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Santa Barbara

The Development of an Online Intervention to Increase Supportive Behaviors Among Parents of Transgender Youth

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Counseling, Clinical, and School Psychology

by

Emmie P. Matsuno

Committee in charge:

Professor Tania Israel (Chair)

Professor Heidi Zetzer

Professor Miya Barnett

September 2019

The dissertation of Emmie Matsuno is approved.

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Miya Barnett

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Heidi Zetzer

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Tania Israel, Committee Chair

June 2019

The Development of an Online Intervention to Increase Supportive Behaviors Among Parents of Transgender Youth

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Emmie Matsuno

ACKNOWLEDGEMENTS

First and foremost, I would like to express my deepest gratitude to my committee chair and mentor Dr. Tania Israel. She has always been my biggest supporter and always believed in me and my potential. I will always appreciate her positive encouragement, wise guidance, and willingness to take the time to help me at every stage of my professional development. I would also like to thank my other dissertation committee members Drs. Heidi Zetzer and Miya Barnett. Heidi too, has always been there rooting for me and has been a very grounding and empowering role model to me. I appreciate Miya's warmth and openness to providing suggestions and support with my research. I could not have dreamed of a better dissertation committee!

Next, I would like to share my appreciation for my partner Elisa. She has shown tremendous patience as I worked endless hours on this project. I am so thankful to have a partner who supports my ambitions and is proud of my efforts. Her humor, love, and compassion helped me persevere and I am so lucky to have her as a steady force in my life. I would also like to thank my corgi pup Riley for being the cutest, giving me snuggles, and forcing me to take breaks to play with him and take walks.

Finally, I would like to thank my family and friends. I could not have gotten this far without them. My parents have consistently supported my academic efforts and have helped me navigate graduate school and academia. My sister has encouraged and inspired my passion to help others and her spirit always keeps me going. I am so grateful for my friends from college and graduate school who bring me so much joy and have checked in with me multiple times to support me through the many milestones in graduate school. I cannot express how happy I am to have all of these wonderful, loving, humans in my life. Thank you!

Emmie Matsuno Vita 2019

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2009-2013	University of Colorado, Boulder B.A. Psychology (*Summa Cum Laude*) B.A. Music (*with Honors*) Undergraduate Honors Thesis: *Attitude Extremity and Party Identification Strength on Perceived Polarization*

Publications

Matsuno E. (2019). Breaking the Binary in Psychology: How to empower and support trans and non-binary graduate students in psychology. Division 44 Newsletter. Retrieved from https://www.apadivisions.org/division-44/publications/newsletters/division/2019/04/support-nonbinary

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Matsuno, E., Budge, S. (2017). Non-binary gender identities: a critical review of the literature. *Current Sexual Health Reports, 1-5.*

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Matsuno, E. (2016). Are you a boy or girl? no: living outside the gender binary. Retrieved from https://psychologybenefits.org/2016/05/16/living-outside-the-gender-binary/.

Puckett, J. A., **Matsuno, E**., Dyar, C., Mustanski, B., & Newcomb, M. E. (in press). Mental health and resilience in transgender individuals: What type of support makes a difference? *Journal of Family Psychology.*

Goodman, J. A., Israel, T., Merrill, C. R. S., Lin, Y., Kary, K., G., **Matsuno, E.,** & Choi, A. Y. (in review). Refinement and replication of an internet-based intervention for internalized heterosexism. *Journal of Counseling Psychology.*

Peer- Reviewed Academic Presentations

Matsuno, E. (2019*). Supporting trans populations through online interventions.* In, Emerging Findings in the Development of Culturally Responsive Care with Transgender and Gender Diverse (TGD) Clients. Symposium at the Association of Women in Psychology Conference, Newport, RI.

Matsuno, E. (2018). *Experiences of Parents of Trans Youth.* Poster at the American Psychological Association Annual Convention, San Francisco, CA.

Matsuno, E. & Budge. S. (2018). Co-Chair of *Inclusion of Non-binary people in Feminist and Queer Spaces.* Conversation hour at the American Psychological Association Annual Convention, San Francisco, CA.

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Matsuno, E. (2018). *Understanding the Experience of Non-binary Youth.* Plenary session at the Adolescent Mental Wellness Conference: Overcoming Cultural Barriers to Access, Santa Clara. CA.

Matsuno, E. (2018). *Introducing the TRIM: Transgender Resilience Intervention Model.* In, How do you bounce back? Understanding resilience among transgender people. Symposium at the Association of Women in Psychology Conference, Philadelphia, PA.

Matsuno, E., Gebhard, K., Lalwani, A. (2017). *Transgender Inclusion in Feminist Spaces.* Conversation hour at the American Psychological Association Annual Convention, Washington, DC.

Matsuno, E., Goodman, J.A., & Merrill, C. R. S. (2017). *Mental Health Based on Intersections of Sexual Orientation, Gender Identity, Race, and SES.* Poster presentation at the National Multicultural Conference and Summit, Portland, OR.

Matsuno, E. (2017) *Recruiting Lesbian, Gay, and Bisexual participants through Social Media and Listservs.* In J. A. Goodman (Chair), Recruitment Strategies for Psychological Research with LGBTQ Populations. Symposium at the National Multicultural Conference and Summit, Portland, OR.

Matsuno, E., Rorty, M., Dolan, C. (2016). *Transgender, Genderqueer, and Non-Binary Clients.* Skill Building Workshop at the UC Mental Health Cultural Competency Summit, Newport Beach, CA.

Matsuno, E. (2016). *Breaking the binary: educating students about gender diversity.* In H. Sweet (Chair), Beyond APA: Strategies for Educating the Public About Gender Issues. Symposium at the American Psychological Association Annual Convention, Denver, CO.

Matsuno, E., Israel, T., Choi, A. Y. Goodman, J. A., Lin, Y., Kary, K., G. (2016). *Reducing transgender internalized stigma: Development and efficacy of an online intervention.* Poster at the American Psychological Association Convention in Denver, CO.

Kary, K. G., Israel, T., **Matsuno, E.,** Goodman, J. A., Choi, A. Y., Lin, Y. J., & Merrill, C. R. S. (2016). *Reducing lesbian internalized stigma: Development and efficacy of an online intervention.* Poster the American Psychological Association Annual Convention, Denver, CO.

Israel, T., Lin, Y. J., Goodman, J. A., **Matsuno, E.,** Choi, A. Y., Kary, K. G., Merrill, C. R. S. (2016). *Reducing LGBTQ stigma through online interventions*. In H. M. Levitt and B. L. Velez (Co-Chairs), Psychotherapy and intervention research with LGBTQ populations. Symposium at the American Psychological Association Annual Convention, Denver, CO.

Goodman, J. A., Israel, T., Merrill, C. R. S., Lin, Y., Kary, K., G., **Matsuno, E.,** & Choi, A. Y. (2016). *Refinement and replication of an internet-based intervention for internalized*

heterosexism. Poster at the American Psychological Association Annual Convention, Denver, CO.

Israel, T., Lin, Y. J., Goodman, J. A., & **Matsuno, E**. (2016). *Online interventions to reduce LGBTQ stigma*. Exhibition of practices accepted for presentation at the 2nd International Conference on LGBT Psychology and Related Fields, Rio de Janeiro, Brazil.

Goodman, J.A., **Matsuno, E.**, Israel, T. (2016). *Creating Online Psychological Interventions: Four Steps to Making It Happen.* Workshop at the 2016 Winter Round Table Conference, New York, New York.

Matsuno, E., Israel, T. (2015). *Attitudes of Cisgender, Lesbian, Gay, and Bisexual Individuals Toward Transgender Individuals*. Poster presentation at the 2015 American Psychological Association Conference. Toronto, Canada.

Matsuno, E., Israel, T., Goodman, J…Kary, K. (2015). *Screening LGBT Participants in Psychological Research.* Poster presentation at the 2015 American Psychological Association Conference. Toronto, Canada.

Kary, K., Israel, T., Choi, A.Y., Lin, Y. R., Goodman, J.A., & **Matsuno, E.** (2015). *Exposure to, sources of, and rejection of anti-gay messages.* Poster presentation at the 2015 American Psychological Association Conference. Toronto, Canada

Israel, T., Lin, R. Delucio, K., Goodman, J., **Matsuno, E.,** Choi, A. (2015). *Reducing Internalized Stigma in LGBT Subpopulations: Challenges and Strategies.* Symposium at the 2015 National Multicultural Conference and Summit, Atlanta, Georgia.

Service

Jan 2019 - present	*Member,* Children, Youth, and Families Committee, APA Division 44
Oct 2017 – present	*Member*, Task Force on Dismantling Racism, APA Division 44
Apr 2017 – Jan 2019	*Chair*, APA Division 35 (Psychology of Women) Section IV (Section on Lesbian, Bisexual, and Transgender Issues), Graduate Student Committee
Nov 2016 – Dec 2018	*Member*, American Psychological Association Graduate Students Committee on Sexual Orientation and Gender Diversity
Jan 2017 – Jan 2018	*Vice President*, Santa Barbara Transgender Advocacy Network (SBTAN)
Jan 2016 – Jan 2018	*Board Member,* Santa Barbara Transgender Advocacy Network
Jan 2016 – Jan 2018	*Member*, Events Planning Committee, Santa Barbara Transgender Advocacy Network
Nov 2015 – Jan 2018	*Group Facilitator*, Trans Youth Support Group, SBTAN
2015 - 2017	*Member*, Trans Task Force, Resource Center for Sexual and Gender Diversity, UCSB
2016 - 2017	*Member*, Diversity Committee, Counseling, Clinical, School, Psychology Department, UCSB
2015 - 2016	*Mentor*, LGBTQ Mentoring Program, Resource Center for Sexual and Gender Diversity, UCSB
2015	*Student Member*, Curriculum Committee, Counseling, Clinical, School Psychology Department, UCSB
2015	*Panelist*, LGBT Allyship, PFLAG monthly meeting, Santa Barbara, CA
2014/2015	*Youth Ally*, Community Leadership Institute, Just Communities, Santa Barbara, CA
2014/2015	*Group Facilitator/Presenter* (4 times), Youth Connect Conference, Santa Barbara, CA
2014/2015	*Volunteer*, Everybody Does Outreach, Hosford Clinic, Santa Barbara, CA

2014/2015	*Student Member,* Climate Committee, Counseling, Clinical, School Psychology Department, UCSB
2014	*Group Facilitator*, LGBT Youth Group, Pacific Pride Foundation, Santa Barbara, CA
2014	*Panelist*, LGBT Discussion on Religion/Spirituality, Cambridge Drive Community Church, Santa Barbara, CA
2014	*Panelist*, LGBT Narratives, Marriage and Family Therapy Program, Antioch University, Santa Barbara, CA
2014	*Panelist*, LGBT Narratives, Human Sexuality, Santa Barbara City College, Santa Barbara, CA
2014	*Student Assistant*, Hosford Counseling and Psychological Services Clinic, Santa Barbara, CA Supervisor: Dyan Wirt
2011- 2013	*Volunteer/Intern*, Counseling and Psychological Services, University of Colorado, Boulder

Invited Presentations

Feb 2019	Guest Lecture, "Affirming counseling for non-binary clients", *Reconstructing Gender: Exploring Trans Experiences with Stigma, Mental Health, and Resilience,* (Aaron Samuel Breslow, PhD), Colombia University, New York City
Aug 2015 - present	*Presenter* - "Gender Diversity and Trans Affirming Care", presented to the following groups: UCSB Faculty/Staff; Hosford Clinic; CANDO Youth Group, Just Communities, Wellness, UCSB Career Services, CALM, Cal Lutheran Faculty, Family Service Agency, Behavioral Wellness, UCSB Counseling and Psychological Services, Quail Springs Permaculture, Safe Zone 2, SBCC Counseling Staff, Nevada County Public and Behavioral Health, Antioch Faculty in Clinical Psychology
Fall 2017	Guest Lecture, "Counseling Gender Minority Clients", *Multicultural Psychology* (Tiffany O'Shaughnessy, Ph.D.), San Francisco State University
Spring 2017	Panelist, "Triumphs and Challenges: Peer Mentoring for LGBTQ Students of Color", *APA Division 44 Webinar Series*
Spring 2016	Presenter, "Trans in the Workplace: Understanding Trans Identities and Career Related Concerns", *Santa Barbara Career Symposium*
Spring 2016	Presenter, "LGB and T? Examining LGB Attitudes Toward Transgender Populations", *UCSB Grad Slam*
Spring 2016	Presenter, "Trans in the Workplace: Navigating Career Concerns for Transgender and Gender Nonconforming Individuals", *UCSB Pride Week*
Winter 2016	Guest Lecture (250 students), "Gender Diversity" *Women, Society, and Culture* (FEMST 20; Eileen Boris, Ph.D.), UCSB
Fall 2015	Guest Lecture (250 students), "Queer Women of Color," *Women of Color* (FEMST 60; Teresa Figueroa-Sanchez, Ph.D.) UCSB
Fall 2015	Presenter, "LGBT Youth and Mental Health", *Express Yourself LGBTQ Youth Conference,* Santa Barbara, CA

