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Contents

17.1	Introduction	240
17.1.1	Goals for Screening and Assessment	240
17.1.2	Relevance and Function	241
17.1.3	Characteristics for Measurement	241
17.2	Multimodal Assessment	242
17.3	Assessment Instruments	244
17.3.1	Screening of Substance Use/Abuse	245
17.3.2	Problem Identification, Diagnosis, and Monitoring	248
17.3.3	Instruments to Assess Comorbidity	250
	17.3.3.1 Standardized Interviews, Structured Interviews and Checklists	252
	17.3.3.2 Conclusion	254
17.3.4	Other Areas	255
	References	257

Abstract

The aim of this chapter is to provide the reader of a strategy to decide which instruments to use in case of dual disorder. Depending on the level in the diagnostic process, distinction should be made between the need for screening and than further assessment. Then, several instruments are presented for the screening of substance use or abuse in general psychiatric context and for the screening of comorbidity in treatment context of substance use disorders. Instruments should cover a number of criteria such as reliability and validity,

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relative easy training and—in a European context—availability in several languages.

Once the screening is able to confirm a suspected diagnosis, rating scales and structured interviews are recommended. In case of substance use disorder, the instruments should be multidimensional and sometimes substance specific. To assess comorbidity, comprehensive clinical experience is basic, beside the use of structured and standardized instruments and rating scales, in order to reduce sources of error. It is concluded that more standardization of the diagnostic process needs to be taken for the future of empirical research in psychiatry to advantage consistency and comparability of data across studies. Next to the need of more standardization of the diagnostic process, standard use of instruments in clinical practice could also enhance communication and alliance between patient and therapist. By incorporating patient and therapist ratings in the assessment process, clinical usefulness, personal relevance, and meaningfulness to the patient could be enhanced.

17.1 Introduction

17.1.1 Goals for Screening and Assessment

A psychiatric assessment or psychological screening is a process of gathering information about a person within a (mental) health service. Mostly, the purpose of assessment is to make a diagnosis within a clinical context. It is commonly carried out as a first step in the treatment process with clinical or therapeutic purposes. Although assessment can be carried out with other purposes, the focus of this article will be on clinical assessment.

Depending on the specificity of the health service the person is presenting at (mental health or addiction care) as well as the acuteness of the treatment demand, a distinction should be made between screening and assessment in order to make a diagnosis.

The main *goal or purpose* of screening is to detect the frequency of a certain condition in a wide range of people. Co-occurring alcohol, other drug, and mental health conditions seem to be common among people in addiction care, although a number of them display only some or milder symptoms while not meeting the ICD or DSM criteria for the diagnosis of a mental health disorder (Mills et al. 2009). Vice versa, prevalence of substance abuse in psychiatric populations is high (Kerkmeer et al. 2003). So, in case of suspicion of co-occurring addictive and psychiatric disorders, screening for both addiction and mental health symptoms/disorder is indicated.

The original *goal or purpose* of more in-depth assessment is to diagnose the existence of a mental health and/or addiction disorder in order to build a treatment plan. In medicine, a diagnosis frequently refers to the ability to identify the origin/cause of a medical condition, based on symptoms and complaints. In mental health care, a diagnosis provides more gradual information about the type/category/class

and severity of symptoms/a disorder, including the broad (bio-psycho-social-moral) perspective of personal, medical and family history, trauma history, risk assessment, and strengths and weaknesses to current mental state and presenting issues.

17.1.2 Relevance and Function

Screening could have several functions. Within the context of this article, we would like to focus on two of them. In the first place, screening allows measuring the *prevalence* of either addiction or mental health disorder in populations that present in mental health or addiction care, respectively. The relevance of screening is associated with our knowledge that comorbidity can produce negative consequences on treatment outcome. Apart from that knowledge and although comorbid mental health conditions are more complex, those populations could benefit as much from traditional alcohol and drug treatment as people without comorbid profiles (Mills et al. 2009). Therefore, early recognition and assessment of both conditions is crucial, as early detection and treatment of psychiatric and substance use disorders and problems enhance the probability of better outcomes (Tiet et al. 2008).

Another important function of screening is to be able to determine those persons for whom further, more in-depth assessment on their mental health and/or addictive condition is needed. Only in the case of dual disorder, one could argue that screening is not relevant anymore (de Weert-Van Oene et al. 2013). However, screening is often a first step in any assessment strategy. Therefore, screening instruments that can be used in broader practice are also presented.

Also more in-depth assessment within the treatment process can have multiple functions and relevance. While looking at the instruments our focus will mainly be on the following characteristics: Firstly, the instrument should be able to classify a person within the diagnostic system of mental disorders. As an even more important second step, we will look at the existence of connecting factors in order to build a treatment plan, to monitor the response to treatment, and to enhance communication and patient involvement.

17.1.3 Characteristics for Measurement

Screening and assessment should occur as transparent and objective as possible. Therefore, the use of standardized instruments or tools by trained people is preferable. Of course, the instruments and tools themselves should meet several conditions.

While screening instruments mostly focus on only one mental health and/or addiction condition, assessment should cover several life areas that are relevant in case of comorbidity. Because of the *multidimensionality* of substance use and mental health disorders, several areas can be relevant. Traditionally there are six areas in addiction treatment to consider: physical health, education—work-income, substance

use, judicial status, family and/or social relations, and mental health. Since a couple of areas seem to fail in this listing, the International Classification of Functioning, Disability and Health (ICF) can serve as a guideline for relevance check.

