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# ASSOCIATIONS BETWEEN PSYCHIATRIC MORBIDITIES AND IDENTITY DEVELOPMENT IN ADOLESCENTS WITH GENDER DYSPHORIA REFERRED TO SPECIALIZED GENDER IDENTITY SERVICES

*ABSTRACT*

***Objectives:*** *Establishing a stable identity is considered an important developmental task during adolescence. One salient identity domain is gender identity or the inner sense of gender. Gender dysphoria (GD) may occur when this inner sense of gender does not align with the sex registered at birth. Both poorer overall identity development and GD have been connected to mental health problems in adolescence. The aim of this study was to investigate the associations between mental health problems and identity development among adolescents with GD.* ***Materials and methods:*** *We conducted a study on 114 adolescents (94 birth-registered females and 20 birth-registered males, aged 12–18 (mean age (sd) 16.2 (0.1) years) seeking medical gender reassignment (GR) in specialized gender identity services in Finland. Identity development was measured in terms of "impaired personality functioning" with the 58-item self-report questionnaire Assessment of Identity Development in Adolescence (AIDA). Psychiatric morbidity was assessed by reference to previous psychiatric treatment history, ICD-10 psychiatric diagnoses and psychiatric symptoms recorded in the participants' case histories before and during the gender identity assessment. The data were analysed using cross-tabulations with chi-square statistics and t-test, and multivariate associations using linear and logistic regression as appropriate.* ***Results:*** *Contrary to our expectations, the AIDA scores were not associated with psychiatric morbidity variables. We suggest that it is, thus, imperative to conduct a comprehensive and holistic evaluation of adolescents seeking medical GR, not relying solely on self-reports. However, higher AIDA scores indicating poorer identity development were connected to not being considered eligible for medical GR.* ***Conclusions:*** *The inclusion of identity development self-assessment can only provide some indications on overall maturity and preparedness for medical GR.*

KEYWORDS: GENDER DYSPHORIA, PSYCHOPATHOLOGY, IDENTITY DEVELOPMENT, PERSONALITY FUNCTIONING, ADOLESCENCE

## INTRODUCTION

Identity refers to a person's sense of self and has both intrapsychic and interpersonal dimensions. A stable identity requires mental unity and provides a sense of continuity within oneself and in relation to others as well as the ability to differentiate oneself from others [1,2].

According to major developmental theories, identity development is considered an important developmental task during adolescence [1,2,3]. In adolescence, identity is anticipated to progress from searching and experimenting with identity alternatives towards identity integration, in which a sense of continuity and sameness about the self prevails; in problematic cases, identity confusion (or diffusion) characterized by uncertainty and inconsistency about the self may emerge [1]. The state of identity integration can be divided into two dimensions: coherence (i.e. sameness across contexts) and continuity (i.e. sameness across time) (for an overview see [4]). Empirical research has validated these theories, although adolescent identity development

often evolves at a slow pace, there are considerable differences between individuals, and for many, identity maturation work is postponed into adulthood [5,6,7].

One salient domain of identity is gender identity, which refers to a person's inner sense of their gender irrespective of their biological characteristics. This inner sense of gender is not always congruent with the birth-registered sex [8]. Cisgender refers to a gender identity corresponding with birth-registered sex and transgender to sex-discordant gender identities. The discrepancy between gender identity and birth-registered sex may be accompanied by distress or functional impairment, known as gender dysphoria (GD). The formation of gender identity is often seen as multi-dimensional, multi-determined and prone to change over time [5]. Individual, behavioural and environmental aspects interact in creating gender identity and changes therein over time [9]. Medical gender reassignment (GR) is considered a treatment option in alleviating GD already during the developmental years [10]. Early adolescence, in particular, is a time of hormonal, neurobiological and environmental changes, which is why a broad and multi-dimensional approach to evaluating gender identity and psychological health in adolescents is necessary before considering body-modifying interventions [11,12,13,14].