2014 - 2015	Guest Lecture (3 times, 100 students), "Intervention Research," *Research in Applied Psychology* (CNCSP 102; Matt Quirk, Ph.D.), UC Santa Barbara
Spring/Fall 2015	Guest Lecture (2 times, 600 students), "Gender and Sexuality," *Introduction to Sociology* (SOC 1; Victor Rios, Ph.D.), UCSB
Summer 2015	Guest Lecture, "Gender Diversity 101," *Psychology of Gender* (CNCSP 114, Diana Copus, M.A.), UCSB
2015 - 2017	Guest Lecture (3 times), "LGBTQ 101," *Introduction to Psychology* (Lana Hale-Smith, LCSW), UCSB
Summer 2015	Presenter (3 times), "LGBTQ 101," AHA Youth Group, Santa Barbara, CA
Spring 2015	Presenter, "Rape Culture: Prevention & Intervention," *Helping Relationships* (CNCSP 101; Hanna Weisman, M.A.) Santa Barbara, CA
Fall 2014	Guest Lecture (250 students), "Past and Current Perspectives of Sexual and Gender Identities," *Women, Society, and Culture* (FEMST 20; Sarah Watkins, Ph.D.), UCSB

Honors/Awards/Certificates

2019	Division 44 Distinguish Student Contribution Award
2019	American Psychological Foundation's (APF) 2019 Roy Scrivner Research Grant
2018	Award for Outstanding Graduate Student – APA Division 17 Section on LGBT Issues
2018	Graduate Student Research Award – APA Division 35 Section 4 (LGBT Concerns)
2018	Doctoral Student Travel Grant - UCSB
2017	Susan A. Neufeldt Award for Excellence in Clinical Supervision - Hosford Clinic Committee
2017	Travel Grant- Department of Clinical, Counseling, and School Psychology, UCSB
2017	Division 35 Student Travel Award
2016	Division 44 Student Transgender Research Travel Award
2016	Dr. Richard A. Rodriguez Division 44 Student Travel Award
2016	Philip & Aida Siff Educational Foundation Graduate Fellowship
2016	Distinguished Graduate Teaching Award, Feminist Studies Department, UCSB
2016	Semi-Finalist – Point Foundation Scholarship
2016	Travel Grant- Department of Clinical, Counseling, and School Psychology, UCSB
2016	Gottman Couples Therapy, Level 1 Certificate
2015	Block Grant – Department of Clinical, Counseling, and School Psychology, UCSB
2015	Outstanding Queer Scholar Award - UCSB Resource Center for Sexual and Gender Diversity
2015	Ray E. Hosford Award for Excellence in Clinical Dedication - Hosford Clinic Committee
2015	Hosford Award for Excellent Research Proposals – Department of Clinical, Counseling and School Psychology, UCSB
2014	Outstanding Teaching Assistant Award Nomination, UCSB

2014	Travel Grant - Department of Clinical, Counseling and School Psychology, UCSB
2014	Hosford Hero Award – Hosford Counseling and Psychological Services, UCSB
2014	Research Assistantship – Tania Israel, Ph.D., UCSB
2014	Stipend Award – Department of Clinical, Counseling and School Psychology, UCSB
2013	Block Grant – CCSP, UCSB
2013	Psychology Departmental Honors- Summa Cum Laude
2012	Psi-Chi Membership (International Honor Society in Psychology)
2012	Most Active Volunteer Award- Counseling and Psychological Services

Teaching Experience

Summer 2017	Instructor, *Psychology of Gender* (CNCSP 114), UCSB
Fall 2016	Co -Instructor, *Introduction to Mindfulness Based Stress Reduction* (INT 94TD; Heidi Zetzer, Ph.D.), UCSB
Summer 2016	Instructor, *Psychology of Gender* (CNCSP 114), UCSB
Winter 2016	Teaching Assistant, *Women, Society, and Culture* (FEMST 20; Eileen Boris, Ph.D.), UCSB
Fall 2015	Teaching Assistant, *Women of Color* (FEMST 60; Teresa Figueroa-Sanchez, M.A.), UCSB
Summer 2015	Teaching Assistant, *Introduction to Educational and Vocational Guidance* (CNCSP 110; Molly Steen, M.A.) UCSB
Spring 2015	Teaching Assistant, *Introduction to Sociology* (SOC 1; Victor Rios, Ph.D.), UCSB
Fall 2014	Teaching Assistant, *Women, Society, and Culture* (FEMST 20; Sarah Watkins, Ph.D.), UCSB
Fall 2014	Completed Course, *Pedagogy in Applied Psychology* (CNCSP 293; Tania Israel, Ph.D.), UCSB
Summer 2014	Teaching Assistant**,** *Peer Helping* (CNCSP 115; Tania Israel, Ph.D.), UCSB
Spring 2014	Teaching Assistant, *Positive Psychology* (CNCSP 112; Collie Conoley, Ph.D.), UCSB

Supervision Experience

Aug 2018 – Aug 2019	Supervisor of Psychology Extern, Counseling and Psychological Services, UPenn Supervisors: Cyndy Boyd, PhD and Michele Downie, PhD
Jun 2016 – Jun 2017	Outreach Supervisor, Hosford Counseling & Psychological Services Clinic Supervisor: Heidi Zetzer, Ph.D.
Jan 2016 – Jun 2017	Basic Practicum Supervisor, Hosford Counseling & Psychological Services Clinic Supervisor: Heidi Zetzer, Ph.D.

Clinical Experience

Aug 2018 – Aug 2019	Doctoral Intern, Counseling and Psychological Services, University of Pennsylvania Supervisors: Cyndy Boyd, PhD and Matthew LeRoy, PsyD
Sep 2016 – Jun 2017	Practicum Student, Counseling and Psychological Services, UC Santa Barbara Supervisor: Juan Riker, Ph.D.
Sep 2015 – Sep 2016	Extern, Pacific Pride Foundation (LGBT Center), Santa Barbara Supervisor: Bren Fraser, MFT
Sep 2015 – Jun 2016	Career Practicum Student, Career Services, UC Santa Barbara Supervisor: Molly Steen, M.A.
Oct 2014- Sep 2015	Advanced Practicum Clinician, Hosford Counseling & Psychological Services Clinic, UC, Santa Barbara Supervisors: Heidi Zetzer, Ph.D., Maryam Kia-Keating, and PhD.
Jan 2014- Jun 2014	Basic Practicum Clinician, Hosford Counseling & Psychological Services Clinic, UC Santa Barbara Supervisors: Heidi Zetzer, Ph.D., Laurel Brown M.A., Wendy Peffercorn, M.A.
Aug 2012- May 2013	Intern, Counseling and Psychological Services at CU, Boulder Supervisor: Andrea Iglesias, PsyD.
Jan 2012 - May 2013	Volunteer, Counseling and Psychological Services at CU, Boulder

Research Experience

Feb 2017 – present	Independent Researcher, Dissertation Dissertation Committee: Tania Israel, PhD, Heidi Zetzer, PhD, Miya Barnett, PhD Dissertation Title: *Development of an Online Intervention to Increase Supportive Behaviors Among Parents of Transgender Youth*
Sep 2013 – Sep 2016	Graduate Student Assistant for Counseling Psychology Department University of California, Santa Barbara Advisor: Tania Israel, PhD
Jan 2012-May 2013	Research Assistant for Emotions, Decisions, Judgment, and Intuition Research Lab University of Colorado, Boulder Advisor: Leaf Van Boven, PhD

Professional Affiliations

American Psychological Association
- Division 1 (General Psychology)
- Division 17 (Counseling Psychology)
- Division 35 (Psychology of Women)
  - Chair, Section IV (LGBT Concerns) Graduate Student Committee
- Division 44 (Sexual Orientation and Gender Diversity)

- Member, Task Force on Dismantling Racism

Division 45 (Psychological Study of Culture, Ethnicity, & Race)

Division 51 (Psychological Study of Men and Masculinities)

American Psychological Association of Graduate Students (APAGS)

APAGS Committee on Sexual Orientation and Gender Diversity (APAGS CSOGD)

Santa Barbara County Psychological Association (SBCPA)

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ABSTRACT

The Development of an Online Intervention to Increase Supportive Behaviors Among Parents of Transgender Youth

by

Emmie P. Matsuno

Parental support plays a vital role in protecting trans youth from mental health risks including depression, anxiety, substance use, and suicide (Olson, Durwood, DeMeules, & McLaughlin, 2016; Simons, Schrager, Clark, Belzer, & Olson, 2013). Additionally, parents of trans youth experience distress themselves when learning their child is transgender and may experience worry, anxiety, guilt, and grief (Dierckx, Motmans, Mortelmans, & T'sjoen, 2016). This study examined the acceptability and feasibility of the Parent Support Program, an online intervention aimed at 1. decreasing parental distress and feelings of isolation, 2. increasing knowledge about gender diversity and empathy towards transgender youth, and 3. increasing intentions and self-efficacy to engage in transgender affirming behaviors. The intervention was developed based on previous research on the experiences and needs of parents of trans youth, theories of behavior change, and feedback from two focus groups with parents of transgender youth and experts in transgender mental health. The Parent Support Program includes three modules with psychoeducational text, affirming images, educational videos, videos of parents and trans youth, writing activities, and interactive quizzes. The pilot study found that the intervention was highly acceptable and provided helpful information on how to improve the feasibility of the intervention and conducting a larger efficacy study. Improvements include making the intervention more tailored and changing the online platform to decrease technical issues. Additionally, recruitment strategies will be adjusted to

increase the credibility of the program and reach parents with less pre-existing support. Implications for future research and practice with this population are discussed.

Keywords: Transgender, Youth, Parental Support, Parental Acceptance, Intervention

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Chapter 1: Rationale

Transgender Youth and Mental Health

Transgender[1] youth are at high risk for negative mental health outcomes including depression, anxiety, substance use, and suicide (Clements-Nolle, Marx, & Katz, 2006). Between a quarter to half of transgender youth have attempted suicide (Grossman & D'Augelli, 2007; Mustanski & Liu, 2013), a suicide attempt rate over 10 times higher than the general suicide rate for youth. Transgender youth are at higher risk for negative mental health outcomes compared to transgender adults (Xavier, Bobbin, Singer, & Budd, 2005) and their cisgender sexual minority (e.g. gay/lesbian/bisexual) counterparts (Mustanski, Garofalo, & Emerson, 2010).

The onset of puberty may exacerbate these negative mental health outcomes for transgender adolescence (Olson, Forbes, & Belzer, 2011)**.** Many therapists of transgender youth have described extreme distress in their clients related to the physical changes associated with puberty (Brill & Pepper, 2008; Ehrensaft, 2011). One study of transgender youth found that majority of their participants gained awareness of their gender identity around puberty when they began to develop secondary sex characteristics that did not align with their gender (Grossman & D'Augelli, 2006). Although, many transgender people may become aware of their gender identity before the onset of puberty, the physical changes that occur often serve as a catalyst for anxiety, depression, and suicidal ideation (Olson et al., 2011). Transgender youth that don't identify exclusively as male or female (i.e. non-binary

[1] Transgender, trans, and gender minority are used interchangeably throughout the text to describe anyone who identifies with a gender different from the sex they were assigned at birth. This includes transgender men, transgender women, and non-binary people.

youth) also often experience gender dysphoria when reaching puberty in their adolescence (Olson, Durwood, DeMeules, & McLaughlin, 2016).

Along with the increased likelihood of gender dysphoria around the age of puberty, transgender youth also experience several environmental factors that may impact their mental health. Minority stress theory helps explain how environmental factors relate to the high mental and physical health risks for marginalized groups including transgender people (Meyer, 2003). From a minority stress framework, external (distal) stressors such as gender-related discrimination, rejection, victimization, and non-affirmation of gender identity contribute to internal (proximal) stressors such as internalized transphobia, concealment, and negative expectations (anticipation of stigma) (Testa, Habarth, Peta, Balsam, & Bockting, 2015). Both external and internal stressors impact transgender mental health.

Research has demonstrated that the minority stressors identified are related to negative mental health outcomes for transgender people. For example, distal stress factors including discrimination, victimization, and gender-based violence contribute to the negative mental health risk for transgender people (Clements-Nolle et al., 2006; Grant et al., 2011; Kosciw, Greytak, Bartkiewicz, Boesen, & Palmer, 2012). Furthermore, there is evidence that proximal (internal) stressors can contribute to negative mental health risk. For example, internalized transphobia was associated with an increase in suicide attempts among transgender adults (Perez-Brumer, Hatzenbuehler, Oldenburg, & Bockting, 2015) and anticipated stigma based on one's transgender identity has also been linked to negative mental health risk (Breslow, Brewster, Velez, Wong, Geiger, & Soderstrom, 2015; Gamarel, Reisner, Laurenceau, Nemoto, & Operario, 2014).