A valuable tool should be *reliable and valid*. In case of screening, the tool should be able to identify the existence of a disorder, and do so without any coincidences (reliability). It should be able to distinguish people that need further assessment on a certain condition from those who do not (validity) referring to the sensitivity and specificity of the tool. In order to avoid false positives and/or negatives, the tool must be sufficiently sensitive (ability to recognize the disorder) and specific (ability to exclude people without the disorder). According to the Dutch guideline for screening, for example, sensitivity seems more important (Kerkmeer et al. 2003). Yet, in case of high sensitivity more false-positive cases will be found, which could in turn compensate for the lower proportions in case of high prevalence. However, when high prevalence is expected, the need for screening disappears, as in this case full assessment should be provided for all people directly. The best way to control for reliability and validity of instruments is a search for publications on the psychometric characteristics (e.g. meta-analysis).

Within the European context, the availability of an instrument in *several languages* is advantageous.

As generally *routine outcome monitoring* is required, tools should also be suitable for repeated use. They should be sensitive for the measurement of change/outcome. The monitoring of an individual patient's progress is perceived as one-way to improve treatment outcome. Actually, the social context is claiming the necessity of a monitoring perspective as an aspect of quality assurance. Since assessment with feedback evidentially leads to positive effects on retention in treatment (Raes et al. 2011), the possibility of integrating the instrument within the clinician–patient encounter in order to provide double-sided feedback on the results will also be rated.

This means that the burden for clinical workers and the patient should be taken into account. The instruments themselves should be as short as possible, and easy to interpret. Hence, time to complete and *training aspects* will be considered in the overview. It is important that the training for the use of the instrument should be short and feasible without (eventually a minimum of) advanced specialization in mental health disorders and/or substance abuse disorders, respectively.

Last but not least, a **good balance between costs and benefits** should be found. Especially for screening tools, that are to be conducted in larger groups, the conduct/administration-price of the tool should be evaluated and free availability is preferable.

17.2 Multimodal Assessment

It is generally agreed upon that human behaviour and experience have to be measured in a multimodal way (other terms occasionally used: multi-method, multi-methodically). Thus, distinctions are made between the following aspects (Baumann et al. 1985): databases (e.g. psychological), eventually partial aspects

Table 17.1 Multimodal assessment

Databases	Basic units of consideration (perspectives: e.g. biochemical, physiological, psychological, social, ecological)
Sources of data	Data provider (e.g. patient, therapist, nursing staff, reference person, neutral observer)
Functional ranges	Partial aspects/constructs within a database (e.g. psychological databases: experiences, behaviour, feeling, working capacity)

within a relevant area (constructs) and sources of the information/data (see Table 17.1) as well as the type of instruments which are used to assess the relevant aspects of interest.

Multimodal assessment can be understood as a *general framework* which has to be specified for the concrete assessment of individual persons or groups of persons, making it necessary to select specific instruments. The choice should be made according to specific criteria (see Sect. 17.1.3).

A multimodal approach is generally required for evaluation, e.g. of psychotherapy and psychotropic drugs research in order to cope with the complexity of the phenomena studied. Multimodal assessment in this area is increasingly gaining importance because of the range of competing psychotherapeutic methods, the development of disorder-specific treatment approaches as well as manualized/standardized therapy approaches. Furthermore, a multimodal approach is essential in order to account for the varying degrees of exactness in databases and data providers as well as their functional ranges.

Last but not least, the necessity of a multimodal approach arises from the need to reduce investigator dependent rating bias and results in the inclusion of different perspectives. With regard to self-rating scales, bias may include acquiescence, central tendency, or social desirability; on the level of observer-rating scales it may come from insufficient experience with the scale, or response biases such as generosity error or error of leniency.

In the field of multimodal assessment the relation between self- and observer-rating scales is of special relevance. Both self- and observer-rating scales (with the patient and the therapist as the most important sources) are characterized in relation to other assessment methods in that they are applicable in a vast range of areas and that they are easy to administer (e.g. time-saving).

There is extensive literature available since several years comparing the results of self- and observer rating scales (e.g. Baumann et al. 1985; Smolka and Stieglitz 1999), especially in the area of psychotherapy and psycho-pharmacotherapy. Independent of the analysed groups of disorders the results of the studies coincide. The following conclusions can be drawn in relation to self- and observer rating scales:

- Both groups of instruments only correlate to a medium degree.
- Observer-rating scales often provide a better differentiation between groups of patients than self-rating scales.

Table 17.2 Multimodal assessment of anxiety disorders (examples)

Databases	Psychological, physiological, social
Sources of data	Patient, therapist, independent/trained rater, relevant others (e.g. family members)
Functional ranges	<ul style="list-style-type: none"> • Psychological database: cognitions, emotional reactions, behaviour • Physiological database: physiological reactions • Social database: impairments and handicaps, social support
Assessment instruments	Self- and observer-rating scales, structured or standardized interviews, diaries, behaviour observations, behavioural tests, self-monitoring, physiological assessment instruments.

- Observer-rating scales are more sensitive in detecting differences between groups of patients than self-rating scales.
- Great discrepancies are often observed on the level of individual patients.
- Various factors may account for these discrepancies: The instruments cover different aspects of the construct of interest (e.g. the different instruments used to assess the depressive syndrome).
- The perspective of the patient him-/herself and of other data sources are different.

In summary, one should not conclude that observer-rating scales are generally preferable to self-rating scales. They should rather be seen as complementary, as not all phenomena of interest (e.g. mood, feelings, complaints) can be assessed with observer-rating scales.

For most psychiatric disorders, a multimodal approach is necessary for an adequate description, as a gold standard is missing. An example is present in Table 17.2. Addictive disorders are particularly characterized as multidimensional with different aspects to consider such as subjective experiences, specific behavioural reactions, and social interactional consequences, as well as a broad spectrum of somatic dysfunctions.

Depending on the specific aim of the assessment (e.g. the natural course, efficacy of a therapeutic intervention), a broad range of aspects has to be taken into account.