Uncertain identity has been connected to many psychosocial problems for adolescents, such as loneliness and substance abuse problems, and there is evidence of reciprocity [6,15]. Particularly active identity development, such as that taking place during adolescence, may also be a risk factor for socio-emotional disorders (i.e. depressive, anxiety and eating disorders), and these disorders may disturb identity development [16]. Identity confusion has been linked strongly to depressive symptoms throughout adolescence [17]. However, more research on the connections between socio-emotional disorders and identity development is still needed [18]. Identity is often seen as essential to personality development and disturbances in identity are considered to be closely related to the development of personality disorders [2], which is why identity constitutes a central diagnostic criterion for personality disorders in the Alternative Model for Personality Disorders (AMPD) in DSM-5 [19].

Both internalizing and externalizing mental disorders are common in adolescence [20,21]. Transgender-identifying adolescents have been reported to experience mental health problems even more often than their cisgender peers in general population [22,23]. Similarly, adolescents seeking medical GR report high levels of psychopathology, even to the same extent as adolescents seeking psychiatric treatment [24,25,26,27]. Depression and anxiety disorders are the most common diagnoses among these adolescents [28,29]. Additionally, suicidality seems to be more prevalent both among transgender-identifying adolescents in general population and among adolescents seeking medical GR [30,31,32]. There is also some indication that personality disorders may be more prevalent among transgender-identifying youth [33].

Hence, according to various identity theories and empirical studies, poorer identity development may be related to mental health problems [2,6,16,17], and mental health adversities are over-represented among adolescents referred to specialized gender identity services (GIS) [24,25,26,27]. Nevertheless, in the few studies available on the subject, the overall identity development of adolescents referred to GIS did not seem to differ from the identity development of population youth [34,35]. This contradicts the findings that the profile of psychiatric symptoms among gender-referred adolescents is fairly comparable to that of adolescents receiving general psychiatric care [27]. There may, however, exist special confounders in this group. A history of medical and societal stigmatization may create distrust of professionals among gender as well as sexual minority groups [36] and result in under-reporting of psychiatric symptoms, particularly in order to facilitate access to medical GR [37,38,39]. A desire to present oneself in a predefined way would likely impact self-report measures more than professionals' observations over a longer period of time, and could confound actual associations between observed indicators of psychopathology and self-report-based measure of identity development. We wanted to investigate to what extent identity pathology coincides with psychiatric morbidity within the gender-referred group. In light of earlier adolescent psychiatric research [40], we expected to see an association between general psychopathology and identity pathology in this group as well.

Comprehensive, reliable assessment is of the utmost importance for treatment planning with adolescents experiencing gender-related distress [14]. In the present study, our aim was to increase the evidence base in assessing the treatment needs of gender-referred adolescents, and thus contribute to enhanced clinical decision-making processes ensuring the most appropriate and safe treatment options for these adolescents. We sought answers to the following research questions:

1. Are indicators of psychiatric morbidity associated with impaired identity development as measured by the Assessment of Identity Development in Adolescence

(AIDA) in adolescents with gender dysphoria seeking medical gender reassignment?
2. How are the indicators of psychiatric morbidity and AIDA scores associated with eligibility for medical gender reassignment in adolescents with gender dysphoria?

## MATERIALS AND METHODS

This was a retrospective chart review, and the data were gathered among adolescents consecutively referred to one of the two nationally centralized gender identity services (GIS) for minors conducting comprehensive assessments on the eligibility of minors with features of GD for medical GR.

### *DATA COLLECTION*

The sample initially comprised 88 adolescents with features of GD seeking medical GR at the Tampere University Hospital gender identity services during the years 2018–2020, and whose gender identity assessment had reached at least the initial stage by the data collection time in 2020–2021 [27]. In January 2024, twenty-six more adolescents with GD whose assessment had started in October 2021–January 2022 were added to the sample, and thus the final sample included 114 participants.

