Personality problems among patients with substance use disorders: 
Assessment and clinical implications.

Ingebjørg Aspeland Lien

Main thesis in clinical psychology

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IV
Abstract

Student/author: Ingebjørg Aspeland Lien.
Title: Personality problems among patients with substance use disorders: Assessment and clinical implications.
Supervisor: Espen Ajo Arnevik.

Background and aim: Several studies have shown that personality disorders (PDs) are frequently occurring among patients with substance use disorders (SUDs). A development from the research of co-occurrence estimates in this patient group is investigating personality problems. Personality problems are dimensional constructs aiming to capture the core of personality pathology. The aim of the study was to investigate personality problem severity among Norwegian adult SUD patients. Personality problems were assessed using the self-report questionnaire Severity Indices of Personality Problems (SIPP-118). Furthermore, we sought to explore the association between substance use characteristics (poly-substance use, injection use, age of debut and primary preferred substance) and personality problem severity.

Method: The study used a cross-sectional design based on questionnaires, which included the SIPP-118 as well as questions on demographic data and substance use characteristics. The study sample consisted of 155 SUD patients currently in treatment at detoxification sections at Oslo University Hospital. Data was gathered by the student in a period of seven months, from July 2014 to January 2015.

Results: The results indicated that SUD patients have personality problems at a level of severity comparable to previously investigated PD patient samples, and significantly more severe than personality problems found in normal population samples. This indicates that personality problems is a common, as well as detrimental, feature among SUD patients, which further points towards considering these in all aspects of SUD treatment. None of the investigated substance use characteristics were significant predictors of personality problem severity. Thus, the study points to a need for separately assessing personality pathology in SUD patients. Though psychometric evaluation of the SIPP-118, we found that personality problems could be assessed reliably and validly in SUD patients during detoxification. This is an important contribution to the discussion concerning time and context of personality pathology assessment in the SUD treatment field, which might also have clinical implications.
Clinical implications: Assessing personality problems early in treatment might make possible a more integrated approach to SUD treatment, where personality problems, as well as substance related problems, are targeted. The study also indicates a need for greater integration of knowledge and methods from PD treatment into the SUD treatment field.
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Abbreviations

SUD: Substance use disorder
WHO: World Health Organization
ICD: International Classification of Diseases
DSM: Diagnostic and Statistical Manual of Mental Disorders
PD: Personality disorder
ASPD: Antisocial personality disorder
BPD: Borderline personality disorder
SCID-II: Structured Clinical Interview for the DSM-IV
NEO PI-R: The Revised NEO Personality Inventory
DAPP-BQ: Dimensional Assessment of Personality Pathology – Basic Questionnaire
SIPP-118: Severity Indices of Personality Problems
TSB: Tverrfaglig Spesialisert Behandling
REK: Regional Ethics Committee
EuropASI: European adaptation of the fifth edition of the Addiction Severity Index
SPSS: Statistical Program for Social Sciences
ANOVA: Analysis of variance
SD: Standard deviation
SIF: Safer injection facilities
SCL-90: Symptom Checklist-90
NICE: National Institute for Clinical Health and Clinical Excellence
1 Introduction

1.1 Substance use disorders

Use of drugs places high costs on society, including decreased productivity, health problems, costs relating to substance-related crime and impact on public safety (International Narcotics Control Board, 2013). In addition to financial burdens, families, children, friends and environment are affected by substance use disorders (SUDs). SUD is an immense personal burden for affected individuals, impacting mental and physical health, ability to work, participation in society, as well as interpersonal relationships. The World Health Organization (WHO) estimates that substance use accounts for 10 percent of all life years lost (premature mortality) globally (United Nations Office on Drugs and Crime, 2012). SUDs are among the most prevalent mental disorders in Norway. According to the annual report on health in the Norwegian population, lifetime prevalence of SUDs is between 10 and 20 percent (Folkehelseinstituttet, 2014). Harmful use of or dependence on alcohol (International Classification of Diseases 10 (ICD-10) code F10) is the most frequently occurring SUD in Norway, while poly-substance use (ICD-10 code F19) is the second most frequent.

Dependence is a complex and multifaceted field of study, and many theories have been developed to explain the origin and maintenance of SUDs (West & Brown, 2013). Among these, the bio-behavioral diathesis-stress model is frequently used to conceptualize the etiology of SUDs (Verheul & van den Brink, 2000). This means that the onset and course of SUD is considered a result of the continuous and mutual interaction between an individual’s biological and psychological vulnerabilities and resources on the one hand, and psychosocial environment on the other hand. Multiple vulnerability factors in the individual and the psychosocial environment increases the chance of developing the disorder.

Substance use disorder (SUD) is defined as: “A cluster of physiological, behavioral, and cognitive phenomena in which the use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviors that once had greater value” (WHO, 1992). According to the ICD-10 definition of SUD, harmful substance use (abuse in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)) and dependence are collectively referred to as substance use disorders (Miele et al., 2000). The terms “addiction” and “dependence” have been widely and variably used, and might be hard to define and
operationalize (Kranzler & Li, 2008). Therefore, for the purpose of this thesis, *substance use disorder* (SUD) according to the ICD-10 will be the preferred term.

### 1.2 Personality and personality problems

In his 1937 book “Personality: a Psychological Interpretation”, Gordon Allport states that personality “…is what lies behind specific acts and within the individual. The system that constitute personality is in every sense determining tendencies and when aroused by suitable stimuli provide those adjustive and expressive acts by which personality comes to be known” (Allport, 1937, p. 48). The essence in this definition is that personality is a person’s general tendency to react, behave, think and feel across situations. A central element when discussing personality is traits. Personality traits can be defined as “…the relatively enduring patterns of thoughts, feelings and behaviors that reflect the tendency to respond in certain ways under certain circumstances” (Roberts, 2009, p. 140). A known and agreed upon model of the structure of normal personality, classified by personality traits, is Costa and McCrae’s five-factor model (Saulsman & Page, 2004). The five traits represented in this model are neuroticism, extraversion, agreeableness, conscientiousness and openness to experience.

Personality consists of traits and structures that characterize personality as well as the functions that these traits and structures perform and the adaptive purposes they serve (Livesley & Jang, 2000). As stated by Allport (1937, p. 48): “Personality *is* something, and personality *does* something”. What personality does, the functional domain of personality, can be labelled adaptive capacities (Bastiaansen, De Fruyt, Rossi, Schotte, & Hofmans, 2013). The adaptive capacities usually refer to the organization of personality that includes regulation of self; value of the self, identity and control over impulses, and interpersonal functioning; mentalization capacity, creating and maintaining meaningful intimate relationships and empathy (Livesley & Jang, 2000). Development of adaptive capacities starts early in life, are learned in social contexts, and the capacities’ development continue throughout the life course (Andrea et al., 2007).

Life tasks, such as identity formation and establishing meaningful interpersonal relationships, are adaptive problems a person must fulfil to develop functionally. While solutions to these tasks form core components of personality, failure to solve them can lead to malfunctioning of the adaptive capacities. When the adaptive capacities function maladaptively, they can be
referred to as *personality problems* (Andrea et al., 2007). Furthermore, dysfunctioning of the adaptive capacities; the personality problems, are believed to form the core components of personality disorders (PDs) (Livesley & Jang, 2005). In the alternative criteria for PDs in the Diagnostic and Statistical Manual of Mental Disorders, 5th ed. (DSM-5), it is proposed that PDs are characterized by significant impairments in self- (identity and self-direction) and interpersonal (empathy and intimacy) functioning (American Psychiatric Association, 2013). This is in accordance with a perspective that normal and pathological personality is distributed dimensionally, held by many researchers (Arnevik, Wilberg, Monsen, Andrea, & Karterud, 2009). The adaptive capacities are also believed to be dimensional phenomena, meaning that more severe personality pathology is related to less adaptive capacities, and thus more severe personality problems. Adaptive capacities are in continuous development, and are available to change (Bastiaansen et al., 2013). This can help to explain why diagnostic stability for PDs seems to be lower than previously assumed, and explain change due to therapeutic interventions (Arnevik et al., 2009). The clinical relevance of the concept of personality problems makes them an interesting topic of study.

1.3 Relationship between SUDs and personality problems

In researching the link between dependence and personality, several studies have explored comorbidity rates between SUDs and PDs. In these studies, one finds that a large portion of SUD patients meet criteria for an axis II-diagnosis, and similarly that a large portion of patients with a diagnosis of PD also have a SUD diagnosis (Karterud, Wilberg, & Urnes, 2010; Skodol, Oldham, & Gallaher, 1999; Verheul & van den Brink, 2005). The prevalence rates vary between different types of substances as well as for the different PDs and PD clusters (Arefjord, 2011). Rates of co-occurring SUD-PD are found to be lower among patients primarily using alcohol (ICD-10 code F10) than among those using other or multiple substances (ICD-10 code F11-19). Grant et al. (2004) found that 29% of individuals with SUD using alcohol had at least one co-occurring PD, while the rate was 48% among individuals with SUD using other or multiple substances. Antisocial personality disorder (ASPD) and borderline personality disorder (BPD) are the most frequently occurring PDs among individuals with SUDs (Grana, Munoz, & Navas, 2009; Grant et al., 2004; Karterud et al., 2010; Landheim, Bakken, & Vaglum, 2003). In their literature review Trull, Sher, Minks-
Brown, Durbin, and Burr (2000) found that 57% of individuals diagnosed with BPD met diagnostic criteria for SUD. Impulsivity and externalization, typical characteristics of ASPD and BPD, seem to be important factors for explaining the association between SUDs and PDs (Jahng et al., 2011; Sher & Trull, 2002).

There has been research into whether SUDs can contribute to, or cause personality problems, or vice versa. Reviewing literature on the relationship between SUD and BPD, Trull et al. (2000) argue that SUD can contribute to aspects of personality problems. The substances’ neurological and neurotoxic effects are important to consider in this regard. Examples are serotonin depletion resulting from high intake of alcohol leading to impulsivity (Carver & Miller, 2006), or the substances’ effect on neurodevelopment leading to difficulties with executive functions important for self-regulation and problem-solving among other things (Trenz et al., 2012). Another explanation for the association is the possibility that individuals with personality problems might turn to substances to self-medicate affective or interpersonal disturbances, thus influencing the development of SUDs (Flores, 2001). Yet another possibility is that SUDs and PDs are both caused by a common factor, such as childhood traumas or genetic factors (Sher & Trull, 2002). A fourth option is that co-occurring SUDs and personality problems maintain each other. There has been some evidence that SUDs increase the chronicity of BPD, and that BPD increases the chronicity of SUDs (Trull et al., 2000). To date, there is no evidence solidly supporting one influence over the other. The term co-occurring disorders imply two disorders with a purely temporal relationship, and not necessarily a common underlying cause or related etiologies (Morisano, Babor, & Robaina, 2014). Because the questions concerning related etiologies or common causes are too complex for the scope of this thesis, the term co-occurrence will be preferred over comorbidity.

1.3.1 The association between substance use characteristics and severity of personality problems

It has been proposed that substance use problems, like personality problems, can be viewed as being distributed dimensionally rather than as categorical states (Gossop, Griffiths, Powis, & Strang, 1992; Kranzler & Li, 2008). This allows us to talk about severity of substance use. On the basis of literature reviewed (Colpaert, De Maeyer, Broekaert, & Vanderplasschen, 2013; Gonzales et al., 2011; Gossop et al., 1992; Latimer, Newcomb, Winters, & Stinchfield, 2000),
the following four characteristics are considered indicators of substance use severity: poly-substance use, route of administration, age of debut and primary preferred substance. These relate to different aspects of substance use, and might be associated differently with each other and with other indicators of mental health.

