The background features a gradient from red at the top to blue at the bottom. It is overlaid with various circular and semi-circular patterns, including dashed lines, solid lines, and arrows. A prominent scale on the left side shows numbers from 150 to 260 in increments of 10. The main title is centered in large, white, sans-serif capital letters.

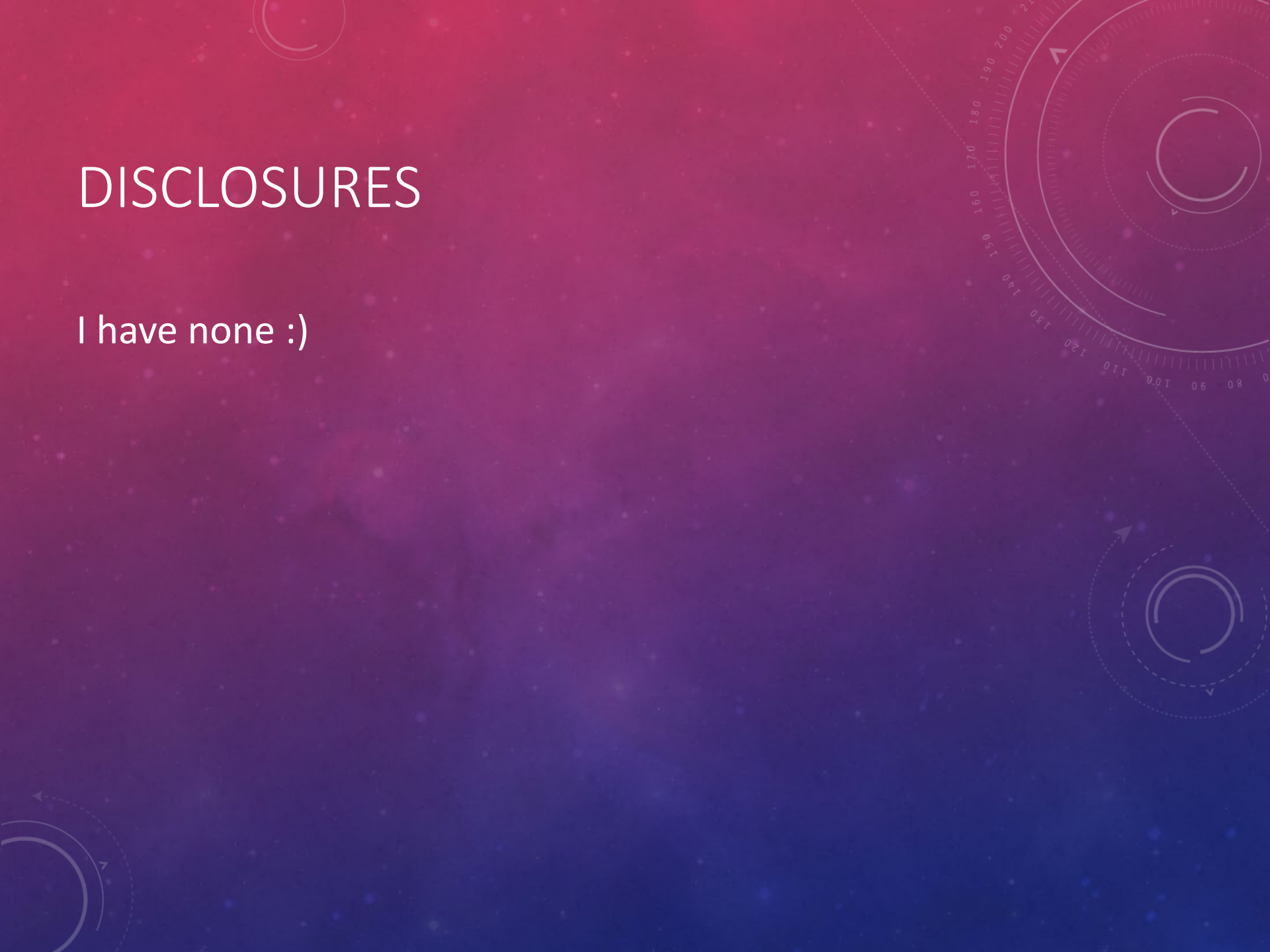
PUBERTAL SUPPRESSION FOR TRANSGENDER YOUTH AND RISK OF SUICIDAL IDEATION

TURBAN ET AL., PEDIATRICS, 2020

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DISCLOSURES

I have none :)