The assessment comprised at least a review of the adolescents' earlier health and social welfare records and structured and free-format initial interviews with the adolescents and their guardian(s) conducted by members of the multi-disciplinary team. The adolescents' earlier health and social welfare records had been requested from their previous health and social care contacts with the adolescents' and the guardians' due permission. Based on the information in the records and the initial multi-disciplinary clinical interviews, the assessment procedure was either continued, with additional interviews and psychological tests conducted by the team members, or discontinued. AIDA was the first structured measure used in the assessment process and was administered to all participants during the initial stage. In the present study, earlier records and case files of the initial assessments were utilized, likewise subsequent assessments if available. The national guidelines recommend psychosocial intervention supporting identity development as first-line treatment for adolescents with GD [13]. In addition, possible severe mental disorders that have considerable potential to complicate identity development, as well as endanger reliable identity assessment, have to be treated appropriately before gender identity assessments that may result in medical GR interventions. If thereafter a stable and persistent sex-discordant gender identity and appropriate capacity to informed consent can be concluded in multi-disciplinary assessments, medical GR can be considered.

The study was duly approved by the Ethics Committee of Tampere University Hospital and the appropriate research permission was obtained from the Tampere University Hospital administration.

### *MEASURES*

The Assessment of Identity Development in Adolescence (AIDA) is a self-report questionnaire enabling a dimensional differentiation between healthy and impaired identity development. It contains 58 items with a 5-step response format (0=no to 4=yes), and higher scores indicate more severe pathology. By adding up all the items, a total score representing Identity Diffusion is obtained. The total score can be divided into two dimensions: Discontinuity and Incoherence, each of which has three subdimensions reflecting the theoretical origins of the concept (see Supplementary Table 1; for an overview see [4]). The original German AIDA [41] has had very good scale reliabilities (.94 for total score, .86 and .92 for main dimensions and from .76 to .86 for subdimensions) and has been demonstrated to differentiate adolescents with personality disorders from general population and from adolescents with other types of psychiatric problems [40]. With the English version, the good psychometric properties could be replicated [42]. The culture-adapted version AIDA Finnish had similarly good scale reliabilities (with Cronbach's alpha .96 on total, .90 and .95 on primary and .75 to .89 on subscale level) and matched the results on clinical validity of the original German AIDA in patient groups with diagnoses from the internalizing spectrum [43].

Data on sociodemographic variables, i.e. birth-registered sex, age and family constellation (living with both parents/with one parent/in foster care/without a guardian) on admission to GIS were gathered. Indicators of psychiatric morbidity were collected from the earlier records and case files with a structured data collection form. Psychiatric treatment history during childhood (up to age 12) and in adolescence (13≥) prior to or at the time of the first contact to GIS were recorded (yes/no). Psychiatric diagnoses during adolescence were moreover recorded and reported according to the International Statistical Classification of Diseases

(ICD-10) [44] at the level of main classes (i.e. F10–19, F20–29, F30–39…). Psychiatric symptoms during adolescent years were recorded with a 21-item symptom checklist [27,45,46,47] developed in the study clinic for research and service development purposes. Each symptom was marked as present or absent. In the present study, the symptoms of internalizing (suicidal ideation & talk, suicide attempts, self-harming behaviours, depression, manic behaviour, eating disorder symptoms, anxiety) and externalizing (non-physical aggression towards other people, temper tantrums, violent behaviour towards other people, breaking and destroying property, inappropriate sexual behaviour, alcohol abuse, substance abuse, truancy/refusal to attend school, property crimes, impulse control problems, running away) were summed up to their respective sum scores (internalizing: range 0–7; externalizing: range 0–11).

### *STATISTICAL ANALYSES*

The data were analysed using IBM SPSS Statistics Software 27. The data were described using frequencies of categorical variables and mean (sd) scores of continuous variables. Bivariate associations were studied using cross-tabulations with chi-square statistics (Fisher's exact test where appropriate) and t-test. Multivariate analyses with continuous dependent variable were performed using linear regression and those with dichotomous dependent variable using logistic regression. Because of sex differences in psychiatric morbidity, and because during the adolescent years, even small age differences may have a considerable developmental impact, all multivariate associations were adjusted for sex and age. A cut-off of $p<0.05$ was used to indicate statistically significant differences.

## RESULTS

### *SAMPLE DESCRIPTION*

The sample consisted of 114 adolescents (mean age (sd) 16.2 (0.1) years, range 12–18) entering GIS, seeking medical gender reassignment. Ninety-four of them were birth-registered females and 20 birth-registered males, with 91% (103/114) living with at least one of their parents. Age and family constellation did not differ by sex.