Poly-substance use, injecting use and early age of debut are factors associated with increased risk of developing a SUD and longer duration substance use (Domier, Simon, Rawson, Huber, & Ling, 2000; Magid & Moreland, 2014; Trenz et al., 2012). These indicators of substance use severity are also associated with negative long-term consequences for mental and physical health (Di Poggio et al., 2006; Domier et al., 2000; Gruber, DiClemente, Anderson, & Lodico, 1996; Taplin, Saddichha, Li, & Krausz, 2014). Higher rates of co-occurring personality pathology are found among SUD patients with poly-substance use and/or injecting use compared to SUD patients only consuming one substance per day and employing other routes of administration (Landheim et al., 2003; Saint-Lebes, Rodgers, Birmes, & Schmitt, 2012; Verheul, van den Brink, & Hartgers, 1995). Early onset of substance use might be an indicator of more severe pathology, and is of concern among other things due to how the substances’ neurotoxic effects might interfere with neurodevelopment and development of executive functions (Trenz et al., 2012).

There is an ongoing discussion concerning the relevance of primary preferred substances of use. Several studies have found common characteristics among subgroups of substance users based on their primary preferred substance, such as heroin (Di Poggio et al., 2006; Hopfer, Mikulich, & Crowley, 2000) and stimulants (Wu, Pilowsky, Wechsberg, & Schlenger, 2004). Other studies have found primary substance of use to be a less important indicator of overall severity compared to factors such as co-occurring mental disorders, poly-substance use and economic adjustment (Campbell et al., 2013). An agreed upon division, both theoretically and clinically, is the one between substance users preferring alcohol and those preferring other substances (these are often poly-substance users). Co-occurring SUD-PD with alcohol as preferred substance seem to be less harmful than with other or multiple substances (Landheim et al., 2003; van den Bosch & Verheul, 2007).

1.3.2 Clinical implications

The reviewed literature finds that presence of PD diagnoses among SUD patients admitted for treatment is frequently occurring. Co-occurrence of SUD-PD is associated with greater
functional impairment (Skodol et al., 1999) and a mutual deterioration of the prognosis (Karterud et al., 2010; Trull et al., 2000), indicating a need for increased focus on developing effective treatment for this group of patients. Typical treatment considered for low functioning SUD patients is inpatient treatment focusing on substance use related problems (Gossop, 2001). This treatment might not be suited to meet the whole range of problems SUD patients encounter. Research indicates that personality pathology is common among SUD patients, which means that knowledge the PD treatment field might be valuable contributions to SUD treatment. One aspect concerns what treatment setting these patients are admitted to. While there has been political focus over the last years on increasing the number of inpatient places within SUD treatment (Hatlebakk, 2014), outpatient treatment is the recommended format for patients with BPD and ASPD (National Institute for Health and Clinical Excellence, 2009a, 2009b). If PD treatment guidelines were translated to the field of SUD treatment on the basis of high co-occurrence rates between SUD-BPD and SUD-ASPD, this would possibly call for restricted inpatient treatment of SUD patients. Another aspect concerns the possibility for more integrated treatment approaches. Integrated treatment targets the co-occurring disorders simultaneously, which means introducing approaches and methods from the PD treatment field into SUD treatment for the purpose of targeting personality pathology.

To gain further insight into SUD patients’ functioning and to determine what treatment type and setting is adequate for these patients, it might be important to assess personality problems. A traditional assumption among clinicians working with SUD patients has been that one must wait until a period of abstinence before measuring personality pathology (Marlowe, Husband, Bonieskie, Kirby, & Platt, 1997). However, at this stage, treatment format and approach might have been chosen and treatment might have started and progressed. This presents a problem if aspects other than substance use related problems should be deciding factors for treatment. Thus, assessing personality problems at an early stage in treatment may have clinical implications. An important question is therefore how and when we can assess personality problems in SUD patients.

### 1.4 Assessment of personality problems

Different instruments have been developed to assess an individual’s personality pathology, all with their understanding of personality pathology as well as specific limitations and benefits.
One of these instruments is the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II). The SCID-II is a clinical interview assessing diagnostic criteria for the 10 PDs in the DSM classification system, used to assess diagnoses of PD. One assumption behind this diagnostic instrument is that normal and abnormal personality belong to qualitatively different domains, which is now objected by many researchers (van Kampen, 2002). The Revised NEO Personality Inventory (NEO PI-R) is another instrument used for assessing personality pathology. This questionnaire measures the five major domains of personality presented in Costa and McCrae’s five factor model (Ryder, Costa, & Bagby, 2007). An assumption behind the clinical use of this instrument is that personality pathology represents extreme and maladaptive variants of normal personality traits (Lynam, 2012). Another instrument is the Dimensional Assessment of Personality Pathology – Basic Questionnaire (DAPP-BQ). This instrument is based on a dimensional model of PDs, assessing the major common dimensions across personality pathology (van Kampen, 2002).

The Severity Indices of Personality Problems (SIPP-118) is an instrument assessing the core components across PDs, referred to as personality problems. The questionnaire was developed by Dutch and British clinical experts in the field of personality and PDs for research purposes as well as for clinical purposes. The SIPP-118 aims to measure an individual’s levels of adaptive capacities at a given time, and can indicate in which areas of personality functioning treatment is needed and which areas are adaptive and resourceful (Verheul et al., 2008). Furthermore, the SIPP-118 can be used as a measure of change due to treatment, indicating which capacities have improved and become more adaptive (Verheul et al., 2008). The SIPP-118 has currently been tested with five samples. In the initial validity study of the SIPP-118, personality problems were assessed in a Dutch PD sample (N=555) and a Dutch normal population sample (N=478) (Andrea et al., 2007). Personality problems in a Norwegian PD sample (N=114) were assessed in the Ullevål Personality Project (Arnevik et al., 2009). The SIPP-118 has also been tested with a clinical and a non-clinical adolescent sample (Feenstra, Hutsebaut, Verheul, & Busschbach, 2011). Overall, the SIPP-118 shows promising psychometric properties, is widely used for assessing personality problems at specialized treatment facilities for patients with PDs throughout Norway and addresses the adaptive capacities not formally limited to abstinence. Thus, the SIPP-118 was chosen to be the assessment instrument used in this study.
The need for specific assessment of personality functioning in patients in the mental health care is generally acknowledged (American Psychiatric Association, 2006; Langås, Malt, & Opjordsmoen, 2012; Verheul, 2001). Focus on the clinical importance of assessing personality pathology within the SUD field has increased with research focusing on patients with co-occurring SUD and mental disorders, among these PDs, and their treatment needs. An interesting topic of study is therefore whether instruments used for assessing personality functioning in other clinical populations, also validly and reliably can be used to assess personality functioning in SUD patients.

1.5 Problem presented and hypotheses

A development from the research of co-occurrence estimates is to investigate the levels of personality problems in Norwegian SUD patients. Study of the dimensional construct personality problems compared to the type-based PD diagnoses in relation to SUD, is a relatively new and undiscovered field of study.

Drawing from previous research on substance use characteristics, the study will explore the relationship between substance use severity and severity of personality problems. If apparent differences in personality problems by substance use characteristics are found, this could indicate different treatment needs for different subgroups of SUD patients.

1.5.1 Hypotheses

1. On the basis of reviewed literature showing that more than 50% of SUD patients meet diagnostic criteria for one or more PDs, we expect to find that SUD patients have severe personality problems. Personality problems are previously assessed in three adult samples; a Dutch PD sample and a Dutch normal population sample, and in a Norwegian PD sample (Andrea et al., 2007; Arnevik et al., 2009). Comparing our study sample with these three samples, we expect to find that Norwegian SUD patients have personality problems at a level of severity comparable to the PD population, and significantly different from the normal population, as measured by the SIPP-118.

2. It is expected that severity of substance use; poly-substance use, injecting route of administration, early age of substance use debut and primary preferred substance not being alcohol, is related to severity of personality problems.
a. The negative consequences of poly-substance use, such as impact on mental and physical health (Di Poggio et al., 2006), as well as quality of life (Colpaert et al., 2013) are widely acknowledged. SUD patients with poly-substance use are found to have higher rates of co-occurring PDs than non-poly-substance users (Landheim et al., 2003; Verheul et al., 1995). Reflecting these research findings, we expect to find that the negative impacts of poly-substance use affects personality functioning among Norwegian SUD patients. Thus, **SUD patients with poly-substance use are expected to have lower scores on all SIPP-118 domains compared to patients that primarily prefer using only one substance.**

b. Injecting use is associated with higher rates of morbidity and mortality compared to other routes of administration, as well as poorer mental and physical health, and some researchers propose that injecting substance use is a separate indicator of more severe psychopathology (Saint-Lebes et al., 2012). We expect this to be reflected in the levels of severity of the Norwegian SUD patients included in the study. **We expect to find that patients with injection as primary route of administration and patients preferring multiple routes of administration have lower scores on all domains of the SIPP-118 than non-injectors.**

c. Trenz et al. (2012) emphasize the importance of exploring early substance use debut, particularly at or prior to age 15. Kandel, Davies, Karus, and Yamaguchi (1986) found that substance use at age 15-16, primarily use of illicit substances, correlated with continued substance use, marital problems, work instability, delinquency and psychological functioning 10 years later. In accordance with this and other studies showing detrimental long-term effects of early substance use initiation, **we expect to find that patients reporting substance use debut before or at the age of 16 will have lower scores on all SIPP-118 domains compared to patients with substance use debut at older ages, indicating an association between age of debut and personality problem severity.**

d. SUD patients are often characterized by and divided according to primary preferred substances. The division between alcohol as preferred substance and other preferred substances is especially pronounced. Several studies have found that there are significantly lower rates of PDs among substance users primarily using alcohol than among those using other substances (Landheim et al., 2003; Langås et al., 2012; Skodol et al., 1999). Preferring alcohol compared to preferring other substances might relate differently to severity of personality problems. More specifically, **we expect to find more severe personality problems among SUD patients using other substances compared to those primarily using alcohol.**
accordance with Campbell et al. (2013), showing that primary substance of use is an unimportant indicator of substance use severity; *we do not expect to find significant differences in severity of personality problems between SUD patients based on primary preferred substance of use.*

3. Landheim et al. (2003) found significant differences in comorbidity rates and patterns between male and female poly-substance users. The female substance users had higher rates of BPD, while the male poly-substance users more often met diagnostic criteria for ASPD. In the study by Arnevik et al. (2009) where severity of personality problems among PD patients was investigated, no significant differences between genders were found. In the present study, we are concerned with severity of personality problems; core pathology common across PDs. *Thus, no significant differences in SIPP-118 domain scores between genders are expected.*
2 Method

2.1 Sample

The sample consists of inpatients at the section for detoxification from alcohol and other legal substances, and section for illegal substances at the Oslo University Hospital. Before admission to treatment patients are evaluated by an interdisciplinary team. Patients who fulfill the diagnostic criteria for SUDs according to the diagnostic system ICD-10, are given “right” to specialist health care treatment according to the national “Prioriteringsveileder Tverrfaglig Spesialisert Rusbehandling (TSB)” (Helsedirektoratet, 2012b). Thus, all the study participants were admitted to specialist health care treatment.