Transgender youth may experience external minority stressors in various environments. School is a social environment that is likely to have a large impact on youth because most youth spend most of their waking hours in a school environment and are largely influenced by the acceptance or rejection of their peers (Mustanski & Liu, 2013). The US Transgender Survey (James et al., 2016) found slight improvements in the school environments for transgender youth, but the overall climate remains hostile to this population. For example, 54% of those who were out or perceived as transgender in K-12 were verbally harassed, almost one-quarter (24%) were physically attacked, and 13% were sexually assaulted in K-12 due to their gender identity (James et al., 2016). Seventeen percent of participants reported dropping out of school directly as a result of mistreatment. The 2011 National School Climate Survey (Kosciw et al., 2012) found similar results reported by transgender youth. For example, 80% of transgender students reported feeling unsafe at school. The results demonstrated that students who experienced higher levels of victimization based on their gender identity had higher levels of depression, lower levels of self-esteem, and lower educational aspirations than those who experienced lower levels of victimization (Kosciw et al., 2012).

Finally, family context has a major influence on transgender youth experiences. Outside of school, transgender youth are likely to spend a large portion of time with their primary caregivers and other family members present in the home. An abundant amount of psychotherapy research demonstrates that parental relationships have a large impact on youth mental well-being and later adult psychopathology (Edwards, Sullivan, Meany-Walen, & Kantor, 2010; Thomson, Hanson & McLanahan, 1994). Research shows that harsh or abusive environments have significant negative impacts on a child's mental health (Mullen, Martin,

Anderson, Romans, & Herbison, 1993; Rohner, Khaleque, & Cournoyer, 2005; Springer, Sheridan, Kuo, & Carnes, 2007).

Furthermore, parents or caregivers have significant power in relation to their children. Youth are typically financially dependent on their parents and rely on them for housing, food, and other needs. Parents of transgender youth largely dictate whether or not their child is able to socially or medically transition if desired (Kennedy, 2008). For example, parents can refuse to buy clothing that does not align with the expectations of their child's assigned gender or enforce punishments if their child wears clothing the parents disapprove of. Gender-related medical care such as puberty blockers, hormone replacement therapy, and gender-related surgeries legally require consent by all legal guardians of the minor (Olson-Kennedy, Rosenthal, Hastings, & Wesp, 2017). Therefore, if one legal guardian does not agree with medical transition, then the minor cannot receive any medical treatments until they turn 18 even if another legal guardian is supportive of medical procedures.

Parent Acceptance and Rejection

Parent acceptance and/or rejection of their transgender child has a significant impact on their child's well-being (Ryan, Russell, Huebner, Diaz, & Sanchez, 2010; Olson et al., 2016). Family acceptance can protect transgender youth from negative mental health risk such as suicide, depression, anxiety and substance use (Ryan et al., 2010). Family acceptance consists of behaviors and attitudes that indicate affirmation of their family member's gender identity. Youth with higher levels of family acceptance reported higher self-esteem, social support, and general health and lower levels of depression, substance use, suicidal ideation and attempts (Olson et al., 2016; Ryan et al., 2010; Simons, Schrager, Clark, Belzer, & Olson, 2013). Conversely, parental rejection is associated with higher rates of negative mental health outcomes including suicide. One study found that 57% of transgender youth

who were rejected by their parents had attempted suicide, compared to 4% of transgender youth with accepting and supportive parents (Travers, Bauer, Pyne, & Bradley, 2012).

Furthermore, parental acceptance is likely to have an impact on other social environments that impact transgender youth. Parental acceptance is significantly associated with advocacy in a family context and school context (Birnkrant & Przeworski, 2017). In qualitative research parents of transgender youth often report becoming an advocate for their child at school, doctor's offices, and with extended family members (Koken, Bimbi, & Parsons, 2009; Matsuno & Israel, in preparation). Parents are in a position where they may have more power to create changes within these social systems than their child. For example, schools may deny a name change request made by a student, but may honor this request if made by a parent. Therefore, parental acceptance may protect transgender youth in many capacities.

Along with protecting transgender youth from immediate mental health risk, parental acceptance and support is likely to prevent future distress for transgender youth. Parent rejection experienced by youth can have long-term negative effects well into adulthood (Repetti, Taylor, & Seeman, 2002). Therefore, the absence of rejecting behaviors and presence of supportive parental behaviors is likely to reduce the risk of future mental health risk for transgender youth. Furthermore, as parental consent is required for transgender youth to receive medical care related to transition, parental acceptance potentially influences the age at which their child medically transitions. One benefit of starting medical procedures at before puberty is that hormone blockers and hormone replacement therapy can prevent the transgender youth from going through the puberty associated with their assigned sex (Olson-Kennedy et al., 2016; de Vries et al., 2014). One study found that puberty suppression and hormone replacement therapy alleviated gender dysphoria in transgender youth adults and

improved psychological functioning (de Vries et al., 2014). This also prevents the necessity of many gender related surgeries such as breast reduction surgery or electrolysis to remove facial hair, medical procedures that can cost thousands of dollars (Stroumsa, 2014).

Parent Well-being

Parents themselves experience a considerable amount of distress when they learn their child is transgender (Dierckx, Motmans, Mortelmans, & T'sjoen, 2016; Hill & Menvielle, 2009), especially if they disapprove of their child's gender identity and/or expression (Hill & Menvielle, 2009). Parents may experience a host of stressful experiences including, but not limited to: experiences of grief, shame, and guilt, coming out to extended family members and friends, fear of their child experiencing bullying, discrimination and violence, making important medical decisions for their child, and navigating conflict within the family (Dierckx et al., 2016; Hill & Menvielle, 2009; Kuvalanka, Weiner, & Mahan, 2014; Malpas, 2011; Matsuno & Israel, in preparation; Zamboni, 2006). Parents often feel overwhelmed, confused and isolated upon the discovery of their child's transgender status (Kuvalanka et al., 2014). Parents also may begin to experience secondary stigma related transnegativity, adding to their distress (Zamboni, 2006).

Parents' psychological distress and general well-being is likely to impact their transgender child as well. Due to the stigma of transgender identities, parents may be reluctant to seek social support outside of their immediate family (Zamboni, 2006). Therefore, parents may put their transgender child in the position to help them process their grief and distress related to their child's transgender identity (Wahlig, 2015). Furthermore, parents may blame their child for the distress they experience (Zamboni, 2006) which could increase conflict in their relationship. Parents may also experience conflict between each other if they disagree about the acceptance or rejection of their child's transgender identity

(Hill & Menvielle, 2009; Kuvalanka et al., 2014; Malpas, 2011). Parental conflict can have negative impacts on children, especially if the child feels responsible for the conflict (Erel & Burman, 1995; Grych & Fincham, 1990).

A study on parents of sexual minority youth have found that parental psychological distress is associated with parental rejection of their sexual minority child (Richter, Lindahl, & Malik, 2017). Parents with higher levels of parental rejection reported higher levels of psychological distress. However, it is unclear whether parental rejection leads to parental distress or if parental distress leads to parental rejection. Therefore, reducing either parental psychological distress or parental rejection may in turn reduce the other. Although not yet researched, a similar relationship is likely to be found for parents of transgender youth, indicating that reducing parental rejection may benefit parental well-being and vice versa.

Interventions to increase parent support

Given the high mental health risks transgender youth face, the influence of parents on transgender youth well-being, and the distress that families encounter when they learn a family member is transgender, resources to support parents and caregivers of transgender youth may be particularly salient. Although there is are growing number of resources for parents of transgender youth (e.g. PFLAG groups, published books – see https://www.genderspectrum.org/quick-links/books-and-media, and an online course – see https://www.coursera.org/learn/health-gender-spectrum), only one psychological intervention with published research exists for parents of transgender youth (Hill & Menvielle, 2009; Hill, Menvielle, Sica, & Johnson, 2010; Menvielle & Rodnan, 2011. There are a few research-based resources for parents of LGB youth (e.g. Diamond et al., 2012; Hueberner, Rullo, Thoma, MacGarrity, & Mackenzie, 2013; Willoughby & Doty, 2010). However, transgender youth face specific types of prejudice and unique challenges, such as transitioning socially,

medically, or legally (James et al., 2016). Therefore, the challenges of parents of transgender youth in supporting their children may differ from those of parents of sexual minority youth. Given these differences, research informed trainings specifically targeted toward parents of transgender youth might have a greater effect than the mere adaptation of existing parent interventions for sexual minority youth.

Furthermore, online tools are likely to have a meaningful impact for this population specifically. Parents may not have access to in person transgender resources, especially in rural areas. Also, given the stigma that transgender people face, parents might be hesitant to enter a resource center and are likely to search for help online. In a recent study, 64% of parents reported online resources such as trainings, videos, and online support groups helped them become more supportive of their transgender children (Matsuno & Israel, in preparation). Therefore, the accessibility and anonymity of an online intervention can help reach the parents who need the most support and guidance.

Significance

Given the high mental and physical health risks that transgender youth face and the importance of parental support for transgender well-being, an intervention aimed at increasing parental support has the potential to save lives. Furthermore, this type of intervention has the potential not only to support transgender youth, but also to prevent future risk of negative mental health outcomes for transgender adults by allowing them to transition earlier and be affirmed in their gender at a younger age. Medical and legal transition processes require parental consent and therefore many transgender youth cannot medically or legally transition until after the age of 18 if their parents disagree with those procedures. Delay of a desired medical transition can increase suicidal ideation, particularly when going through puberty inconsistent with one's gender identity (Coleman et al., 2012).

Furthermore, parents of transgender youth go through significant amounts of personal distress when they discover their child is transgender. Parents go through own coming out process when their child comes out and may feel confused and isolated. The proposed project can alleviate psychological distress by providing parents with information and supportive parenting tools.

Objectives of the study

The long-term objective of my research is to develop an accessible and effective online intervention that will help parents of transgender youth support their children. I collected data from 85 parents of transgender youth that describes their experiences and identifies influences on supportive or unsupportive behaviors (Matsuno & Israel, in preparation). These data, along with theories of behavior change and parenting, informed the content of the intervention. The main objectives for the project are to: 1. Develop and refine an online intervention to increase parents' support of their transgender child and 2. Pilot test the online intervention to gather feasibility and acceptability data.

Research Questions

1) Will the intervention and efficacy study (intervention and measures) be feasible for parents of transgender youth to complete?

A) Identify recruitment and attrition rates to run an efficacy study with 500 individuals.

i) What is the attrition rate for the intervention and outcome measures and the control intervention?

ii) At what points do participants drop out?

iii) For participants who drop out, what barriers inhibited participants from completing the intervention or outcome measures?

a. Does the amount of times a participant leaves and returns to the intervention relate to the attrition rate?

c. Does the overall length of time it takes to complete the intervention relate to the attrition rate (e.g. 1 day versus 1 week)?

iv) What is the attrition rate for the follow up?

B) How do participants interact with the online intervention?

i) Over what length of time will it take for participants to complete the intervention and outcome measures?

ii) What is the length of time spent on each module and outcome measures?

iii) How many times do participants leave and return to the intervention?

2. Will the intervention components and outcome questionnaires be acceptable (i.e. appropriate, useful, understandable, satisfying, and effective) to parents of transgender youth?

Chapter 2: Literature Review

Gender Terminology/Definitions

Transgender (or trans) is an umbrella term that refers to people whose gender identity does not align with the sex they were assigned at birth and **cisgender** refers to people whose gender identity aligns with the sex they were assigned at birth (i.e. not transgender) (James et al., 2016). The term transgender refers to multiple gender identities including transgender men and women, non-binary/genderqueer people and sometimes gender nonconforming people (Bockting, 1999). A **transgender man/boy** is someone assigned female at birth and identifies as male. A **transgender woman/girl** is someone assigned male at birth and identifies as female (APA, 2015). **Non-binary** or **genderqueer** is a term that defines several gender identity groups, including (but not limited to): (a) an individual whose gender identity falls between or outside male and female identities, (b) an individual who can experience being a man or woman at separate times, or (c) an individual who does not experience having a gender identity or rejects having a gender identity (Matsuno & Budge, 2017). **Gender nonconforming** men and women are people whose gender expression differs from gender norms associated with their assigned birth sex, but whose gender identity aligns with their assigned birth sex (APA, 2015).

Gender identity is a term indicating a person's internal sense of one's own gender, as a woman, man, both, neither, or another gender (Singh, 2017). Gender identity is internal and not necessarily visible to others. Whereas, **gender expression** is defined as the behaviors associated with an outward expression of culturally defined ways of communicating masculinity and/or femininity (e.g., clothing, hair style, language), or a rejection of these (Matsuno & Budge, 2017).

Although historically "gender identity disorder" was used to pathologize transgender people, it is well established that being transgender is not itself a disorder, abnormal, or psychologically harmful (APA 2015, Coleman et al., 2012). The World Professional Association for Transgender Health (WPATH) states that "The expression of gender characteristics, including identities, that are not stereotypically associated with one's assigned sex at birth is a common and culturally diverse human phenomenon that should not be judged as inherently pathological or negative" (WPATH SOC, 2011, p.4). The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) recently retracted "Gender Identity Disorder" and replaced the diagnosis with "Gender Dysphoria" (DSM-5). **Gender dysphoria** refers to discomfort and/or distress related to the discrepancy between the person's gender identity and the person's assigned sex and the associated gendered expectations and or primary and secondary sex characteristics (Knudson, De Cuypere, & Bockting 2010).