OBJECTIVES



BACKGROUND AND
RATIONALE



STUDY DESIGN



KEY RESULTS



STRENGTHS AND
LIMITATIONS



CLINICAL RELEVANCE
AND DISCUSSION

BACKGROUND

Mental health disparities in transgender youth

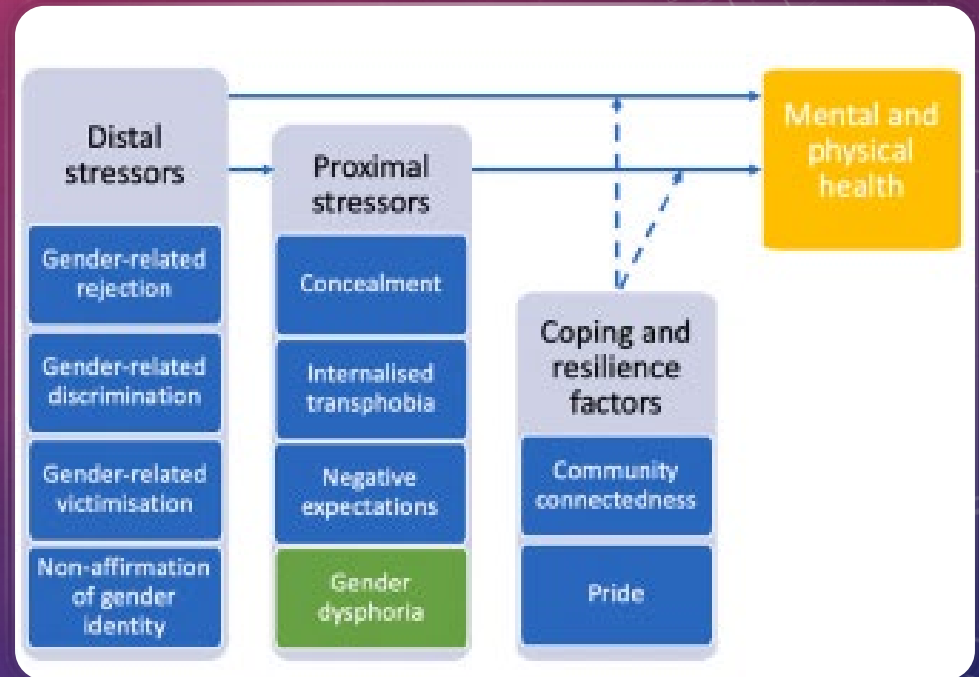
Higher rates of depression, anxiety, suicidality

