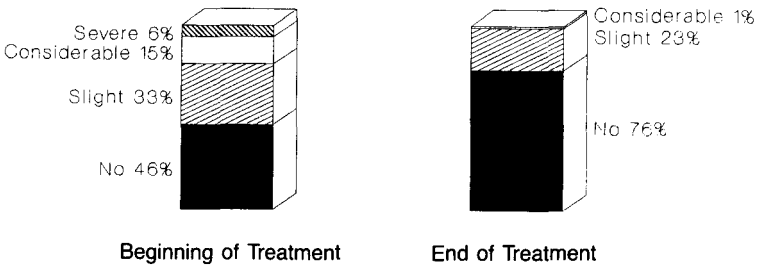

FIGURE 14.2.
Proportions of drug addicts with different degrees of depression according to scores from the Beck Depression Inventory (BDI) at the beginning (N = 181) and end (N = 81) of treatment.

3. Psychosomatic Complaints

Factor VI: Bodily Reactions to Arousal.

(A21: "I gasp in arousing situations so that I have to inhale deeply."r = .73).

Factor VII: Sleep Disturbances

(A83: "I have difficulties in getting to sleep and sleeping all night."r = .82).

Instead of factors suggested by the FPI on the basis of a validation with a normal population, these results point to specific problem domains relevant to drug addicts. They reflect actual problematic aspects of personality.

Depression

Depressive tendencies deserve special attention in drug addicts. There is a high prevalence for depressive tendencies in drug addicts, with symptoms being similar in European and American cultures (Hendriks, Steer, Platt, and Metzger 1990). Clear changes during treatment appeared for the population studied here. The proportion of patients with increased depression values in the FPI declined from 60% to 34% (See Table 14.1), and the data from the BDI also reflect clear improvement in the psychological state (Figure 14.2). The proportion of 48% patients with considerable to moderate depression at the beginning of therapy declines to 24% at the end.

At the single-item level, analysis sought to determine which aspects

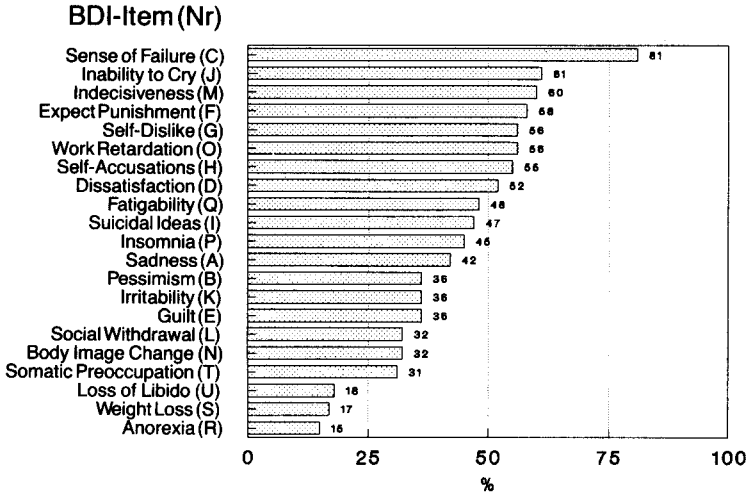

FIGURE 14.3.
Proportions (%) of drug addicts (N = 181) reporting symptoms in Beck Depression Inventory (BDI) items.

of depression (1) are especially problematic, (2) change most, and (3) remain problematic even at the end of treatment. An aspect was defined as "problematic" when an individual indicated at least the lowest level of presence of the problem (= 1) on that single item independent of intensity:

1. *Problematic aspects* for more than 50% of the patients at the beginning of treatment are shown in Figure 14.3. These were sense of failure (C = 81%), inability to cry (J = 61%), indecisiveness (M = 60%), expectation of punishment (F = 58%), self-dislike (G = 56%), work retardation (O = 56%), self-accusation (H = 55%), and dissatisfaction (D = 52%). For item J, it is noteworthy that 49% indicated intensity 0, and 56% indicated intensity 3: "I used to be able to cry but now I cannot cry at all even though I want to." Since only 5% had intensity 1, "I cry more now than I used to," one could regard this as a specific emotional/expressive deficit in this population that is different from depressed patients.

2. *Changes* during the course of treatment are shown in Figure 14.4. The differences in the proportion of drug addicts with problematic BDI items between the beginning and end of treatment were determined. Negative values thus indicated a decrease of problems over the time of treat-

