



Development and validation of gender distress and gender positivity measures for transgender youth

Sandra Gotovac, Ph.D
Epidemiology & Biostatistics,
Western University

& Greta R. Bauer, Ph.D, MPH
for the Trans Youth CAN! Research Team

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Background-Gender Dysphoria

- Distress from discordance between one's gender and the gender assigned at birth
 - Trans and gender-diverse (TGD) people experience dysphoria related to one's **body**, and to **social** interactions
 - *Gender dysphoria* is a clinical diagnosis
- Current measures:
 - Utrecht Gender Dysphoria Scale (UGDS)-1997
 - Update: Gender Spectrum (UGDS-GS)-2020
 - Gender Identity/Gender Dysphoria Questionnaire for Adolescents and Adults (GIDYQ-AA)-2007



Background-Gender Euphoria

- Originated within community (since at least the 90s) to reflect the converse of dysphoria
 - Used in academic literature since about 2009
 - Euphoric feelings are more than the absence of dysphoria
 - Euphoric experiences can be related to the external **body**, and related to **social** interactions
- Current measures:
 - Transgender Positive Identity Measure (T-PIM)-2021



Background-Scale Development

Issues with current measures

- Insensitivity to early non-surgical changes
- Dysphoria/distress assessed as a single construct
- Non-inclusive of non-binary identities & not parallel for SAB
- Not appropriate for youth (complex language & sexual items)
- No measures of positivity (at the time of development)

Goal of our measures

1. Sensitive to early effects of hormone treatment (not a clinical diagnosis)
2. Scales contain parallel items for SAB & content validity for non-binary identities
3. Subscales assessing feelings related to sexed body and social gender
4. Appropriate for *younger* youth
5. Focus on *positive* feelings and not just distress



Background-Scale Development

TYC! Gender Distress Scale

- Initial items pooled from UGDS & revised for inclusion of non-binary identities, redundant and sexual items removed
 - Items separated into distress related to body and distress related to social gender
- Additional items derived from researcher and clinician expertise and lived experience
 - And input from trans youth community feedback groups in Eng & Fr
- Final scale: 9 modified items from UGDS + 6 new items=15 items

TYC! Gender Positivity Scale

- Designed to be parallel format to TYC!-GDS
 - Positivity related to body and to social gender
 - Items derived from researcher and clinician expertise and lived experience
- Additional items derived from input from trans youth community feedback groups in Eng & Fr
- Final scale: 12 items

Trans Youth
 CAN! Gender
 Distress
 Scale
 (Original
 Version)

To what extent do you agree with the following statements?
 On a scale from 1-5 where 1=disagree completely, 2=disagree somewhat, 3=neutral, 4=agree somewhat, 5=agree completely.

BIRTH WISH

1) I wish I had been born in a different body

SOCIAL SUBSCALE

2) I avoid social situation or activities because I can't express myself in my gender

3) I feel hurt if someone calls me the wrong gender (using the wrong pronouns/wrong name)

4) I enjoy dressing myself in ways that express my gender [reversed]

5) I feel that society doesn't accept or embrace me in my gender

6) I worry that people will always treat me as the wrong gender

7) When people treat me like the wrong gender or expect to me behave like a [boy/girl] I feel hurt

BODY SUBSCALE

8) I dislike seeing my naked body

9) I feel unhappy because I have a [feminine/masculine] body

10) I worry that I might always have a [feminine/masculine] body

11) I dislike peeing [sitting down/standing up]

12) I dislike having [a period/penis or erections] because it makes me feel like I'm not my true gender

13) I dislike having [breasts/facial hair] because it makes me feel like I'm not my true gender

14) I feel like I can't trust what my body might do as I get older

15) I dislike my voice because I feel that it doesn't match my gender

To what extent do you agree with the following statements?

On a scale from 1-5 where 1=disagree completely, 2=disagree somewhat, 3=neutral, 4=agree somewhat, 5=agree completely.

