Mental Health in Children and Adolescents with Gender Incongruence

The Year in Review

Dagmar Pauli, Switzerland
Psychiatric University Hospital Zurich

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HAMBURG, GERMANY

What do we know for sure?

Mental Health in Children and Adolescents with Gender Incongruence in Clinical Samples (studies until 2023)

- depression and/or anxiety disorder 32-78%

  (Di Ceglie et al., 2002; Spack et al., 2012; Skagerberg, Parkinson, et al., 2013; Becker et al., 2014; M. Chen et al., 2016; Holt et al., 2016; D. Chen et al., 2017; Chodzen et al., 2018; Kaltiala-Heino et al., 2015; Khatchadourian et al., 2014; Nahata et al., 2017; Olson et al., 2015; Peterson et al., 2017)

- suicide attempt in history 9-52%

  (Spack et al., 2012; Becker et al., 2014; M. Chen et al., 2016; Holt et al., 2016; Khatchadourian et al., 2014; Nahata et al., 2017; Peterson et al., 2017)

- suicidal ideation and self-harm 13-75%

  (Di Ceglie et al., 2002; Spack et al., 2012; Becker et al., 2014; M. Chen et al., 2016; Holt et al., 2016; Kaltiala-Heino et al., 2015; Nahata et al., 2017; Olson et al., 2015; Skagerberg, Parkinson, et al., 2013)

Many, but not all, children and adolescents with gender incongruence have high levels of stress due to concomitant mental health problems.

Rates of depression and self-harm vary by sample and country.

Protective factors are family and peer support and lack of victimization

Mental Health in Children and Adolescents with Gender Incongruence

Jarvis et al., 2025

N=3783, patients with records of gender incongruence compared to ED-patients and ASD-patients in primary care practices UK 2011-2021

- incidence rate gender incongruence increased (0.41 to 4.4 per 10’000 person years)
- 4.7% were prescribed puberty blocking, 8.0% were prescribed GAH
- mental health: 52.7% had record of anxiety, depression or self-harm
- compared to ED-patients and ASD-patients similar rates of anxiety and higher rates of depression and self-harm

conclusion

- **gender incongruence is increasing but is still a rare condition**
- **few diagnosed youths have medical gender affirming treatments**
- **high burden with depression and self-harm in adolescents with gender incongruence**

Mental Health in Children and Adolescents with Gender Incongruence in General - Mental Health Burden in Clinical Samples from Different Countries 2023-25

- **Norway**: N=83, 74.7% AFAB, mean age 15.6 y
  67.5% one or more psychiatric diagnosis, 44.6% had a history of self-harm, and 15.7% had a history of a suicide attempt *(David et al., 2025)*
- **Colombia**: N=42, 58% AFAB, mean age 15.0 y
  44% depression, 37% anxiety, 23% self-harm, 16% suicide attempt
  siginificantly higher rates of mental health impairments in AFAB *(Gutierrez et al. ,2024)*
- **France**: N=239, 68% AFAB, mean age 15.9 y
  28% had a history of inpatient psychiatric treatment, 38% had a history of bullying
  major depression disorder AFAB: 65.4% and 1 suicide, AMAB 48.6%, anxiety disorder AFAB: 45.7%, AMAB 28.4% (*La Grange et al., 2024)*
- **Austria**: N=49, 59% AFAB, mean age 15.0 y
  significantly more AFAB than AMAB youth within the clinical range in the CBCL externalizing problem scale
  significantly more AMAB than AFAB witin the clinical range in the internalizing problems scale of the YSR
  but significantly **more AFAB reported suicidal ideation** (*Klinger et al., 2023)*
- **Turkey**, N=30, 73.3% AFAB, mean age 15.9 y
  63% co-occuring psychiatric disorders, 40% depression, 16.6% anxiety disorders, 70% self-harm *(Agkül et al., 2025)*
- **Poland**, N=89, 86% AFAB, mean age 15.9 y
  mood disorder 59.8%, anxiety disorder 26.0%, eating disorder 2.3%, personality disorder 12.6%
  glucocorticoid balance disturbed (gender minority stress) *(Jacubowsky et al., 2025)*
- **Portugal**, N=89, 58.1% AFAB, mean age 16 y
  47.1% requiring psychopharmacological treatment *(Gloria et al., 2025)*
- **Israel:** n=674, 63.2% AFAB,
  higher mental health burden in older adolescents, in AFAB, in non binary individuals
  self harm 15.1%, suicide attempt 8.5%, anxiety disorders 25.1%, depression 23.4% *(Topaz et al., 2024)*

