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The Effect of Delayed Access to Gender Affirming Hormone Therapy on the Mental Health of Transgender Patients

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Abstract

Purpose/Objective: Transgender (TG) people make up approximately 0.5% of the United States' population and face barriers in healthcare. Not all TG people desire gender affirming hormone therapy (GAHT) but those who do may struggle to find a prescriber and face delays in receiving care. This presentation explores the mental health impact of delayed access to GAHT on TG patients.

Methods: PubMed, Medline, and Cochrane were searched using the keywords "transgender", "gender affirming hormone therapy", and "mental health". A separate search string replaced "mental health" with "education" to find articles related to clinician education on GAHT.

Results: TG participants not on GAHT had significantly worse depression and anxiety than cisgender people, but after six months of GAHT, depression and anxiety were comparable to the general population. TG patients on GAHT had significantly improved depression and anxiety compared to before they started GAHT and TG patients waiting to start GAHT. Depression, psychopathology, body uneasiness, and gender dysphoria improved with GAHT. A one-hour lecture on GAHT for medical students significantly increased familiarity with GAHT which may increase future likelihood of prescribing it and improve access.

Conclusions: TG patients waiting for GAHT have poorer mental health than TG patients on GAHT and the general population, but within six months of starting GAHT, there is no significant difference in depression or anxiety in TG people and cisgender people. TG patients with diagnosed gender dysphoria should not face delays in initiating GAHT. Improved access to GAHT requires more prescribers, so GAHT needs to be a required topic for clinicians to reduce health disparities for TG patients.

Introduction

- There are approximately 1.6 million TG people over 12 years old in the US. TG is a label that refers to someone whose gender differs from their assigned sex at birth and includes both binary and nonbinary genders.
- Some TG people affirm their gender medically, which can include taking GAHT. Many primary care providers (PCPs) are reluctant to prescribe GAHT, due to a lack of education on TG healthcare and/or lack of experience prescribing GAHT.[3]
- There are long wait lists at many clinics that have integrated models of TG health and primary care,[4, 5] so many TG patients face significant delays in their ability to initiate GAHT.
- Among TG patients who have a PCP, 28% have delayed needed medical care in the previous year due to concerns about discrimination and 33% have had to teach their provider about TG people to get appropriate care.[9]
- TG patients frequently face delayed access to healthcare, including GAHT. The aim of this presentation is to explore the effect of delayed access to GAHT on the mental health of TG patients and discuss how this is related to the limited education PCPs receive on TG healthcare during their clinical training.

References

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2. Fisher AD, Castellini G, Ristori J, et al. Cross-Sex Hormone Treatment and Psychobiological Changes in Transsexual Persons: Two-Year Follow-Up Data. *J Clin Endocrinol Metab*. 2016;101(11):4260-4269. doi:10.1210/jc.2016-1276
3. Pathoulas JT, Blume K, Penny J, Mansh M, Rubin N, Farah RS. Effectiveness of an Educational Intervention to Improve Medical Student Comfort and Familiarity With Providing Gender-Affirming Hormone Therapy. *Fam Med*. 2021;53(1):61-64. doi:10.22454/FamMed.2021.612374

Topic of Interest

- TG people have higher rates of depression, anxiety, and suicidality compared to cisgender people.[11]
- Because TG patients have disproportionately high rates of mental health conditions, it is clinically important to understand the intervenable factors that can exacerbate their mental health.
- GAHT is widely recommended as a standard of care for treating gender dysphoria,[13] but is not routinely taught to clinicians-in-training. It is necessary to understand how delayed access to GAHT affects the mental health of TG patients to reduce healthcare disparities.

Methods

- PICO Question: **In transgender patients who require gender affirming hormone therapy, does delayed access to care have a negative effect on mental health?**
- An article search was conducted using the databases PubMed, Medline, and Cochrane
- Keywords used were "transgender", "gender affirming hormone therapy", and "mental health". A second search used "education" instead of "mental health".
- Results were limited to clinical trials, meta-analyses, RCTs, and systematic reviews published from 2012 to 2022.

Discussion

Effect of cross-sex hormones on the quality of life, depression and anxiety of transgender individuals: a quantitative systematic review[12]

Purpose: To find more definitive answers for how GAHT affects quality of life (QoL) and mental health in TG people, to help the decision-making process for PCPs given the widespread lack of TG health competency among PCPs.
Methods: Systematic review searching 4 databases for studies about GAHT and quality of life in TG individuals. Identified articles were screened against inclusion criteria, eligible ones were appraised for methodological quality.
Results: 5 of 7 studies found TG patients on GAHT had significantly better depression, anxiety, and QoL than TG patients not on GAHT. Prior to GAHT, TG patients had significantly worse depression and anxiety than the general population but after 3-6 months there was no difference. After 1 year of GAHT there was a statistically significant reduction in depression and anxiety compared to pre-GAHT.
Conclusions: GAHT could not definitively be proven to improve QoL and mental health in TG patients; the certainty of the conclusions in the individual studies was low at best but the data does not justify delaying GAHT for patients with ongoing depression or anxiety because GAHT may help improve both.
Limitations: Different scales were used for mental health and QoL which prevented a meta-analysis. Sample size was low, and evidence quality was low/very low due to variations in dose, admin route, and time patients were on GAHT.