PRIDE IN GENDER

1) Being trans or non-binary is one of the cool things about me

2) I feel a sense of accomplishment and pride being able to express myself as my gender

SOCIAL SUBSCALE

3) I enjoy going out in public and doing social activities because I can express myself as my gender

4) I feel validated when strangers in public treat me like my gender

5) I feel confident trying new and different clothes that express my gender

6) I feel happy that society sees me on the outside for who I am on the inside

7) I am relieved that I don't have to work as hard as I used to for people to see me as my gender

BODY SUBSCALE

8) I feel confident in my body

9) I feel attractive

10) I am comfortable in my body

11) I feel like my body fits with the real me

12) Things about my body that used to bother me don't bother me as much anymore

Trans Youth
CAN! Gender
Positivity
Scale
(Original
Version)

Methods- Trans Youth CAN!

Sample

- 174 youth from puberty to age 15
- Referred to one of 10 gender clinics for blockers or hormones
 - Youth recruited at their first medical appointment at clinic
 - **Gender clinic**=medical clinic that provides gender-affirming clinical care (blockers/hormones), and may include mental health support
- 160 matched parents

Prospective cohort study.

Data on social, family, and medical outcomes

Data Sources (with 2 years of follow up)

- Interviewer-administered youth surveys (baseline, 1-year, and 2-year follow-up)
- Self-completed parent surveys (baseline, 1-years, and 2-year follow-up)
- Clinic medical records (each clinic visit)
- Short online symptom checklists (every 3 months)



Methods-Scale Validation

1. Complete case analysis from baseline data
 - TYC-GDS (N=158); TYC-GPS (N=161)
2. Examine inter-item polychoric correlations & measures of internal consistency
 - TYC-GDS: Remove item #4, item #1 w/ body subscale
 - TYC-GPS: Remove item #1, item #2 w/ social subscale
3. Confirmatory factor analyses (SAS “proc calis”)
 - TYC-GDS
 - TYC-GPS
4. Convergent validity analyses
 - TYC-GDS
 - TYC-GPS



Results-Sample Characteristics

n=161

	%
Age, years	
10-13	31.1
14-15	68.9
Gender identity	
Male or primarily a boy	75.6
Female or primarily a girl	17.5
Non-binary	6.9
Time since first aware of gender issues	
<1 year	1.2
1 years	13.7
2 years	16.8
3-4 years	36.0
5+ years	32.3
Living in their identified gender	
All the time	86.2
Some of the time	13.8
Not at all	0.0

	%
Ethnoracial background	
Indigenous	18.9
Non-Indigenous visible minority	5.7
Non-Indigenous white	75.5
Immigration background	
1 or more immigrant parent	25.9
No immigrant parents	74.1
Living environment	
City	49.7
Suburb	34.8
Rural	15.5
Province of residence	
Alberta	16.8
British Columbia	5.6
Manitoba	1.9
Nova Scotia	6.2
Ontario	57.1
Prince Edward Island	0.6
Quebec	11.8



Results-Confirmatory Factory Analysis (TYC-GDS)

TYC-GDS Item	Social Factor			Body Factor		
	Std Est.	SE	p	Std Est.	SE	p
1. I wish I had been born in a different body				0.602	0.055	<.0001
2. I avoid social situation or activities because I can't express myself in my gender	0.303	0.080	0.0002			
3. I feel hurt if someone calls me the wrong gender (using the wrong pronouns/wrong name)	0.736	0.049	<.0001			
5. I feel that society doesn't accept or embrace me in my gender	0.410	0.075	<.0001			
6. I worry that people will always treat me as the wrong gender	0.516	0.067	<.0001			
7. When people treat me like the wrong gender or expect to me behave like a [boy/girl] I feel hurt	0.828	0.042	<.0001			
8. I dislike seeing my naked body				0.756	0.038	<.0001
9. I feel unhappy because I have a [feminine/masculine] body				0.847	0.027	<.0001
10. I worry that I might always have a [feminine/masculine] body				0.627	0.052	<.0001
11. I dislike peeing [sitting down/standing up]				0.556	0.058	<.0001
12. I dislike having [a period/penis or erections] because it makes me feel like I'm not my true gender				0.796	0.033	<.0001
13. I dislike having [breasts/facial hair] because it makes me feel like I'm not my true gender				0.872	0.024	<.0001
14. I feel like I can't trust what my body might do as I get older				0.468	0.066	<.0001
15. I dislike my voice because I feel that it doesn't match my gender				0.537	0.060	<.0001