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Summary

- Mean age at referral 15-16y
- 58-86% AFAB
- Most studies: higher rates in mental health impairment in AFAB
- depression 23.4-59.6%, self harm 15.1-70%, suicide attempt 8.5-16%, anxiety disorder 16.6-37%

47.1% requiring psychopharmacological treatment *(Giorda et al., 2025)*

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Mental Health Burden and Timing of Gender Related Events

- *Topaz et al., 2024, Israel*

N=674, 61% AFAB, 39% AMAB

adolescents referred to gender clinic in Israel

Mental health and timing of gender-related events among transgender and gender-diverse children and adolescents seeking gender-affirming consultation and care

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Results

- mental health burden: non-binary > AFAB > AMAB
- seeking gender affirming care at a more advanced pubertal stage and older age was associated with an increased likelihood of psychopathology
- later recollection of first gender incongruence memory was correlated with higher rates of depression and anxiety

Mental Health: Age Comparison

Archives of Sexual Behavior (2024) 53:2883–2896
https://doi.org/10.1007/s10508-024-02940-3

ORIGINAL PAPER

Mental Health Evaluation of Younger and Older Adolescents Referred to the Center of Expertise on Gender Dysphoria in Amsterdam, The Netherlands

Frédérique B. B. de Rooy[1,2] · Marijn Arnoldussen[1,2] · Anna I. R. van der Miesen[1,2] · Thomas D. Steensma[2,3] · Baudewijntje P. C. Kreukels[2,3] · Arne Popma[1] · Annelou L. C. de Vries[1,2]

Received: 25 January 2023 / Revised: 9 June 2024 / Accepted: 10 June 2024 / Published online: 9 July 2024

De Rooy et al., 2024

N=1478 patients referred to gender clinic Amsterdam 2000-2018

younger presenters: 58.9% AFAB, older presenters: 70.2% AFAB

Comparison: < 13.9 y and > 14 y

Results

Mental Health: **Significantly higher problem scores in CBCL and YSR in older presenters** compared to younger presenters (YSR: older presenters 41.1% in clinical range vs. younger presenters 18.8%)

Conclusion

- older presenters have more mental health problems and more autistic traits (in AMAB) compared to younger presenters
- age differences call for an individualized approach in clinical care

Gender Incongruence and Autism – New Results

ASD diagnosis rates 9.0-10.2% in GI-samples

- **9.6 % ASD diagnosis** *(David et al., 2023*)
- **9% ASD diagnosis** *(La Grange et al., 2024)*
- **10.2% ASD diagnosis** *(Klinger et al., 2025)*

Higher mental health burden of adolescents with ASD and GI compared to adolescents with only GI

- Youth with co-occurring ASD/GI were at **significantly greater risk of also having anxiety or depression** diagnoses compared with youth with ASD alone, GI alone, or neither diagnosis *(Kahn et al, 2023)*
- ASD traits in gender incongruent youths were associated with **significantly higher rates of suicidality** *(Lehmann et al., 2025)*

What are we not so sure about?

Mental Health in Children and Adolescents with Gender Incongruence in General (new results 2023-25)

- *Ruuska et al., 2024*

  N=2088, age < 23y, register study of patients in gender units Finnland 2019-2023

  suicide rate was 0.3% compared to aged matched controls 0.1%. The difference was fully explained by psychiatric treatment history (number of consultations).

  question: How to interpret the mental health burden of the trans youth population?

- *Kaltiala et al., 2023*

  N = 3937, mean age 21.1 y, register study of patients in gender units Finnland 1996-2019

  risk to need subsequent psychiatric specialized treamtent increased from 3.3 to 4.6 fold during study period compared to age matched controls

  question: Does the population change? Does the psychiatric care change? Are we more aware?

Does medical gender affirming care improve mental health?

