A renewed interest in identity as one of the core markers of personality disorders has been introduced by the DSM-5 Level of Personality Functioning Scale. However, little is known about the utility of the construct of identity in children and adolescents. This study aimed to broaden the knowledge of identity integration as a core component of personality functioning in adolescents. The authors investigated levels of identity integration, as measured by the Severity Indices of Personality Problems (SIPP-118; Verheul et al., 2008), in adolescents in both normal (n = 406) and clinical populations (n = 285). Furthermore, changes in levels of identity integration during treatment were investigated in a clinical subsample (n = 76). Levels of identity integration were not associated with age. They were, however, associated with the absence or presence of personality pathology. Most adolescents receiving inpatient psychotherapy gradually changed toward more healthy levels of identity integration; a significant number, however, remained at maladaptive levels of identity functioning after intensive psychotherapy.

The ongoing revision of the Diagnostic and Statistical Manual (DSM-5) has introduced a renewed interest in the concept of identity. Identity is seen as one of the core markers of personality disorders (PDs). Identity is integrated in the self-related functioning domain, whereas the interpersonal functioning domain represents the other core marker of personality pathology. Many theories of personality pathology note that indeed both these aspects (self and other representations) are in need of clinical attention (Clarkin & Huprich, 2011). Problems in self- and interpersonal functioning are considered to be indicators of the severity of personality pathology, and severity has been shown to be one of the most important predictors of dysfunction for patients with PDs (Hopwood et al., 2011). In this new model, severity is
captured by the Level of Personality Functioning Scale (Bender, Morey, & Skodol, 2011). This scale is directly informed by the *Psychodynamic Diagnostic Manual* (PDM Task Force, 2006), which assumes that an assessment of identity is of crucial importance in assessing severity of personality pathology. The *DSM-5* Level of Personality Functioning Scale assumes that problems in identity shape a dimension, ranging from Level 0 (i.e., no problems as evidenced in an ongoing awareness of a unique self; a consistent and self-regulated positive self-esteem; and a capacity for experiencing, tolerating, and regulating a full range of emotions) to Level 4 (i.e., the virtual absence of the experience of a unique self and sense of agency/autonomy with confusing or lacking boundaries with others; a weak or distorted self-image that is easily threatened by interactions with others; significant distortions and confusion around self-appraisal; and the experiencing of emotions that are not congruent with context or internal experience, often accompanied by hatred and aggression as dominant affects, although disavowed and attributed to others).

The Level of Personality Functioning Scale was introduced to capture the core impairments in personality pathology that would not only be able to predict possible alliance problems in therapy, but would also be indicative of the expected outcome in treatment (Skodol et al., 2011). Severity of personality pathology has been reported as one of the best predictors of prospective dysfunction for patients with PDs (Hopwood et al., 2011). Bornstein (1998) stated that severity is the best predictor of treatment outcome for this group of patients. Interestingly, severity, or self- and/or interpersonal functioning, has not often been used to assess treatment outcomes. The focus of outcome research has traditionally been on symptom reduction and syndrome remission. Recent studies, however, suggest that these outcome parameters might have created a too optimistic picture about the treatability of PDs. The initial optimism about the changeability of PDs, based on Zanarini’s initial rates of remission of (borderline) PD in long-term community studies (Zanarini, Frankenburg, Hennen, & Silk, 2003) and associated remission rates in treatment outcome studies (Perry, Banon, & Ianni, 1999), has been somewhat moderated in the light of more recent data on social and occupational functioning and quality of life in PD patients at long-term follow-up (Zanarini, Frankenberg, Bradford Reich, & Fitzmaurice, 2010). These data suggest that “success” of treatment in terms of symptom reduction does not always guarantee success in terms of functional improvement because most studies demonstrate a flattening Global Assessment of Functioning curve, indicating poor social and occupational functioning in the long run. These data might suggest that successful treatment should not (only) be defined by syndrome remission, but also by the strengthening of certain adaptive psychological capacities (“resilience”), which will enable patients to deal with future life stressors in a more productive way. It can be assumed that the proposed *DSM-5* severity components are better able to capture some of these core capacities than its predecessor, the *DSM-IV*. There is some recent evidence that changes in these more dynamic aspects of personality functioning, including changes in reflective function and attachment style, mediate superior outcomes of some treatment programs for personality disordered patients (Levy et al., 2006; Rossouw & Fonagy, 2012). These changes may
account for long-term treatment benefits (Shedler, 2010). Therefore, changes in identity toward more mature levels of identity could provide a more sensitive measure of essential changes in functioning during treatment for personality pathology.