Fit Index	Value
Chi-square	χ^2 (76, n=158)=557.31, p<.0001
AGFI	0.5642
NNFI	0.5604
CFI	0.6328
RMSEA	0.2008, 90%CI[0.1854, 0.2166]
SRMR	0.1441

Results-Confirmatory Factory Analysis (TYC-GPS)

TYC-GPS Item	Social Factor			Body Factor		
	Std Est.	SE	p	Std Est.	SE	p
2. I feel a sense of accomplishment and pride being able to express myself as my gender.	0.593	0.064	<.0001			
3. I enjoy going out in public and doing social activities because I can express myself as my gender	0.723	0.054	<.0001			
4. I feel validated when strangers in public treat me like my gender.	0.625	0.061	<.0001			
5. I feel confident trying new and different clothes that express my gender.	0.599	0.063	<.0001			
6. I feel happy that society sees me on the outside for who I am on the inside.	0.551	0.067	<.0001			
7. I am relieved I don't have to work as hard as I used to for people to see me as my gender.	0.494	0.071	<.0001			
8. I feel confident in my body.				0.793	0.034	<.0001
9. I feel attractive				0.720	0.042	<.0001
10. I am comfortable in my body				0.906	0.021	<.0001
11. I feel like my body fits with the real me.				0.880	0.024	<.0001
12. Things about my body that used to bother me don't bother me as much anymore.				0.594	0.055	<.0001

Fit Index	Value
Chi-square	$\chi^2(43, n=161)=174.46, p<.0001$
AGFI	0.7528
NNFI	0.7857
CFI	0.8325
RMSEA	0.1382, 90%CI[0.1172, 0.1599]
SRMR	0.0995

Results-Convergent Validity (TYC-GDS)

Convergent Variable	Gender Distress					
	Total		Social		Body	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Modified Depression Scale	0.426	<.0001	0.407	<.0001	0.349	<.0001
Kessler 6 Psychological Distress Scale	0.468	<.0001	0.437	<.0001	0.388	<.0001
Gender distress self-rating (1-10)	0.483	<.0001	0.366	<.0001	0.475	<.0001
Desire for any surgery	0.382	0.0002	0.358	0.0017	0.331	0.0013
Using any substance to deal with gender stress	0.324	0.206	0.413	0.053	0.137	0.583
Self-harm last 12 months (non-gendered parts of the body only)	0.197	0.053	0.115	0.253	0.208	0.042
Self-harm last 12 months (gendered parts of body)	0.497	0.0001	0.470	<.0001	0.317	0.031
Suicide attempt last 12 months	0.234	0.104	0.279	0.027	0.125	0.376
Suicidal thoughts last 12 months (related to being trans)	0.498	<.0001	0.488	<.0001	0.349	0.013
Engaged in disordered eating behaviours related to gender in last 30 days	0.396	0.007	0.129	0.321	0.562	<0.0001
Number of types of public spaces avoiding to avoid transphobia	0.530	<.0001	0.528	<.0001	0.395	<.0001

Results-Convergent Validity (TYC-GPS)

Convergent Variables	Gender Positivity					
	Total		Social		Body	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Parental support	0.218	0.0063	0.152	0.059	0.194	0.015
Quality of my life	0.367	<.0001	0.195	0.013	0.368	<.0001
School Connectedness	0.332	<.0001	0.289	0.0002	0.259	0.001
Family Connectedness	0.383	<.0001	0.413	<.0001	0.246	0.0017
Positive feelings re: gender	0.399	<.0001	0.388	<.0001	0.285	0.0001