17.3 Assessment Instruments

Before presenting and discussing the instruments, some general remarks concerning differences between the US and European approach in the diagnosis could be made. The main difference consists in focusing on ICD-10 in Europe and DSM in the USA. In addition, in the USA more rating scales are used, e.g. to quantify the symptomatology. Also, the use of diagnostic interviews in the USA is more important, while in Europe the assessment of classical psychopathology plays a bigger role.

17.3.1 Screening of Substance Use/Abuse

Properly trained mental health and addiction workers understand the role, function, and difference between screening tools and clinical measures, and of course no screening tool or clinical measure suffices on its own. In fact, their most important function is to assist practitioners and patients in clinical decision making. In case of screening, the goal is to discover potential risk areas. They are not designed to make a clinical diagnosis.

In an early study from 2004, three instruments were discussed for the screening of substance use disorders (Dom et al. 2004): *CAGE* (Cut down, Annoyed, Guilty, Eye-opener), the Alcohol Use Disorders Identification Test (AUDIT-10q) or short version *AUDIT-C* (3 q), the Munich Alcoholism Test (MALT) or short version (MALT-3), and the Dartmouth Assessment of Lifestyle Instrument (*DALI*). In the UNODC-Treatment program (UCLA 2006), some of these instruments were also suggested besides the availability of similar instruments: the *ASSIST* (Alcohol, Smoking, and Substance Involvement Screening Test), the Drug Use and Cannabis Disorders Identification Test (*DUDIT* and *CUDIT*) (Adamson and Sellman 2003), the *DAST-10* (Drug Abuse Screening Test), the *CRAFFT* (6 q) (Car, Relax, Alone, Forget, Family or friends, Trouble), and the *TWEAK* (Tolerance, Worried, Eye-opener, Amnesia, Cut down). The Dutch guideline for dual disorder (Kerkmeer et al. 2003) added to that list the Alcohol Dependence Scale (ADS), the *CAGE* Adapted to Include Drugs (*CAGE-AID*), the Short Drug Abuse Screening Test (*S-DAST*), the Mac Andrew Alcoholism Scale (*MAC*), the Michigan Alcoholism Screening (*MAST*) and Short *MAST* (*S-MAST*), the Reason's for Drug Use Screening (RDU), and the Severity of Dependence Scale (*SDS*).

Based on the discussion and commonalities in the conclusions of the three guidelines, we inserted the *CAGE*, *CAGE-AID*, *AUDIT*, *AUDIT-C*, *DUDIT*, *CUDIT*, *DAST*, and the *ASSIST* into Table 17.3.

CAGE and *CAGE-AID* are screening tools for alcohol and drugs, respectively, by means of four items: Cutting Down, Annoyance resulting from criticism, Guilt feeling, and Eye-opener. *AUDIT* is a brief structured interview, which can also be used as a self-rating list with ten questions. *CUDIT* and *DUDIT* were developed for the screening of cannabis and drug use disorder, respectively. Within psychiatric samples, they were all found suitable for use in first episode psychosis (Adamson and Sellman 2003). *ASSIST* has been developed to detect substance use disorder in primary health care. It screens for all levels of problem or risky substance use in adults. It consists of eight questions covering the main substance categories. *DAST*, consisting of 28 or 10 (short version) items measuring drug-related problems in the last 12 months has good psychometric qualities and is the only screener that has been validated within a psychiatric sample (Maisto et al. 2000).

CAGE and *CAGE-AID* are most widely used (Aertgeerts et al. 2000), although *AUDIT* had better psychometric properties. It is the length of the *AUDIT* that hampers its use. Drug screens for routine use should be brief. However, for the determination whether further assessment for substance use disorder ought to be implemented, the brief version of *AUDIT* (*AUDIT-C*), and their derived

Table 17.3 Instruments for the screening of substance use/abuse

Name of instrument	Type	Available languages	Sensitivity for change/therapeutic use and feedback properties	Time to complete	Need for training	Cost
ASSIST (alcohol and drugs)	Structured interview	English French German Spanish Portuguese Russian ...	– (for primary health care) + (feedback properties) + (repeatable)	5–10 min	Self-training is possible	Free (WHO)
AUDIT/ AUDIT-C (alcohol) CUDIT (cannabis) DUDIT (drugs)	Structured interview	AUDIT: English and numerous languages including Dutch French German Italian Spanish and Slovenian DUDIT: English Dutch German Spanish Portuguese Danish Norwegian Swedish Finnish Hungarian and Turkish CUDIT: English French German Italian	+	1–3 min	Minimal	Free

CAGE (alcohol)/ CAGE-AID (drugs)	Self-rating scale	English Dutch	+		1–2 min	Minimal	?
DAST/S- DAST (alcohol)	Self-report or structured interview	English Finnish	+		5 min	Careful reading and adherence to the instructions in the “DAST Guidelines”	Without or at nominal cost

instruments DUDIT and CUDIT are advised. Validity of the abbreviated versions has been confirmed as well as the efficiency of the language adapted versions (de Meneses-Gaya et al. 2009). For epidemiologic and/or research purposes, it may be advisable to choose the WHO-screening instrument ASSIST, which has been validated with the MINI-Plus (Tiet et al. 2008). ASSIST and AUDIT are available in different European languages, as well (WHO 2013).

17.3.2 Problem Identification, Diagnosis, and Monitoring

The instruments for problem identification and diagnosis proposed in Dom and colleagues (2004) are the EuropASI: European Addiction Severity Index, the CIWA-AR: Clinical Institute Withdrawal Assessment for Alcohol—revised, the OCDS: Obsessive Compulsive Drinking Scale, the FTND: Fagerström Test for Nicotine Dependence and the RCQ: Readiness to Change Questionnaire, which is more suitable for the assessment of motivational factors related to change in substance abuse.