The concept of identity relies on Erikson’s (1963) notion of identity as a fundamental organizing principle of personality development. It is an ongoing process going from infancy through old age. Ideally, identity is “an individually-constructed sense of who one is, based upon who one has been, and who one can realistically imagine oneself to be in the future” (Marcia, 2006, p. 585). Consolidation of identity is seen as a central task of adolescence (Erikson, 1963), and it involves “experiencing oneself as consistent over time and situations, displaying stable attitudes and values, having long-term goals and aspirations, and making commitments to people and roles experienced as self-defining” (Westen, Betan, & Defife, 2011, p. 305). Unsuccessful resolution of the identity crisis leads to “a diffuse sense of identity, confusion about social roles, and uncertainty about internal subjective states and feelings” (Crawford, Cohen, Johnson, Sneed, & Brook, 2004, p. 374). Identity diffusion is seen as a core feature of borderline personality organization (Kernberg, 1984) and as a fundament for personality pathology (Marcia, 2006).

According to Erikson (1963), identity problems are assumed to be normative for adolescence. However, research has shown that most adolescents who experience a “Sturm und Drang” period during adolescence grow up to be healthy adults (Westen et al., 2011). Westen and colleagues (2011) found more pathological variants of the normative identity problems (identity diffusion) in adolescents and reported a systematic relationship with personality pathology, as is true for adults. Furthermore, it has been shown that of all borderline personality disorder (BPD) criteria, identity disturbances are among the most powerful predictors of BPD in adolescents (Becker, Grilo, Edell, & McGlashan, 2002). Moreover, it was demonstrated that identity problems in personality disturbed adolescents are clearly distinguishable from normal identity issues in adolescents (Goth et al., 2012). These findings suggest that pathological variants of identity are a clinically meaningful construct, related to different forms of severe personality pathology and distinguishable from normal identity issues in adolescence. Research on identity diffusion in adolescents and the relationship with personality pathology is important in light of the increasing body of evidence that PDs can be diagnosed in adolescents (see, e.g., Chanen & McCutcheon, 2008; Feenstra, Busschbach, Verheul, & Hutsebaut, 2011; Grilo et al., 1998; Johnson et al., 2000; Westen, Shedler, Durett, Glass, & Martens, 2003) and are strongly associated with concurrent (see, e.g., Braun-Scharm, 1996; Johnson et al., 2005; Kasen et al., 2007; Lavan & Johnson, 2002; Serman, Johnson, Geller, Kanost, & Zacharapoulou, 2002; Westen et al., 2003) and future problems and dysfunctional behaviors (Chen, Cohen, Kasen, & Johnson, 2006; Daley et al., 1999; Daley, Rizzo, & Gunderson, 2006; Johnson, Chen, & Cohen, 2004; Johnson et al., 1999, 2005; Levy et al., 1999).

This study aims to broaden our knowledge in identity as a core component of PDs in adolescents and of changes in identity as outcome parameters
in treatment. Identity was measured using the Identity integration domain of the Severity Indices of Personality Problems (SIPP-118; Verheul et al., 2008). Identity integration is defined as a coherent sense of self, the capacity to see oneself and one’s own life as stable, integrated, and useful. The goals of this study are threefold: (a) to determine whether more immature levels of identity are related to age and/or psychopathology; (b) to determine whether treatment is able to transform immature levels of identity; and (c) to determine whether “normal” levels of identity are obtained after treatment.

METHOD
PARTICIPANTS

Data from the normal reference population with the same age and gender distribution used in this study were collected in several high schools in Belgium. After the purpose of the study was explained, the high school students completed the questionnaire under supervision. Students received no compensation for completing the questionnaire. A total of 406 students completed the questionnaire, of whom 322 (79.3%) were female. The mean age of the students was 16.3 (range 14–22, SD = 1.25).

Clinical population data were collected at de Viersprong. De Viersprong is a highly specialized mental health care institute in the Netherlands, offering outpatient, day hospital, and inpatient psychotherapy for adolescents and adults with severe and complex personality pathology. In general, patients are referred to de Viersprong from all over the country because of complex pathology that appears to be refractory to outpatient treatment. A total of 285 adolescent patients were referred to de Viersprong between June 2006 and January 2009 and were included in this study; 239 (83.9%) of them were female. The mean age of the adolescent patients was 16.3 (range 13–19, SD = 1.37). A subset (n = 133) of the referred patients was admitted to the inpatient unit of de Viersprong and were followed during their treatment. Patients were asked to complete the questionnaire again at 6 months and at 12 months after the start of their treatment (this was the end of their treatment).

