Chapter 1

Introduction, aim and outline of the study
INTRODUCTION

It has been recognized for many years that the use of benzodiazepines (BZDs) can lead to benzodiazepine dependence.\textsuperscript{1-11} Especially long-term BZD use carries a high risk of dependence.\textsuperscript{12-19} This also applies to normal-dose BZD use, which is referred to as low-dose BZD dependence.\textsuperscript{6,10,20-23} There is no convincing proof that long-term BZD use has lasting therapeutic effects.\textsuperscript{18,19,24,25} On the contrary, persistent cognitive deficits have been demonstrated after withdrawal from long-term BZD use.\textsuperscript{26} In general, it is agreed that BZD use should be therapeutic and not maintain dependence. Guidelines with respect to the prescription of BZDs have been proposed, in order to prevent dependence as much as possible.\textsuperscript{27-30} Nevertheless, in many reports the dependence risks have been played down or have been 'outweighed' by the desired therapeutic effects.\textsuperscript{31-33} Some reports only addressed dependence in the case of non-medical BZD use. Objections have been made against this confinement to non-medical BZD use,\textsuperscript{34,35} because it suggests that medical use rules out BZD dependence. Along these lines, the debate on BZD dependence has persisted, apparently maintained by a lack of consensus on the definition of BZD dependence.\textsuperscript{10,36,37}

In contrast, during the past thirty to forty years, there has been a clear trend in psychiatry towards developing descriptive criteria for psychiatric disorders and reaching consensus on classification systems, such as the International Classification of Diseases (ICD) from the World Health Organization (WHO) and the Diagnostic Statistic Manual for Mental Disorders (DSM) from the American Psychiatric Association (APA). In the ICD-10, DSM-III-R and DSM-IV\textsuperscript{38-41} criteria are defined for substance dependence,\textsuperscript{42-45} which are based on the provisional criteria for alcohol dependence postulated by Edwards and Gross in 1976.\textsuperscript{46,47} In the field of addiction, these substance dependence criteria have increasingly been applied to
alcohol and other psychoactive substances.\textsuperscript{48-54}

Although the ICD and the DSM substance dependence criteria have gained worldwide recognition in psychiatry, they have been neglected in relation to BZD dependence in scientific reports. Linsen et al. (1995) assessed the definitions used for BZD dependence in 250 papers published between 1988 and 1991: the ICD and DSM criteria had only rarely been used.\textsuperscript{37} In a review on historical developments in the diagnosis of BZD dependence, Tyrer (1993) did not mention the ICD and DSM criteria at all, but still concluded that the diagnosis remained shadowy.\textsuperscript{10}

It can be concluded that the ICD and DSM substance dependence criteria have not yet become popular for the diagnosis of BZD dependence. The medical context in which BZDs are mostly used probably masks aspects of dependence. Therefore, these aspects are not taken into account during screening for ICD and DSM substance dependence symptoms. Most dependence-inducing drugs are bought in shops (alcohol) or acquired illicitly; the overt reasons for use are the induction of euphoria and/or a decrease in withdrawal symptoms. Their use is not labelled as medical. BZDs, on the other hand, are generally acquired on medical prescription and the overt reason for their use is labelled as medical. Within this medical context, it is more tempting to believe that BZD use relieves medical complaints instead of producing a state of dependence. Dependence symptoms like withdrawal and craving are therefore easily mistaken for relapsing disease symptoms.\textsuperscript{21,55-57} Gratification of persistent appeals from patients by physicians who write repeat prescriptions in order to continue to suppress the symptoms can lead to neglect or denial of dependence symptoms. A compliant attitude of physicians with respect to prescribing BZDs can induce a false sense of security in patients and reinforce requests for repeat prescriptions. The medical context, particularly the interaction between the patient and physician, therefore appears to add an
extra dimension to dependence in the case of BZD use. To break this vicious circle, the logical step was to develop specific criteria for BZD dependence which would take the medical context into account. A provisional set of specific criteria for BZD dependence, formulated on the basis of a literature study and clinical experience, was briefly outlined by Linsen et al. Subsequently, a delphi procedure was used to obtain feedback on these criteria from an international panel of experts; the feedback was used to modify the criteria. The final set of criteria for BZD dependence is shown in Appendix A.