One benefit of the current diagnosis is that is creates a pathway to access to medical care, because insurance companies require documentation of "medical necessity" to cover gender affirming medical care such as hormone replacement therapy and gender related surgeries (Olson-Kennedy et al., 2017). However, some critique the continuation of the diagnosis in the DSM because of it can be misconstrued and perpetuate the belief that being transgender is a mental disorder (Lev, 2013).

Parental Influence on Youth

Copious research has demonstrated the impact of that parents have on their child's well-being (e.g. Resnick et al., 1997). Parents are in the position to have a large influence on their children as they typically dictate the home environment for their children, have financial power, and are in close contact with them from birth until age 18. Furthermore, research in attachment has shown that closeness to primary caregivers early in life has a large impact on

well-being and influences character traits in adulthood (Bowlby, 2005; Dozier, Stovall-McClough, & Albus, 2008).

Parent acceptance and support has been shown to be a protective factor against negative mental health outcomes for youth (Colarossi & Eccles, 2003; Resnick, Harris, & Blum 1993), especially youth with marginalized identities (Bean, Barber, & Crane, 2006; Poteat, Mereish, DiGiovanni, & Koenig, 2011). Whereas, parent rejection and/or hostility is strongly associated with mental health risk for youth (Rohner, 2004; Rohner et al., 2005). Parental rejection is associated with depression, behavior problems, substance abuse, maladaptive attachment styles, low self-esteem, and poor coping styles for youth (Rohner, 2004; Rohner et al., 2005). Verbal, physical, and sexual abuse are associated with increased mental health risks including anxiety, depression, aggression, self-harm, substance use, and low self-esteem (Browne & Finkelhor, 1986; Mullen et al., 1993); risks that last into adulthood (Horwitz, Widom, McLaughlin, & White, 2001; Anda et al., 2006).

Parental Acceptance-Rejection theory (PAR theory; Rohner, 1980, 1986) is a theory of socialization that attempts to predict and explain antecedents and consequences of parental acceptance and rejection. PAR theory conceptualizes the perceived acceptance-rejection of children across four domains: warmth-affection, hostility-aggression, indifference-neglect, and undifferentiated rejection. "Warmth-affection" is related to the child's perception of the parents' verbal, physical or symbolic gesture of love. "Hostility-aggression" is defined as overt physical or verbal expressions of rejection including verbal abuse and violence. "Indifference-neglect" is conceptualized as lack of warmth, but also absence of overt abuse. Examples include parents being emotionally withdrawn, unavailable or fail to provide material necessities. Lastly, "undifferentiated rejection" is defined as treatment not

characterized as the previous constructs, but is still experienced by the child as void of key expressions of love and care. A meta-analysis revealed that perceived parental acceptance-rejection is associated cross-culturally with personality dispositions and psychological adjustment (Khaleque & Rohner, 2002).

Parental Acceptance/Rejection of Transgender Youth

Parents of transgender youth have significant influence over their child's well-being not only based on the closeness of their relationship with their child, but also in dictating what how their child expresses their gender through clothing, hair etc. and whether the child can partake in medical procedures to negate feelings of gender dysphoria. Both social transition (i.e. changing appearance, name, and/or pronouns to align with one's gender identity) and medical transition (i.e. medical procedures to make physical aspects align with one's gender identity) have been found to increase well-being and decrease negative mental health outcomes including suicide (American Psychological Association, 2009; Close, 2012). Parental acceptance or rejection of their child's transgender identity can influence whether they allow their child to dress in congruence with their gender and to receive transgender related medical care.

Actual or anticipated family rejection plays an instrumental role in transgender youth's well-being (Katz-Wise, Rosario, & Tsappis, 2016; Ryan et al., 2010; Torres et al., 2015) and has been found to predict mental health outcomes for LGB youth (Ryan, Huebner, Diaz, & Sanchez, 2009; Needham & Austin, 2010). Parental rejection is associated with a higher risk for suicide and psychological distress for transgender people (James et al., 2016). Almost half (49%) of participants from the U.S. Transgender survey (N = 27, 715) who reported family rejection had attempted suicide compared to one third (33%) of those who did not report family rejection. Another study found that 57% of transgender youth without

supportive parents had attempted suicide, whereas only 4% of transgender youth with supportive parents had attempted suicide (Travers et al., 2012). Transgender people who experience family rejection were twice as likely to be homeless and twice as likely to have done sex work than transgender people who did not experience family rejection (James et al., 2016).

Transgender youth may experience a disruption in their attachment if their primary caregivers have difficulty accepting their child as transgender or actively reject their child for being transgender (Katz-Wise et al., 2016). Furthermore, children with an insecure attachment may be at greater risk for parent rejection than for those with a secure attachment (Katz et al., 2016). Sexual minority youth report lower levels of secure attachment and closeness to their parents (Pearson & Wilkinson, 2013) and one study found that mothers show less affection for their sexual minority children (Rosario et al., 2014). A disruption in parent-child attachment for transgender youth is likely to have a negative impact on their well-being (Lin, 2016).

Transgender youth and gender non-conforming youth are at high risk for parental rejection (Koken et al., 2009) even greater than their cisgender sexual minority peers (Roberts et al., 2012). James et al., (2016) found that half of participants who were out to their families experienced some form of family rejection. Rejection behaviors included ending their relationship, not allowing their child to wear clothes matching their gender identity, being kicked out of their home, being sent to a professional to remain as the gender assigned to them at birth, or being verbally, physically, or sexually abused (James et al., 2016). One quarter of the sample reported that an immediate family member stopped speaking to them or ended their relationship because they were transgender, 8% were kicked out of their home, 27% were not allowed to wear clothes that matched their gender, 14%

were sent to a professional to stop them from being transgender and 10% experienced violence from an immediate family member. Another study found that more than two-thirds of transgender youth reported past verbal abuse by their parents related to their gender identity and/or expression and approximately one-fifth to one-third reported past physical abuse (Grossman, D'Augelli, & Frank, 2011). In this study, the more gender non-conforming the youth were, the more abuse they reported.

Transgender youth of color may be at greater risk of experiencing family rejection (Koken et al., 2009; Singh & McKleroy, 2011). Singh & McKleory (2011) found that almost all their participants (transgender people of color) reported that their families struggled with accepting them as a transgender people. Participants discussed feeling judged, misunderstood, and portrayed as an "outcast." James et al. (2015) found that transgender people of color were more likely to experience violence by a family member and be kicked out of their home than their white counterparts.

Parental acceptance on the other hand, can bolster the resilience of transgender people (Koken et al., 2009; Singh & McKleroy, 2011) and protects LGBT youth from depression, substance abuse, and suicidal ideation and behavior (Needham & Austin, 2010; Ryan et al., 2010). In qualitative study by Singh & McKleory (2011), participants described family acceptance as central to their resilience to hard times. One participant stated,

> "Once I had mother's support, no one else could say anything to me that would hurt me. She's a mother-bear—she does what she has to do to protect her cubs. Her acceptance of me was life-changing. I could walk with my head up with her approval. I knew then not worry about what folks had to say about me, because I knew she had my back. (D.J. age 28, Hispanic, Transgender man)" (p. 38).

Transgender youth who rated their parents as "supportive" reported higher life satisfaction and self-esteem and lower rates of depression and suicide attempts (Simons et al., 2013; Travers et al., 2012).

It is common for families to experience strain in their relationships when a family member comes out as transgender (Rankin & Beemyn, 2012). Similar to parent reactions to a child coming out as LGB, parents can experience a whole host of positive and negative emotions (Dierckx et al., 2014). However, both transgender youth and parents of transgender youth commonly report "negative reactions" when the child comes out (Grossman, D'Augelli, Howell, & Hubbard, 2005; Hill et al., 2010). A study by Grossman and colleagues (2005) found that transgender youth reported that 54% of their mothers reacted "negatively" or "very negatively" to the disclosure of their transgender identity, while 25% reacted "positively" or "very positively" and 21% exhibited "no reaction." Fathers had a higher reported rate of "negative" or "very negative" reactions at 63%. However, participants reported that both mothers' and fathers' reactions became more positive over time.

Contrary to previous research a couple of recent studies found that majority of parents of transgender youth reported positive reactions and initial acceptance/supportiveness (Birnkrant & Przeworski, 2017; Matsuno & Israel, in preparation). These results could indicate a shift in cultural norms around acceptance of gender non-conforming expressions or identities in children. Transgender people have become much more visible in mainstream media in the last 10 years (Horvath, Iantaffi, Grey, & Bockting, 2012) and positive attitudes toward transgender people are increasing (Claman, 2009; Matsuno & Israel, in preparation). However, these two studies measured parents self-reported reactions versus perceptions of transgender youth measured in Grossman et al. (2005). Therefore, there may be discrepancies between parent perceptions of acceptance and transgender youths' perceptions. Furthermore,

parents who agree to participate in research on parental acceptance may be more accepting to begin with. Therefore, these samples may not represent the broader parent population.

Experiences of Parents of Transgender Youth

Some have described family members' experiences of learning about another family member's transgender identity as a grieving process, with common emotions being shock, anger, anxiety, and depression (Lesser, 1999; Zamboni, 2006). Lev (2004) describes four stages that families with a gender-variant family member go through. The first stage discovery and disclosure of a transgender identity. Next the family usually experiences some "turmoil" and conflict including financial problems, health issues, and parting disagreements. After the turmoil stage, the family enters a stage of negotiation where parents may attempt to control the child's gender presentation through bargaining. For example, allowing the child to wear the clothes they desire in the home, but not in public. The final stage involves finding balance in the family relationships by considering the child's needs and the larger family's needs simultaneously. Similarly, Ellis and Eriksen (2002) adapted stages of grief models to support families of a transgender individual. Both studies describe these five stages, denial, anger, bargaining, depression and acceptance. Ellis and Eriksen (2002) add a sixth stage, pride. The authors suggest that the stages do not necessarily progress in a linear fashion, but encourage family therapists to use this framework to help families adjust to their loved one's transgender identity.

Other clinicians have described a similar grieving process when they work with parents of transgender youth (Brill & Pepper, 2008; Schwartz, 2012; Wahlig, 2015). One psychiatrist who works with parents of transgender youth reported that the most "obvious" emotion that he experienced from mothers is grief (Schwartz, 2012). Gender is an integral part of someone's personal identity and therefore some parents may feel their child has

fundamentally changed (Norwood, 2012). Parents may grieve many different losses including the "loss of gendered expectations for what that person's future and loss of a particular gendered relationship they shared before transition" (Norwood, 2013, p. 38). Furthermore, parents may have difficulty understanding their own grief because their child has not actually died and there are few resources for this type of grief (Brill & Pepper, 2008). Wahling (2015) understands parents of transgender youth as experiencing an "ambiguous loss", indicating a lack of clarity about the absence or presence of a loved one. Other types of ambiguous losses include when there is a physical absence, but a psychological presence or a psychological absence, but a physical presence (Boss, 1999). Ambiguous losses are particularly challenging for families to heal from (Boss, 2004).

Aside from grief, the most common theme described in many studies of parents of transgender youth is that parents are worried for their child's safety and well-being. One study found that 60% of parents expressed fear that other people would hurt their child, verbally or physically based on their gender nonconformity (Kuvalanka et al., 2014). Concern for their child's safety was commonly reported by parents in other qualitative studies of parents as well (Guy, 2014; Kuvalanka et al., 2014). On a checklist of potential barriers to acceptance of their transgender child, the most frequently endorsed barrier was "fear my child will be bullied or hurt for being trans/non-binary" (Matsuno Israel, in preparation). Along, with concern about their child's safety, parents reported concern about their child's future happiness (Hill & Menvielle, 2009). Parents described fears that their child would have "a hard life" and some parents reported fear that their child might choose to commit suicide if they were really unhappy (Hill & Menvielle, 2009). Parents expectations and beliefs about the future may impact how their transgender child thinks about their future, as this relationship has been found in parents of cisgender adolescents (Seginer & Mahajna,

2016). Future perspectives have been associated with anticipated stigma among transgender populations (Golub & Gamarel, 2013), a proximal minority stressor according to the minority stress framework (Testa et al., 2015). Having access to role models and positive portrayals of transgender people may shape both parents and youths future perspectives (Katz-Wise, Budge, Orovecz, Nguyen, Nava-Coulter, & Thomson, 2017).