### *PSYCHIATRIC MORBIDITY*

Of the participants, 31% (35/114) had received psychiatric treatment as children (i.e. aged <13) and 78% (89/114) as adolescents. During adolescence, mental health treatment was more common among birth-registered females (85% (80/94) vs. 45% (9/20), $p<0.001$).

Of all the participants, 62% (71/114) had been given a psychiatric diagnosis during the adolescent years; 45% (9/20) of birth-registered males and 66% (62/94) of birth-registered females ($p=0.06$). In the whole group, the diagnoses were distributed in diagnostic main categories as follows: severe mood disorders (F30–39) 58% (41/71), anxiety disorders (F40–48) 59% (42/71), eating disorders (F50–59) 6% (4/71), personality disorders (F60–69) 3% (2/71), developmental disorders (F80–89) 11% (8/71) and disorders with onset in childhood (F90–99) 44% (31/71). A participant might have more than one diagnosis and therefore the percentages do not sum up to 100%. Mood disorders (F30–39) were more common among birth-registered females (40% (38/94) vs. 15% (3/30), $p=0.04$).

Altogether, 87% (99/114) presented with psychiatric symptoms recorded in their case histories from the adolescent years, 94% (88/94) of the birth-registered females and 55% (11/20) of the birth-registered males ($p<0.001$). Birth-registered females presented with higher total externalizing (5.2 (2.9) vs. 2.6 (2.9), $p<0.001$) and internalizing (4.1 (2.1) vs. 1.9 (2.0), $p<0.001$) symptom scores, but there was no sex difference in externalizing symptom scores (0.9 (1.1) vs. 0.6 (1.0), $p=0.6$).

### *INDICATORS OF PSYCHIATRIC MORBIDITY AND IDENTITY PATHOLOGY AS MEASURED BY AIDA*

The indicators of psychiatric morbidity studied were not associated with AIDA total score (*Table 1*).

Table 1. Associations between psychiatric variables and Assessment of Identity Development in Adolescence (AIDA) total score. A) Each variable was entered into the linear regression model alone, adjusting for sex and age. B) All variables were entered into the linear regression model simultaneously, adjusting for sex and age

| | B | SE | Beta | t | p |
|---|---|---|---|---|---|
| **A. Variables entered one by one** | | | | | |
| Psychiatric diagnosis during adolescence | 6.3 | 5.6 | .11 | 1.13 | .26 |
| Psychiatric treatment in childhood | 6.4 | 6.0 | .10 | 1.07 | .29 |
| Psychiatric treatment in adolescence | .4 | 5.9 | .006 | .06 | .95 |
| Internalizing symptoms in adolescence (sum) | 1.1 | 1.3 | .09 | .85 | .39 |
| Externalizing symptoms in adolescence (sum) | -.9 | 2.5 | -.03 | -.35 | .73 |
| **B. All variables entered simultaneously** | | | | | |
| Psychiatric diagnosis during adolescence | 11.8 | 8.4 | .21 | 1.40 | .16 |
| Psychiatric treatment in childhood | 3.9 | 7.1 | .06 | .54 | .59 |
| Psychiatric treatment in adolescence | -7.7 | 8.3 | -.14 | -.93 | .35 |
| Internalizing symptoms in adolescence (sum) | .4 | 2.0 | .03 | .18 | .86 |
| Externalizing symptoms in adolescence (sum) | -1.9 | 3.3 | -.07 | -.59 | .56 |

### *ASSOCIATIONS BETWEEN INDICATORS OF PSYCHIATRIC MORBIDITY AND AIDA SCORES WITH NOT BEING CONSIDERED ELIGIBLE FOR MEDICAL GR*

Of the adolescents in the sample, 64% had been deemed ineligible for hormonal interventions at the time of data collection, and their assessments had been terminated. In bivariate analyses, being deemed ineligible for hormonal intervention was associated with having a psychiatric treatment contact and having a psychiatric diagnosis during the adolescent years, with both internalizing and externalizing symptom scores and with all AIDA indices (*Table 2*).