2.2 Participant characteristics

The sample consists of 155 participants, with a mean age of 42 years (SD=11.7). 61% of the participants were men, 66% had 12 years of education or more, and 26% had completed a university or a university college education (see table 1).

30% of the sample reported alcohol as their primary preferred substance, 20% heroin, 6% amphetamines, 3% medicines/pills, 3% cannabis, 2% cocaine, 1% Methadone/Subutex, 1% other opiates and 1% hallucinogens. One third of the sample reported multiple primary substances. The sample was divided into five subgroups for statistical analyses, based on the nature of their primary preferred substance (Campbell et al., 2013; Fridell & Hesse, 2006). These five groups were alcohol, opiates (heroin, Methadone/Subutex and other opiates), stimulants (amphetamines, cocaine and cannabis (Stewart, Dewit, & Eikelboom, 1984)), tranquillizers (medicines/pills) and other substances (see table 1). The majority of the last group (52 of 53) reported preferring multiple substances, indicating poly-substance use.

Two thirds of the sample (62.5%) reported daily poly-substance use. Similar portions of SUD patients with poly-substance use have been found in other studies (European Monitoring Centre for Drugs and Drug Addiction, 2009). With regard to route of administration for primary preferred substance, 36.5% of the sample reported oral administration, 6% nasal administration, 13% smoking, 3% non-intravenous injection, 29% intravenous injection, and
13% reported multiple routes of administration. 62% of the total sample reported that they had once injected a substance. Mean age for injection debut was 23 years (SD=8.6).

Based on reviewed literature on consequences of age of substance use debut, it seems relevant whether debut happens before or after 16 years of age (Kandel et al., 1986). Because the majority (74%) of the present sample reported substance use before or at age 16, this group was divided into two subgroups to be able to further check for impact. Age of debut within the sample varied between 7 and 52 years, with a mean age of 16 years (SD= 6.6). Age of substance use debut was split into three groups for analyses: very low age of debut (earliest age (7 years) → 13 years) (37,5%), low age of debut (14-16 years) (37,5%) and moderate to high age of debut (17 years → oldest (52 years)) (23%).

Because of limited time and resources, as well as concerns regarding accuracy of self-report, no data on co-occurring axis I pathology was collected for the present study. A number of previous studies have found that there is a high prevalence of mental disorders; mood disorders, anxiety and post-traumatic stress disorder, as well as PDs, among SUD patients in treatment (Conway, Kane, Ball, Poling, & Rounsaville, 2003; Flynn & Brown, 2008; Folkehelseinstituttet, 2014). This means that several of the participants in the study might have a co-occurring axis I mental disorder.

Table 1: Characteristics of the study participants.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender, male</td>
<td>94 (61)</td>
</tr>
<tr>
<td>Education, 12 years or more</td>
<td>101 (66)</td>
</tr>
<tr>
<td>Preferred substance</td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>46 (30)</td>
</tr>
<tr>
<td>Opiates</td>
<td>34 (22)</td>
</tr>
<tr>
<td>Stimulants</td>
<td>17 (11)</td>
</tr>
<tr>
<td>Tranquilizers</td>
<td>5 (3)</td>
</tr>
<tr>
<td>Other/multiple</td>
<td>53 (34)</td>
</tr>
<tr>
<td>Poly-substance use</td>
<td>90 (62,5)</td>
</tr>
<tr>
<td>Route of administration</td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>51 (36)</td>
</tr>
<tr>
<td>Method</td>
<td>Count (N)</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Nasal</td>
<td>9 (6)</td>
</tr>
<tr>
<td>Smoking</td>
<td>18 (13)</td>
</tr>
<tr>
<td>Non-intravenous injection</td>
<td>4 (3)</td>
</tr>
<tr>
<td>Intravenous injection</td>
<td>41 (29)</td>
</tr>
<tr>
<td>Multiple</td>
<td>18 (13)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age of debut</th>
<th>Count (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 → 13</td>
<td>58 (38)</td>
</tr>
<tr>
<td>14 → 16</td>
<td>58 (38)</td>
</tr>
<tr>
<td>17 →</td>
<td>36 (24)</td>
</tr>
</tbody>
</table>

### 2.3 Data collecting procedure and context

Questionnaire data was gathered in a period of seven months, from July 2014 to January 2015. Research protocol was approved by the Regional Ethics Committee (REK) prior to data collection.

Participants were recruited through weekly participation at collective afternoon meetings at the two detoxification sections. During these meetings patients were given brief information about the study and participation. It was promoted as a study to look into the needs and problem areas of patients in SUD treatment, with the objective of further insight into how we can improve SUD treatment. The staff working at the three sections was also encouraged to recruit participants. No incentive was offered, and the voluntary nature of participation was emphasized. Patients were informed that choice of participation would have no consequences for further or current treatment (Del Boca & Noll, 2000). Patients with insufficient command of the Norwegian language, in acute crisis or other severe condition were not requested to participate. Patients were asked to fill out the questionnaire either on their own or with help from the staff. The filled out questionnaires were put in marked envelopes, which were in turn put in a locked mailbox. All data was treated without name, national identity number or other pieces of identifying information.

The description of the context is relevant when discussing the results, as the context might affect the validity of the assessment. The usual length of treatment at the detoxification sections is approximately 10 days. Many patients are referred for further SUD treatment after
This. For some patients, this is their first encounter with SUD treatment, while other patients have been through several earlier detoxification stays as well as longer duration treatments. One of the things that these patients share is that this is a challenging period, characterized by upheavals, changes, and insecurity. The two detoxification sections each have 15 beds, and patients are replaced each day, making the patient group unstable. It is reasonable to reflect on the impact this environment has on patients in which a large portion might have insecure attachment patterns (Thorberg & Lyvers, 2006). In addition an unstable external context, many of the detoxification patients may struggle with abstinence pains, withdrawal symptoms and other physical problems due to recent substance use, which impact their functioning.

During time of collection, there was opportunity to spend time and engage in dialogue with the patients. Regardless of their choice of participation, the majority of patients expressed a positive attitude towards the study. Several patients expressed the wish to talk about their history and present situation, plans for further treatment and to express personal opinions on how SUD treatment can improve, often mentioning the need for a well-functioning follow-up care. While some patients displayed an uncritical openness, others kept their distance and explained that they refused to participate because they did not want to give out personal information. A large portion of the patients asked did not want to participate, often because they found the questionnaire too extensive and too long. Due to the study design, we do not have information on the group of patients declining to participate.

2.4 Design and questionnaire

The study used a cross-sectional design that was based on self-report questionnaires. The questionnaire (see appendix) was developed for the current study to be able to answer the research questions of interest. Total number of items in the questionnaire was 133. The main part of the questionnaire was the Severity Indices of Personality Problems (SIPP-118), used in the operationalization of personality problems. Five questions concerned demographic data such as gender, age and level of education. The last 10 questions were adapted from the widely used questionnaire European Addiction Severity Index (EuropASI) (Kokkevi et al., 1994), which was used as a basis to assess substance use characteristics.
2.5 Operationalization of personality problems

Personality problems were assessed using the SIPP-118. The SIPP-118 is a self-report questionnaire developed by Dutch and British clinical experts in the field of personality and PDs (Verheul et al., 2008). The questionnaire was primarily developed for research purposes, but seems to be useful in clinical contexts (Andrea et al., 2007). The SIPP-118 assesses the personality problem profile of a given individual, and the severity of these personality problems. The perspective underlying the SIPP-118 is based on dimensional approaches to core components of personality pathology rather than type-based classification systems. As the focus of the measure is on adaptive capacities considered subject to change (Bastiaansen et al., 2013), the SIPP-118 can be administered as a repeated measure of change after therapeutic interventions (Verheul et al., 2008).

The 16 facets outlined in table 2 are the basis of the SIPP-118. They make up five domains of personality functioning; self-control, identity integration, responsibility, relational functioning and social concordance. The 16 facets are unidimensional, generalizable across various types of PDs, have good internal consistency and have shown good test-retest reliability (Andrea et al., 2007; Verheul et al., 2008).

Table 2: Facets and domains of the SIPP-118.

<table>
<thead>
<tr>
<th>Facet</th>
<th>Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion regulation</td>
<td>Self-control</td>
</tr>
<tr>
<td>Effortful control</td>
<td></td>
</tr>
<tr>
<td>Self-respect</td>
<td>Identity integration</td>
</tr>
<tr>
<td>Stable self-image</td>
<td></td>
</tr>
<tr>
<td>Self-reflexive function</td>
<td></td>
</tr>
<tr>
<td>Enjoyment</td>
<td></td>
</tr>
<tr>
<td>Purposefulness</td>
<td></td>
</tr>
<tr>
<td>Responsible industry</td>
<td>Responsibility</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td></td>
</tr>
<tr>
<td>Intimacy</td>
<td>Relational functioning</td>
</tr>
<tr>
<td>Enduring relationships</td>
<td></td>
</tr>
</tbody>
</table>
The SIPP-118 asks respondents to rate the extent to which they agree on 118 different statements when thinking back on the last three months. Examples of statements are: “I know exactly who I am and what I am worth” and “Some people think of me as a rude person”. Response is scored on a 4-point Likert scale, ranging from 1 (“completely disagree”) to 4 (“completely agree”). High scores on the SIPP-118 indicate higher levels of adaptive capacities, whereas lower scores indicate deficient levels of adaptive capacities and thus personality problems (Andrea et al., 2007). For the current study, a version of the SIPP-118 translated to Norwegian was used, showing good reliability at the facet level and good cross-national validity when used with a Norwegian PD patient sample (Arnevik et al., 2009).

### 2.6 Operationalization of substance use characteristics

Questions concerning the participant’s substance use characteristics were drawn from the European adaptation of the fifth edition of the Addiction Severity Index (EuropASI) (Kokkevi & Hartgers, 1995). The EuropASI is a semi-structured interview examining problems and symptoms in seven areas of functioning assumed to be affected by substance use and subject to change during treatment. The areas are medical condition, employment/social support, alcohol consumption, consumption of other substances, legal problems, family/social relationships and psychological condition (Kokkevi & Hartgers, 1995; López-Goñi, Fernández-Montalvo, & Arteaga, 2012). The EuropASI is used clinically to assess individual treatment needs and also for research purposes, such as comparing groups of SUD patients with different characteristics (López-Goñi et al., 2012). Studies of the reliability and validity of the EuropASI have been conducted on SUD populations with satisfactory results (Kokkevi & Hartgers, 1995).
Questions from the section covering consumption of alcohol and other substances in the EuropASI were turned into questionnaire format and included in the study questionnaire. Questions were chosen on the basis of their relevance for the research questions, and how substance use severity is operationalized elsewhere (Fernandez-Serrano, Lozano, Perez-Garcia, & Verdejo-Garcia, 2010; Gonzales et al., 2011). Included questions concerned age of substance use debut, primary and secondary preferred substance, poly-substance use, route of administration, age of injection debut, longest period of abstinence and previous treatments (see appendix). The majority of these questions correspond to definitions of the same constructs elsewhere, while others are more difficult to reach an agreement on. One construct difficult to define is poly-substance use. The European Monitoring Centre for Drugs and Drug Addiction (2009) has defined poly-substance use as “regular use of more than one substance”, while the same construct is defined by EuropASI as “daily use of more than one substance”, making comparisons between studies difficult. In this study, the definition from the EuropASI was adopted.