40% endorsed lifetime suicide attempt

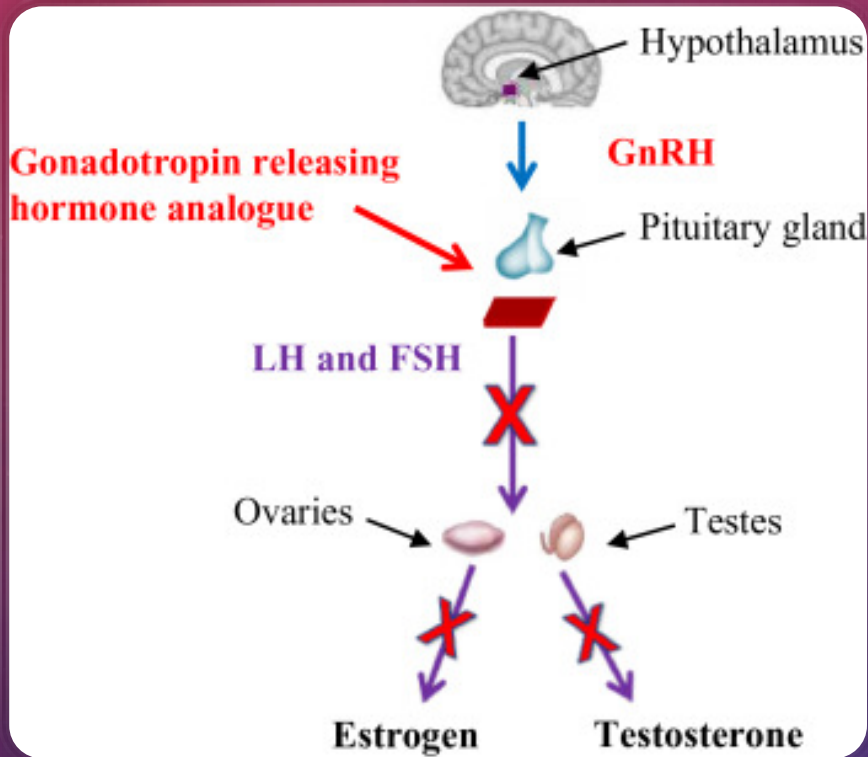
Dysphoria + Minority Stress Model

Pubertal suppression theorized to reduce dysphoria

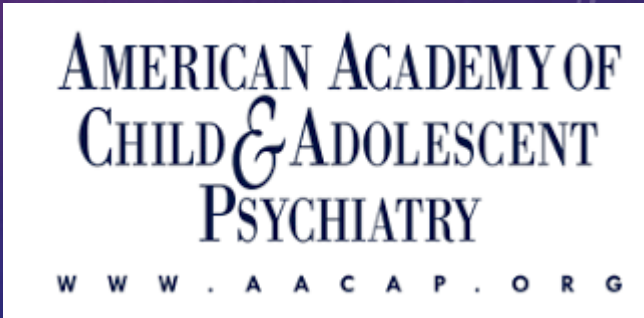
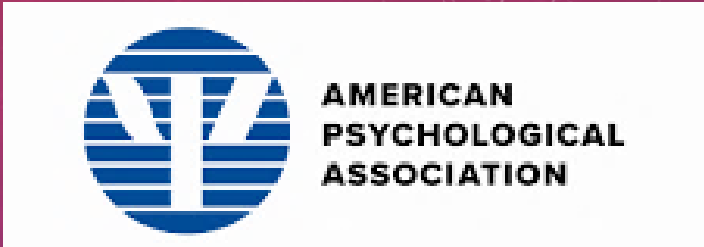
- Prior studies:
 - Internalized psychopathology improved after tx
 - Superior global functioning



CLINICAL GUIDELINES



- Endocrine Society & WPATH recommend GnRHa at Tanner stage 2
- Fully reversible puberty-blocking intervention



STUDY OBJECTIVE

- To assess if access to pubertal suppression during adolescence is associated with reduced suicidality among transgender individuals who wanted it.
- Hypothesis: among those who wanted pubertal suppression, those who received it would have superior mental health outcomes

STUDY DESIGN

Cross-sectional
analysis

2015 U.S. Transgender
Survey (USTS)

Participants: 20,619
transgender adults
surveyed (18–36 years
old)

Community recruited
sample

One month period

3494 ever wanted
pubertal suppression

EXPOSURE & OUTCOME DEFINITIONS

Exposure: Pubertal
suppression (GnRHa) before
age 17

Outcomes:

Suicidal ideation (past-year,
lifetime)

Suicide attempts (past-year,
lifetime)

Kessler Psychological
Distress Scale (K6)

Substance use (binge
drinking, illicit drug use)

CONTROL VARIABLES

- Adjusted for:
 - Age
 - Age of social transition
 - Age of initiation of hormone therapy
 - Gender identity
 - Assigned sex at birth
 - Sexual Orientation
 - Race
 - Total household Income
 - Family support
 - Education
 - Current hormone treatment



KEY RESULTS - DEMOGRAPHICS

16.9% wanted pubertal
suppression

Only 2.5% of those received it

Associated with:

- Younger age
- AMAB
- Heterosexual orientation
- Higher income
- Family support

KEY RESULTS

- Univariate analysis:
 - ↓ Past-year SI
 - ↓ Lifetime SI
 - ↓ Past-month severe psychological distress
- Multivariable
 - ↓ Lifetime SI: AOR = 0.3 (95% CI: 0.2–0.6)
- No significant difference in attempts or substance use