In the UNODC Treatment program (UCLA 2006), only the Addiction Severity Index (ASI) is suggested for the assessment of substance abuse. Other instruments discussed in the Dutch Guideline for dual disorder (Kerkmeier et al. 2003) are the Alcohol Use Disorder and Associated Disabilities Interview Schedule (DIS), the Composite International Diagnostic Interview (CIDI) (WHO 1997; Andrews and Peters 1998), the Maudsley Addiction Profile (MAP) (Marsden et al. 1998), the Opiate Treatment Index (OTI), the Self-Administered Alcoholism Screening Test (SAAST), the Structured Clinical Interview for DSM Disorders (SCID), the Semi-Structured Assessment for the Genetics of Alcohol (SSAGA).

A more recent Dutch publication (De Weert-Van Oene et al. 2013) promotes the use of a new instrument, combining on the one hand an international classification system of functioning and on the other hand parts of different separate instruments that each time focus on an important aspect to be assessed in case of dual disorder: the Measurement in Addiction for Triage and Evaluation (MATE) (Schippers et al. 2010). The MATE includes the Composite International Diagnostic Interview (CIDI), the Maudsley Addiction Profile—Health Symptoms Scale (MAP—HSS), the Standardized Assessment of Personality Abbreviated Scale (SAPAS), the International Classification of Functioning, disability and health (ICF) (Baron and Linden 2008), the Obsessive Compulsive Drinking (and drug use) Scale (OCDS), and the Depression Anxiety Distress Scales (DASS 21) (De Beurs et al. 2001).

From the instruments mentioned above, EuropASI is the European standardised version of the original American ASI. Primarily, DIS was preceding the CIDI. CIDI and SCID will be discussed in the context of the assessment of comorbidity. Therefore, solely the following are kept in Table 17.4: the EuropASI and all instruments that are fully or partly taken in the MATE, as there are OCDS, MAP-HSS, SAPAS, ICF, and DASS.

OCDS, SAPAS, and DASS could be seen as relevant screeners for strongly prevalent (mental health) comorbidity in populations with substance abuse.

Table 17.4 Instruments for multi-dimensional assessment in patients with substance use disorder

Name of instrument	Description	Available languages	Sensitivity for change/therapeutic use and feedback properties	Time to complete	Need for training	Cost
ASI/ EuropASI	Semi-structured interview, covering 7 potential problem areas	English Dutch German Greek French Spanish ...	+(follow-up version available)	30– 45 min	1,5 day training	Free
OCD ^S _{MATE}	16-items self-rating scale	English		5 min	Minimal	
CIDI ^{MATE}	Structured diagnostic interview conforming DSM or ICD Max 376 items in 14 diagnostic categories	English Dutch	+ – in case of cognitive limitation	Time spending	Intensive training needed Risk of over-diagnosing	WHO
MAP/MAP- HSS ^{MATE}	Short structured interview. 56 items in four areas Problem-identification at intake and outcome measure	English Italian Spanish Portuguese		12 min	Moderate	?
SAPAS ^{MATE}	Brief screening test for personality disorder					
ICF ^{MATE}	Classification system					WHO
DASS 21 ^{MATE}						
MATE	Multimodal	Dutch English German				

EuropASI has been a gold standard for years, considering treatment demanding people in substance related and/or mental health facilities. Recently a new instrument, elaborated in the Netherlands is gaining attention: the Measurement in the Addictions for Triage and Evaluation (MATE) Table 17.5. The instrument is composed of ten modules, constructed according to the World Health Organisation (WHO) classification systems International Classification of Diseases (ICD), and International Classification of Functioning, Disabilities and Health (ICF). It was decided to arrange the instruments in Table 17.4 in order of priority: firstly, those that refer to WHO classifications and/or instruments (CIDI, ICF); secondly, the common ones in the three guidelines; and thirdly, the MATE. Since not all of the instruments exist in several European languages, preferences could depend on the language issue. There are only poor arguments to prefer one instrument to another due to psychometric characteristics. Preference should be based upon measurement purpose (research, treatment plan, supporting therapeutic alliance, monitoring. . .), most adapted modality in practice (interview, self-rating scale, screening test or classification system), realism to implement (time to complete, need for training, cost). Instruments combining several of these characteristics are most promising in a decade where outcome measurement and monitoring are upcoming issues. The importance of assessment with feedback to support clinical meetings is essential for implementation (Raes 2012).

The MATE itself can be considered a multimodal assessment tool, since it includes several main areas, specific subareas, self-rating scales as well as interview schedules, observation items and health symptoms. An overview has been given in Schippers et al. (2010). MATE consists of ten modules, each of them referring to a specific tool within a specific domain.

17.3.3 Instruments to Assess Comorbidity

The process of diagnosis of comorbid disorders is a complex one. The investigator must have comprehensive clinical experiences and extensive knowledge of current classification systems, as well as specific knowledge with regard to individual disorders and their defining symptoms. Since comorbidity also may occur in different stages of life, the sequence must be observed. A clinical interview is problematic and prone to failure with respect to these aspects. Here structured and standardized interviews can help to reduce these sources of error. Since such interviews are usually very time-consuming, screening instruments should be used before a comprehensive assessment. Recently Mestre-Pintó and colleagues (2014) developed the short screening interview “Dual Diagnosis Screening Interview” (DDSI; application time about 20 min). Even check lists can be very helpful here (e.g. SCL; Table 17.6).