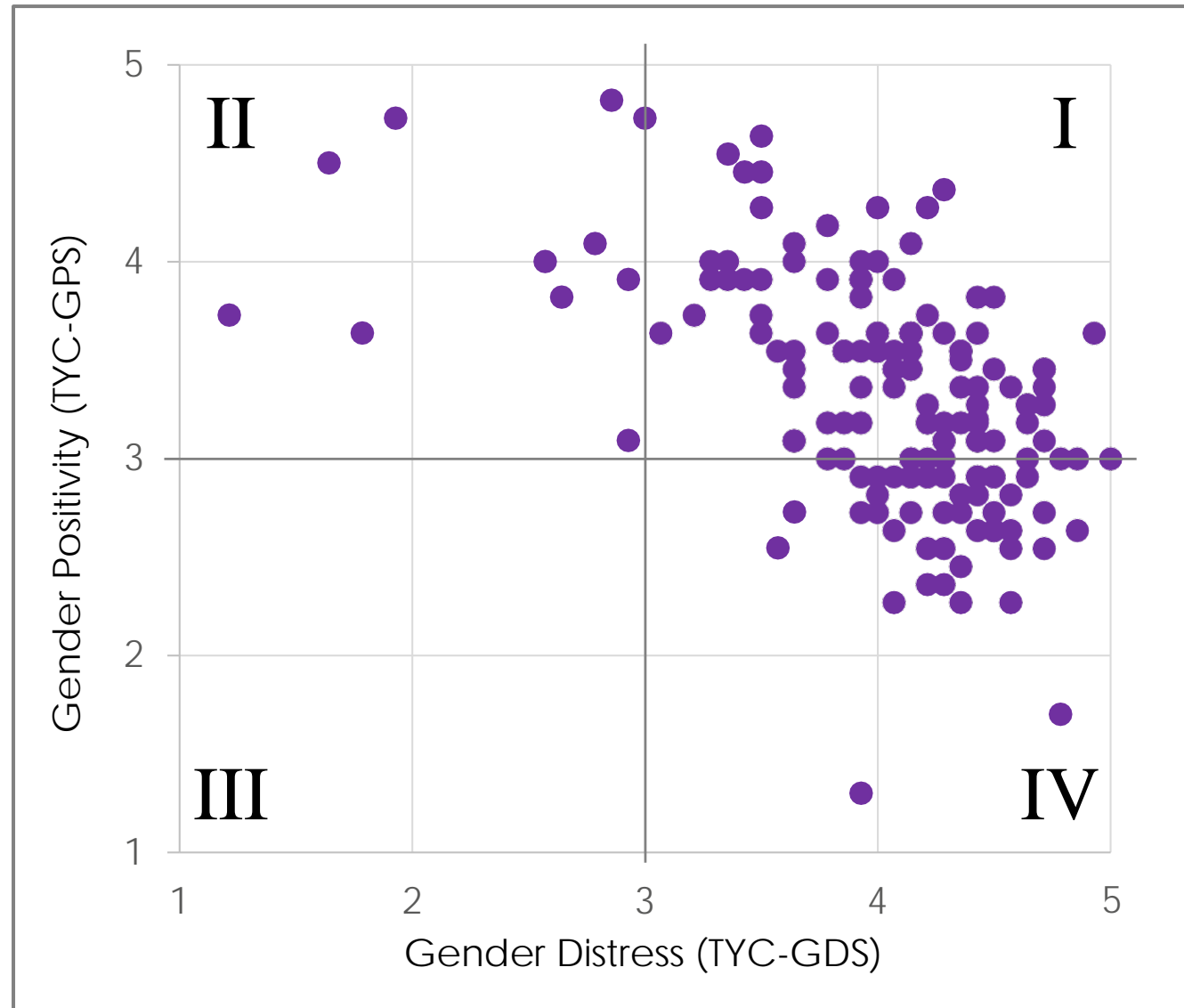


Results-Social vs Body & Distress vs Positivity

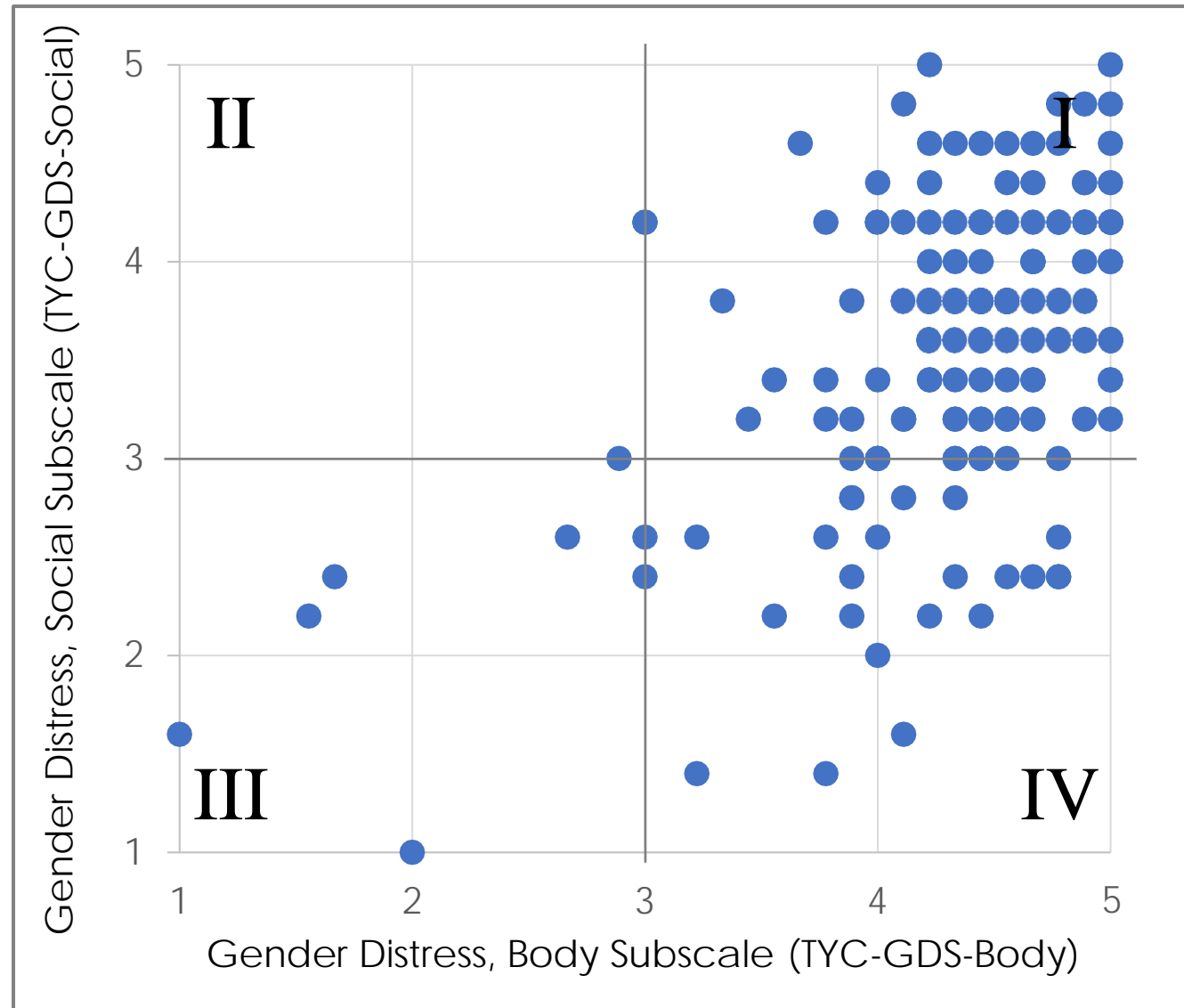
- Social * Body Factors
 - TYC-GDS: $r=0.732, p<.0001$
 - TYC-GPS: $r=0.315, p=0.0002$
- Gender Distress * Gender Positivity
 - $r=-0.529, p<.0001$