This study was approved by the Ethical Commission of the Psychological Department of the University of Amsterdam.

MEASURES

Identity integration was measured by the domain Identity integration of the Severity Indices of Personality Problems (SIPP-118; Verheul et al., 2008). The SIPP-118 is a dimensional self-report questionnaire and aims to measure the core components of (mal)adaptive personality functioning. The SIPP-118 asks respondents to think about the past 3 months and to answer the extent to which they agree with statements such as “It is hard for me to believe in myself as a worthy person” (reversely scored) and “I know exactly who I am and what I am worth.” The response categories range from 1 to 4 and are described as fully disagree, partly disagree, partly agree, and fully agree.
The SIPP-118 consists of 118 items. The measure comprises 16 facets, which are clustered into five higher order domains. The higher order domains are named Self-control, Social concordance, Identity integration, Relational capacities, and Responsibility. In this study, only the domain Identity integration was used. The domain Identity integration is interpreted as the ability to see oneself and one’s own life as stable, integrated, and purposive. Facets included in this domain are Stable self-image (the ability to experience an inner sense of continuity/sameness of self across time and situations), Self-reflexive functioning (the capacity to understand the possible meanings of and causal connections between internal and external experiences, as well as the ability to identify reasons for things happening within yourself rather than constantly trying to find answers in the world outside), Self respect (the capacity to feel that you are worthy, and to know that others or yourself have no right to harm you physically or emotionally), Purposefulness (the capacity to make life meaningful by creating the means as well as the opportunities for achievement and organizing time in line with one’s goals), and Enjoyment (the capacity to enjoy without feeling guilty).

Higher scores indicate better adaptive functioning, whereas lower scores represent more maladaptive personality functioning. The SIPP-118 was tested in an adolescent sample and showed adequate psychometric properties (Feenstra, Hutsebaut, Verheul, & Busschbach, 2011). Alpha scores for the Identity integration facets for the normal sample ranged from .68 (Self-reflexive functioning) to .80 (Self respect); alpha scores for the clinical sample ranged from .73 (Self-reflexive functioning) to .89 (Self respect).

STATISTICAL ANALYSES

On theoretical grounds, we divided the clinical and normal samples into three age categories to illustrate the development of Identity integration. Independent t tests were conducted to analyze the differences between the clinical sample and the normal reference group. ANOVAs were performed to investigate differences per age category for the normal reference group for the domain and facet scores. Repeated-measures ANOVAs were conducted to analyze the change in Identity integration and its facets in the clinical sample.

To investigate clinically significant change for the different facets of Identity integration, we computed the percentage of patients who achieved reliable change, the percentage of patients who moved from a dysfunctional range to a normative range, and the percentage who had both reliable change and moved into a normative range as measured by the SIPP-118 (Jacobson & Truax, 1991). Reliable change was calculated using the formula: \( RC = 1.96 \times \sqrt{2(SE)^2} \), with \( SE = SD_{clinical} \times \sqrt{1 - \alpha} \). A cutoff point for movement into a normative range was computed using the following formula: \((SD_{normal} \times M_{clinical} + SD_{clinical} \times M_{normal})/(SD_{normal} + SD_{clinical})\). Means, standard deviations, and alpha scores for the different facets were used from Feenstra, Hutsebaut, et al. (2011). Clinical deterioration was also computed, defined as patients whose score decreased by the reliable change index. Reliable change indexes and cutoff values for the different facets were as follows: Stable self-image RC = .78, cutoff = 2.57; Self-reflexive functioning RC = .86, cutoff = 2.65;
Self respect RC = .74, cutoff = 2.66; Purposefulness RC = .94, cutoff = 2.86; Enjoyment RC = .82, cutoff = 3.00. Clinically significant change was not calculated for the Identity integration domain because no alpha score was available to calculate reliable change.