The postulation of these specific criteria enabled a new structured approach to BZD dependence, in addition to the DSM and ICD classifications. A self-report instrument, the Benzodiazepine Dependence Self-Report Questionnaire (Bendep-SRQ), was developed with the aim of reflecting the severity of BZD dependence. The Bendep-SRQ is shown in Appendix B of this thesis. The criteria in Appendix A served as the main basis for the formulation of the Bendep-SRQ items.

This thesis made a structured approach to BZD dependence in a clinical study on several samples of outpatients who were using BZDs.
AIM OF THE STUDY

The purpose of this study was to evaluate some structured approaches to the assessment of BZD dependence that were based on the general criteria of the substance dependence syndrome and the specific criteria for BZD dependence (see Appendix A). In this evaluation, special attention was paid to the psychometric properties of DSM-III-R, ICD-10 and Bendep-SRQ dependence constructs when they are applied to BZD use. Thorough investigation of these psychometric properties guided a well-considered application of structured approaches as clinical instruments with the aim of facilitating the clinical management of non-indicated chronic BZD use.

OUTLINE OF THE STUDY

This thesis followed the two structured approaches described above. Chapters 2 and 3 focus on the application of the DSM-III-R and ICD-10 substance dependence criteria for the evaluation of BZD dependence, while Chapters 4, 5, 6 and 7 concentrate on the development of the Bendep-SRQ.

Chapter 2 evaluates the DSM-III-R and ICD-10 BZD dependence criteria using an epidemiological approach. The criteria were applied to outpatient BZD users to assess the prevalences of the past year and lifetime BZD dependence diagnoses based on the DSM-III-R and ICD-10 classifications. On the assumption that these prevalence figures reflected the risk of BZD dependence in outpatient BZD users, recommendations could be made for the clinical management of BZD use.
Chapter 3 takes a dimensional approach to the DSM-III-R and ICD-10 BZD dependence criteria; Rasch modelling was applied to a large sample of outpatient BZD users to assess the homogeneity of the DSM-III-R and ICD-10 BZD dependence criteria. The reliability of resulting the Rasch homogeneous sets of criteria was assessed in terms of subject and item discriminability. Taking the specific order and the contents of the items into account, theoretical rationales were formulated to support the construct validity of the Rasch homogeneous sets of criteria. Attention was paid to some differences between the DSM-III-R and ICD-10 constructs.

Chapter 4 describes a study in which the Bendep-SRQ was introduced and assessed in an outpatient sample of BZD users, consisting of General Practice (GP) patients, psychiatric outpatients and self-help patients. The composition of the Bendep-SRQ is described and potential Bendep-SRQ scales were extracted by means of factor analyses. Rasch analyses were carried out to assess the scalability of the Bendep-SRQ scales. Subsequently, the reliability of the Bendep-SRQ scales was evaluated in terms of subject discriminability, item discriminability and test-retest stability. A new measure emerged: the Item Discriminability Coefficient (IDC). To support the construct validity of the scales, theoretical rationales were drawn up to explain the specific item order provided by the Rasch scale values. To assess the concurrent and discriminant validity, a matrix consisting of Bendep-SRQ scales and supposed concurrent and discriminant measures was factor-analysed. In the light of the results, the utility of the Bendep-SRQ is discussed.

Chapter 5 presents a study on the assessment of BZD dependence in alcohol and drug dependent outpatients who were receiving treatment at Community-Based Addiction Centres (CBACs). The prevalences of the DSM-III-R and ICD-10 dependence diagnoses were determined with respect to BZDs and other psychoactive substances. Applying the
methodology of Chapter 4, the psychometric properties and the utility of the Bendep-SRQ were evaluated in this particular population.

Chapter 6 re-assesses the scalability, reliability and validity of the Bendep-SRQ scales in new samples of GP patients and psychiatric outpatients for the purpose of cross-validation. In the discussion of the results, differences between the new and original patient samples with respect to sociodemographic characteristics and aspects of BZD use were taken into account.

Chapter 7 applies a new methodology, referred to as Rasch latent trait standardization, to standardize the raw sumscores of the Bendep-SRQ scales into the normal form, using the total group of GP patients as a normative sample. This new method was compared to the classical method of standardization. Standard scores and corresponding percentile ranks were derived to facilitate the interpretation of the Bendep-SRQ sumscores in clinical practice.

Chapter 8 presents a general discussion on this study. The main topics include a global clinical impression, design and implementation, the psychometric methodology applied and the utility of the new structured approaches in clinical practice and scientific research. Some major conclusions are drawn and recommendations are made for further research.
REFERENCES