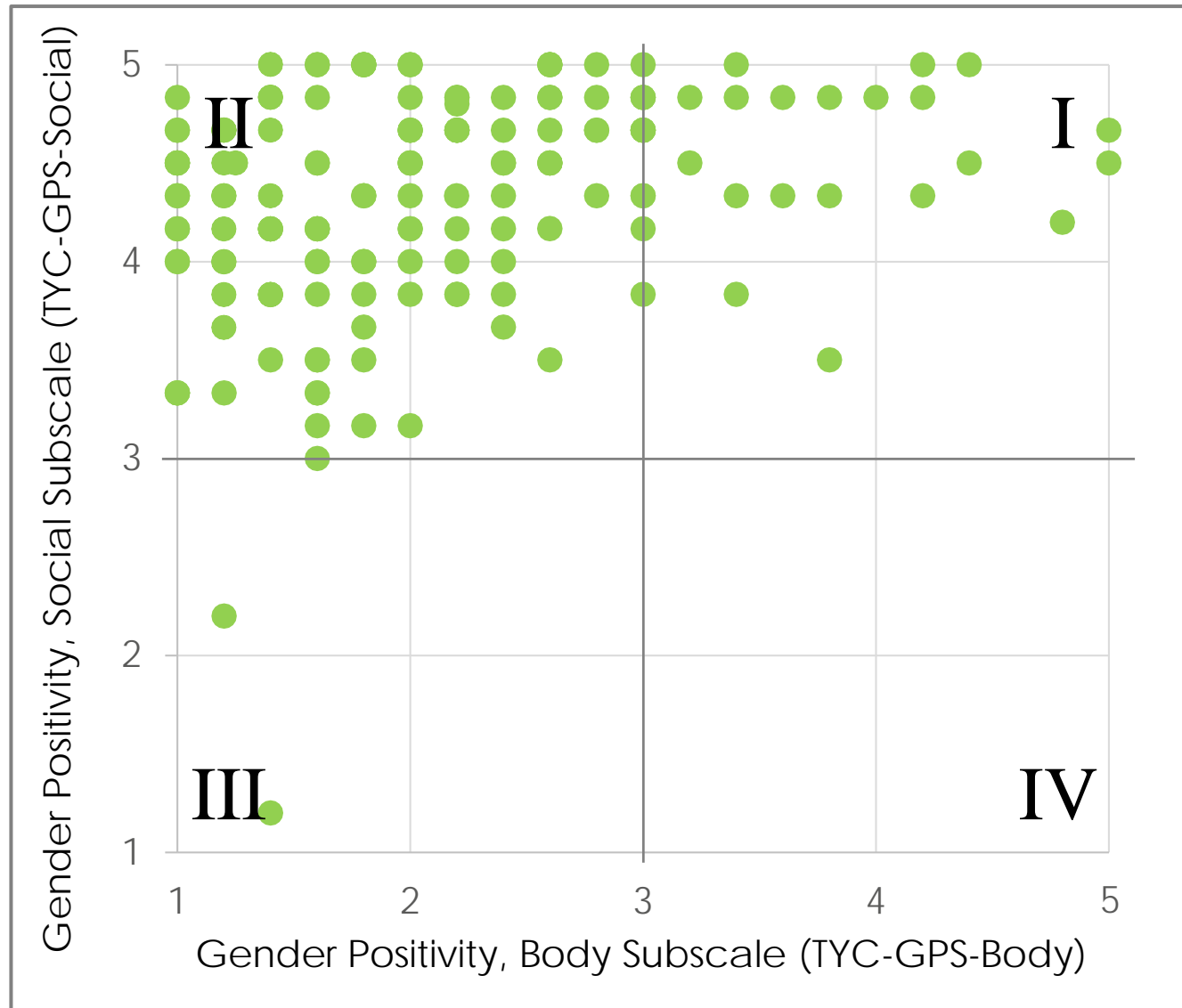
TYC-GDS and TYC-GPS quadrant plot: Total scale scores