2.7 Statistical analyses

For investigating the present hypotheses, a quantitative approach was chosen. Data was analyzed using the Statistical Program for Social Sciences (SPSS, version 22.0). All predictor and criterion variables represent psychological constructs operationalized on the basis of the study questionnaire. All statistical tests were two-tailed, and we employed an alpha level of .05.

Before conducting analyses, the assumption of normality in the data was explored. Normally distributed continuous variables are an underlying assumption for subsequent tests (Field, 2009). The histograms in figure 1 show frequency (y-axis) and score (x-axis) on the five SIPP-118 domains. From visual inspection, the scores look reasonably normally distributed, following the shape of the normal curve. Scores of skewness and kurtosis were calculated. Skewness and kurtosis are measures of the distributions’ symmetry and pointiness, and large scores indicate that the data are not normally distributed (Field, 2009). In the current sample skewness scores for the five domains were within the range of .35 and 2.38, and kurtosis scores within the range of .42 and 1.41. This is considered acceptable. In summary, there were no serious violations of the assumption of normality in the five outcome variables. Thus, parametric tests were preferred for subsequent analyses.
To compare severity of personality problems in the study sample to two PD samples and a sample from the normal population, analysis of variance (ANOVA) for each facet of the SIPP-118 was conducted. The data available for conducting these ANOVAs were sample size, mean and standard deviation (SD) retrieved from Andrea et al. (2007) and Arnevik et al. (2009), thus we conducted ANOVAs using summary data. As SPSS cannot be used for conducting these analyses, an online calculator was used (Interactive Statistics, 2015). To test where reliable differences between samples occurred, Tukey HSD post-hoc tests were executed. The Tukey HSD is a less conservative test than the Bonferroni correction. This means that it is easier to achieve statistical significance with the Tukey HSD than with more conservative corrections, which in turn might lead to overestimation of the differences between the samples in the analysis (Bordens & Abbott, 2008). To further compare SIPP-118 facet scores between the different samples, effect sizes were calculated. Because of limitations regarding available data for conducting the analyses (sample size, mean and SD), we calculated Cohen’s $d$ using an online effect size calculator (Psychometrica, 2015). According to Cohen (1992), $d = .10$ is considered a small, $.50$ medium and $1.0$ a large effect size.

For investigating the hypotheses concerning whether severity of personality problems in the sample significantly varied across substance use characteristics, we conducted independent samples t-tests and ANOVAs. ANOVA is a robust statistical test, not highly affected by different sizes between samples or violations of underlying statistical assumptions (Bordens & Abbott, 2008). For post-hoc tests, the Bonferroni correction was chosen. This is a conservative test, thus reducing the chance of finding statistically significant differences only by chance; type I errors. The trade-off with using the Bonferroni correction is loss of statistical power, meaning a somewhat lower chance of detecting a true effect (Field, 2009).
To explore whether indicators of substance use severity predicted severity of personality problems, a multiple regression analysis was conducted. The method of forced entry (enter in SPSS) was chosen, as the predictor variables seem to be somewhat independent predictors of substance use severity, and therefore independently related to the outcome variable.
3 Results

3.1 Reliability

Reliability analyses were conducted to investigate the consistency between the items included in the 16 facets of the SIPP-118, and was estimated using Cronbach’s alpha (α). The facets showed alpha scores from 0.59 to 0.84, with a mean estimated alpha score of 0.74 (see table 3). The facets showing alpha scores below 0.70, indicating low to moderate reliability, were intimacy (α=0.59), enduring relationships (α=0.69), responsible industry (α=0.68) and respect (α=0.62).

Table 3: Reliability of the 16 SIPP-118 facets for three different samples.

<table>
<thead>
<tr>
<th>Facets</th>
<th>Number of items</th>
<th>Norwegian substance use population</th>
<th>Dutch normal population</th>
<th>Dutch PD population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion regulation</td>
<td>7</td>
<td>0.76</td>
<td>0.82</td>
<td>0.74</td>
</tr>
<tr>
<td>Effortful control</td>
<td>7</td>
<td>0.72</td>
<td>0.72</td>
<td>0.79</td>
</tr>
<tr>
<td>Self-respect</td>
<td>8</td>
<td>0.80</td>
<td>0.83</td>
<td>0.81</td>
</tr>
<tr>
<td>Stable self-image</td>
<td>7</td>
<td>0.76</td>
<td>0.82</td>
<td>0.74</td>
</tr>
<tr>
<td>Self-reflexive functioning</td>
<td>7</td>
<td>0.80</td>
<td>0.81</td>
<td>0.74</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>7</td>
<td>0.75</td>
<td>0.79</td>
<td>0.75</td>
</tr>
<tr>
<td>Purposefulness</td>
<td>7</td>
<td>0.79</td>
<td>0.74</td>
<td>0.74</td>
</tr>
<tr>
<td>Intimacy</td>
<td>7</td>
<td><strong>0.59</strong></td>
<td>0.83</td>
<td>0.80</td>
</tr>
<tr>
<td>Enduring relationships</td>
<td>7</td>
<td><strong>0.69</strong></td>
<td>0.75</td>
<td>0.73</td>
</tr>
<tr>
<td>Feeling recognized</td>
<td>8</td>
<td>0.77</td>
<td>0.80</td>
<td>0.77</td>
</tr>
<tr>
<td>Responsible industry</td>
<td>7</td>
<td><strong>0.68</strong></td>
<td><strong>0.68</strong></td>
<td>0.73</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>8</td>
<td>0.70</td>
<td><strong>0.69</strong></td>
<td>0.78</td>
</tr>
<tr>
<td>Aggression regulation</td>
<td>8</td>
<td>0.84</td>
<td>0.79</td>
<td>0.86</td>
</tr>
<tr>
<td>Frustration tolerance</td>
<td>8</td>
<td>0.78</td>
<td>0.78</td>
<td>0.73</td>
</tr>
<tr>
<td>Cooperation</td>
<td>8</td>
<td>0.76</td>
<td>0.76</td>
<td>0.76</td>
</tr>
<tr>
<td>Respect</td>
<td>7</td>
<td><strong>0.62</strong></td>
<td><strong>0.65</strong></td>
<td><strong>0.69</strong></td>
</tr>
</tbody>
</table>

Note: Low alpha scores are indicated with bold writing.
### 3.2 Personality problems among SUD patients

Figure 2 presents SIPP-118 facet scores for the study sample (N=155) compared to a Norwegian PD sample (N=114) (Arnevik et al., 2009), a Dutch PD sample (N=555) and a sample from the Dutch normal population (N=478) (Andrea et al., 2007).

Figure 2: Mean scores for the 16 SIPP-118 facets in four different samples.

#### 3.2.1 Comparing personality problem severity between different samples

One-way ANOVAs were conducted to explore whether scores on the 16 SIPP-118 facets differed between the four different samples; Norwegian SUD patients, Norwegian PD patients, Dutch PD patients and the Dutch normal population. Tukey post-hoc tests showed that the difference between facet scores in the SUD patient sample and the Dutch normal population sample were statistically significant \( p < .001 \) for the following 14 facets; emotion regulation, self-respect, stable self-image, self-reflexive functioning, enjoyment, purposefulness, intimacy, enduring relationships, feeling recognized, trustworthiness, aggression regulation, frustration tolerance, cooperation and respect.

To further explore the differences in personality problem severity between the samples, we calculated effect sizes using the Cohen’s \( d \). Effect size for all 16 SIPP-118 facets between the sample of SUD patients and the Norwegian PD sample, and between the SUD sample and the
sample from the Dutch normal population, were calculated (see table 4). As seen in figure 2, the SUD sample differed from the Dutch normal population sample on a majority of the facets, with effect sizes (Cohen’s $d$) ranging from 0.28 to 1.92. The mean estimated effect size for all facets was 1.06. Comparatively, when looking at the scores between the study sample and Norwegian PD sample, these were similar on a majority of the facets. Effect sizes between these two samples had a range from 0.02 to 0.73, with a mean estimated effect size for all facets of 0.38.

Table 4: Effect sizes (Cohen’s $d$) between the sample of SUD patients and PD patients and between SUD patients and normal population sample.

<table>
<thead>
<tr>
<th>Facet</th>
<th>Cohen’s $d$</th>
<th>SUD vs. PD (Norway)</th>
<th>SUD vs. normal (the Netherlands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion regulation</td>
<td>0.345</td>
<td>1.152</td>
<td></td>
</tr>
<tr>
<td>Effortful control</td>
<td>0.016</td>
<td>1.481</td>
<td></td>
</tr>
<tr>
<td>Self-respect</td>
<td>0.693</td>
<td>1.068</td>
<td></td>
</tr>
<tr>
<td>Stable self-image</td>
<td>0.435</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Self-reflexive functioning</td>
<td>0.353</td>
<td>1.078</td>
<td></td>
</tr>
<tr>
<td>Enjoyment</td>
<td>0.616</td>
<td>1.207</td>
<td></td>
</tr>
<tr>
<td>Purposefulness</td>
<td>0.529</td>
<td>1.389</td>
<td></td>
</tr>
<tr>
<td>Intimacy</td>
<td>0.348</td>
<td>0.480</td>
<td></td>
</tr>
<tr>
<td>Enduring relationships</td>
<td>0.730</td>
<td>0.840</td>
<td></td>
</tr>
<tr>
<td>Feeling recognized</td>
<td>0.511</td>
<td>0.643</td>
<td></td>
</tr>
<tr>
<td>Responsible industry</td>
<td>0.295</td>
<td>1.920</td>
<td></td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>0.313</td>
<td>1.691</td>
<td></td>
</tr>
<tr>
<td>Aggression regulation</td>
<td>0.056</td>
<td>1.184</td>
<td></td>
</tr>
<tr>
<td>Frustration tolerance</td>
<td>0.493</td>
<td>1.078</td>
<td></td>
</tr>
<tr>
<td>Cooperation</td>
<td>0.426</td>
<td>0.511</td>
<td></td>
</tr>
<tr>
<td>Respect</td>
<td>0.062</td>
<td>0.278</td>
<td></td>
</tr>
</tbody>
</table>
3.3 The relationship between substance use characteristics and severity of personality problems

We explored whether the presence of poly-substance use was related to severity of personality problems in the sample. 62% of the sample (N=89) reported poly-substance use. The poly-substance group had lower mean scores on all five SIPP-118 domains than the non-poly-substance group (see figure 3). This difference was statistically significant for four of the five domains; self-control (t(140)= -3.036, p < .01), social concordance (t(141)= -2.030, p < .05), identity integration (t(141)= -2.885, p < .01) and relational functioning (t(141)= -2.361, p < .05). The difference was not statistically significant for the responsibility domain.

Figure 3: Mean scores on the five SIPP-118 domains for patients reporting poly-substance use and patients not reporting poly-substance use.