Multivariate analyses with eligibility for medical GR (yes/no) as the dependent variable were performed using logistic regression, adjusting for age and sex. When the indicators of psychiatric morbidity and AIDA scores were entered each separately, the indicators of morbidity during adolescence and AIDA total and discontinuity scores yielded statistically significantly increased Odds Ratios, childhood morbidity and AIDA incoherence scores borderline significant associations (*Table 3*).

Next, psychiatric diagnoses during adolescence, psychiatric treatment during childhood, psychiatric treatment during adolescence and internalizing and externalizing symptom scores were entered simultaneously as independent variables, controlling for age and sex. In this analysis, none of the independent variables displayed a statistically significant association with non-eligibility for medical GR. Finally, AIDA total score was added into the analysis. AIDA total

score yielded a statistically significant, albeit weak, association with not being considered eligible for medical GR (OR (95% CI) of 1.02 (1.004–1.04), p=0.02), when further adjusted for sex, age and the psychiatric variables (*Table 4*).

The final model was re-run replacing AIDA total score with, each in turn, AIDA discontinuity and AIDA incoherence. None of the AIDA subscales gave a statistically significant OR for non-eligibility when all the psychiatric morbidity variables were included in the model.

Table 2. Psychopathology and Assessment of Identity Development in Adolescence (AIDA) raw and t-scores among adolescents not considered eligible and those (likely) eligible for medical gender reassignment (%)

| | (likely) eligible n=41 | not eligible n=73 | p |
|---|---|---|---|
| Psychiatric diagnosis during adolescence | 46.3 | 71.2 | 0.02 |
| Psychiatric treatment in childhood | 19.5 | 37.0 | 0.06 |
| Psychiatric treatment in adolescence | 61.0 | 87.7 | 0.002 |
| | | | |
| Internalizing symptoms in adolescence (sum) | 2.7 (2.5) | 4.3 (1.9) | <0.001 |
| Externalizing symptoms in adolescence (sum) | 0.5 (1.0) | 1.0 (1.1) | 0.03 |
| AIDA total score | 60.2 (27.4) | 73.5 (27.4) | 0.01 |
| AIDA discontinuity | 27.9 (12.7) | 35.2 (17.4) | 0.002 |
| AIDA incoherence | 30.0 (15.5) | 36.7 (17.4) | 0.04 |
| AIDA total t-score | 46.0 (7.2) | 49.5 (7.1) | 0.01 |
| AIDA discontinuity t-score | 46.1 (7.7) | 50.6 (7.2) | 0.002 |
| AIDA incoherence t-score | 45.1 (6.5) | 48.0 (7.3) | 0.04 |

Table 3. Odds Ratios (OR) with 95% intervals (CI) for being deemed ineligible for medical gender reassignment (GR) by indicators of psychopathology and Assessment of Identity Development in Adolescence (AIDA) raw and t-scores, when each variable is entered as independent variable alone, controlling for age and sex

| | |
|---|---|
| Psychiatric diagnosis during adolescence | 2.4 (1.0–5.6), p=0.04 |
| Psychiatric treatment in childhood | 2.7 (1.0–7.2), p=0.05 |
| Psychiatric treatment in adolescence | 2.5 (1.0–5.9), p=0.05 |
| Internalizing symptoms in adolescence (sum) | 1.3 (1.1–1.6), p=0.007 |
| Externalizing symptoms in adolescence (sum) | 1.5 (0.9–2.4), p=0.8 |
| AIDA total score | 1.02 (1.002–1.04), p=0.02 |
| AIDA discontinuity | 1.05 (1.01–1.09), p=.007 |
| AIDA incoherence | 1.03 (0.999–1.1), p=0.06 |
| AIDA total t-score | 1.07 (1.008–1.1), p=0.03 |
| AIDA discontinuity t score | 1.09 (1.02–1.2), p=0.007 |
| AIDA incoherence t-score | 1.06 (0.999–1.1), p=0.06 |