For the screening of personality disorders, SAPAS is brief and suitable for addictive populations. In case of substance abuse, an indication of obsessive compulsive behaviour can be elicited by the OCDS. The instrument measures alcohol (or drugs) craving, while it conceptualizes craving as similar to obsessive

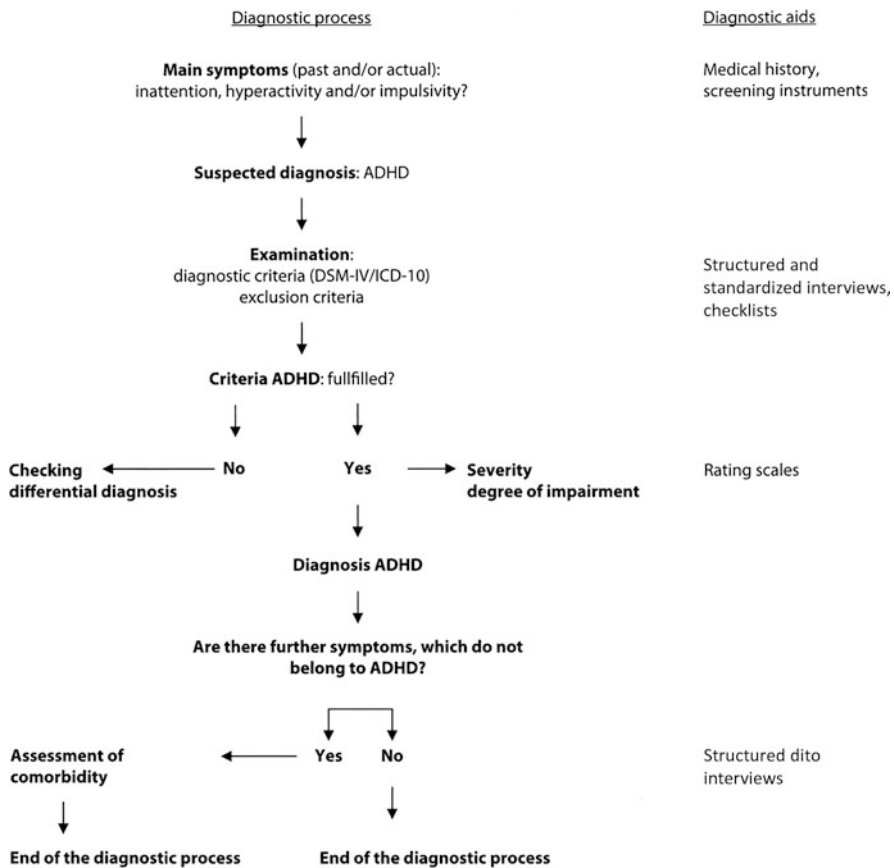


Fig. 17.1 Steps in the diagnostic process

compulsive disorder. To detect depression and/or anxiety, the Depression and Anxiety Scale DASS is a good screening tool. The Obsessive Compulsive Drinking Scale and the Depression and Anxiety Scale are both self-rating scales with 16 or 21 items, respectively, while SAPAS is a screening test/interview for personality disorders done by the clinician.

In clinical routine the diagnostic process to find one or more diagnoses is a complex process (see Fig. 17.1). Several issues should be considered, for example the problems of a clinical interview to assess all information, the differentiation between different disorders and the evaluation of comorbid diagnosis. The process is exemplified by ADHD diagnostics.

To support this process specific instruments are valuable tools. Especially the enormous increase in the use of psychoactive substances and related problems in public health emphasizes the great need for diagnostic instruments, which could be used for different purposes in different settings. Üstün and Wittchen (1992)

Table 17.5 Framework of the MATE

Domain	Module	Classification system	Original tool
Substance related disorders	M1: Substance Use: quantity, frequency and variability	Use grid	
	M4: Substance dependence and abuse	ICD/DSM dependence criteria/abuse criteria	
	Q1: Craving	Self-report quest	OCDS adapted
Psychiatric comorbidity	Q2: Depression, anxiety, stress	Self-report quest	DASS
	M2: Indications for psychiatric or medical consult (psychotic symptoms, suicidality and current psychiatric treatment)	Interview	
	M6: Personality	Interview	SAPAS
Physical comorbidity	M5: Physical complaints; and M2	Interview	MAP-HSS
Personal and social functioning	M7: Activities and participation: care and support	ICF coreset and need for care	
	M8: Environmental factors influencing recovery		
	No system	M3: Treatment history	Interview

discussed the relevance of diagnostic instruments, especially structured and standardized interviews (see Table 17.6): (1) epidemiological methods in general population surveys are necessary to assess on-going changes and trends on the basis of instruments which produce comparable data; (2) screening or case-finding instruments are essential for the early detection of potential cases or actual cases and related prevention and intervention programs; (3) the reliable and valid assessment of diagnostic features such as comorbidity, abuse patterns and substance-related problems is necessary for systematic treatment, rehabilitation and social reintegration of patients; (4) standardized instruments are the basis for evaluation of symptom patterns across substances delineating the course and natural history of disorders; (5) diagnostic instruments are essential for the evaluation of intervention programs in terms of their process, outcome, cost effectiveness, impact and acceptability.

17.3.3.1 Standardized Interviews, Structured Interviews and Checklists

Composite International Diagnostic Interview

The CIDI is a standardized diagnostic interview developed on the basis of the Diagnostic Interview Schedule (DIS) by WHO and associated working groups. The

Table 17.6 Instruments for the assessment of substance use and comorbid disorders according to DSM-IV and/or ICD-10

Instruments	Format	System	Application	User
CIDI	StandI	ICD-10 DSM-IV	Training	Lay interviewer Psychiatrist Psychologist
CIDI-SAM	StandI	ICD-10 DSM-IV	Training	Lay interviewer Psychiatrist Psychologist
M.I.N.I.	StandI	ICD-10 DSM-IV	Training	ICD-10 DSM-IV
SCID	StrucI	DSM-IV	Training Knowledge of the system	Psychiatrist Psychologist
SCAN	StrucI	ICD-10 DSM-IV	Training Knowledge of the system	Psychiatrist Psychologist
IDCL	CL	ICD-10 DSM-IV	Training Knowledge of the system	Psychiatrist Psychologist

StandI Standardized Interview, *StrucI* Structured Interview, *CL* Checklist

CIDI was designed primarily for epidemiological studies. Content and structure of the interview follow a high level of standardization of diagnostic questions and coding procedures to ensure that the instrument could be used for clinical or research purposes in a wide range of settings. The use of the interview has to be trained over a period of at least 1 week and could be conducted by trained clinicians as well as non-clinicians. The duration of the assessment encompasses a range between 1 and 3 h. The core version has an alcohol and other drug use section within 15 general sections in a modular format. Using a related computer program, CIDI could produce most important ICD-10 and DSM-IV diagnoses. A computer-assisted version (CIDI-A) and a training package is available. Feasibility and reliability of the instrument were tested in different field trials (Wittchen et al. 1991). Sufficient inter-rater reliability coefficients ($\kappa > 0.60$) were usually found for substance use disorders.