44% of the sample (N=61) reported injection (intravenous or not intravenous) as usual route of administration, or multiple routes of administration. The part of the sample reporting injecting/multiple routes had lower mean scores on all SIPP-118 domains than the non-injecting group (see figure 4). This difference was statistically significant only for the self-control domain (t(137)= -1.967, p < .05).
Age of debut was divided into three groups; very low age of substance use debut (very low age of debut (7 years → 13 years) (37.5%), low age of debut (14-16 years) (37.5%) and moderate to high age of debut (17 years → oldest) (23%). Across all SIPP-118 domains, patients with very low and low age of substance use debut had lower mean scores than patients with debut at moderate or high ages (see figure 5). Post-hoc comparisons with the Bonferroni correction were conducted to check for further patterns in the results. These analyses showed that the difference between scores for the low age groups and the moderate/high age group was statistically significant on three domains; self-control (F(2,147)=6.214, p<.01), identity integration (F(2,148)=6.568, p<.01) and responsibility (F(2,147)=4.278, p<.05). Difference in scores between the very low and low age of debut groups were not statistically significant for any of the domains.

Figure 5: Mean domain scores between ages of substance use debut.
30% of the sample (N=46) reported alcohol as their primary preferred substance of use, with the remaining 70% (N=107) of the sample reporting other or multiple preferred substances. Independent samples t-tests showed that the group reporting alcohol as primary preferred substance had higher mean scores on all domains than the remainder of the sample (see figure 6). This difference was statistically significant for the domains self-control (t(151)= -2.053, p <.05), identity integration (t(152)= -2.188, p <.05) and responsibility (t(151)= -2.398, p <.05).

Figure 6: Mean SIPP-118 domain scores for patients primarily preferring alcohol and patients preferring other substances.

The further effect of primary preferred substance on severity of personality problems was explored using one-way between groups ANOVA. Preferred substance of use was grouped into five categories; alcohol (N=46), opiates (N=34), stimulants (N=17), tranquilizers (N=5) and multiple/other (N=53). The group of patients reporting alcohol as their preferred substance had higher scores across all SIPP-118 domains compared to the four other categories (see figure 7), but this difference was not statistically significant for any of the domains. Post-hoc comparisons with the Bonferroni correction showed no statistically significant differences in domain scores based on preferred substance.
The effect of gender on severity of personality problems was explored using independent samples t-tests. There was no consistent trend across gender in the mean domain scores. However, the female part of the sample (39%) had statistically significant higher scores on the social concordance domain ($t(151)=-2.342, p <.05$) and the responsibility domain ($t(150)=3.457, p <.01$), than the male part.

### 3.4 Multiple regression

A multiple linear regression was conducted to investigate whether SIPP-118 domain scores could be predicted by substance use characteristics. Before conducting the analysis, underlying assumptions for multiple regression was explored (Field, 2009). First, we conducted a bivariate correlation between possible predictor variables (see table 5).

Table 5: Bivariate correlations between possible predictor variables.

<table>
<thead>
<tr>
<th></th>
<th>Poly-substance use</th>
<th>Age of debut</th>
<th>Preferred substance</th>
<th>Alcohol vs other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of debut</td>
<td>.173*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preferred substance</td>
<td>-.445**</td>
<td>.071</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol vs other</td>
<td>-.544**</td>
<td>-.120</td>
<td>.758**</td>
<td></td>
</tr>
<tr>
<td>Injection/multi use</td>
<td>-.427**</td>
<td>-.256**</td>
<td>.309**</td>
<td>.523**</td>
</tr>
</tbody>
</table>

Note: **p<.01, *p<.05
The highest correlation between predictor variables, \( r = -.758 \), was found between the two variables concerning preferred substances; “preferred substance” and “alcohol vs other”. In accordance with statistic guidelines to avoid problems of multicollinearity (Bordens & Abbott, 2008), we chose to eliminate the variable “preferred substance”. Moderately high correlations were found between the variables “preferred substance” and “poly-substance use”, however both variables were kept for further analyses. Preliminary analyses showed a sufficiently large sample size, no multicollinearity between predictor variables, normally distributed as well as linear residuals, and no detected outliers. As there were no serious violations of basic assumptions, the regression analysis was conducted.

Three predictor variables; primary substance of use (alcohol vs. other), age of debut (>16 vs. <&16) and poly-substance use (no vs. yes), was included in the analysis. Evident from the conducted t-tests and ANOVAs, these showed a statistically significant association with the criterion variables. Route of administration was not included, as this factor’s association with severity of personality problems in the study sample was not statistically significant.

The results of the regression indicated that the three predictors explained 12.3% of the variance in self-control domain score (\( R^2 = .123 \), \( F(3,138) = 6.462, p<.001 \)), 4% of the variance of score on the social concordance domain (\( R^2 = .040 \), \( F (3,139) = 1.932, \text{n.s.} \)), 12.4% of the variance of the score on the identity integration domain (\( R^2 = .124 \) \( F(3,139) = 6.537, p<.001 \)), 5.6% of the variance in relational functioning score (\( R^2 = .056 \), \( F(3,139) = 2.769, p<.05 \)), and 8.4% of the variance in responsibility domain score (\( R^2 = .084 \), \( F(3,138) = 4.245, p<.01 \)) (see table 6). Age of debut was found to be a statistically significant predictor of SIPP-118 score on three domains; self-control, identity integration and responsibility. Poly-substance use was found to predict domain score to a lesser degree; the variable explained a statistically significant amount of variance for the two domains self-control and relational functioning. Primary substance of use (alcohol vs other/multiple substances) was a non-statistically significant predictor of score on all of the domains in the SIPP-118.
Table 6: Regression analysis predicting domain score on SIPP-118 from type of primary substance of use (alcohol or other), age of debut and poly-substance use.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>Model $R^2$</th>
<th>$\beta$</th>
<th>t</th>
<th>Sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-control</td>
<td>Alcohol vs other</td>
<td>.123</td>
<td>-.064</td>
<td>-.677</td>
<td>.500</td>
</tr>
<tr>
<td></td>
<td>Age of debut</td>
<td></td>
<td>-.245**</td>
<td>-3.058</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>Poly-substance use</td>
<td></td>
<td>-.190*</td>
<td>-1.990</td>
<td>.049</td>
</tr>
<tr>
<td>Social concordance</td>
<td>Alcohol vs other</td>
<td>.040</td>
<td>.041</td>
<td>.416</td>
<td>.678</td>
</tr>
<tr>
<td></td>
<td>Age of debut</td>
<td></td>
<td>-.101</td>
<td>-1.213</td>
<td>.227</td>
</tr>
<tr>
<td></td>
<td>Poly-substance use</td>
<td></td>
<td>-.181</td>
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<td>.124</td>
<td>-.066</td>
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<td></td>
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<tr>
<td>Relational functioning</td>
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<td>.042</td>
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<tr>
<td></td>
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<td></td>
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<td></td>
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<td>-.047</td>
<td>-.488</td>
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Note: ** $p < .01$, * $p < .05$. 
4 Discussion

4.1 Personality problems among SUD patients

The aim of the study was to investigate personality problems, as measured by the SIPP-118, among SUD patients. In agreement with our expectations, we found that the SUD patient sample had severe personality problems. Our main findings are in accordance with several studies showing high prevalence of personality pathology among patients in SUD treatment (Grant et al., 2004; Skodol et al., 1999). The fact that our study’s findings correspond to results from studies with larger samples and more extensive methods strengthens our findings’ trustworthiness and generalizability, and indicate that personality problems might be measured early in a treatment process, assessed by self-report measures. This might have important clinical implications, as will be discussed later.

An underlying assumption of the SIPP-118 is that it is a measure of core personality pathology (Andrea et al., 2007). Our main findings being in accordance with accredited studies showing high SUD-PD co-occurrence strengthens this assumption. In the current study, we compared SIPP-118 scores from our study population with three different samples; two samples of PD patients and one normal population sample. In agreement with our expectations we found an overlapping facet profile and comparable facet scores, as indicated by low to moderate effect sizes, between a Norwegian PD sample (Arnevik et al., 2009) and the Norwegian SUD sample. We found that SUD patients’ scores were significantly different from the scores of the Dutch normal population sample on the majority of the 16 SIPP-118 facets, as well as a large mean effect size on all facets between these samples. Thus, our results indicate that SUD patients have personality problems at a level of severity comparable to PD patients, and significantly different from the normal population. The results strengthen the assumption that the SIPP-118 is a measure of pathology, which means that the questionnaire measures what it was intended to measure.

A premise for answering the questions of interest is adequate psychometric properties of the SIPP-118 when used with the study sample. The SIPP-118 has not previously been used with SUD patient samples. Furthermore, personality pathology in our study sample was assessed during the detoxification stage despite the general assumption that personality pathology should be assessed in a stable phase after months of abstinence. Both factors could affect the
questionnaire’s ability to assess personality problems reliably and validly in the study sample. When exploring the reliability of the SIPP-118, we found moderate to high alpha levels for the majority of the SIPP-118 facets. Cronbach’s alphas in the current study were in the same range as with the Dutch normal and PD sample and the Norwegian PD sample (Arnevik et al., 2009). Thus, the results indicate that the SIPP-118 reliably assess personality functioning in SUD patients during detoxification.

Our findings strengthen the assumption that personality problems are a common feature among SUD patients. This appears to be a robust finding, though many questions concerning personality problems within this patient group remain. For example, the impact of withdrawal states and abstinences on personality problems should be the subject of investigation. A longitudinal study, measuring SUD patients’ personality problems in the abstinence phase and then again in later stages of treatment, or years after treatment completion, would be a useful supplement to the existing literature. This would inform us about the stability and change of personality problems among SUD patients, and whether level of severity is unstable due to effects of withdrawal, effects of substance use or change due to treatment. This might also shed light on the etiology of the co-occurrence between SUDs and PDs.

4.2 Characteristics of substance use related to severity of personality problems

For the purpose of exploring how severity of substance use relates to personality problems, we investigated the association between poly-substance use, injecting use, early age of debut and primary preferred substance of use not being alcohol, and personality problem severity. These characteristics are commonly considered indicators of substance use severity, and are related to negative long-term consequences for mental and physical health (Colpaert et al., 2013; Gonzales et al., 2011).

It is generally acknowledged that poly-substance use indicates a more severe pattern of substance use, and has a wide range of negative consequences (Di Poggio et al., 2006; European Monitoring Centre for Drugs and Drug Addiction, 2009). In agreement with this, we found that the group of participants who reported poly-substance use had more severe personality problems than those who reported using only one substance per day. The direction of this relationship is unclear. The nature of poly-substance use itself might account for the high levels of personality problems in this group. For example, the increased toxicity resulting
from interactions between substances consumed close together in time or the possible consumption of higher doses of substances (European Monitoring Centre for Drugs and Drug Addiction, 2009), might lead to more severe personality problems found among poly-substance users. Another possibility is that patients with more severe underlying personality problems and relational problems might be more susceptible for poly-substance use, thus creating the association.

Based on research showing that injecting substance use has detrimental consequences for mental and physical health (Domier et al., 2000; European Monitoring Centre for Drugs and Drug Addiction, 2014; Strang et al., 1998), it was somewhat surprising to find that injection use was not related to severity of personality problems in the study sample. However, only a small portion of the reviewed literature investigated injection use in Norwegian settings. Injecting substance use might be perceived as less severe, and have less severe consequences, among Norwegian substance users than elsewhere, which might help explain the weak association we found. Injection use is a common route of administration in Norway. In our study sample, two thirds of the participants reported having once injected a substance. In a study by SIRUS (2014a), 80% of the sample (only including non-alcohol using participants) reported having injected a substance during the last four weeks. While there has been little research on injecting substance users in Norway, the problem has had political focus for years. This led to the establishment of a safer injection facility (SIF) in Oslo in 2005. The SIF is a place where injection users can get temporary shelter, clean syringes and medical help if needed (SIRUS, 2014b). Reviews find that SIFs lead to less risky injecting behavior, fewer deaths due to overdoses, increased enrollment in SUD treatment and saved public resources (Beletsky, Davis, Anderson, & Burris, 2008; Petrar et al., 2007). The impact of injection use among Norwegian substance users for personality functioning and other aspects of mental health should be the subject of further investigation.