Cross-Sex Hormone Treatment & Psychobiological Changes in Transsexual Persons: 2-Year Follow-Up Data[16]

Purpose: To evaluate differences in mental health between TG patients on GAHT and not on GAHT, see whether bodily changes on GAHT were correlated with psychopathology, and see psychologic effects of GAHT over time.
Methods: New referrals to the Center for Gender Dysphoria Assistance at the University of Florence were enrolled if >18, had a diagnosis of gender dysphoria, and had no gender affirming surgeries. A subsection of participants were followed for 2 years and evaluated at 3, 6, 12, and 24 months for psychometric evals and analysis of bodily changes.
Results: Transmasculine patients (TMs) and transfeminine patients (TFs) on GAHT had significantly lower levels of bodily uneasiness than TMs and TFs not on GAHT. TMs and TFs on GAHT had less severe depression than TMs and TFs not on GAHT but the difference was only statistically significant for TMs. TMs and TFs had significantly improved psychopathology, depression, body uneasiness, and subjective gender dysphoria over time.
Conclusions: TG patients on GAHT had significantly lower levels of depressive symptoms, subjective gender dysphoria, and body uneasiness than patients not on GAHT and these factors improved over time. GAHT-induced body changes were significantly associated with better psychological adjustment.
Limitations: There was a small sample size – 359 for the cross-sectional study and 54 for the prospective study. Italy is also a racially homogenous country[17] so therefore not representative of the general population.

Effectiveness of an Educational Intervention to Improve Medical Student Comfort and Familiarity With Providing Gender-Affirming Hormone Therapy[18]

Purpose: Many providers are reluctant to initiate GAHT due to a lack of knowledge, so the authors developed an educational program for medical students to see if familiarity with GAHT could increase after the curriculum.
Methods: A 1-hour didactic and interactive lecture was developed that focused on the scope of practice for GAHT prescription, the informed consent model, and medical management of masculinizing and feminizing GAHT. A pre- and post-survey was taken by second-year medical students at the University of Minnesota who attended the lecture.
Results: There was a significant increase in awareness of GAHT medications and dosing, the informed consent model, the ability to find GAHT resources, and providing GAHT in a primary care setting after attending the lecture.
Conclusions: A 1-hour lecture on GAHT increased medical student familiarity and comfort with the learning objectives and was a feasible addition to the curriculum that could be adopted by other programs.
Limitations: The sample size (54) was very small and there was likely a selection bias because the lecture was optional so there could be a difference in baseline knowledge between the students who did and did not attend.

Conclusions

- The current body of literature on the effects of GAHT on mental health in TG patients is small, and the quality of the evidence reviewed is low due to both avoidable and unavoidable limitations.
- The data suggests that TG patients waiting to start GAHT have poorer mental health than TG patients on GAHT and the general population, but within 6 months of starting GAHT there is no significant difference in depression, anxiety, or QoL for TG patients vs cisgender people.
- GAHT was associated with reduced depression, anxiety, body uneasiness, and subjective gender dysphoria across multiple studies and the improvement increased over time.
- GAHT has the potential to save lives – 11.2% of TG people reported a suicide attempt within the past year[19] and 3.2% of initial suicide attempts result in death,[20] which means 5,700+ TG people in the US may die by suicide annually.
- The benefit of GAHT outweigh the risks and TG patients who have a diagnosis of gender dysphoria should not face delays in initiating GAHT.
- Current research suggests that delayed initiation of GAHT is worse for the mental health of TG patients than more prompt treatment.
- The biggest barrier to increased availability of GAHT is provider education – studies have shown that focused educational programs are effective at improving comfort and familiarity with GAHT in medical students.[15, 18]
- GAHT needs to be a required topic for future clinicians to reduce health disparities for TG patients and improve their mental and physical wellbeing.

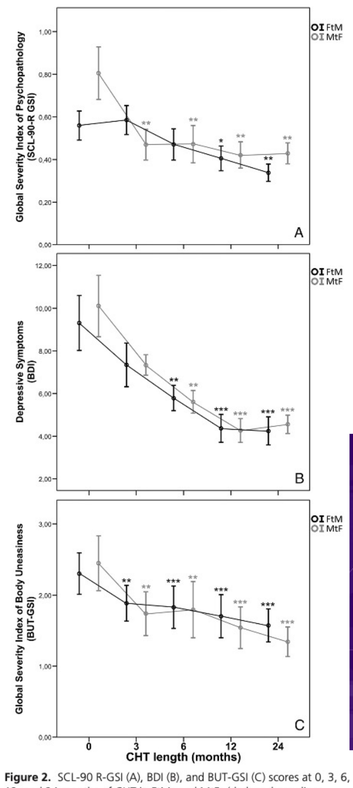

Figure 2. SCL-90 R-GSI (A), BDI (B), and BUT-GSI (C) scores at 0, 3, 6, 12, and 24 months of CHT in FtMs and MtFs (dark and gray lines, respectively). *, $P < .05$, **, $P < .01$, ***, $P < .001$ across time vs time 0 in FtM and MtF groups, respectively.

Table 2: Change in Medical Student Comfort and Familiarity With Gender-Affirming Hormone Therapy Following Didactic Intervention

Learning Objective	Pre	Post	Mean Change	*P* Value
I am familiar with how to use a dosing guide in gender-affirming hormone care.	1.0±0.14	3.5±0.16	2.5±0.60	.00000
I am familiar with different medication options in gender-affirming hormone care.	1.5±0.17	3.8±0.11	2.3±0.21	.00000
I am familiar with an informed consent model of gender-affirming hormone care.	2.1±0.19	3.9±0.13	1.8±0.20	.00000
I feel confident that I could find resources to provide gender-affirming hormone care.	2.5±0.19	4.1±0.11	1.6±0.19	.00000
I am familiar with the idea of gender-affirming hormone care in a primary care setting.	2.9±0.21	4.3±0.09	1.42±0.19	.00000
I understand the difference between patients' legal names and chosen names.	4.3±0.15	4.7±0.09	0.4±0.13	.017

Responses for 5-point Likert scale range from 1=strongly disagree to 5=strongly agree. Means reported with standard error. *P* values follow Bonferroni correction using an α of .05 for significance.