TYC-GDS quadrant plot: Social vs. body subscale scores



TYC-GPS quadrant plot: Social vs. body subscale scores



Conclusions

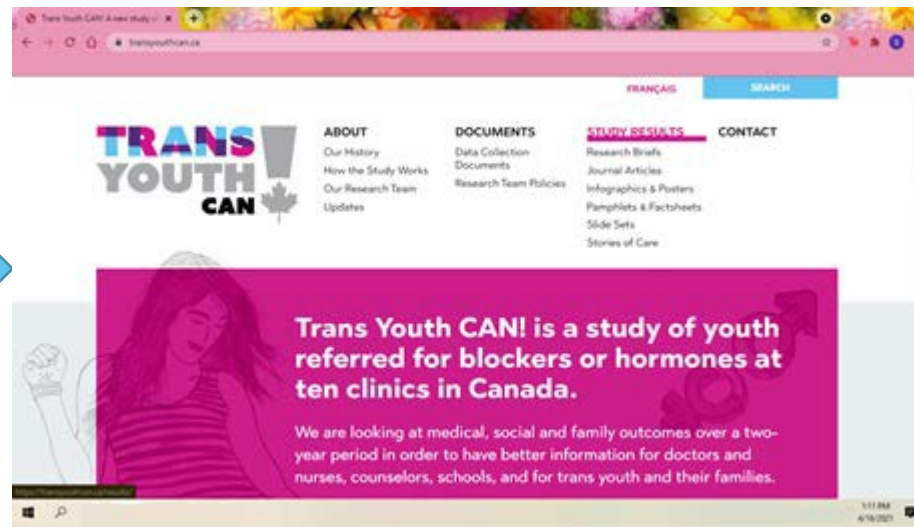
- Feelings of distress and positivity are not poles on a spectrum, but are distinct constructs
 - Youth can have complex feelings about their gender
- Results support the factor structure of the measures that TGD youth can feel distress and positivity related to their body and their social gender
 - Limitations of small sample size
- Future research:
 - Examine change in GD & GP over time with gender affirming care
 - Use and validate in other (e.g., non-clinical; older) populations



Impact

- Nuanced understandings and measures of gender-related feelings are needed to better assess these psychological constructs and their roles in health.
- Need to focus on positivity/strengths and not just negativity/distress related to gender

Get all our results and the full measures here!



www.transyouthcan.ca

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Thank you to our research team!

Principal Investigators

Greta Bauer
Margaret Lawson

Co-investigators

Joey Bonifacio
Bob Couch
Jen Ducharme
Steve Feder
Shuvo Ghosh
Loralee Gillis
Natasha Johnson
Carys Massarella
Dan Metzger
Arati Mokashi
Danièle Pacaud
Mark Palmert
Joe Raiche
Annie Pullen Sansfaçon
Elizabeth Saewyc
Robert Stein
Françoise Susset
Julie Temple
John VanderMeulen
Ashley Vander Morris

Collaborators

Lorraine Gale
Simon Trepel

Project Staff

Sandra Gotovac

Site Staff

Nikita Anderson
Brenda Bradley
Shelby Deibert
Ceilidh Harrison
Gabriela Kassel Gomez
Debra Lieberman
Chris MacDonald
Shannon Millar
Lara Penner-Goeke
Catherine Watson

Site Team Members

Manpreet Doulla
Chelsey Grimbley
Karine Khatchadourian
Katie Pundyk
Amy Robinson
Scott Somerville
Brandy Wicklow

Students

Emily Sanders
Gagandeep Singh
Sara Todorovic

Additional Contributors

Siobhan Churchill
Jennilea Courtney
Laura Douglas
Cindy Holmes
Lee Iskander
Alicia Klaassen
Spencer Lowes
Emily Nunez
Jake Pyne
Frank Suerich-Gulick
Gioi Minh Tran

19 youth who provided
feedback on survey items
(English and French groups)

9 parents/caregivers who
provided feedback on survey
items (English and French
groups)

6 youth and 7 parents in our
Community Consultation
Committees

Our youth participants

Our parent/caregiver
participants

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Alberta Children's Hospital

Universite de Montreal

Centre de sante MERAKI Health Centre

BC Children's Hospital



SickKids THE HOSPITAL FOR SICK CHILDREN



Avec nos mains, nos cœurs, et nos esprits ouverts

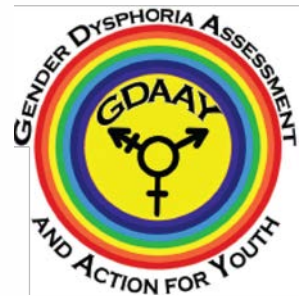
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University of Manitoba



CIHR IRSC Canadian Institutes of Health Research / Instituts de recherche en sante du Canada

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