We found that substance use before or at age 16 was related to severity of personality problems. This corresponds to the general agreement within the SUD field that early debut of substance use is a risk factor for severe dependence (Gruber et al., 1996; Magid & Moreland, 2014; Trenz et al., 2012), and that early substance use can affect personality functioning (Kandel et al., 1986; Trenz et al., 2012). High levels of personality problems may lead to an earlier substance use debut, early involvement in substance use may lead to lower functioning, or both processes might be involved. This study does not clarify the link of
causality further, but it illustrates the importance of early intervention and good prevention strategies. An interesting topic for further research is looking into the relationship between the particular substance used at debut and personality problems. A plausible hypothesis would be that early debut with heroin or other illegal substances would be indicative of more severe personality pathology than early debut with cigarettes or alcohol. Understanding these relationships is important to create efficient prevention and intervention strategies.

As SUD patients are often classified based on whether their primary preferred substance of use is alcohol or other substances, we wanted to explore whether this was related to severity of personality problems. In our study sample, using other substances than alcohol was associated with more severe personality problems. This is in agreement with studies finding lower rates of PDs among SUD patients primarily using alcohol compared to those using other or multiple substances (Grant et al., 2004). The association between alcohol and personality problems might indicate that using alcohol is generally less harmful for personality functioning than using other or multiple substances. If this is not the case, it might indicate that there are other moderating or mediating variables accounting for the relationship. Possible variables may concern patient characteristics such as age, poly-substance involvement, age of harmful use/dependence onset or education level.

4.2.1 Can we use characteristics of substance use as a tool to screen for personality problems?

We conducted a regression analysis to explore which, if any, of the characteristics of substance use could predict severity of personality problems. Only the three variables poly-substance use, early age of debut and primary preferred substance other than alcohol was included. We found age of debut and poly-substance use to be statistically significant predictors, while primarily using alcohol did not significantly predict personality problem severity. Thus, we might be left with two separate substance use characteristics predicting the severity of personality problems in the study sample: patients with substance use debut before or at the age of 16 and patients using multiple substances daily.

Even if age of debut and poly-substance use were the substance use characteristics with the highest explanatory value in this study, these variables explained only a small portion (4 to 12%) of the variance in severity of personality problems. This means that none of the common indicators of substance use severity can be used to explain the presence and severity
of personality problems in the investigated SUD sample. A more general conclusion is that personality problem severity might not be explained by characteristics of substance use. Furthermore, this might indicate that one cannot clinically screen for personality pathology in SUD patients by substance use characteristics alone. There may be no apparent short-cut for assessing personality problems in this clinical population, indicating the importance of independently assessing personality problems in SUD patients.

4.3 Limitations and strengths

Several limitations of the current study should be acknowledged. The first limitation concerns the fact that the study is based on self-report questionnaires, with respect to both personality problems and substance use characteristics. There are certain drawbacks with using self-report instruments. One is the assumption that participants give correct and accurate answers to most items for our data to be valid. Darke (1998) has suggested that self-report is a reliable and valid method of retrospectively reporting substance use. While the questions concerning substance use characteristics are of a more factual nature, the questions concerning personality functioning depends on abilities to introspect. The self-report questionnaire assumes that the individual has expertise and self-knowledge enough to report subtle as well as more apparent dimensions of themselves correctly. If participants incorrectly report aspects of their personality functioning, this might lead to an overestimation or underestimation of their personality problems.

A common challenge in using self-report questionnaires is that the statistical properties differ in different patient populations. Illustrative of this is a German study of the validity of the Symptom Checklist-90 (SCL-90), where the instrument showed better psychometric properties when used with clinical rather than nonclinical samples (Schmitz et al., 2000). In another validity study of the SCL-90 in Finland (Holi, Sammallahti, & Aalberg, 1998), they found that the American norms were invalid in Finnish settings. Similarly, we are faced with questions regarding whether the psychometric properties of the SIPP-118 differ when used with the study sample compared to other samples. Previous studies investigating the use of the SIPP-118 with a sample from the normal population, PD samples, and clinical and non-clinical adolescent samples (Andrea et al., 2007; Arnevik et al., 2009; Feenstra et al., 2011; Verheul et al., 2008), have found good psychometric properties of the instrument, including high alpha levels for the majority of the 16 SIPP-118 facets. This is the first study.
investigating the use of the SIPP-118 in a sample of adult, Norwegian SUD patients. Therefore, we investigated the validity and reliability of the questionnaire.

When investigating the psychometric properties of a questionnaire, questions concerning how items are perceived by the sample, in what context the questions are reflected upon and how concepts are understood by the participants are relevant (DeVellis, 2012). One example is the concept of intimacy in the SIPP-118, which was one of the facets with the lowest alpha levels in the study. The concept of intimacy might be perceived, characterized and understood differently among SUD patients than among other clinical and non-clinical populations. For SUD patients, intimacy might include negative references, such as the experience of shame related to being a substance user (Hughes, 2007; Rounsaville, Gawin, & Kleber, 1985), and ambivalence towards and fear of intimacy (Thorberg & Lyvers, 2006). These aspects might not be adequately captured by the SIPP-118 facet “capacity for intimacy”, making the facet less suitable for the SUD patient sample. Apart from some facets showing low alpha levels, the SIPP-118 seems to have adequate reliability when administered to SUD patients.

Another relevant question concerns whether the findings in the current study are generalizable, and whether they can be used to make inferences about other samples of SUD patients. This concerns the external validity of the study. Because of time and resource considerations, our sample is relatively small (N=155), meaning that our sample might not be a representative selection from the population of SUD patients. The study sample is highly selected, consisting of patients who have requested SUD treatment, who are in the stage of detoxification and who are able to fill out an extensive questionnaire. The European Monitoring Centre for Drugs and Drug Addiction (2009, p. 20) suggests that “…drug users entering treatment can be considered as indirect indicators of the profiles and trends in the wider population of problem drug users”. To increase the generalizability of the finding that SUD patients have severe personality problems, our findings should be replicated using larger samples of SUD patients.

The exact number and description of participants who did not want to participate in the study is not known. This can be considered a limitation of the study, as these patients might differ on important characteristics from the study sample. The data collection procedure and nature of the study have possibly excluded the patients with the poorest functioning; lowest ability to read or concentrate, fewest years of education, lowest level of impulse control or delay of gratification. This means that the average levels of personality problems in the sample might
be positively skewed compared to the population of SUD patients, thus showing a more positive picture of this patient population than what is the actual case. The fact that patients with the lowest levels of functioning might not be included in the study sample represents a limitation of the study, but if true, it accentuates our finding that SUD patients have severe personality problems.

A more general limitation concerns the fact that the study is based on a cross-sectional design, which limits our ability to make causal inferences based on the data. Still, our main results concerning the severity of personality problems among SUD patients, and the fact that substance use characteristics seem to be unfit for screening for personality problems, stands with this cross-sectional design.

### 4.4 Assessment of personality problems in SUD-patients while in detoxification

Our study proposes that there is a need for separately assessing personality problems in SUD patients. Questionnaire administration context can affect response accuracy (Del Boca & Noll, 2000), thus important questions concern when and where assessment of personality problems should be conducted.

The participants in our study were inpatients at detoxification units. As described in the data collection procedure, a detoxification stay is most likely characterized by withdrawal states and abstinence pains. Symptoms of withdrawal vary between substances of use, and can be as serious as delirium tremens (Mayo-Smith et al., 2004) and perceptual and neuropsychological disturbances (Tyrer, Murphy, & Riley, 1990). Typical symptoms of withdrawal are dysphoria, insomnia, anxiety and irritability. Del Boca & Noll’s (2000) study on the validity of self-report assessment in SUD patients found that factors such as stage of recovery, sobriety and withdrawal states can influence trustworthiness of the collected data. We did not assess duration of abstinence before participation, thus possible residual substance effects and symptoms of withdrawal might challenge the validity of the questionnaire. None of the participants were under the (obvious) influence of their primary substance of use, but there is a possibility that some patients still were under the influence of psychoactive medicines during participation.
There are a number of concerns regarding personality problem assessment in SUD patients during the detoxification stage. In the context of detoxification with emotional uncertainty and withdrawal states, patients might overestimate the severity of their personality problems (Del Boca & Noll, 2000), or may, on the contrary, underestimate their severity. Based on the presented concerns, and their findings that measures of psychopathology can be unstable at time of treatment entry, Marlowe et al. (1997) suggest that measures of psychopathology in SUD patients should be conducted after more than 10 days post-intake. This corresponds to the general assumption that personality pathology should be assessed in a stable phase after a time of abstinence, and also to the DSM-5 PD diagnostic guidelines. These guidelines state that a diagnosis of PD should not be based “…solely on behaviors that are consequences of substance intoxication or withdrawal or that are associated with activities in the service of sustaining substance use” (American Psychiatric Association, 2013, p. 649). There are apparent reasons as to why assessment of personality pathology might be more informative and valid when done at later stages in treatment. This concerns the possibility of longer duration abstinence and more distance to substance use, as well as factors concerning stability, security and order, which may all impact response accuracy (Del Boca & Noll, 2000). Contrary to this, a study of Norwegian SUD patients’ levels of personality pathology found that use of the self-report instrument MCMI gave valid clinical information when administered within the first two weeks of treatment initiation (Ravndal, Vaglum, & Lauritzen, 2005).

We found that the overall reliability of SIPP-118 at the facet level was good when the questionnaire was administered to SUD patients in detoxification. The alpha scores were comparable to those found when administered to PD patients in Norway and the Netherlands (Arnevik et al., 2009; Verheul et al., 2008) and the normal population in the Netherlands (Verheul et al., 2008). Contrary to the context of detoxification for the SUD sample, personality problems in the PD patients were assessed in a more stable phase; they were inpatients receiving long-term day treatment in specialized PD treatment units (Arnevik et al., 2009). Despite a different context for participation, the instrument seems to reliably assess personality functioning in SUD patients, showing that they have personality problems comparative to the PD population. Furthermore, our finding is supported by literature on personality functioning in SUD patients (Kandel et al., 1986; Skodol et al., 1999; Verheul, 2001). Thus, it seems reasonable to conclude that we can assess personality problems in SUD patients using the SIPP-118 during the detoxification stage.
There are several benefits to assessing personality functioning as early as during detoxification. One is the possibility of addressing personality problems when establishing a working alliance and thus preventing premature drop-out (Brorson, Arnevik, Rand-Hendriksen, & Duckert, 2013; Ravndal et al., 2005; Verheul, 2001). Personality problem profiles might also inform the clinician of what further treatment will work best for whom, and thus have treatment-matching implications (Verheul, 2001).