One common misconception among parents of transgender children is the belief that gender variance (i.e. not conforming to the gender norms expected based on your assigned sex) indicates same-gender attraction (Hill & Menvielle, 2009). Many parents of gender non-conforming youth worry that their child will be gay (Griffiths, 2002). Negative views about "homosexuality" may drive parent behaviors that regulate the child's gender expression in an attempt to prevent their child from an LGB orientation. Published books have advised parents to police their child's gender expression as a means to maintaining a heterosexual orientation (Nicolosi & Nicolosi, 2012; Rekers, 1982). On the other hand, parents may find it easier to accept that their child is lesbian or gay in comparison to being transgender and therefore deny or disregard the child's gender identity, in hopes that their child is "just" gay rather than trans (Hill & Menvielle, 2009). In Hill and Menvielle's qualitative study (2009), a mother stated "You can wrap your brain around just being a normal boy. You can wrap your brain around a gay male. But, transgender issues are just kind of the next level." (p. 262)

Gender variance or non-conformity in childhood may or may not indicate a future transgender identity (APA, 2015). Research suggests that between 12% - 50% of children diagnosed with gender dysphoria persist into identifying as transgender in adulthood (Steensma, McGuire, Kreukels, Beekman, & Cohen-Kettenis, 2013). Therefore, many children who initially identify with a gender different from their assigned sex return to identifying with their birth gender. Furthermore, many gender-conforming children later

identify with a sexual minority orientation and do not identify as transgender (Drescher, 2014; Rieger, Linsenmeier, Gygax, & Bailey, 2008; Wallien & Cohen-Kettenis, 2008). Gender identity and expression tends to be more fluid among children, but gender identity often tends to stabilize during adolescence Brill & Kenney, 2016). Adolescence is a time when many identities begin to consolidate especially one's sense of sexuality and gender. Those who maintain a transgender identify from childhood into adolescence are likely to maintain a transgender identity into adulthood (Brill & Kenney, 2016).

Parents may be reluctant to accept their child's gender identity if they are unsure whether the new gender identity will persist (Hill & Menvielle, 2009). The many gender paths that gender variant children take is often stressful for parents who want to be certain about their child's gender identity (Ehrensaft, 2016). Not having definitive answers about the child's long term gender identity may also create reluctance to accept or treat their child according to the child's disclosed gender identity (Ehrensaft, 2016). Diane Ehrensaft (2016) recommends that parents take a flexible stance around their child's gender and not to become firm in their own wishes and desires for their child's gender identity and expression. Taking a stance of non-judgmental openness to a child's experience of gender can help support them in their own process of gender identity development (Brill & Kenney, 2016).

Along with grappling with their own reactions to their child's transgender identity, parents may experience stress related to transgender stigma. Among qualitative studies parents often report feeling shame related to the stigma attached to gender non-conformity (Dierckx et al., 2014). Parents often reported "blaming themselves" for their child being transgender due to the belief that being transgender is a response to "bad parenting" (Di Ceglie & Thu¨mmel, 2006; Johnson & Benson, 2014; Kuvalanka et al., 2014; Malpas, 2011; Riley, Linsenmeier, Gygax, Bailey, 2011). This belief is often affirmed by negative

judgments by others of their parenting decisions (Hill & Menvielle, 2009) and by historical writings by psychologists that explicitly "blame" parents for gender nonconformity in children (Stoller, 1985). The subsequent secondary stigmatization that parents endure may also create reluctance to access social support from others adding to their stress (Zamboni, 2006).

Parents often go through their own "coming out" process with family members and friends after their child comes out as transgender. Fear of judgments by others including family and friends of the parental figures, may create distress for parents and difficulty making decisions about their child's gender expression and or identity. For example, parents may be viewed negatively and/or have conflicts in their relationships for allowing their child to wear the clothes they desire if it's not in accordance with the sex they were assigned at birth.

Conflicts between parents can occur if there are disagreements about the acceptance of gender non-conforming behaviors of their child. For example, one parent may be accepting of gender non-conforming behaviors and a transgender identity and agree with fulfilling the child's desires to socially and/or medically transition, whereas the other parent may feel anxious or want to teach their child stereotypical gender norms (Hill & Menvielle, 2009; Malpas, 2011). Kuvalanka et al. (2014) interviewed five mothers of transfeminine children. The mothers reported that fathers took longer to understand their child's gender identity and were more concern about safety and protection of their child, whereas mothers were more likely to show acceptance and unconditional love. Consent forms for medical transition procedures require signatures from all legal guardians and therefore, if one parent or guardian does not approve of medical gender related procedures, the transgender youth will not be able to access gender related medical care.

The literature also indicates that mothers are more likely to be involved in discussing gender with their child and support and accept their child's transgender identity more quickly in comparison to fathers (Grossman, D'Augelli, Howell, & Hubbard, 2005; Hill & Menvielle, 2009; Koken, Bimbi, & Parsons, 2009). Grossman et al. (2005) found that transgender youth reported greater amounts of negative reactions from their fathers in comparison to their mothers. Hill and Menvielle (2009) found that fathers were less involved in their child's life with respect to gender issues. They also found that many fathers disapproved or ignored their child's gender choices all together.

Attitudes Toward Transgender People

Parental behaviors may be related to their own attitudes toward transgender people and beliefs about gender. Both explicit (conscious) and implicit (subconscious) negative bias are linked to discriminatory behaviors toward minority groups (Fiske, Gilbert, & Lindzey, 2010; Ziegert & Hanges, 2005). Although only a few studies have examined explicit attitudes toward transgender people, they found that cisgender heterosexual people, especially men, hold negative attitudes toward transgender people (Hill & Willoughby, 2005; Norton & Herek, 2013; Walch et al., 2012). Recently, a measure was developed to measure implicit attitudes toward transmen and transwomen (Wang-Jones, Alhassoon, Hattrup, Ferdman, & Lowman, 2017). The study found that cisgender, heterosexual, politically conservative people, and those who reported no personal contact with transgender individuals showed preferences toward cisgender people in comparison to transmen and transwomen (Wang-Jones et al., 2017). Contrary to findings from studies examining explicit attitudes, no differences were found between cisgender heterosexual men and women on the implicit attitudes measure, indicating that while women may endorse positive attitudes on explicitly,

they may still hold implicit bias. Both explicit and implicit attitudes predicted support for transgender affirming workplace policies.

Parents own negative biases toward transgender people are likely to influence their attitudes about parenting a transgender child and consequently influence their behavior towards their child. A study that looked at predictors of behavioral intentions toward transgender youth found that attitudes toward gender variance was the best predictor of their behavioral intentions; more so than other known predictors such as contact with transgender people and other demographic factors (e.g. gender, religion) (Elischberger, Glazier, Hill, & Verduzco-Baker, 2016). In a recent study with parents of transgender youth, attitudes toward transgender people was the strongest predictor of parental supportive behaviors toward their transgender child (age 13 -24) in comparison to other predictors such as contact with transgender people, knowledge about gender diversity, and the parent's gender (Matsuno & Israel, in preparation). Therefore, changing parental attitudes about gender variance and transgender people is likely to consequently change parental behaviors.

Furthermore, literature on other parenting behaviors such as the use of corporal punishment or engaging in physical abuse have demonstrated a direct link between attitudes, beliefs, and behaviors (Lundahl, Nimer, & Parsons, 2006; Milner, 2000). In these studies parents who believed that corporal punishment was an effective long-term socialization strategy were more likely to engage in physical abuse (Lundahl et al., 2006). However, even a slight shift in these attitudes about corporal punishment could significantly affect parenting choices and behaviors (Milner, 2000).

Essentialist Beliefs

For parents of transgender youth, holding essentialist beliefs about gender may inhibit parents from supporting their child's transgender identity. Essentialism in its broadest

definition implies that social categories have a set of "essential features" (Haslam, Rothschild, & Ernst, 2000). Essentialist beliefs about gender assume differences psychological differences between men and women are biologically based, immutable, information, and discrete (Bastian & Haslam, 2006). Essential views about sex also state that a person's "biological sex" (i.e. sex chromosomes, genitalia, and other sex characteristics) determines their gender and that gender is stable across a lifetime (Davidson, 2014). Therefore, one with sex essentialist beliefs may believe that transgender people are really the gender that was assigned to them at birth based on their sex (i.e. transwomen are really men etc.). Many scholars critique essentials beliefs about sex/gender and argue that gender is a separate construct from sex (West & Zimmerman, 1987).

Essentialist beliefs has been linked to negative evaluations to several oppressed groups including, racial minorities, sexual minorities, women and gender minorities (Davidson, 2014; Haslam & Levy, 2006; Haslam, Rothschild, & Ernst 2002; Roets & Van Hiel, 2011). Bastian and Haslam (2006) found that participants who endorsed more essentialist beliefs were more likely to endorse stereotypical views of various social and cultural groups. Follow up analyses showed that participants assigned biological explanations to stereotypic views (e.g. women are worse at math in comparison to men based on their biology). Others have found similar results in that people who are high in essentialist beliefs are more likely to attribute problems that groups of people face to internal factors, such as biology, rather than external or environmental factors (Howell, Weikum, & Dyck, 2011).

Research has found evidence for a link between essentialism and transgender prejudice (Davidson, 2014; Davidson & Czopp, 2014; Matsuno & Israel, in preparation; Tee & Hegarty, 2006). In a sample from the United Kingdom, Tee and Hegarty (2006) found that those who endorsed the belief that changing one's gender went against a person's "biology"

were more likely to oppose transgender rights. Similarly, Davidson and Czopp (2014) found a relationship between essentialism and transgender prejudice in a US sample. The study measured transprejudice through a modified social distance scale that measured a person's level of comfort around transgender individuals. Participants high in essentialism felt less comfortable sharing public spaces, especially bathrooms, with transgender people compared to participants low in essentialism. In a study with a sample of parents of transgender youth, sex essentialism significantly predicted both negative attitudes toward transgender people and the frequency of reported supportive behaviors toward their transgender child (Matsuno & Israel, in preparation). Therefore, changing essentialist beliefs about sex and gender could have an impact on parent attitudes and behaviors toward their transgender child.

Casual and Controllability Attributions

Two other factors that may contribute to parent rejection and unsupportive behaviors are causal and controllability attributions. Casual attributions refer to a belief that someone's sexual orientation and/or gender identity is caused by situational/environmental factors (rather than biological factors) and controllability attributions refers to the belief that someone's sexual orientation and/or gender identity is under their control (Bernstein, 1990). Casual and controllability attributions coincide with the rhetoric that being gay or transgender "is a choice" and therefore can be changed given the right environmental conditions or through self-control. These attributions have been associated with negative attitudes toward LGB people (Armesto & Weisman, 2001; Haider-Markel & Joslyn, 2008; Haslam & Levy, 2006) and likely influence parent acceptance or rejection of their LGB child (Shpigel, Belsky, & Diamond, 2015).

Similarly, causal attributions are related to attitudes toward transgender people (Claman, 2008; Elischberger et al., 2016). A recent study found that people's belief about the

causes of gender atypical behavior significantly predicted attitudes toward transgender youth above and beyond religion, political beliefs, and belief in gender norms (Elischberger et al., 2016). Stronger belief in environmental causes (e.g. parents, peers) predicted stronger disapproval of transgender youth and stronger belief in biological causes (e.g. genes, hormones) predicted more favorable attitudes. Another study found the same result indicating that causal attribution of transgender identities to biological rather than social factors was related to more positive attitudes (Claman, 2008).

Parents of transgender youth who belief their child's transgender identity or gender nonconforming behaviors are due to situational factors (e.g. peer pressure, media, parenting) may hold onto the belief that their child's gender identity can be changed or will eventually revert to the gender they were assigned at birth. For example, in a study on experiences of parents of transgender youth, a father of a transgender boy stated, "I just do not believe that my kid is really trans. From what I can see, she is trying to become someone else to escape from herself, to escape sexually aggressive males" (Matsuno& Israel, in preparation). This participant also endorsed high sex essentialist beliefs and more negative attitudes towards transgender people. Casual attributions appear to be a major barrier in parents' acceptance and support of their child's transgender identity. Similarly believing that a transgender identity is within one's control, may create frustration for parents when their child does not "choose" a gender-conforming identity or expression.

Shpigel and Colleagues (2015) discuss their clinical work with parents of sexual minority youth. They found that parents who believe their child was once heterosexual, but changed their orientation due to external events tend to cling to the hope that their child will return to identifying as heterosexual. Holding onto this hope can also alleviate or suspend their fears, conflicts, and embarrassment related to their child. However, when their child

does not change, parents often become frustrated and angry. In their clinical work with parents, introducing the possibility that their child's sexual minority orientation was not a choice, but rather influenced by biology and immutable helped decrease their anger and increase their empathy toward their child (Shpigel et al., 2015). They also recommend sharing research on the etiology of sexual orientation and the lack of research to support sexual orientation change efforts with parents.

Similarly, it may be helpful to present information related to causes of being transgender with parents. The etiology of gender minority identities and sexual minority identities is complex with no definitive answers (Ettner & Guillamon, 2016). However, there is growing evidence that there are biological components related to gender identity development. (Berglund H, Lindström, Dhejne-Helmy, & Savic, 2008; Coolidge, Thede, & Young, 2002; Diamond, 2013). Transgender and gender variant people have existed throughout history and across cultures all over the world, indicating that transgender identities are not a "new phenomenon" (Stryker, 2008). Additionally, professional organizations and medical experts argue that gender variance is merely an example of human diversity (Bockting, 2009) and recommend against restricting gender non-conforming behaviors or efforts to prevent a transgender identity (APA, 2015; Coleman et al., 2012; Ehrensaft, 2016).

Therefore, although the etiology of transgender identity remains unknown, it may be helpful for parents to understand that there are likely biological components out of their child's control that contribute to gender variant expressions. Also, the link between causal and controllability attributions and transgender prejudice suggests that changing parents' casual and controllability attributions about their child may be a key factor in the path towards acceptance, empathy, and trans-affirming parenting behaviors.