To investigate Identity integration (and its facets) over time, a Kaplan Meier analysis was performed. This type of analysis uses a so-called count variable that marks the moment at which a subject has reached the definition of the index category, and therefore no longer contributes time to the denominator. The index in this study was predefined as crossing the cutoff value for each domain or facet, calculated using the previously described formula of Jacobson and Truax (1991). The cutoff value for the Identity integration domain was 4.12. When a person reaches the index score at start of treatment, this person contributes 1 day to the denominator. When a person has no data at the second time point (6 months after start of treatment), and did not reach the index score at the first time point, this person contributes 91 days to the denominator (6 months/2). When a person reaches the index score at the second time point, this person contributes 183 days (6 months) to the denominator. When a person has no data at the third time point (12 months after start of treatment), and did not reach the index score at the first two time points, this person contributes 274 days (6 months + [6 months/2]) to the denominator. When a person does not reach the index score at all time points, this person contributes 365 days (12 months) to the denominator.
RESULTS
DIFFERENCES IN IDENTITY INTEGRATION SCORES BETWEEN PATIENTS AND NONPATIENTS

Figures 1a to 1f show the mean Identity integration domain and facet scores for the clinical sample and the normal reference group per age category at baseline (start of treatment for the clinical sample). As one can see, in all age categories, the lowest (and thus more pathological) scores were reported by the adolescent patients for the Identity integration domain as well as all of its facets. Differences between the clinical sample and the normal reference group were significant \((p < .001)\) for all age categories and for both domain and facet scores. As for differences per domain or facet for the different age categories, no significant differences were found for either the normal reference group or the clinical sample.

CHANGES IN IDENTITY INTEGRATION

Figures 2a and 2b show the changes in Identity integration and the underlying facets for the total clinical sample \((n = 76)\) during their treatment. The total group of patients improved significantly in terms of Identity integration, \(F(1.823, 136.697) = 44.303, p < .001\), Stable self-image, \(F(2, 150) = 44.364, p < .001\), Self-reflexive functioning, \(F(1.850, 138.717) = 38.634, p < .001\), Self respect, \(F(2, 150) = 23.319, p < .001\), Purposefulness, \(F(1.851, 138.848) = 27.727, p < .001\), and Enjoyment, \(F(2, 150) = 18.374, p < .001\).

CLINICALLY MEANINGFUL CHANGE

As for the facet Stable self-image, almost 30% of the adolescents showed clinically significant change, meaning that they showed reliable change as well as movement into a normative range. As one can see in Table 1, smaller proportions of clinically significant change were reported for the other facets (26%, 26%, 20%, and 16%, respectively).

TIME TO CHANGE

As is shown with Figure 3, 62 adolescents (47%) reached the index value for Identity integration at the end of their treatment. Table 2 shows the number

<table>
<thead>
<tr>
<th>Stable self-image</th>
<th>Reliable Change N (%)</th>
<th>Movement Into Normative Range N (%)</th>
<th>Clinically Significant Change N (%)</th>
<th>Deterioration N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>33 (37.9)</td>
<td>40 (46.0)</td>
<td>26 (29.9)</td>
<td>1 (1.1)</td>
<td></td>
</tr>
<tr>
<td>Self-reflexive functioning</td>
<td>26 (29.9)</td>
<td>38 (43.7)</td>
<td>23 (26.4)</td>
<td>1 (1.1)</td>
</tr>
<tr>
<td>Self respect</td>
<td>34 (39.1)</td>
<td>24 (27.6)</td>
<td>23 (26.4)</td>
<td>4 (4.6)</td>
</tr>
<tr>
<td>Purposefulness</td>
<td>25 (28.7)</td>
<td>31 (35.6)</td>
<td>18 (20.7)</td>
<td>1 (1.1)</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>18 (20.7)</td>
<td>22 (25.3)</td>
<td>14 (16.1)</td>
<td>2 (2.3)</td>
</tr>
</tbody>
</table>
of patients who reached the index score per domain/facet and the mean number of days needed to reach the index score.

**DISCUSSION**

This study aimed to broaden our knowledge of problems in identity as core markers of psychopathology in adolescents and of changes toward more mature levels of identity throughout treatment for adolescents with personality pathology. The results of this study can be summarized as follows: (a) levels of identity integration as measured by the SIPP-118 (Verheul et al., 2008) are not associated with age among adolescents; (b) levels of identity integration are associated with the absence or presence of (personality) pathology; (c) adolescents receiving inpatient psychotherapy showed significant improve-
CHANGES IN IDENTITY INTEGRATION IN ADOLESCENTS

ments in levels of identity integration; and (d) although a majority of adolescents reached normal levels of identity functioning, a substantial number remained at maladaptive levels of identity functioning after 1 year of intensive psychotherapy.