### 4.5 Clinical implications

The findings from this study might have clinical implications for delivery and treatment within the SUD treatment field. Several studies have shown the effectiveness of SUD treatment (Gossop, 2001). Completion of treatment is associated with better mental and physical health, reduced substance use, increased abstinence during and after treatment, and reduced public costs (Brorson et al., 2013; Leshner, 1999; Morisano et al., 2014). As completion of treatment seems to be a crucial factor for treatment effect, high rates of drop-out from SUD treatment is a major problem (Brorson et al., 2013). High rates of relapse during and after treatment also challenge the effect of SUD treatment (Bornova & Daughters, 2007). Of special concern are patients with co-occurring SUD and mental disorders, such as PDs. These seem to be overrepresented in challenging patient groups, including those who are considered “treatment failures” (Kofoed, Kania, Walsh, & Atkinson, 1986). In this regard, it is important that SUD treatment is developed to meet the full range of problems SUD patients might encounter, including severe personality problems.

The study results indicate that there is a need for greater integration of knowledge from the PD treatment field within SUD treatment. Clinical choices, one example being choices regarding treatment settings, may be more informed if aspects such as a patient’s personality problems are taken into consideration. Compared to SUD patients, there are stricter practice guidelines concerning treatment formats for patients with BPD and patients with ASPD. According to the NICE Guidelines for BPD (National Institute for Health and Clinical Excellence, 2009b, p. 24), patients should be referred for inpatient treatment only “…if there is a significant risk to self or others that cannot be managed within other services”. Thus, guidelines call for a restriction on the use of inpatient treatment for patients with a diagnosis of ASPD and/or BPD. The extensive use of inpatient treatment within the SUD treatment field might be challenged since ASPD and BPD are the PDs most frequently occurring within
the SUD population (Grana et al., 2009), and that SUD patients might have personality problems as severe as those found among PD patients. Thus, the use and effect of inpatient treatment in the SUD field should be the subject for further evaluation.

The present study implies that assessing personality problems early in treatment, thus making possible a more integrated approach to SUD treatment, with focus on both substance related problems and personality problems is the best way forward. Integrated treatment is defined as treatments that combine, incorporate and modify aspects from one type of treatment with aspects from another type of treatment, so that the co-occurring disorders receive treatment simultaneously from the same treatment provider (American Psychiatric Association, 2006; Morisano et al., 2014). Integrated treatment programs seem to be cost-effective and have high rates of positive treatment outcome for SUD patients with co-occurring disorders (American Psychiatric Association, 2006; Helsedirektoratet, 2012a; Morisano et al., 2014). Kelly, Daley, and Douaihy (2012, p. 20) propose that “although reducing drug use is imperative for overall improvement during treatment, non-substance related pathology must not be neglected early in treatment”. Studies show that SUDs and personality pathology follow independent courses. Remission in SUD is not significantly associated with remission of personality dysfunction (Verheul, 2001), and targeting only the co-occurring pathology does not sufficiently reduce more specific SUD related problems (American Psychiatric Association, 2006; van den Bosch, Verheul, Schippers, & van den Brink, 2002). Furthermore, it is suggested that patients with co-occurring SUD and PD are less likely to respond favorably to traditional SUD treatment interventions (Ball, 1998). To prevent drop-out, maximize treatment effect and help SUD patients with low levels of functioning, targeting personality problems in addition to substance related problems in SUD treatment might be necessary. In the Norwegian national guidelines for treatment of patients with co-occurring SUDs and mental disorders, integrated treatment approaches are recommended (Helsedirektoratet, 2012a), but no recommendation for assessment of personality problems are referred.

The current study indicates that the SIPP-118 might be used reliably for assessing personality problems in SUD patients. The instrument may also be used for clinical purposes at other stages in SUD treatment. One of these is assessing change in personality problem severity and profile during and after treatment (Verheul et al., 2008). Another clinical purpose the SIPP-118 may serve is indicating what aspects of personality problem that could be targeted in treatment, by assessing levels of severity and specific areas of dysfunctional. Examples are
regulation of aggressive impulses or cooperation abilities. Identifying aspects such as these, which are capacities believed to be modifiable due to treatment (Verheul et al., 2008), might give hope for improvement and higher levels of functioning. It is believed that a thorough understanding of the needs and problem areas of the individual patient might help staff and therapists work more effectively with SUD patients with personality problems (Maslin et al., 2001), where the SIPP-118 might be an effective tool. As well as assessing levels of personality problems, the SIPP-118 might also be used to assess an individual’s strengths and resources, which corresponds to recommended focus on assessing and supporting a patient’s resources and strengths during and after treatment (Helsedirektoratet, 2012a).

This study shows that substance use debut before or at age 16 is associated with more severe personality problems than substance use debut at later ages. This finding might indicate different treatment needs between early debut substance users and older debut substance users. Thus, treatment providers should be aware of the impact of early substance use debut on personality functioning and treatment needs among SUD patients. The effect of early substance use debut on personality functioning should be investigated further, to more efficiently be able to provide treatment suited to meet these patients’ needs.
Conclusions

The main aim of the study was to investigate personality problems, assessed by the SIPP-118, among SUD patients. The results showed that SUD patients had high levels of personality problems. We found that personality problems among SUD patients were as severe as personality problems among PD patient treatment groups, and significantly less severe than those found in the normal population. Furthermore, we found an association between poly-substance use, young age of substance use debut and primary preferred substance not being alcohol, and personality problem severity. However, none of these substance use characteristics were significant predictors of personality problem severity. The study therefore proposes a need for assessing personality problems independently in SUD patients.

Adequate psychometric properties of the SIPP-118 when used with the study sample were a premise for answering our research questions. We found good reliability, as indicated by adequate alpha levels of the majority of the SIPP-118 facets, and adequate external validity, as indicated by agreement with previous research. Thus, the SIPP-118 seems to be suited for assessing personality problems in SUD patients while in detoxification. This is an important contribution to the discussion regarding time and context of personality assessment in the SUD field. The current study is the first to investigate personality problems assessed with the SIPP-118 among SUD patients. This means that the findings should be replicated using larger sample sizes. In addition to this, further investigation of personality problems in SUD patients, investigating the stability and change of these with regards to substance use effects, withdrawal states and effects due to treatment would be interesting supplements to the existing literature.

The study supports the use of knowledge from the PD treatment field within SUD treatment, for example concerning recommended treatment setting. The results also infer a more integrated approach to SUD treatment. This is in accordance with the Norwegian national clinical guidelines for treatment of patients with SUDs and mental disorders, as well as several studies showing the effect of integrated treatment programs for SUD patients. The clinical use of the SIPP-118, as a tool for assessing personality problem severity, for assessing areas of dysfunctioning and resources as well as change in personality problem profile due to treatment, is promising.
References


based practice guideline (vol 164, pg 1405, 2004). *Archives of Internal Medicine, 164*(18), 2068-2068. doi:10.1001/archinte.164.13.1405


Forespørsel om deltakelse i forskningsprosjekt

«Sammenhengen mellom alvorlighetsgrad på ruslidelse og personlighetsproblemer – implikasjoner for behandling»

Bakgrunn og hensikt

Hva innebærer prosjektet?

Mulige fordeler og ulemper
Det er ingen fordeler for deg knyttet til deltakelse i forskningsprosjektet, men mange vil oppleve det som meningsfullt å bidra til forskning på et viktig felt som det finnes forholdsvis lite forskning på. Det er heller ingen ulemper knyttet til deltakelse, bortsett fra at du må sette av rundt 30 minutter til å besvare spørreskjemaet. Enkelte av spørsmålet kan være personlige, men skal i utgangspunktet ikke virke støtende eller krenkende.
**Hva skjer med informasjonen om deg?**
Informasjonen som registreres om deg skal kun brukes slik som beskrevet i hensikten med prosjektet. Alle opplysninger vil bli behandlet uten navn og fødselsnummer eller andre direkte gjenkjennende opplysninger. Det vil ikke være mulig å identifisere deg i verken databasen eller i resultatene av prosjektet.

**Frivillig deltakelse**
Det er frivillig å delta i studien. Dersom du ikke ønsker å være med i prosjektet vil det ikke få noen konsekvenser for din behandling.

Dersom du har spørsmål om prosjektet kan du kontakte hovedoppgavestudent Ingebjørg Aspeland Lien ingebjal@student.sv.uio.no, eller Espen Ajo Arnevik esarne@ous-hf.no.
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<td>Med tanke på de siste tre månedene, i hvilken grad er du enig i følgende utsagn?</td>
<td>Helt uenig  Delvis uenig  Delvis enig  Helt enig</td>
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<tr>
<td>1 Jeg kan takle skuffelser svært godt</td>
<td>[ ] [ ] [ ] [ ]</td>
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<td>2 Av og til blir jeg så overveldet at jeg ikke kan kontrollere reaksjonene mine</td>
<td>[ ] [ ] [ ] [ ]</td>
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<tr>
<td>3 Når jeg blir opprørt av noen, får jeg ofte lyst til å såre vedkommende</td>
<td>[ ] [ ] [ ] [ ]</td>
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<tr>
<td>4 Jeg vet nøyaktig hvem jeg er og hva jeg er verdt</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>5 Når jeg føler noe, kan jeg nesten alltid sette ord på den følelsen</td>
<td>[ ] [ ] [ ] [ ]</td>
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<tr>
<td>6 Det er vanskelig for meg å se på meg selv som en verdifull person</td>
<td>[ ] [ ] [ ] [ ]</td>
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<tr>
<td>7 Jeg føler meg konstant misforstått av andre mennesker</td>
<td>[ ] [ ] [ ] [ ]</td>
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<td>8 Det er lett for meg å akseptere folk som de er, selv om de er annerledes enn meg</td>
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<td>9 Jeg er overbevist om at meg å se på meg selv som en verdifull person</td>
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<td>10 Jeg er overbevist om at meg å se på meg selv som en verdifull person</td>
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<td>11 Jeg kan arbeide sammen med andre på et felles prosjekt til tross for personlige motsetninger</td>
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<td>12 Jeg møter sjelden noen som jeg tør dele mine tanker og føler med</td>
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<td>13 Jeg har mennesker i livet mitt som jeg føler spesiell nærhet til</td>
<td>[ ] [ ] [ ] [ ]</td>
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<td>14 Jeg gjør ting selv når jeg vet at de kan bli sett på som uansvarlige av andre</td>
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<td>15 Hvis jeg har blitt enig med andre om en handlingsplan, holder jeg meg vanligvis til avtalen</td>
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<td>16 Jeg blir irritert når ting ikke går min vei</td>
<td>[ ] [ ] [ ] [ ]</td>
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<tr>
<td>17 Jeg har vanligvis god nok kontroll over følelsene mine</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>18 Noen ganger blir jeg så sint at jeg får lyst til å slå eller sparke folk</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>19 Som oftest forstår jeg hvorfor jeg gjør det jeg gjør</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>20 Av og til får jeg lyst til å skade eller straffe meg selv med vilje</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>21 Jeg er overbevist om at andre ikke kan lære meg å kjenne slik jeg virkelig er</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>22 Det er vanskelig for meg å respektere folk som har ideer som er forskjellige fra mine</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>23 Jeg ser ofte ikke noen grunn til å fortsette å leve</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>24 Jeg bruker mye tid på å gjøre ting som må gjøres, men som ikke gir meg noe glede</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>25 Jeg foretrekker å arbeide alene så jeg ikke trenger å tilpasse meg andre</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>26 Det er vanskelig for meg å vise varme følelser for andre</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>27 Det er vanskelig for meg å bli knyttet til noen annen</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>28 Jeg er en som ikke alltid holder meg til reglene, særlig når det er lett å ignorere dem</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
<tr>
<td>29 Jeg tror virkelig at det alltid fins en utvei når ting går galt</td>
<td>[ ] [ ] [ ] [ ]</td>
</tr>
</tbody>
</table>
Med tanke på de siste tre månedere, i hvilken grad er du enig i følgende utsagn?