Knowledge

These attitudes and beliefs may be influenced by knowledge or lack of knowledge about transgender people and gender non-conformity. A recent qualitative study with parents of transgender youth found that eight out of nine participants reported that they were poorly educated about what it means to be transgender prior to their own experience of having a transgender child (Guy, 2014). "Three parents had no idea what the word meant, three mistook gender-nonconforming behavior as a sign of homosexuality, and five possessed inaccurate or incomplete understandings of what it meant to be a transgender person" (Guy, 2014, p. 35). Similarly, Kuvalanka and Colleagues (2014) found that all of their participants were initially uninformed about transgender identities and gender nonconformity – especially about transgender youth. A needs assessment of parents of gender non-conforming children found that parents reported needing access to basic, research-based information soon after becoming aware of their child's transgender status (Riley, Sitharthan, Clemson, & Diamond, 2011). Similarly, another study found that 28% of parents reported that lack of information about transgender identities was a barrier to supporting their transgender child (Matsuno & Israel, in preparation).

Furthermore, obtaining knowledge can change attitudes (Paluck & Green, 2009). Matsuno and Israel (in preparation) found that knowledge about gender diversity did not significantly predict supportive parental behaviors toward their transgender child. However, knowledge did significantly predict attitudes toward transgender people, which in turn, was the strongest predictor of supportive behaviors. These findings align with other theoretical models of implementing interventions to create behavior change. For example, implementation research on evidenced-based practices has found support for the knowledge-attitudes-practice (K-A-P) process (Rogers, 2003). The K–A–P process hypothesizes that

sufficient knowledge and favorable attitudes toward an innovation should influence whether it is adopted into practice (Nakamura, Higa-McMillan, Okamura, & Shimabukuro, 2011). Evidence of the K-A-P process has been found in medical settings for cancer screen procedures and blood transfusion procedures (Rim et al., 2009; Salem-Schatz, Avorn, & Soumerai, 1993) and marginal evidence has been found in support of this process in the implementation of evidence-based mental health practices (Nakamura et al., 2011). Research on prejudice reduction has found evidence for didactic instruction as being an effective method of reducing negative attitudes toward minority groups (Paluck & Green, 2009). Therefore, obtaining accurate knowledge about gender diversity and transgender youth may be an important step in creating more positive attitudes toward transgender people, which may influence parental behaviors.

Supportive Parenting Behaviors

The literature on what constitutes supportive behavior for parents of transgender youth mainly comes from published books by clinicians who work with transgender youth and their families or from the broader literature on supportive parenting for LGBTQ youth. Generally, the literature discusses two main types of supportive behaviors: creating an affirming environment and advocating for their child. Beyond these two major themes, parents often struggle with decisions about medical treatments such as puberty blockers, hormone replacement therapy, and surgeries. Parents primarily hold the power of whether transgender youth can receive such procedures, aside from socio-economic and legal barriers. Although, there are no clear-cut answers about benefits and risks of medical transition procedures, I will discuss recommendations for parents made by mental health and medical providers.

Creating an affirming environment. There are many ways parents can create an affirming and supportive environment for their transgender child. One crucial way parents can support their transgender child is by explicitly telling their child they support them. LGBTQ youth want *explicit* support from parents and family members (Roe, 2017). If support is not made clearly communicated, transgender youth might assume that their parents do not support them. When a child comes out, it often creates strain and a shift in family dynamics, even if family members are supportive. Lack of communication can increase family conflict and add strain on the parent-child relationship (Ryan, 2009). Transgender adults report suffering by not being able to discuss their experiences related to gender with their parents (Riley et al., 2013). Furthermore, parents reported that talking to their child about their gender helped them become more supportive (Matsuno & Israel, in preparation).

Another important supportive behavior for parents is to allow their child to have gender variant behaviors including how they dress, who they are friends with, and what activities they engage in. Transgender youth report wanting the freedom to make their own choices in their friends, appearance, and activities (Riley et al., 2013). Diane Ehrensaft (2011), a clinical psychologist, discusses two types of parenting behaviors related to a child's gender expression/identity: *obstructive parenting* and *facilitative parenting*. Facilitative parenting allows for creativity in the child's gender expression and identity; it implies an openness and acceptance for children to express their gender in their own unique way while helping them adapt to a world that may not embrace their way of being. Obstructive parenting styles are often governed by more rigid thinking that restricts the child's expression of themselves. Most parents will engage in both types of parenting and are often influenced by their own upbringing and socialization around gender (Ehrensaft, 2011).

Furthermore, parents may believe that they are protecting their child from bullying by monitoring their appearance and gender expression. Although this behavior may be well intentioned, it can communicate to the child that their gender expression is unacceptable, undesirable, or invalid (Ryan, 2009). Allowing for children to be their authentic selves through supporting non-conforming gender expressions, can help the child thrive and prevent the negative effects of gender dysphoria and concealment of one's true self (Durwood et al., 2017; Ehrensaft, 2011). Research shows that transgender youth who have socially transitioned (e.g. wearing clothes, using pronouns that match the child's affirmed gender) have lower rates of depression and anxiety in comparison to transgender youth who have not socially transitioned (Durwood, McLaughlin, & Olson, 2017), indicating that parental support of social transition has a positive impact on transgender adolescents' mental health.

Another way parents restrict their child's gender identity is by denying them access to LGBT related events, support groups, or LGBT friends. If parents believe that casual attribution of a transgender identity is influenced by environmental factors, they may believe that restricting access to transgender related environments will prevent their child from being transgender (Shpigel et al., 2015). However, this type of restriction can have serious negative mental health consequences by isolating their child and decreasing their social support (Ryan et al., 2010). Social support and community belongingness are well documented as strong protective factors against negative mental health risks for transgender people (Barr, Budge, & Adelson, 2016; Bockting et al., 2013; Budge et al., 2013; Moody et al., 2015). Therefore, parents who allow or encourage their child to access social support through transgender communities not only demonstrate their acceptance of their child's identity, but help their child gain social support that can drastically support their mental health (Ryan, 2009).

Transgender individuals often adopt a new name and pronouns that align with their gender (APA, 2015). Parents can demonstrate their support for their child by using the pronouns and name that their child desires (Ryan, 2009). Being referred to by the correct pronouns was one of the needs identified by a needs assessment of transgender youth and their parents (Riley et al., 2013). Transgender people have reported feeling a sense of validation and acceptance when others refer to them by the pronoun or pronouns that correspond to their gender identity (Burnes et al., 2010). Mental health professionals have identified referring to people by the correct pronoun as a core component of cultural competent behavior when working with transgender people (APA, 2015; Lev & Alie, 2012). Although parents often struggle with adjusting to new gender pronouns, it is an important way that parents can demonstrate their acceptance and support for their child (Hill & Menvielle, 2009).

Advocating for your child. Parents are in the position to advocate for their child in several different social systems. One of the most common scenarios where parents advocate for their child is with other family members. Caitlin Ryan from the Family Acceptance Project (2009) recommends that parents intervene when their child is mistreated based on their LGBT identity and that parents require that other family members respect their LGBT child. Parents can take an active step in ensuring that extended family members refer to their child with the correct name and gender pronouns and treat their child in a respectful manner. Parents can also take the burden off their child to educate others, by educating those around the child about gender diversity to help create a safe space (Hill & Menvielle, 2009).

Transgender youth may or may not want to disclose their transgender identity to other family members, friends, teachers or others. It's important that parents have continuous and

open conversation with their child about "coming out" and transition options. Prematurely telling others about the child's transgender identity before the child is comfortable could lead to embarrassment and a breach of the child's trust (Ehrensaft, 2011). However, if the child is open to others knowing their newly identified gender, parents can help alleviate some of their child's distress by "coming out" to others for their child. This can protect their child from potentially negative reactions from others, but it is important to maximize the child's agency in deciding when and how they want to come out. A continuous conversation about "coming out" is necessary as the child's comfort with other people knowing their transgender identity may differ based on context and may change after the child transitions.

Parents can also advocate for their child by helping them navigate other social systems where they might encounter problems. Transgender youth often experience mistreatment, harassment, or microaggressions at school and other community settings such as doctors' offices and religious communities (Horn, Kosciw, & Russell, 2009; Kosciw et al., 2012). Parents can advocate for their children if they witness or become aware of such occurrences (Ryan et al., 2010). For example, parents can talk to school administration if their child is mistreated to help prevent future bullying or mistreatment. Parents are in the position where they are likely to have more influence on other adults than transgender youth and can use their power to help advocate for their child's rights and safety. Transgender youth are likely to feel supported by their parents if they demonstrate that they are willing to take action against injustices.

Furthermore, schools and other agencies may lack affirmative policies that protect transgender youth (McGuire, Anderson, Toomey, & Russell, 2010). For example, schools may not have a method for changing names on school rosters or identifying students gender

pronouns, which could lead to teachers misgendering or "outing" a transgender student in class. Parents can educate themselves on their child's legal rights and work with transgender advocacy organizations to ensure their child is treated fairly (Hill & Menvielle, 2009). In fact, many affirmative resources and advocacy organizations for transgender youth have been started by parents (e.g. Santa Barbara Transgender Advocacy Network; Transgender Access Partnership).

Openness to transition. Dr. Diane Ehrensaft describes the concept of a gender-creative parent as a parent who is open to the many different gender paths that their child might take and who can withstand a state of not knowing (2011). A child's gender development is an evolving fluid process, which can be frustrating for parents who are seeking a sense of certainty and stability. Learning to take a flexible stance toward a child's gender may be easier for parents of children who have not reached puberty as no medical interventions are necessary. However, parents of youth who are pre-teen or teenagers face difficult decisions regarding medical transition procedures that potentially have life-long effects. These decisions can cause a considerable amount of distress and anxiety for parents.

Clinicians and physicians who work with transgender youth and their families recommend that parents keep an open mind about the potential benefits of medical transition procedures (Brill & Pepper, 2008; de Vries et al., 2014; Ehrensaft, 2011).
Amongst transgender adults, it is well documented that regret after medical procedures is rare and that psychological outcome improve after medical transition (Close, 2012). As recently as 2009, the World Professional Association for Transgender Health (WPATH) and the Endocrine Society have published guidelines that recommend treating transgender

adolescents with pubertal suppression and/or cross-sex hormone therapy for severe gender dysphoria (Hembree et al., 2009).

Research on mental health outcomes after medical transition is just emerging for transgender youth. However, the existing research supports positive outcomes from medical transition procedures. A seven-year longitudinal study of transgender youth ages 11 – 17, found that psychological functioning and well-being steadily improved after puberty suppression and gender reassignment medical procedures resulting in similar mental health profiles as same-age young adults from the general population (de Vries et al., 2014). Another recent study with a sample of transmasculine youth who received chest reconstruction surgery found that 93% of participants were satisfied with the surgery "all of the time" and none of the participants indicated any regret post-surgery (Olson-Kennedy & Warus, 2017). Additionally, a comparison between transmasculine youth pre-surgical and post-surgical revealed a significant decrease in gender dysphoria indicating support for the effectiveness in chest reconstruction surgery at reducing gender dysphoria (Olson-Kennedy & Warus, 2017).

If the child comes out to the parents in early childhood or at some point before puberty, parents may consider using puberty blockers to prevent the secondary sex characteristics associated with the child's assigned sex from occurring. This can be a useful medical intervention to buy time for the child explore their gender identity and can also give parents more time to educate themselves on medical options for their child and/or become more accepting of other medical interventions (Ehrensaft, 2011). Puberty blockers have few known side effects and are fully reversible if discontinued (Manasco et al., 1989). Puberty submission can prevent the child from ever having to experience the "wrong puberty" by

introducing cross-sex hormones before the child develops the secondary sex characteristics associated with their assigned sex (Hembree et al., 2009; Vance, Ehrensaft, & Rosenthal, 2014). Not only can puberty suppression prevent the gender dysphoria that often strongly occurs at puberty, it can also prevent later gender related surgeries or treatments from being necessary (Hembree et al., 2009). For example, if a transgender boy never grows breasts, he won't have to get them removed at a later point and may never experience chest dysphoria. Another example is that if a transgender girl's voice doesn't deepen, she likely won't experience the distress of being misgendered on the phone or have to spend the cost of voice therapy.

For youth who have already passed the early tanner stages of puberty, cross-sex hormone replacement, and gender affirmation surgeries are options that may support their mental health (Coleman et al., 2012). Gender dysphoria is often exacerbated by the onset of puberty, sometimes triggering the realization of a transgender identity or motivation to disclose a transgender identity to one's parents (Edwards-Leeper & Spack, 2012; Spack et al., 2012), which puts transgender youth a particularly high risk for suicide and other negative mental health outcomes. Therefore, rather than wait until the transgender adolescence is an adult, it may be beneficial to proceed with medical interventions during adolescence (Vance et al., 2014).