Composite International Diagnostic Interview: Substance Abuse Module (CIDI-SAM)

The CIDI-SAM is a standardized interview, which was designed as an optional module to expand the substance use sections of the CIDI core version. In contrast to CIDI, CIDI-SAM includes substance-specific questions on medical, psychological, and social consequences as well as onset, recency, quantity, and frequency for each substance used. Diagnoses following DSM-III, DSM-III-R, DSM-IV, Feighner, Research Diagnostic criteria, and ICD-10 could be produced covering alcohol- and drug-related disorders. The diagnostic and item reliability of the interview was tested sufficiently (Cottler et al. 1991). Using the CIDI-SAM, several authors found a high degree of concordance with respect to harmful use (Cottler 1993; Rapaport et al. 1993).

Mini-International Neuropsychiatric Interview (M.I.N.I.)

The M.I.N.I. is a short structured diagnostic interview for DSM-IV and ICD-10 psychiatric disorders (Sheehan et al. 1998). With an administration time of approximately 15 min, it was designed to meet the need for a short but accurate structured psychiatric interview for multi-centre clinical trials and epidemiologic studies and to be used as a first step in non-research clinical settings. The interview was validated in relation to the Structured Clinical Interview for DSM-III-R and the Composite International Diagnostic Interview (CIDI).

Structured Clinical Interview for DSM-IV (SCID)

The SCID is the most important DSM-related instrument, which is largely used in the USA (Kosten et al. 1990) and in other countries. It was developed by Spitzer and Williams (1980), which demonstrated high reliability coefficients. Additionally, a more detailed version of alcohol and drug use disorders was developed. Using this approach, Bryant et al. (1992) have shown that the coexistence of psychiatric and substance dependence disorders has an adverse effect on accurate diagnosis.

Schedules for Clinical Assessment in Neuropsychiatry (SCAN)

SCAN is a comprehensive structured psychiatric interview, which was developed by WHO (1995) on the basis of the Present State Examination. The SCAN system has a modular format covering the most important DSM-IV and ICD-10 diagnoses, a syndrome checklist, and a clinical history schedule. The system includes a diagnostic computer program, a computer-assisted interview, and a training package (Wing et al. 1992).

Symptom Checklists (SCL)

A more economic and simple method of registering diagnostic criteria are symptom checklists. The International Diagnostic Checklists (IDCL) for ICD-10 and DSM-IV (Hiller et al. 1993) provide lists with the relevant criteria and diagnostic decision rules for each group of disorders. The criteria are assessed by an interviewer on the basis of free clinical interviews and other sources of information.

The ICD-10 Symptom Checklist for Mental Disorders (ICD-10 SCL) (Janca et al. 1994) is another checklist intended for clinicians' assessment of psychiatric symptoms in the F1 category of ICD-10. The lists are accompanied by instructions intended to help the user in considering differential diagnoses. Data concerning inter-rater reliability have not been available so far.

17.3.3.2 Conclusion

During the last few years a number of instruments (interviews and checklists) have been developed to improve the reliability of clinical judgement, whose aim was to reduce specific sources of error (information, observation and/or interpretation variance) (Spitzer and Williams 1980).

This standardization of the diagnostic process is important for the future of empirical research in psychiatry, as cumulative impact of research was often considerably reduced by the fact that results of different studies were not

comparable due to differences in diagnoses and especially amongst diagnostic instruments on which the diagnoses were based. In most studies, however, no instrument was used. According to Helzer (1983), the advantages of using interviews for research are consistency and comparability of data across studies, uniformity and reliability of data within studies, and a reduction of examiner bias in the collection and interpretation of data. Although sufficient or high reliability is achieved with most instruments, we have to consider that validity will always be limited to the validity inherent in the diagnostic criteria on which the instruments are based and the exactness with which the instruments elicit the behaviour, thoughts, and feelings described by these diagnostic criteria.

17.3.4 Other Areas

In case of dual disorder, a multimodal approach requires the consideration of areas beyond substance abuse alone and beyond solely psychiatric diagnosis and classification (see Sect. 17.2). EuropASI is covering the severity of problems in seven relevant life areas, including physical health, education, work and income, alcohol abuse and drug abuse, judicial status, family and social relations, and mental health. Each of the areas can be further explored by more specific tools after an area has been found problematic. MATE is covering ten domains, referring to WHO instruments and classification systems (DSM, ICD and ICF), as there are substance related disorders (use, abuse, dependence, craving), psychiatric comorbidity (depression and anxiety symptoms, personality disorders, suicidality, psychotic symptoms), physical comorbidity (complaints and symptoms) and personal and social functioning (problems, support, and participation). Table 17.6 lists different areas and related instruments valuable for assessment. We can use them at the beginning of treatment (e.g. evaluation of the general level of psychopathology with the SCL-90-R), during treatment (e.g. evaluation of progress or specific problems) and at the end of treatment (e.g. evaluation of success).