The finding that level of identity integration is associated with psychopathology rather than with age confirms the previously mentioned findings of Becker and colleagues (2002), Goth and colleagues (2012), and Westen and colleagues (2011). It refutes notions that discard identity integration or identity diffusion as a meaningful construct in adolescence because of its assumed transient or inherently immature status. Although we cannot draw firm conclusions from our results because we did not use different constructs of identity nor did we relate our findings to symptoms of PDs, it could perhaps be meaningful to clearly distinguish between the constructs of identity (and normal identity issues) and more pathological variants of identity, such as identity diffusion or lack of identity integration. Whereas identity (and the “normal” identity problems) in adolescents might be rather transient and immature, the level of integration of the identity’s inherently transient parts might be well developed in youngsters. In other words, young adolescents might not yet have a relatively stable concept of who they are and what choices they want to make in terms of study, profession, partner, and so on, but they might well have the capacity to experience an integrated, stable, unique, and purposeful sense of self. Accordingly, the level of identity integration as measured by the SIPP-118 seems to capture the prerequisites for a healthy identity development rather than a stable identity per se. These prerequisites seem to be more structurally present (or absent) during the whole adolescent life phase, laying the foundation for dealing with the more
commonsense identity issues. More importantly, these prerequisites seem to capture a more essential feature of personality development to distinguish problematic personality functioning from early adolescence on.

An interesting finding in this study is that disturbed adolescents can reach more mature—even normal—levels of identity functioning during the course of treatment. This study provides evidence that this is not just a matter of development—as no age changes are seen in the reference sample. It might well be possible that these changes in identity integration constitute a component of what one could call “resilience” and might be responsible for durable changes—even in symptom reduction—in follow-up. If one is better able to self-reflect and maintain a unique sense of self and stable self-image—even under stress—one might be better able to deal with future life stress without relapsing into old symptom patterns. Further research should incorporate this issue.

A less hopeful finding from this study highlights the resistance to change in identity integration in a large number of adolescents involved in this study. More than half of the adolescents did not reach mature levels of identity integration even after 1 year of inpatient treatment. This study does not provide an explanation for this resistance to change. It could be due to the lack of effectiveness of the particular treatment model. It could also be that changes in identity integration need more time than a year to occur in an important part of patients. Finally, it might be that (this) treatment is insufficiently tailored to the needs of some adolescents, making it ineffective or at least less effective in changing these personality components.

Several interesting questions remain. One of the most important ones is the relevance of changes in identity integration—and by extension changes in personality functioning—to predict or provide durable changes in life quality. Could it be that interventions that enhance the level of identity integration in adolescents provide a foundation for resuming a healthy developmental trajectory, enabling them to function in a more healthy way as young adults? And what dosage of what kind of treatment would be necessary to obtain these changes?

This study has several limitations. First of all, identity was measured by the SIPP-118. Although this instrument, of all existing instruments, probably relates most closely to the DSM-5 notion of identity, it does not capture completely the way identity is defined in the proposal. For example, the ability

<table>
<thead>
<tr>
<th>Domain/Facet</th>
<th>Number of Patients Who Reached Index Score (%)</th>
<th>Mean Number of Days Needed to Reach Index Score (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity integration</td>
<td>62 (47)</td>
<td>273 (12.42)</td>
</tr>
<tr>
<td>Stable self-image</td>
<td>78 (59)</td>
<td>243 (13.21)</td>
</tr>
<tr>
<td>Self-reflexive functioning</td>
<td>74 (56)</td>
<td>250 (13.47)</td>
</tr>
<tr>
<td>Self respect</td>
<td>65 (49)</td>
<td>241 (13.99)</td>
</tr>
<tr>
<td>Purposefulness</td>
<td>72 (55)</td>
<td>239 (13.85)</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>66 (50)</td>
<td>240 (13.95)</td>
</tr>
</tbody>
</table>
to tolerate and regulate a wide range of emotions, assumed by the DSM-5 model to be an aspect of identity, is not included in the facets of Identity integration as measured by the SIPP-118. Second, although our data strongly suggest that changes in identity integration occur under the influence of treatment, the design does not allow the drawing of firm conclusions on this issue. We do not have follow-up data in the reference sample, nor do we have follow-up data on patients who did not follow treatment. However, the possibility that disturbed adolescents reach mature levels of identity integration only later in life is clearly contradicted by our data.

REFERENCES


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