It is hard to predict the trajectory of gender development for gender non-conforming youth and therefore serious consideration should be taken before consenting to any medical intervention. However, for transgender youth experiencing severe gender dysphoria, medical interventions during adolescents can be lifesaving (Ehrensaft, 2011). It's recommended that parents have continuous conversations with their child about the impacts of puberty on their

feelings of distress (Brill & Pepper, 2008; Ehrensaft, 2011). While many transgender youth experience gender dysphoria related to their secondary sex characteristics, other do not experience gender dysphoria or don't experience it to the degree that would make medical interventions necessary or desired (Ehrensaft, 2016). Parents can become connected with medical doctors and mental health care providers who have expertise working with transgender youth to discuss possible treatments and the benefits and risks or each potential intervention (Brill & Pepper, 2008; Ehrensaft, 2016).

Parenting Interventions

While intervention research for changing behavior toward transgender youth is very limited, a substantial amount of research exists on interventions aimed at changing other parent behaviors such as corporal punishment and child abuse. A meta-analysis of parent training programs aimed at preventing child abuse found that parents' emotional well-being, child-related attitudes, and child-rearing skills were all related and impacted the risk of child abuse (Lundahl, et al., 2006). The meta-analysis of parent training programs demonstrated evidence that changing beliefs and attitudes is directly related to change in parent behaviors and parenting decisions (Lundahl et al., 2006; Milner, 2000). Additionally, parents' emotional well-being was also strengthened from parent training. Parent emotional well-being demonstrated moderated the relationship between parent attitudes and parent behaviors. Many of the interventions were also targeted toward increasing emotional well-being guided by the premise that increased emotional stability will promote parents' willingness and/or ability to apply adaptive child management practices. Programs geared towards behavioral outcomes tended to show more positive changes in behavior than nonbehavioral oriented programs, whereas nonbehavioral programs tended to have a greater impact on attitudes than behavioral programs. Rather than choose between targeting either

attitudes or behaviors Lundahl and Colleagues (2006) suggest that combining the two theoretical approaches is likely to promote positive outcomes.

Online Psychological Interventions

Online psychological interventions (OPIs) have increasingly become a popular method for delivering supportive treatments for a variety of mental health issues (Griffiths, Lindenmeyer, Powell, Lowe, & Thorogood, 2006) and has been a platform for parenting interventions (Dittman, Farruggia, Palmer, Sanders, & Keown, 2014). There are several advantages that an online platform offers such as the ability to serve many people at once, the convenience to participants, and the ability to more easily recruit research participants (Griffiths et al., 2006; Kraut et al., 2004). Online psychological interventions are also more accessible for those who may not have access to in-person resources or who may not be able to afford the cost of therapy or other in-person interventions (Bennett & Glasgow, 2009). Furthermore, OPI's may be more cost-effective because the expenses for the development and dissemination of an online psychological intervention are typically lower than the cost of traditional psychotherapy services (Griffiths et al., 2006). Once created, OPI's typically can be offered to users at little or no cost.

Online interventions also benefit stigmatized groups due to the anonymity of an online platform (Berger, Wagner, & Baker, 2005). Parents of transgender youth may experience secondary stigma related to their child's gender identity/expression and therefore may be reluctant to access in-person resources (Zamboni, 2006). Furthermore, in-person LGBT resources are often non-existent in rural communities (Willging, Salvador, & Kano, 2006) and in-person resources for parents of LGBT youth are rare even in urban communities (Riley et al., 2013). From a sample of 85 parents of transgender youth, 54 (63.5%) reported that "online educational materials" and "online articles/blogs" helped facilitate supportive

parenting behaviors (Matsuno & Israel, in preparation). These results indicate that the majority of parents of transgender youth are looking online for resources and that online materials are beneficial in encouraging transgender supportive behaviors and attitudes.

Existing research demonstrates OPIs as a promising avenue for benefiting psychological outcomes. A meta-analysis of OPI's found that online psychological interventions have been successful at changing targeted mental health outcomes and have shown similar effectiveness to in-person psychotherapy (Barak, Hen, Boniel-Nissim, & Shapira, 2008). Additionally, computer based behavioral interventions have effectively promoted health behaviors (Portnoy, Scott-Sheldon, Johnson, & Carey, 2008). A small number of researched OPIs have been developed to serve sexual and gender minority populations. Lin and Israel (2012) created an OPI that successfully reduced internalized heterosexism in same-sex attracted men. The intervention included psychoeducational materials, a video of a sexual minority discussing overcoming adversities, and reflective writing activities. A modified version of the OPI was successful at reducing internalized transnegativity among transgender adults (Israel et al., in preparation).

To date, just one OPI exists for family members of sexual minority youth. The OPI consisted of a 35-minute video, *Lead with Love*, that aimed to promote acceptance of sexual minority family members (Huebner, Rullo, Thoma, McGarrity, & Mackenzie, 2013). The video consisted of interviews with parents describing their experiences of how they overcame initial negative reactions to their child's sexual orientation, interviews with sexual minority youth, information on the impact of parental rejection, and behavioral recommendations for parents. The OPI was successful increasing parents' self-efficacy on parenting an LGB child and the vast majority of participants found the video helpful. Currently, no researched online interventions for parents of transgender youth exist. However, several organizations offer

online educational resources for parents of transgender youth and recently Stanford School of Medicine launched a free online course for parents of transgender children (described below).

Interventions for Parents of Transgender Youth

Several psychologists have suggested that parents and mental health providers avoid reparative approaches (restricting the child's gender expression to the gender assigned at birth) and engage in affirmative approaches with transgender youth (Brill & Pepper. 2008; Ehrensaft, 2011; Lev, 2004; Menvielle & Rodnan, 2011). There are some published books that provide suggestions for affirmative parenting practices for transgender adolescences such as "The transgender teen: a handbook for parents and professionals supporting transgender and non-binary teens" by Brill and Kenney (2016), "Helping your transgender teen: A guide for parents" by Krieger (2011) and "The gender creative child: pathways for nurturing and supporting children who live outside gender boxes" by Ehrensaft (2016). These books provide very useful guidance for supportive parenting approaches and how to support families with a transgender child based on the authors clinical experience working with families of transgender youth. However, only one parenting intervention has been empirically researched.

Hill and Menvielle (2009) and Hill et al. (2010) conducted studies on the *Children's Gender and Sexual Advocacy and Education Program*, an affirmative parent intervention based in Washington, D.C. The main goals of the program were to help parents affirm and support their children and help them promote healthy adjustment for their children. The program consisted of more than 200 families who participated in trainings as well as online listserv with online discussions and a smaller number of families who participated in in-person support groups. The program informed parents about the negative consequences of

trying to enforce gender conformity in their children such as feelings of shame and lower self-esteem. The program also provided parents with strategies for dealing with teasing and harassments, how to cope with the loss of an idealized future for the child, and how to use humor to deal with and resolve difficult situations. Parents are encouraged to resolve their own shame or discomfort and advocate for their children in other social networks. Finally, the program encourages parents of prepubertal children to not to make rigid assumptions about long-term outcomes of their child's gender journey and be open to multiple future paths (i.e. transgender identity, sexual minority identity, heterosexual identity).

Qualitative interviews with parents affiliated with the program showed promising outcomes of the interventions effectiveness in increasing supportive behaviors, even for those who initially struggled with having gender variant children (Hill & Menvielle, 2009). Themes from the interviews showed a reduction in parents' self-blame and feelings of isolation. The online listserv component of the program allowed parents who had limited access to face-to-face support groups connect with each other. Another study conducted on the same program revealed that children whose parents participated in the program were less pathological than children seeking help from more traditional programs aimed at maintaining gender conformity (Hill et al., 2010). Menvielle and Rodnan (2011) discuss observations from facilitating the in-person support groups for parents of transgender youth associated with the *Gender and Sexual Advocacy and Education Program*. Common themes discussed in the support groups were initial reactions to the child's coming out, anxiety related to coming out to relatives and friends, reactions to perceived losses, and worries related to transitioning.

Although not empirically researched, a free online course was recently created by medical providers at Stanford School of Medicine (Adam, 2017). The online course is titled

Health Across the Gender Spectrum and is organized into three weeks with approximately one hour of content in each week. The first week covers basic terminology and frameworks about gender identity and sexual orientation. The second week focuses on transgender health, transition, and non-binary identities and the third week addresses ways to create gender-inclusive environments. The curriculum is taught through illustrated, animated stories and short teaching videos featuring Stanford physicians, educators, and a transgender faculty member. There are short quizzes following each topic to ensure an understanding of the main concepts presented. Despite a lack of empirical research on the course, the course was rated an average of 4.8 out of 5 stars by 450 course participants since May of 2017, indicating the course is frequently accessed and that participants are satisfied. The qualitative responses from participant reviews indicate that the course is valuable and informative.

Theoretical underpinnings of the proposed intervention

Supporting parent emotional well-being. Parents experience a significant amount of distress when they discover their child is transgender, even if the parent is supportive of their child's transgender identity (Di Ceglie & Thu¨mmel, 2006; Kuvalanka et al., 2014; Malpas, 2011; Riley et al., 2011). Counseling theories offer many potential interventions to reduce psychological distress and support emotional well-being. *Validating* and *normalizing* a client's emotions is a widely-used strategy in many types of therapy (Hill & O'Brien, 2004). Validating and normalizing emotions can provide a sense of relief and give permission to experience difficult emotions (Howard, 2017). Furthermore, parents may feel ashamed if they experience negative emotions related to their child's transgender identity or may be confused if they experience multiple emotions at once (e.g. love and sadness) (Menvielle & Rodnan, 2011). Many clinicians who work with parents of transgender youth recommend that the parents have a platform away from their children where they can openly

discuss all the emotions they experience related to their child (Brill & Pepper, 2008; MacNish & Gold-Peifer, 2011; Menvielle & Rodnan, 2011).

Receiving social support from other parents of transgender youth is another promising factor in supporting parent well-being. Parents frequently describe great relief in discovering others who are struggling with a similar experience (Hill & Menvielle, 2009). Talking to other parents can further help validate and normalize parents' thoughts, emotions, and worries. Furthermore, social support may be crucial for families of transgender youth who often describe of isolation (Ehrensaft, 2011). Parents who do not have access to face-to-face social support often turn to online networks for support (Carroll & Gilroy, 2002; Gold, 2008; Hill & Menvielle, 2009).

Parents often report struggling with grief and difficultly adjusting to the perceived losses associated with a child's transition into a different gender (Dierckx et al., 2016). Family members may have a difficult time coping with the ambiguous loss associated with transition because they come up against conflicting concepts in the meaning making process of the loss (i.e. their loved one is both absent and present) (Norwood, 2013). Parents who are struggling with feelings of grief related to their child's assigned sex may benefit from the knowledge that grief is a common experience even among the most supportive parents (Norwood, 2012).

Parents make sense of their feelings of loss in various ways depending on their preconceived understandings of sex and gender and the relationship between the two (Norwood, 2013). In a qualitative study, Norwood (2013) distinguished four types of meaning making processes that family members will use to understand their loved one's transition: *replacement, revision, evolution,* or *removal*. Family members that believed the concepts of sex and gender are tightly connected, were more likely to feel as though the

person they previously knew was completely lost and either replaced by a different person or not at all after transition (replacement and removal meaning). Family members with a looser association between sex and gender were more likely to believe their loved one was not lost, but rather they had evolved or were the same, but had been misunderstood as their assigned gender (evolution and revision). Those who engage in the first two types of meaning making processes may experience a greater sense of loss when their family member transitions.

There are multiple ways to help support parents experiencing grief related to their child transition. First, moving parents toward either a "revision" or "evolution" understanding of their child's transition may decrease intense feelings of loss and change the task of grieving to a task of adjustment. It appears that changing in conceptualizations of relationship between sex and gender may influence what type of meaning making process will take place (Norwood, 2013). Therefore, changing sex essentialist beliefs may consequently change the type of meaning making process the parent engages in. Regardless of the type of meaning the parent makes, research shows that meaning making after a loss is an essential part of coping with grief (Stroebe, Hansson, Schut, & Stroebe, 2008). A meaning making intervention such as expressive writing may help parents engage in the meaning making process of their child's transition and may help them cope with their grief (Boals, 2012; Park & Esposito, 2011). It's also suggested that meaning making interventions are combined with other forms of coping for the best psychological outcomes following a loss (Park & Esposito, 2011).

Parents often worry about their child's safety and hold negative expectations about their child's future due to the prevailing stigma of transgender people and frequent occurrence of discrimination and violence toward transgender people (Katz-Wise et al., 2017). These expectations can influence their child's own expectations of their future as well

(Seginer & Mahajna, 2016). Anticipation of negative events can be both protective and harmful (Link, Wells, Phelan, & Yang, 2015) and although it is beneficial to plan for possible discrimination and microaggressions, worries and negative anticipation about the future can have negative mental health consequences. Instilling hope is one method that can contest the negative expectations driven by fear (Seginer, 2009). Katz-Wise et al. (2017) suggest that access to role models may shape parents hopes and future expectations, as many parents have limited exposure to positive portrayals of transgender people. Additionally, positive psychology research has tested several interventions aimed at increasing hope that may be beneficial for parents (Seligman, Steen, Park, & Peterson, 2005). Some examples include identifying one's own strengths and engaging in gratitude exercises. Increasing hope may help parents struggling with worries about their child's future.