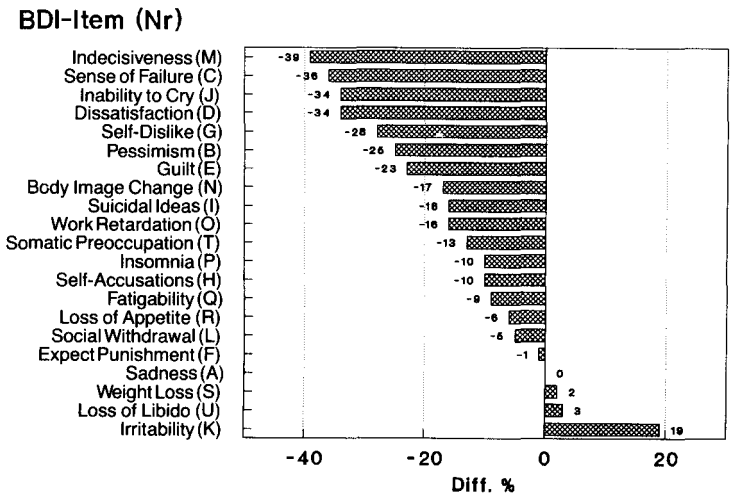

FIGURE 14.4.
Differences between proportions (Diff. %) of drug addicts (N = 81) reporting symptoms in Beck Depression Inventory (BDI) items at the beginning and end of treatment. Negative values indicate fewer symptoms and thus improvement at the end.

ment. The aspects changing most (i.e., in more than 20% of the patients) were the following: indecisiveness (M = −39%), sense of failure (C = −36%), inability to cry (I = −34%), dissatisfaction (D = -34%), self-dislike (G = −28%), pessimism (B = -25%), and guilt (E = −23%).

3. *Remaining problems:* At the end of treatment, a substantial part of the drug addicts still reported problematic aspects in the BDI items. Figure 14.5 includes these in respective order. Topics which remain problematic for a substantial part of the patients (>30%) were the following: self-accusations (H = 49%), irritability (K = 48%), sense of failure (C = 44%), work retardation (O = 42%). Persisting psychovegetative problems were fatigability (Q = 47%) and insomnia (O = 33%). The high proportion of problems with expectation of punishment (F = 63%) is most probably due to the reality of legal conditions of probation (cf. description of the sample). It should be noted that a relatively high proportion of drug addicts still reported self-accusations, sense of failure, or suicidal ideas at the end of treatment.

Comparing the depression data with regard to different kinds of *treatment termination* revealed some interesting trends. Because of the post hoc analysis, differences will be described without statistical testing. Pa-

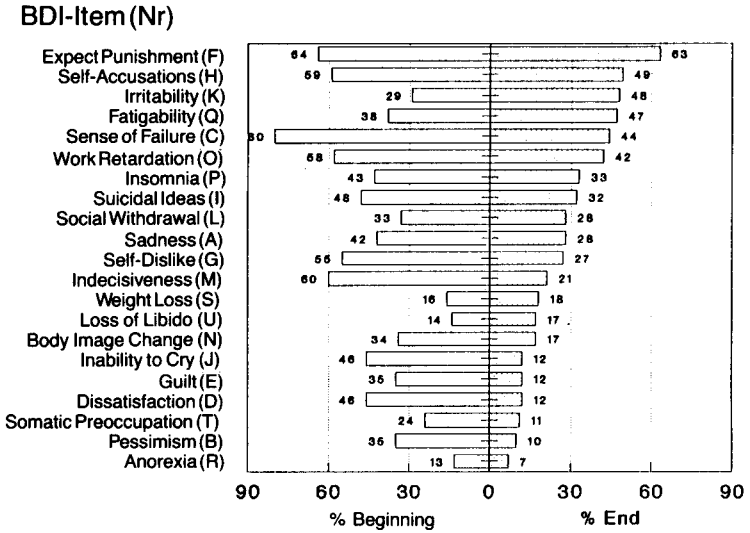

FIGURE 14.5.
Proportions (%) of drug addicts (N = 81) reporting symptoms of depression at the end of treatment.

tients who prematurely left treatment on their own showed the highest proportion of problematic values (1 to 3) in 17 out of the 21 items (Figure 14.6). In contrast, patients who were prematurely expelled from treatment had the lowest proportion of problematic values in 15 out of the 21 items, whereas for patients regularly terminating therapy these proportions were in between. Prematurely leaving patients compared to expelled ones had more frequent problems with self-dislike (G: +30%), self-accusation (H: +29%), fatigability (Q: +26%), suicidal ideas (I: 23%), and dissatisfaction (D: +20%). An individual prognosis on the basis of these differences, however, would be premature. (It could be argued that expelled patients tend to dissimulate more frequently with regard to the problems mentioned.)