TABLE 2**Mental Health Outcomes Among Those Who Received Pubertal Suppression**

| | <u>Univariate Analyses</u> | | <u>Multivariable Analyses</u> | |
|--|----------------------------|----------|-------------------------------|----------|
| | OR (95% CI) | P | aOR (95% CI) | P |
| Suicidality, past 12 mo | | | | |
| Ideation | 0.6 (0.4–0.8) | .006* | 0.6 (0.3–1.1) | 0.09 |
| Ideation with plan | 0.9 (0.5–1.6) | .73 | | |
| Ideation with plan and attempt | 1.2 (0.6–2.3) | .64 | | |
| Attempt resulting in inpatient care | 2.8 (0.8–9.4) | .09 | | |
| Suicidality, lifetime | | | | |
| Ideation | 0.3 (0.2–0.5) | <.001* | 0.3 (0.2–0.6) | 0.001* |
| Attempts | 0.7 (0.4–1.0) | .08 | | |
| Mental health and substance use | | | | |
| Past-month severe psychological distress, K6 ≥13 | 0.5 (0.3–0.8) | .001* | 0.8 (0.4–1.4) | 0.38 |
| Past-month binge drinking | 1.3 (0.8–2.0) | .29 | | |
| Lifetime illicit drug use | 1.1 (0.7–1.8) | .67 | | |

DISCUSSION

- Pubertal suppression linked to lower lifetime suicidal ideation
- 9/10 who wanted it endorsed lifetime SI
- Most effective for ideation, not attempts
 - Underpowered for suicide attempt?

BARRIERS TO ACCESS

- Cost: \$4,000–\$25,000/year
- Limited insurance coverage
- Parental consent often required
 - Tx associated with lower lifetime SI, even after adjustment for family support
- Clinician bias
 - Heterosexual sexual orientation
 - Affirmation buffers against minority stress

STRENGTHS

- Largest survey of transgender adults to date
- First to analyze pubertal suppression vs suicidality
- Controlled for major confounders

LIMITATIONS

- Cross-sectional: cannot infer causation
- Retrospective, self-reported data
- Non-random sampling
- Unable to assess dysphoria
- Reverse causality



FUTURE DIRECTIONS

Need

- Need for longitudinal studies

Explore

- Explore nonbinary youth needs

Assess

- Assess broader mental health and quality-of-life outcomes
 - Lower odds of depression and suicidality over 12 months
 - Narrative Review: Suicide-related outcomes
 - Systemic Review of GnRHAs



DISCUSSION
QUESTIONS

Is pubertal suppression a
suicide prevention tool?

Ethical implications of
limited access?

Navigating public
discourse?

REFERENCES

- Jackson D. Suicide-Related Outcomes Following Gender-Affirming Treatment: A Review. *Cureus*. 2023 Mar 20;15(3):e36425.
- Linander I, Lundberg T, Alm E. The gender minority stress model and/or cisnormativity? The need for pluralistic theoretical perspectives in improving trans health and medicine. *Soc Sci Med*. 2024 Jun;351:116957.
- Rascoe, A. M., & Rascoe, A. M. (n.d.). Gonadotropin-releasing hormone analogue. In *ScienceDirect Topics: Neuroscience*.
- Tordoff DM, Wanta JW, Collin A, Stepney C, Inwards-Breland DJ, Ahrens K. Mental Health Outcomes in Transgender and Nonbinary Youths Receiving Gender-Affirming Care. *JAMA Netw Open*. 2022 Feb 1;5(2):e220978.
- Tornese G, Di Mase R, Munarin J, Ciancia S, Santamaria F, Fava D, Candela E, Capalbo D, Ungaro C, Improda N, Diana P, Matarazzo P, Guazzarotti L, Toschetti T, Sambati V, Tamaro G, Bresciani G, Licenziati MR, Street ME, Aversa T, Delvecchio M, Faienza MF, Iughetti L, Calcaterra V, de Sanctis L, Salerno M, Franceschi R. Use of gonadotropin-releasing hormone agonists in transgender and gender diverse youth: a systematic review. *Front Endocrinol (Lausanne)*. 2025 May 14;16:1555186.
- Turban, J. L., King, D., Carswell, J. M., & Keuroghlian, A. S. (2020). Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation. *Pediatrics*, 145(2).