Table 4. Odds Ratios (OR) with 95% intervals (CI) for being deemed ineligible for medical gender reassignment (GR) by indicators of psychopathology and Assessment of Identity Development in Adolescence (AIDA) total score when all variables were entered into the model simultaneously controlling for age and sex

| | |
|---|---|
| Psychiatric diagnosis during adolescence | 1.03 (0.3–13.3), p=1.0 |
| Psychiatric treatment in childhood | 1.6 (0.5–4.8), p=0.4 |
| Psychiatric treatment in adolescence | 1.5 (0.3–5.7), p=0.7 |
| Internalizing symptoms in adolescence (sum) | 1.2 (0.9–1.6), p=0.3 |
| Externalizing symptoms in adolescence (sum) | 1.2 (0.7–2.0), p=0.5 |
| AIDA total score | 1.02 (1.001–1.04), p=0.04 |

## DISCUSSION

Contrary to our expectations, the indicators of psychiatric morbidity were not associated with identity pathology as measured by AIDA among adolescents seeking medical GR. However, higher AIDA scores had a statistically significant, albeit weak, association with not being currently considered eligible for medical GR. Psychiatric morbidity recorded in the case histories of the adolescents seeking medical GR was very common.

Psychopathology was abundantly present in this sample of gender-referred adolescents, and the total absence of covariation between psychopathology and identity impairment as measured by AIDA in our sample is contrary to earlier research findings showing a significant and prominent connection between impaired identity development and current mental disorder [40,43,48]. Impaired identity development is generally connected to mental health adversities [2,6,16,17]. Adolescents seeking medical GR generally have considerable psychopathology [23,27,28,29], but earlier studies have suggested that these adolescents' overall identity development may not differ from that of peers in general population [34,35]. In this study, specific indicators of psychiatric morbidity did not coincide with identity impairment measures among this group. Several explanations can be considered.

Firstly, the adolescents with GD contacting GIS may have processed their overall identity more than average adolescents, and this may have resulted in reaching a level of identity integration comparable to their population peers despite their considerable psychopathology [35]. Consequently, the typical connection between identity problems and psychiatric disorders, such as depression or personality disorders, would not actually exist in this specific subgroup of adolescents.

Secondly, AIDA may not function in this population as it does in other adolescent populations due, for example, to specific intersectional and cultural variables affecting the population [49]. However, AIDA has proven valid in this age group in many different countries and cultures [40,42,50,51], including Finland [43], hence for AIDA not to function in this Finnish subgroup of adolescents would be exceptional. Furthermore, the AIDA model is based on more directly pathology-related concepts of identity development with a clear assignment to (borderline) personality pathology than Marcia's concept of identity statuses [3] that primarily explore normative development. A pathologically foreclosed identity, in a developmental period where active identity exploration and commitment after exploration is expected to take place, could to some extent explain AIDA scores suggesting non-problematic identity development in such a sample as ours displaying considerable psychiatric morbidity. Future research should explore this by applying methods that measure identity processes, such as exploration, commitment after exploration and reconsideration of commitment.

Thirdly, some studies have observed that transgender adults and adolescents seeking medical GR may attempt to present themselves in a favourable light and omit reporting psychiatric symptoms in order to ensure prompt access to medical GR [37,38,39]. A master's thesis conducted in Finland on 102 adolescents seeking medical GR, who underwent a thorough psychological assessment, found that in self-report instruments the adolescents often did not report serious psychiatric symptoms and psychosocial problems even though these were recorded in their case histories [38]. In our study, the psychiatric morbidity indicators were collected from case files, but the identity pathology indicators were self-reported. In light of the earlier findings, it seems plausible that in our study, too, the adolescents may have undertaken impression management in order to gain access to medical GR. This is unfortunate, since the presentation of an idealized version of oneself in order to obtain medical GR may result in unmet mental health needs and interventions that do not correspond to the authentic self, although impression management may be seen as an attempt to gain access to authentic identity presentation [37]. Potentially unnecessary medical interventions may also cause irreversible changes to the body and potential personal suffering for the young person later in life (e.g. risks to fertility, brain development and bone density) [52,53,54].