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Mental Health and Gender Affirming Care – Longitudinal Studies in adolescents (studies until 2022)

- Netherlands, N=70, 7 y follow-up: improvement in emotional symptoms and behavioral problems, reduced psychopathology *(De Vries et al., 2011, 2014)*
- UK, N=200, 2 y follow-up: improvement in psychopathology and global level of functioning (*Costa et al., 2015)*
- USA, N=148, 1.5 y follow-up: large improvements in body dissatisfaction, slight but siginificant improvement in depression and anxiety *(Kuper et al., 2020)*
- Germany, =75, 2 y follow-up, slight improvement in psychopathology, not significant *(Becker et al., 2020)*
- Netherlands, N=272, transgender adolescents receiving puberty suppression had fewer emotional and behavioral problems than the group that had just been referred to transgender care and had similar or fewer problems than their same-age cisgender peers on the Youth Self-Report domains *(van der Miesen, 2020)*
- USA, N=104, 1 y follow-up, less depression and suicidal ideation *(Tordoff et al., 2022)*
- USA, N=315, 2 y follow-up, less depression, less sucidal ideation, less anxiety, improvement of life satisfaction, 2 suicides *(Chen et al., 2022)*

Reviews of these studies

- moderate evidence for improvement in mental health after GAH (Taylor et al., 2024)
- inconsistent evidence for improvement in mental health after PB (Taylor et al., 2024)
- Significant improvement in mental health after PB, especially when followed by GAH (Tornese et al., 2025)

Mental Health and Gender Affirming Care – Longitudinal Studies (new results 2023-25)

- *Chelliah et al, 2024*, USA

  Follow-up after 1 y of gender affirming therapy
  N = 115, age 12-18y, mean 15.3 y

Original article

Changes in Gender Dysphoria, Interpersonal Minority Stress, and Mental Health Among Transgender Youth After One Year of Hormone Therapy

Priya Chelliah, M.D. [a], May Lau, M.D., M.P.H. [b,c], and Laura E. Kuper, Ph.D. [c,d,*]

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Article history: Received May 16, 2023; Accepted December 15, 2023
Keywords: Transgender youth; Gender dysphoria; Hormone therapy; Minority stress; Mental health

- puberty suppression only (2.6%), testosterone or estrogen therapy (81.7%), both puberty suppression and estrogen or testosterone therapy (13.9%), and menstrual suppression only (1.7%)

  significant results

  - reductions in body dissatisfaction, victimization, depression, anxiety, parent gender related non-affirmation; improvements in psychosocial functioning
  - higher levels of baseline family support, parent gender-related acceptance, and lower levels of baseline victimization were associated with better mental health at one-year follow-up

Mental Health and Gender Affirming Care – Longitudinal Studies (new results 2023-25)

- *Wittlin et al., 2025, USA*

N=183 adolescents with GI compared to siblings and to age mached controls different treatment centers US and Canada

patients with early puberty blocking (average 11 y) and GAH and good parental support

Follow-up average after 8 years

Results

- participants experienced stable and relatively low levels of psychological distress across stages of medical transition and across time.
- By mid-adolescence, levels of anxiety and depressive symptoms among transgender girls and transgender boys generally fell between those of cisgender girls and cisgender boys.