To summarize, we have to make assessments on different levels (see Table 17.7). On the first level we have to make a diagnosis. On the second level, a categorical view ought to be implemented by adding more information concerning the general level of symptomatology as well as the patient's personality profile. On the third level, aspects such as impairment or quality of life should be taken into account. Here, the assessment has to focus on therapy-related aspects in regards to the intervention chosen (Table 17.8).

Table 17.7 Relevant fields in the context of addictive behavior

Area	Examples
General psychopathology	Symptom Checklist—90-Revised (SCL-90-R)
Personality	NEO—Personality Inventory—Revised (NEO-PI-R)
Interpersonal problems	The Inventory of Interpersonal Problems (IIP)
Relationship analysis	Structural Analysis of Social Behaviour (SASB)
Social adjustment	Social Adjustment Scale (SAS), by Weisman
Impairments	Sheehan Disability Scale (SDS)
Quality of life	SF-36 Health Survey (SF-36)

More details to assessment instruments see APA (2000)

Table 17.8 Diagnostic levels and related instruments

Level 1	Categorical diagnostics of addictive behavior and comorbid disorders according to ICD-10 or DSM-IV (e.g. by means of structured interviews)		
Level 2	Global assessment (e.g. by means of CGI or GAF)	General psychopathology (e.g. by means of SCL-90-R)	General aspects of personality (e.g. by means of NEO-PI-R)
Level 3	<i>Impairments</i> (e.g. by means of Sheehan-Scale)	<i>Quality of Life</i> (e.g. by means of SF-36)	
Level 4	<i>Diagnostics related to disorder and therapy</i> (e.g. cognitive-behavioural)		

Summary and Perspectives

Multimodal assessment is not only a must in the area of psychotherapy research and evaluation, but it is of even greater importance in daily clinical practice. For both the researcher and the practitioner, it requires the adoption of a bio-psychosocial and ethical model. Furthermore, clinicians should take into account multiple perspectives (patient, therapist, context. . .) in order to enhance communication. Therefore, several types of validated and preferably standardised instruments are available. Actually, decisions about where to start screening and where to go further into assessment often depend on the focus of the treatment facility and the first treatment demand of the patient. In substance abuse treatment facilities, the adoption of a bio-psychosocial and ethical model is already obvious, but the way psychiatric comorbidity is assessed and recognized is not always clear. The use of a screening instrument for comorbidity is advised in that situation. In general psychiatric facilities, the first treatment demand is not always substance related. In such cases, the use of a screening tool for substance abuse is recommended. In a specific facility exclusively specialized on psychiatric patients or substance abusing patients, respectively, it may be relevant to go further into one particular area, based on a positive quick screen.

Several screening instruments are available to screen for substance abuse in psychiatric populations, but only a few can be used in substance abuse populations to screen for comorbidity. Screening instruments are often self-

rating scales, which are usually preferred by clinical workers due to their brevity and feasibility to use in daily practice. Although discrepancies in ratings between the patient perspective and the one of the therapist can be a problem in the field of research, they are important and useful issues in clinical practice. There, the discrepancies in the measurement between patient and therapist can be used as a mean to enhance communication between patient and therapist, and so enhance alliance. Moreover, in psychotherapy, patients benefit from psychological assessment through active engagement and the provision of ongoing feedback (Clair and Prendergast 1994). By incorporating patient and therapist ratings in the assessment process, clinical usefulness, personal relevance, and meaningfulness to the patient could be enhanced. The information of the therapist is not the sole goal of clinical assessment anymore; it became just as important to develop alliance, to provide collaborative feedback and to come to a shared decision making about treatment options (Pope 1992; Joosten 2009). It would be ideal if in clinical practice the following strategy could be implemented: assess—treat—reassess—adjust treatment (Hunsley and Mash 2005).

References

- Adamson SJ, Sellman DJ (2003) A prototype screening instrument for cannabis use disorder: the cannabis use disorders identification test (CUDIT) in an alcohol-dependence clinical sample. *Drug Alcohol Rev* 22:309–315
- Aertgeerts B, Buntinx F, Bande-Knops J et al (2000) The value of CAGE, CUGE and AUDIT in screening for alcohol abuse and dependence among college freshmen. *Alcohol Clin Exp Res* 24:53–57
- Andrews G, Peters L (1998) The psychometric properties of the Composite International Diagnostic Interview. *Soc Psychiatry Psychiatr Epidemiol* 33:80–88
- Baron S, Linden M (2008) The role of the “International Classification of Functioning, Disability and Health, ICF” in the description and classification of mental disorders. *Eur Arch Psychiatry Clin Neurosci* 258(5):81–85
- Baumann U, Eckmann F, Stieglitz RD (1985) Self-rating data as selecting factor in clinical trials of psychotropic drugs. *Eur Arch Psychiatry Clin Neurosci* 235:65–70
- Bryant KJ, Rounsaville B, Spitzer RL et al (1992) Reliability of dual diagnosis. Substance dependence and psychiatric disorders. *J Nerv Ment Dis* 180:251–257
- Clair D, Prendergast D (1994) Brief psychotherapy and psychological assessments: Entering a relationship, establishing focus, and providing feedback. *Prof Psychol-Res Pract* 25:46–49
- Cottler LB (1993) Comparing DSM-III-R and ICD-10 substance use disorders. *Addiction* 88:689–696
- Cottler LB, Robins LN, Grant BF et al (1991) The CIDI-Core substance abuse and dependence questions: cross-cultural and nosological issues. *Br J Psychiatry* 159:653–658
- De Beurs E, Van Dyck R, Marquenie LA et al (2001) DASS: A questionnaire for the measurement of depression, anxiety and stress (De DASS: een vragenlijst voor het meten van depressie, angst en stress). *Gedragstherapie* 34:35–53
- De Meneses-Gaya C, Zuardi AW, Loureiro SR et al (2009) Alcohol Use Disorders Identification Test (AUDIT): an updated systematic review of psychometric properties. *Psychol Neurosci* 2:83–97