However, in line with our expectations, identity pathology as measured by AIDA was associated with not being considered eligible for medical GR, although with a rather small OR. Eligibility for medical GR is determined in a multi-disciplinary team after sufficiently extensive assessments have been conducted to enable forming a consensus. All indicators but externalizing symptoms score were first associated with not being currently considered eligible for medical GR, but when they were entered into the analysis simultaneously, they were all levelled out. Even though the AIDA scores in the full sample were very low (denoting healthy identity), the AIDA total score was finally the only measure that differed statistically significantly between being deemed or not being deemed eligible for proceeding to medical GR by the expert team. This lends support to the assumption that identity development as assessed by AIDA provides meaningful

information in this subgroup of adolescents, despite their potential desire to present themselves favourably.

Especially in light of the discriminatory history, it is understandable that transgender youth may not trust the clinical staff to understand them and provide them with the best possible care. Nor does the polarized and politicized discussion climate help to build that trust [14]. Clinical staff have the responsibility to communicate clearly that they do not judge or undermine the adolescent's identity and are truly trying to help, with the adolescent's best interests at heart. Open and respectful discussion among the people involved (i.e. the adolescents, their families and the clinical professionals) is essential, likewise open evidence-based research on the subject that the professionals and the families can rely on. The adolescents presenting for treatment also need to understand the risks involved in misrepresenting themselves. Appropriate treatment of co-occurring mental disorders and psychotherapeutic intervention supporting identity exploration are recommended as the first-line treatment of adolescents presenting with gender-related distress in Finland [13]. Recently, the final report of the prestigious Cass Review in the UK concluded the same and called for caution with bodily interventions among minors, given the risks and unknowns related to the yet uncompleted identity development and the undesired psychiatric and medical effects [14]. Advice against medical GR during the adolescent years need not preclude such interventions later if after the first-line treatments they prove timely.

## LIMITATIONS

This study had a cross-sectional design which does not allow conclusions on causality, although the participants' symptoms and disorders dating from before entering GIS were collected from case files originating from the time of their identification, which adds to the design. The paucity of longitudinal studies on the presentations of GD in adolescents is well recognized in the field and there is a strong intention to increase their number in the future [e.g. 14].

The number of birth-registered males in the sample was small, which affects the generalizability of the results. The results may reflect more the situation of birth-registered female than that of birth-registered male adolescents seeking medical GR. Moreover, due to the small number of males, the analyses were not stratified by sex but adjusted for sex (and age), which narrows the results.

Identity development was measured in this study with a self-report tool, which although well validated, carries the limitations of all self-report tools, i.e. the risk of including overtly positive or negative self-presentations. Additionally, other demographic and psychological factors potentially affecting identity development, such as IQ, socioeconomic status or family dynamics [55] were not accessed in the present study.

Psychiatric morbidity variables were collected from the case files that had accumulated both before the young person entered GIS and during their assessment by GIS. Observations recorded before entering GIS are unaffected by a desire to manage self-presentation in the gender identity assessment and can be considered to represent genuine difficulties. However, collecting symptoms from case histories is only as comprehensive as are the recordings. The clinicians writing the earlier case histories may have focused on the most important symptoms and ignored recording less burdensome ones. Hence, the prevalence of some symptoms may have been underestimated.

The accuracy of using personality assessment tools with cisgender norms on transgender populations has also been criticized [33,49,56]. There has been discussion, for example, on the possible intersectional and cultural variables related to minority stress affecting this group's results and the possible overlap between the development of personality disorders and gender dysphoria [33,49]. While gender minorities may be exposed to unique and damaging minority stressors that may lead, for example, to heightened sensitivity to rejection [57], which should be kept in mind, for example, in therapeutic work with these populations [8], it is debatable whether these stressors differ so fundamentally from those of cisgender populations that a different set of norms should be established. Furthermore, transgender identity *per se* is considered natural identity variation. In this light, identity coherence and continuity can be expected to be equally relevant in transgender population as among adolescents at large.

## CONCLUSION

Indicators of psychiatric morbidity among gender-referred adolescents may not be associated with impaired identity development, although measured by well-validated self-report tools. Self-report measures may not be sufficient for assessing young people referred to specialized gender identity services, thus, a holistic and comprehensive

evaluation, relying on multiple sources according to the general practice in Finnish adolescent psychiatry, is of the utmost importance when deciding on the treatment pathways of adolescents with gender dysphoria.

## Supplementary Material

Supplementary data are available at Psychiatrica Fennica online.

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