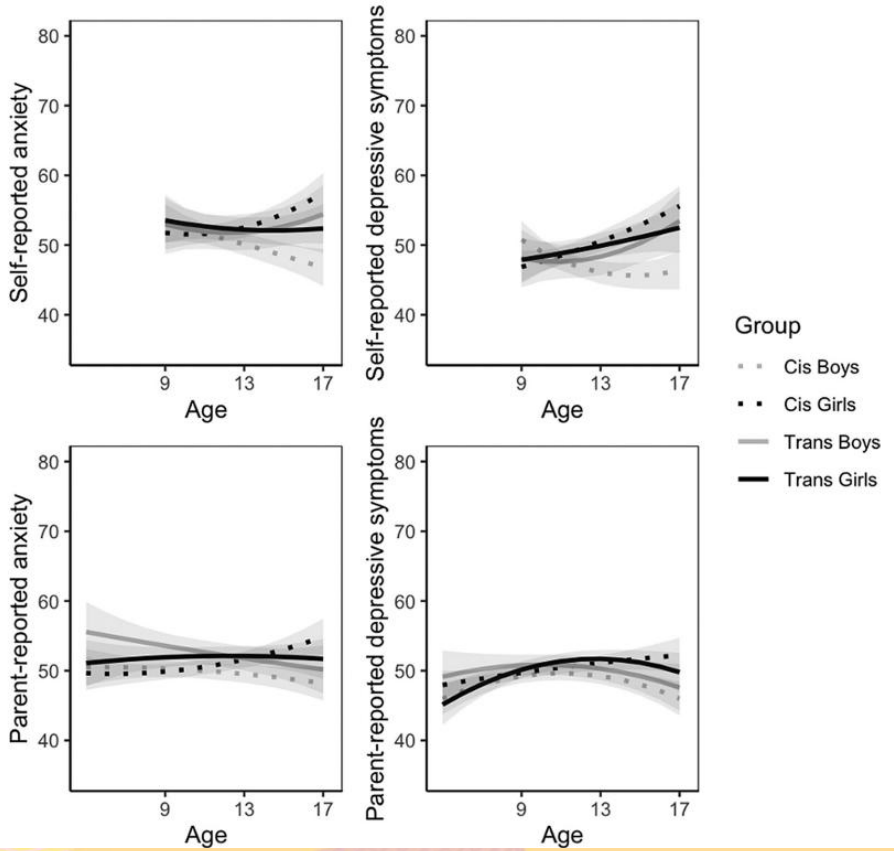
Original article

Mental Health during Medical Transition in a US and Canadian Sample of Early Socially Transitioned Transgender Youth

Natalie M. Wittlin, Ph.D. *, Natalie M. Gallagher, Ph.D., S. Atwood, M.A., and Kristina R. Olson, Ph.D.

Department of Psychology, Princeton University, Princeton, New Jersey

Article history: Received May 17, 2024; Accepted October 23, 2024
Keywords: Transgender; Adolescents; Gender-affirming care; mental health



Mental Health and Gender Affirming Care – Longitudinal Studies (new results 2023-25)


OPEN

PRS GLOBAL OPEN

ORIGINAL ARTICLE

Gender-affirming Surgery

An Assessment of the Longitudinal Impact of Gender-affirming Care in an Adolescent and Young Adult Transmasculine and Nonbinary Patient Population

- *Ewing et al., 2024, USA*

Effects of top surgery in trans male and non-binary adolescents and young adults on mental health

N=110, age at survey 18.8 y, post-op average 12 mths
97.2% had GAH

Results

- ➢ significant reductions in depressive symptoms, gender dysphoria, and chest dysphoria before and after surgery
- ➢ patients reported positive perceptions of their surgical experience, were satisfied with their surgical outcome, and had a positive recovery experience.
- ➢ Time after surgery predicted reduction in depressive symptoms

Mental Health after Discontinuing of GAH (new results 2023-25)

- *Boskey et al., 2025*, USA: N = 1050, clinical sample after gender affirming hormone therapy

  results

  2% discontinued and restarted, 4% disontinued, 0.5% discontinued because of change in gender identity

  mental health: those who had a psychiatric diagnosis, endorsed suicidal ideation, or had a history of psychiatric hospitalization or suicide attempt prior to the time of starting GAH showed higher rates of discontinuing

  mental health after discontinuation: not reported

How do we weigh the evidence?

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How the critics see it: It is all very simple

mental health impairments

gender incongruence in adolescents

Simple solution

resolve mental health problems and gender incongruence will disappear

Or is it the other way around?

Minority stress model

mental health impairments

gender incongruence in adolescents

Simple solution

resolve gender incongruence and mental health impairments will disappear

Or might the real world be more complicated?

What are we aiming for?

What is an «Effective» Gender Affirming Treatment?

Trans negativity as theoretical lens

Oosthoek et al., 2024

What are the current aims of GAT?

- lower psychological distress (that is present prior to transition)
- improvement of overall mental health
- stabilization in the desired gender / good «passing» (and not desist)
- no regret about treatment

Oosthoek *et al. BMC Medical Ethics* (2024) 25:154
https://doi.org/10.1186/s12910-024-01143-8

BMC Medical Ethics

RESEARCH Open Access

Gender-affirming medical treatment for adolescents: a critical reflection on "effective" treatment outcomes

Ezra D. Oosthoek[1,2*†], Skye Stanwich[1,2*†], Karl Gerritse[1,2], David Matthew Doyle[1,3] and Annelou L.C. de Vries[1,2]

But:

- The binary view restricts the recognition that fluidity in gender identity is neither abnormal nor pathological
- TGD individuals continue to face a range of other psychosocial stressors that contribute to chronic minority stress, including but not limited to employment discrimination, lack of safe access to public facilities, and physical violence.
- alleviation of the gender problem is not equivalent with an easy life (assumption of GAT as «curative» can lead to unrealistic expectations)
- ***Desire for transition*** **as a main factor might be neglected**

Thank you for your attention!

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