- De Weert-Van Oene G, de Jong C, Raes V et al (2013) Problem identification, diagnostic and monitoring in case of double diagnosis (Probleemidentificatie, diagnostiek en monitoring bij dubbele diagnose). In: Dom G, Dijkhuizen A et al (eds) *Handbook double diagnosis (Handboek Dubbele Diagnose)*. De Tijdstroom, Utrecht, pp 41–53
- Dom G, Raes V, van den Brink W (2004) Instruments for measuring addictive disorders [Meetinstrumenten bij stoornissen in het gebruik van middelen]. *Tijdschr Psychiatr* 46:671–674
- Helzer JE (1983) Standardized instruments in psychiatry. *Psychiat Dev* 1:161–178
- Hiller W, Zaudig M, Mombour W et al (1993) Routine psychiatric examinations guided by ICD-10 diagnostic checklists (International Diagnostic Checklists). *Eur Arch Psychiatry Clin Neurosci* 242:218–223
- Hunsley J, Mash EJ (2005) Introduction to the special section on developing guidelines for the Evidence-Based Assessment (EBA) of adult disorders. *Psychol Assess* 17:251–255
- Janca A, Ustun TB, van Drimmelen J et al (1994) ICD-10 Symptom Checklist for Mental Disorders (ICD-10 SCL, Version 2.0). WHO, Geneva
- Joosten E (2009) Let's decide together. Shared decision-making in addiction health care. Dissertation, Radboud University Nijmegen
- Kerkmeier M, Blanken P, de Klerk C (2003) Double diagnosis, double aid. Diagnostic guidelines and treatment (Dubbele Diagnose, dubbele hulp. Richtlijnen voor diagnostiek en behandeling). Parnassia, Den Haag
- Kosten TR, Bryant K, Rounsaville BJ (1990) The SCID: a clinical instrument for assessing psychiatric disorders. *NIDA Res Monogr* 105:213–219
- Maisto SA, Carey MP, Carey KB et al (2000) Use of the AUDIT and the DAST-10 to identify alcohol and drug use disorders among adults with a severe and persistent mental illness. *Psychol Assess* 12:186–192
- Marsden J, Gossop M, Stewart D, Best D, Farrell M, Lehman P et al (1998) The Maudsley Addiction Profile (MAP): a brief instrument for assessing treatment outcome. *Addiction* 93:1857–1867
- Mestre-Pintó JI, Domingo-Salvany A, Martin-Santos R, Torrens M et al (2014) Dual diagnosis screening interview to identify psychiatric comorbidity in substance users: development and validation of a brief instrument. *Eur Addict Res* 20:41–48
- Mills LK, Deady M, Proudford H et al (2009) Guidelines on the management of co-occurring alcohol and other drug and mental health conditions in alcohol and other drug treatment settings. National Drug and Alcohol Research Center, Sydney
- Pope K (1992) Responsibilities in providing psychological test feedback to clients. *Psychol Assess* 4:268–271
- Raes V (2012) Assess and give feedback! The effect of using assessment instruments on substance-abuse outpatients' adherence to treatment. Dissertation, Ghent University
- Raes V, De Jong CAJ, De Bacquer D et al (2011) The effect of using assessment instruments on substance-abuse outpatient adherence to treatment: a multicenter randomized controlled trial. *BMC Health Serv Res* 11:123–132
- Rapaport MH, Tipp JE, Schuckit MA (1993) A comparison of ICD-10 and DSM-III-R criteria for substance abuse and dependence. *Am J Drug Alcohol Abuse* 19:143–151
- Schippers GM, Broekman TG, Buchholz A et al (2010) Measurement in the addictions for triage and evaluation (MATE): an instrument based on the World Health Organisation family of international classifications. *Addiction* 105:862–871
- Sheehan DV, Lecrubier Y, Sheehan KH et al (1998) The Mini-International Neuropsychiatric Interview (M.I.N.I.): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *J Clin Psychiatry* 59:22–33
- Smolka M, Stieglitz RD (1999) On the validity of the Bech-Rafaelsen Melancholia Scale (BRMS). *J Affect Disord* 54:119–128
- Spitzer RL, Williams JBW (1980) Classification in psychiatry. In: Kaplan HI, Freeman AM, Sadock BJ (eds) *Comprehensive textbook of Psychiatry*, 4th edn. Williams & Williams, Baltimore, pp 591–613

- Tiet QQ, Finney JW, Moos RH (2008) Screening psychiatric patients for illicit drug use disorders and problems. *Clin Psychol Rev* 28:578–591
- UCLA Integrated Substance Abuse Programs (2006) Drug dependence treatment: training package Volume A: Screening, assessment, and treatment planning. UNODC-Office on Drugs and Crime. <http://www.unodc.org/ddt-training/treatment/a.html>
- Üstün TB, Wittchen HU (1992) Instruments for the assessment of substance use disorders. *Curr Opin Psychiatry* 5:412–419
- Wing JK, Sartorius N, Üstün TB (1992) *Diagnosis and clinical measurement in psychiatry: a reference manual for SCAN*. University Press, London
- Wittchen HU, Robins LN, Gattler LB et al (1991) Cross-cultural feasibility, reliability and sources of variance of the Composite International Diagnostic Interview (CIDI). The Multicentre WHO/ADAMHA Field Trials. *Br J Psychiatry* 159:645–653
- World Health Organization (1995) Schedules for clinical assessment in neuropsychiatry (SCAN). WHO, Geneva
- World Health Organization (1997) Composite International Diagnostic Interview (CIDI) Version 2.1. WHO, Geneva
- World Health Organization (2013) Alcohol, smoking and substance involvement screening test (ASSIST). http://www.who.int/substance_abuse/activities/assist_test/en. Accessed 14 Aug 2013