30 Jeg kan finne passende måter å uttrykke følelsene mine på, selv når de er sterke ..........
31 Jeg blir sjelden så opprørt at jeg mister kontrollen over meg selv ..............................................
32 Andre synes av og til å oppleve adferden min som aggressiv .........................................................
33 Jeg mener fullt ut at jeg er likeså verdifull som andre mennesker ...................................................
34 Mine kolleger og venner synes ikke å være interessert i meg som person ........................................
35 Mesteparten av tiden er jeg i stand til å fylle dagene mine på en meningsfull måte ..........................
36 Jeg har glede av nær kontakt med andre mennesker ........................................................................
37 Jeg har tendens til å se på meg selv som en ”ensom ulv” ................................................................
38 Jeg mislykkes ofte med å få gjort ferdig en jobb fordi jeg ikke prøver hardt nok ..............................
39 Av og til er jeg ikke så pålitelig som jeg kanskje burde være ............................................................
40 Jeg har tendens til å bli veldig frustrert ved tilbakeslag ..................................................................
41 Jeg sier ofte ting jeg angrer senere ....................................................................................................
42 Av og til mister jeg kontrollen i den grad at andre blir skremt av meg ...........................................
43 Jeg tar meg ofte i å oppføre meg på måter som er ukarakteristisk for meg .................................
44 Gjennom samtaler har jeg lært at andre mennesker kan forstå problemene mine temmelig godt 

Jeg kommenterer ofte andre synspunkter eller handlinger på en negativ måte ..................................
46 Jeg forsøker å leve i nuet, fordi de fleste langsiktige mål er meningsløse ..................................
47 Det er vanskelig for meg å virkelig ha glede av å gjøre ting ...........................................................
48 Det er vanskelig for meg å samarbeide hvis ikke andre underordner seg min måte å gjøre tingene på ............................................................
49 Selv blant gode venner viser jeg ikke mye av meg selv ..................................................................
50 Jeg har en tendens til å starte med ting for så gi opp ....................................................................
51 Jeg gir for lett opp hvis oppgaver er frustrerende ......................................................................
52 Jeg har så sterke følelser at jeg lett mister kontrollen over dem ....................................................
53 Jeg handler ofte før jeg tenker ..........................................................................................................
54 Av og til blir jeg så sint at jeg går løs på andres eiendeler ................................................................
55 Jeg tar meg ofte i å undre meg over hva slags person jeg er ...........................................................
56 Ofte er jeg ikke helt klar over mine innerste følelser ....................................................................
57 Kritikk fra andre kan gjøre meg veldig selvsukker ........................................................................
58 Jeg føler meg konstant undervurdert ................................................................................................
59 Det er ofte vanskelig for meg å omgås mennesker med andre verdier ..........................................
60 Jeg føler ofte at livet mitt er meningsløst .........................................................................................
61 Et av mine problemer er at jeg har vanskelig for å hygge meg ......................................................
62 På jobben blir jeg lett irritert over andres måter å gjøre ting på ....................................................
63 Det å dele problemene mine med venner får meg til å føle meg bedre ........................................
64 Jeg synes å mangle den ansvarsfølelsen som er nødvendig for å kunne innfri mine forpliktelser .............................................................
65 Jeg mislykkes ofte med å gjøre ting som er forventet av meg ........................................................
66 Jeg har tendens til å slå eller sparke ting når jeg blir hindret i å nå mine mål ................................
67 Andre har fortalt meg at jeg skulle prøve hardere å hindre at jeg mister kontrollen over følelsene mine ................................................
68 Ofte kan jeg ikke motstå mine lyster og innskytelse ....................................................................

Helt
Delvis
Delvis
Helt
uenig
uenig
enig
enig
69 Andre har kommentert at jeg av og til oppfører meg uvanlig til meg å være ..............................................................
70 Jeg føler ofte at jeg ikke er like mye verdet som andre mennesker .................................................................
71 Jeg tror at de fleste mennesker ikke liker å omgås meg ..............................................................................
72 Interessene mine endrer seg hele tiden ............................................................................................................... 
73 Av og til synes det som at alt i meg på en eller annen måte stenger for evnen til å ha det morsomt ............................................................
74 Jeg unngår så godt jeg kan å arbeide sammen med andre ..............................................................................
75 Det er vanskelig for meg å føle meg elsket av mennesker som jeg har fått et nært forhold til .........................................................
76 Mesteparten av tiden forsøker jeg på en samvittighetsfull måte å utføre oppgaver som er gjort meg ..............................
77 Ofte får jeg ikke betalt gjelden min til rett tid ........................................................................................................
78 Når ting går galt, blir jeg ofte motløs og føler for å gi opp ..............................................................................
79 Jeg kan ofte ikke hjelpe for at jeg uttrykker humøret mitt på en upassende måte ..............................................
80 Jeg ser ut til å gjøre ting som jeg angler på oftere enn andre ........................................................................
81 Det er vanskelig for meg å kontrollere min aggresjon overfor andre ..............................................................................
82 Andre synes at jeg er vinglete ..........................................................................................................................
83 Jeg blir ofte forvirret over hvordan jeg handler, selv når jeg prøver å forstå det så godt jeg kan ..............................................
84 Jeg føler meg stolt over noe jeg har oppnådd i livet mitt .....................................................................................
85 Jeg tror sterkt på at alle har rett til å ha sin egen mening ................................................................................
86 Jeg tror bestemt at livet er for alvorlig til å nytes ..........................................................................................
87 Jeg kan vise min hengivenhet til andre uten for mye ubehag ..............................................................................
88 Det er vanskelig for meg å ha glede av varige forhold ..................................................................................
89 Jeg liker å skape noe sammen med andre mennesker .....................................................................................
90 Noen har kritisert meg for å ha for liten ansvarsfølelse ..................................................................................
91 Når jeg har lovet å gjøre noe, prøver jeg alltid å holde løftet mitt ...........................................................................
92 Jeg overreagerer ofte på bagateller ..................................................................................................................
93 Av og til er det vanskelig for meg å bli aggressiv mot andre ........................................................................
94 Hvordan jeg føler meg eller oppfører meg er ofte veldig uforutsigbart ........................................................................
95 Jeg er ofte motvillig til å reflektere over mine indre motiver .............................................................................
96 Jeg tenker ofte at jeg fortjener å bli behandlet dårlig ..................................................................................
97 Bare helt spesielle personer kan forstå meg ........................................................................................................
98 Jeg synes ofte at andres ideer ikke er så gode som mine ................................................................................
99 Det er vanskelig for meg å uttrykke hengivenhet til andre ................................................................................
100 Jeg har ingen fritidsaktiviteter som jeg virkelig kan glede meg over ........................................................................
101 Det synes som om andre ikke liker å arbeide sammen med meg ........................................................................
102 Et av mine problemer er at jeg finner det vanskelig virkelig å tro at andre er glad i meg ........................................
103 Dessverre er jeg ikke så hardt arbeidende som jeg skulle ønske ...........................................................................
104 Andre har klaget over at jeg ikke er helt pålitelig ..........................................................................................
105 Mindre ergrelser kan være veldig frusterende for meg .....................................................................................
106 Et av mine problemer er at jeg ikke kan håndtere sterke følelser ........................................................................
107 Jeg handler ofte impulsivt selv om jeg vet at jeg vil komme til å angre på det senere ...........................................
108 Noen anser meg som en uforsikker person ........................................................................................................

55
109 Jeg er ofte forvirret med hensyn til hva slags person jeg er i virkeligheten ................................
110 Når jeg forsøker å forstå meg selv, blir jeg ofte mer forvirret enn jeg var på forhånd ............
111 Jeg ser vanligvis ned på meg selv .............................................................................................
112 Mine venner er virkelig interessert i at jeg skal ha det bra ......................................................
113 Jeg kommer stadig i krangel med andre på jobben eller hjemme ..........................................
114 Et av mine problemer er at jeg mangler klare mål i livet mitt ................................................
115 Jeg har sjelden samarbeidet med andre mennesker .................................................................
116 Jeg har vært i stand til å knytte varige vennskap ...................................................................
117 Selv om jeg ikke liker å si det, må jeg innrømme at jeg ikke er så opprørtig som jeg burde være ........................................................................................................
118 Et av mine problemer er at jeg ikke helt forstår betydningen av enkelte av mine barndomsopplevelser ........................................................................................................

Vennligst kryss av for om du er Mann ☐ eller Kvinne ☐

Vennligst oppgi din alder: ☐ ☐ år

Har du fullført ungdomsskole? (sett kryss) Ja ☐ Nei ☐

Har du fullført videregående skole ellet tatt fagbrev? (sett kryss) Ja ☐ Nei ☐

Har du fullført høgskole eller universitetsutdannelse? (sett kryss) Ja ☐ Nei ☐

Hvor gammel var du første gang du brukte et rusmiddel? ☐ ☐ år.

Når fikk du diagnosen «ruslidelse» første gang? ☐ ☐ år.

Hva er ditt primære foretrukne rusmiddel? (sett kryss)
Alkohol ................................................................. ☐
Heroin ..................................................................... ☐
Metadon/subutex (andre substitusjonsmedikamenter) ☐
Andre opiater .......................................................... ☐
Dempende medisiner (benzodiazepiner, sedativa) .. ☐
Kokain ................................................................. ☐
Amfetaminer .......................................................... ☐
Cannabis ............................................................. ☐
Hallusinogener ..................................................... ☐
Sniffestoffer ........................................................... ☐
Andre ................................................................. ☐
Hva er ditt sekundære foretrukne rusmiddel? (sett kryss)
Alkohol .........................................................
Heroin .........................................................
Metadon/subutex (andre substitusjonsmedikamenter) .........................................
Andre opiater ..................................................
Dempende medisiner (benzdiazepiner, sedativa) ..................................................
Kokain .........................................................
Amfetaminer ..................................................
Cannabis ....................................................... 
Hallusinogener ............................................... 
Sniffestoffer ..................................................
Andre ...........................................................

Bruker du vanligvis flere rusmidler/medikamenter per dag? (sett kryss) Ja ☐ Nei ☐

Hva er din vanligste bruksmåte for primært foretrukne rusmiddel? (sett kryss)
Oralt ..............................................................
Nasalt .........................................................
Røyking ........................................................
Ikke intravenøs injeksjon (ikke i blodåre) ........................................
Intravenøs injeksjon (i blodåre) ...........................................

Har du noen gang tatt stoff med sprøyte? Ja ☐ Nei ☐

Hvis ja, hvor gammel var du første gang du gjorde dette? ☐ ☐ år.

Hvor mange måneder har din lengste periode med rusfrihet vart? ☐ ☐ måneder

Hvilken/hvilke av disse typene behandling har du mottatt før denne? (sett kryss for hver av behandlingstypene du har mottatt)
Poliklinisk avrusning .........................
Aurusning i institusjon.........................
Poliklinisk vedlikeholdsbehandling ....
Annen poliklinisk behandling ............
Institusjonsbehandling .....................
Dagtilbud ....................................................
Psykiatrisk sykehus .........................
Somatisk sykehus .............................
Annen behandling .............................