It appears noteworthy that deficiencies of vital functions, otherwise prevalent in depression, are comparatively rare in drug addicts: Loss of appetite (anorexia – R: 15%), weight loss (S: 17%), loss of libido (U: 18%). The young age of drug addicts is probably relevant for this result. This again points to the problem that concepts of depression as assessed in the BDI cannot simply be transferred onto this population of drug addicts. In general, a common concept of "depression" or "depressivity"

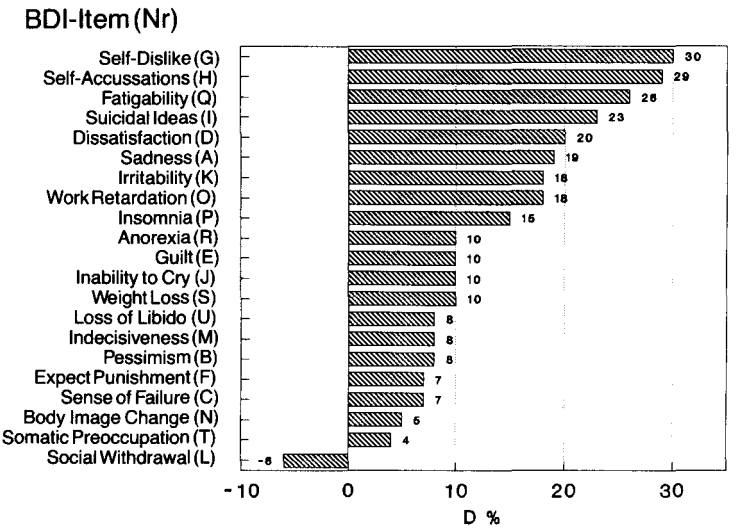

FIGURE 14.6.
Differences of proportions (%) of drug addicts with symptoms in Beck Depression Inventory (BDI) items. Differences between the group of addicts expelled from treatment (N = 37) and the group of addicts prematurely terminating treatment (N = 63). Positive values indicate that addicts prematurely terminating treatment reported more symptoms in all but one item.

is not relevant for drug addicts, but rather specific aspects which also become topics in treatment.

CONCLUSIONS

In accordance with various other studies, the present longitudinal study gave no clues for specific personality variables or traits of drug addicts. Personality factors did not allow a valid prediction of the kind of therapy termination, nor were there clear deviations from the norm. Analyzed as a group, the addicts showed only minor changes that appeared over the course of treatment. These results correspond to data reported on alcohol dependency (cf. Wanke 1987).

A more differentiated picture is gained when stable and changeable

components of personality and analyzed separately. Changeable components are of special relevance for treatment. From the current study these were characteristics of action regulation, that is, activation and impulse control, social interaction, and somatic reactions (sleep disorders, bodily reactions to drug deprivation). For relapse prevention, attention should be given to stable, persistent, problematic components. Persistent suicidal ideas turned out to be one such aspect. Like the differentiation between state and trait anxiety, stable and variable components could also be separated for other domains of personality when they are used to describe the course of treatment.

How can personality concepts and instruments for assessment be utilized for treatment? The claim of therapists to predict the outcome of a treatment may be realized for only a delimited period of time. Especially at such critical points as shortly before relapse, a firm prediction might be possible only rarely (Wanke 1987). Lack of predictability could be a warning which, however, can be verified only afterward.

According to the current results, one benefit of personality concepts could be to specify targets of change on an individual basis and thus clarify effects of therapeutic interventions. Personality concepts can help patients to better understand their problems and to recognize changes as well as persistent areas of vulnerability.

REFERENCES

Bachman, J., and Jones, R. T. (1979). Personality correlates of cannabis dependence. *Addictive Behaviors* 4: 361–71.

Beck, A. T., Rush, A. J., Shaw, B. E., and Emery, G. (1981). *Kognitive Therapie der Depression*. München: Urban & Schwarzenberg.

Fahrenberg, J. and Selg, H. (1978). *Das Freiburger Persönlichkeitsinventar FPI*. Göttingen: Hogrefe.

Hendriks, V. M., Steer, R. A., Platt, J. J., and Metzger, D. S. (1990). Psychopathology in Dutch and American heroin addicts. *International Journal of the Addictions 25*, 1051–63.

Labouvie, E. W. and McGee, C. R. (1986). Relation of personality to alcohol and drug use in adolescence. *Journal of Consulting and Clinical Psychology* 54: 289–93.

Müller-Oswald, U., Ruppen, R., Baumann, U., and Angst, J. (1973). Persönlichkeitsaspekte jugendlicher Drogenkonsumenten. Eine repräsentative Umfrage an 6315 neunzehnjährigen Zürchern. *Archiv für Psychiatrie und Nervenkrankheiten* 217: 207–22.

Platt, J. J., and Labate, C. (1976). *Heroin addiction: Theory, research and treatment*. New York: Wiley, pp. 127–54.

Shedler, J., and Block, J. (1990). Adolescent drug use and psychological health. *American Psychologist* 45: 612–30.

Sieber, M. F. (1981). Personality scores and licit and illicit substance use. *Personality and Individual Differences* 2: 235–41.

Spille, D., and Guski, R. (1975). Langfristiger Drogenkonsum und Persönlichkeitsmerkmale. *Zeitschrift für Sozialpsychologie* 6: 31–42.

Wanke, K. (1987). Zur Psychologie der Sucht. In *Psychiatrie der Gegenwart 3: Abhängigkeit und Sucht*, K. P. Kisker, H. Lauter, J.-E. Meyer, C. Müller, and E. Strömgren (eds.), pp. 19–52. Berlin: Springer.