Reducing prejudice and changing beliefs about transgender people. Intergroup bias often becomes ingrained in childhood and is resistant to change thereafter. Interventions aimed at changing attitudes rarely have durable effects (Paluck & Green, 2009). However, social perspective taking based interventions have shown promise in reducing prejudice. Broockman and Kalla (2016) found that a 10-minute canvassing intervention containing perspective taking and active processing techniques reduced prejudice towards transgender people for at least three months. Furthermore, the effects were seen with transgender canvassers and non-transgender canvassers. Therefore, a social perspective taking exercise might help parents empathize with their child versus taking an oppositional stance.

Another well-researched factor in decreasing bias is intergroup contact (Pettigrew, 1998) and blends well with social perspective taking. Both creating personal contact with transgender people and taking their perspective could reduce the perception of transgender people as an outgroup or "other". People perceive outgroup members in a more stereotypical

way and exaggerate differences between themselves and outgroup members (Hewstone, Rubin, & Willis 2002). Therefore, people with little or no contact with transgender people may have stereotypical perceptions of transgender people that are negative. The research on intergroup contact interventions is promising in reducing prejudice. In fact, even imaging intergroup contact was found to reduce not only explicit, but implicit prejudice (Crisp & Turner, 2009). Furthermore, Internet-based contact through video chat or positive media portrayals can also improve outgroup attitudes and orientations (Schiappa, Gregg, & Hewes, 2005; Yablon & Katz, 2001).

Finally, educational strategies that promote knowledge and appreciation of other groups (Engberg, 2004) can also help to reduce bias. Meta-analysis of parent training programs designed to prevent child abuse show that providing information about the effects of authoritative parenting and child socialization strategies was an effective means to changing attitudes linked to abuse (Lundahl et al., 2006). Knowledge about gender diversity significantly predicted attitudes toward transgender people (Matsuno & Israel, in preparation). Therefore, providing information about gender diversity, transgender identities, and the impact of supportive and unsupportive parenting may impact parent's attitudes toward transgender people broadly and their attitudes on parenting a transgender child.

Changing parenting behaviors. Behaviors are influenced by one's intention to engage in the behavior (i.e. behavioral intentions). Behavioral intentions are plans to engage in a particular behavior and are viewed to be an immediate antecedent to the behavior itself (Ajzen, 1991). A meta-analysis of 47 studies found that medium and large changes in behavioral intentions were associated with small to medium changes in actual behaviors (Webb & Sheeran, 2006). Therefore, changing behavioral intentions is likely to consequently change behaviors. Attitudes about the behavior and what is perceived to be the social norm

regarding the behavior influences someone's behavioral intentions of employing a behavior (Ajzen & Fishbein, 1972; McCabe, Rubinson, Dragowski, & Elizalde-Utnick, 2013). Along with shifting attitudes and drawing awareness to social norms, learning behavioral-skills, strategies, or tools to facilitate the new behavior is a key component of changing behavioral intentions (Fisher, Fisher, & Harman, 2003). A community-based educational intervention aimed at changing behavioral intentions of professionals toward sexual minority youth found that combining educational strategies with skills training was successful in behavioral intentions to support sexual minority youth (Craig, Doiron, & Dillon, 2015).

Along with behavioral intentions, self-efficacy influences adopting a new behavior. Self-efficacy is someone's self-perception of their behavioral competency or ability to execute a specific action in a specific situation (Bandura, 1977). A meta-analysis of parental self-efficacy found that self-efficacy was directly related to behavioral outcomes (Jones & Prinz, 2005). Several parenting interventions target self-efficacy because of its' strong impact on behavior change including a few studies related to parenting and sexuality. For example, there have been parenting interventions successful at increasing parental self-efficacy for communication with a child about sex (Guilamo-Ramos et al., 2011; Weekes, Haas, & Gosselin, 2014). Interventions aimed at increasing parent self-efficacy of employing sexual minority supportive behaviors are sparse (Huebner et al., 2013) and interventions for transgender affirming parenting behaviors is non-existent.

Bandura (2006) describes four determinants of self-efficacy: performance accomplishment history, vicarious experience (e.g. seeing another person successfully employ the behavior), verbal persuasion of efficacy, and emotional arousal (e.g. overcoming anxiety related to the behavior). Bandura also offers various "modes of induction" for each source of self-efficacy that give direct guidance on how to increase self-efficacy.

Performance accomplishment history can be strengthened through repeated success at a behavioral task raise (i.e. participant modeling). This enhances one's sense of personal mastery expectations and once this sense is built, the negative impact of occasional failures is reduced. Live modeling or symbolic modeling also can create a vicarious experience that enhances self-efficacy. Verbal persuasion of efficacy can include positive reinforcement and encouragement when practicing the behavior and generally suggesting the person can cope successfully with the task at hand. Finally, the emotional arousal component of self-efficacy can be influenced through desensitization and exposure approaches. Desensitization includes graduate exposure to the aversive situation in conjunction with anxiety reducing activities (Wolpe, 1974). An exposure approach introduces prolonged exposure to aversive events without relief until emotional reactions are extinguished (Foa, Chrestman, & Gilboa-Schechtman, 2008).

Additionally, social-cognitive theory (SCT) contributes more methods for increasing self-efficacy. SCT describes a bidirectional relationship between five basic human capabilities all related to one's ability to successfully initiate, regulate, and sustain their own behavior (Stajkovic & Luthans, 1979). The five human capabilities are: symbolizing (i.e. processing visual experiences into cognitive models), forethought (i.e. planning behaviors and anticipating consequences), observational (i.e. observing the performance of others and the consequences of their actions), self-regulatory (i.e. setting internal standards and evaluating one's own performance), and self-reflective (i.e. reflecting on actions and determine if they can be successful in the future). Therefore, increasing any of the five basic human capabilities is likely to influence the others and have an impact on self-efficacy and behavior change.

Based on self-efficacy research, it appears that helping parents visualize, plan and successfully practice supportive parenting behaviors will increase their self-efficacy. Also modeling desired behaviors, verbal persuasion, and exposing parents to potentially aversive or feared situations can help increase parental self-efficacy at transgender supportive behaviors. Some supportive parenting behaviors may not require increased self-efficacy to achieve such as taking an open stance to transition procedures or allowing their child to wear gender variant clothing. However, other behaviors such as adjusting to new pronouns may be a difficult task that requires self-efficacy to successfully implement. Therefore, increasing both behavioral intentions and self-efficacy is strong method for producing behavioral changes for a variety of behaviors (Ajzen, 2002).

Parents of transgender youth often fear making mistakes and hurting their child (Matsuno & Israel, in preparation). They might also feel pressure to make the right parenting decisions for their child due to the high mental health risks that transgender youth face (Brill & Kenney, 2016). This increased pressure to "get it right" may induce self-criticism or increased stress. Therefore, it may be helpful for parents to employ self-compassion when working towards changing their behaviors to support their child. Self-compassion is defined by three components: a) self-kindness – being kind and understanding toward oneself in instances of pain or failure, b) common humanity – perceiving one's experiences as part of the larger human experience, and c) mindfulness – holding painful thoughts and feelings in balanced awareness rather than over-identifying with them (Neff, 2003). Not only is self-compassion associated with lower self-criticism, feelings of isolation, and rumination it is also related to behavioral motivation (Neff, 2003). For example, higher levels of self-compassion are associated with greater levels of intrinsic motivation and self-determination (Neff, Hsieh, & Dejitterat, 2005). People who are intrinsically (versus extrinsically)

motivated are more likely to see failure as a learning opportunity and are less likely to experience anxiety associated with avoiding failure (Neff et al., 2005). Another study found that self-compassion increased motivation to improve personal weaknesses, moral transgressions, and test performance (Breines & Chen, 2012). Therefore, increasing parents self-compassion may help to intrinsically motivate them to employ transgender supportive practices and may also reduce anxiety, self-criticism, and feelings of isolation.

Chapter 3 - Method

Part 1 - *Intervention Development and Refinement*

Focus Group Participants

Participants were seven parents, legal guardians, or primary caregivers of youth age 10 or older who identify as a gender different from the sex they were assigned at birth (e.g., transgender boys, transgender girls, non-binary youth). Participants with children who had a gender non-conforming gender expression (i.e., outward appearance, clothing, interests that did not conform to the expectations of the assigned sex), but identified with sex they were assigned at birth were not eligible to participate. There were no restrictions on the length of time that the participant had been aware of their child's transgender identity.

Two focus groups were completed. In total, the sample of focus group participants included two cisgender men and five cisgender women who ranged in age from 39 to 60 years old (M = 46). The sample was 71% (n = 5) European American/White, 14% (n = 1) Asian/Pacific Islander, and 14% (n = 1) Latinx. Slightly over half of participants were heterosexual (n = 4, 57%), with the remaining identifying as gay (n = 1; 14%), bisexual (n = 1; 14%), and queer (n = 1; 14%). Three participants had completed a graduate or professional degree, three completed a Bachelor's degrees, and one completed trade/vocational school. The sample reported high socioeconomic status (SES) with all participants indicating their SES was between 6-8 on a scale from 1 – 9, with 9 indicating the highest SES (Subjective Socioeconomic Status Scale, Adler, Epel, Castellazzo, & Ickovics, 2000). Three participants reported no religious affiliation (43%). Others identified as Buddhist (n = 1, 14%), Christian (n = 1, 14%), Jewish (n = 1, 14%), and Unitarian (n = 1, 14%). Participants reported religion was "not important" (n = 4, 57%), "fairly important" (n =2, 29%), and "very important" (n =

1, 14%). Five participants identified as "very liberal" and two identified as "liberal." Most participants lived in a suburban area (n = 6, 85%).

Focus group participants had a total of nine children who identified as a gender different from their assigned sex. The trans youth ranged in age from 10 – 23 (M = 17.56). Among the participants' trans children, six (67%) were assigned female at birth, three (33%) were assigned male at birth, five (56%) identified as transgender boys, three (33%) identified as transgender girls, and one (11%) identified as agender. Participants reported that none of their children had changed their gender identity more than once. Most participants reported their child had changed their outward gender expression and used different pronouns (89%). Over half of the trans youth had used puberty blockers and started cross-hormone replacement therapy (56%). Four had legally changed their name and legally changed their sex marker (44%) and two had received gender-related surgery (22%).

Feedback from parents of transgender youth

Input on an outline of the intervention was gathered from two focus groups. The first focus group took place on February 24th, 2018 in Berkeley, California and consisted of two participants. Participants were recruited by in-person advertising at two support groups for parents of trans youth, a PFLAG meeting at the Oakland LGBTQ community center and the Gender Spectrum parent support group in Oakland, CA. Participants were also recruited online through advertisements on PFLAG Facebook pages in the San Francisco Bay area. Interested participants were requested to complete a demographic form online and confirm their availability prior to the focus group. Four participants reported that they planned on attending the focus group through the Qualtrics survey. However, only two participants attended the first focus group. Based on the low attendance to the first in person focus group, a second focus group took place through Zoom (an online video conferencing software) on

April 22nd, 2018. Participants for the second focus group were recruited through the Santa Barbara Transgender Advocacy Network (SBTAN) and similarly participants were asked to complete an online demographic survey and confirm their availability prior to the focus group.

For both focus groups feedback was solicited on the content, the design, and the engagement of the intervention based on a detailed outline of the intervention presented in power-point format (see Appendix A for focus group questions). After informed consent was obtained, the focus group discussions were audio recorded. The first focus group was 1 hour 40 minutes in length and the second focus group was 2 hours in length. Based on participant feedback from the first focus group, the last activity in Module 1, which included a video with positive portrayals of families with transgender child was replaced with an activity about coping strategies. Additionally, the order of activities within Module 2 was changed and a video with transgender teens discussing what made them feel supported was added. Based on feedback from the second focus group changes were made to create smoother transitions between activities and modules and additional information was added to the "grief" related activities. The original outline of the online intervention can be found in Appendix B and the revised outline after both focus groups can be found in Appendix C. All participants received the option to donate $15 to either the Pacific Center or SBTAN, or to receive a $15 Amazon gift card. Two participants donated their incentive to the Pacific Center and five participants donated their incentives to SBTAN. The full intervention was developed after feedback was solicited from the focus groups.

Expert feedback. After the full content of the intervention was created and formatted onto the Qualtrics platform, feedback was solicited from six experts in transgender mental health**.** The experts were chosen based on their published work in an academic journal on

transgender well-being, their clinical experience with trans youth and their families, and their availability. All of the experts were asked to review an outline of the entire intervention and were asked to provide qualitative feedback about the intervention as a whole. Each expert reviewed material from one of the three modules. Therefore, two experts reviewed each module and provided qualitative feedback on the strengths and improvements that could made on the module they reviewed. Experts also provided quantitative data after each module activity by rating "how much the activity accomplished the goal of the module" on a scale from 1 – 5, with 5 labeled as "very much" and 1 as "not at all." The activities in Modules 1 and 2 were rated a 5 by experts indicating they accomplished the goal of the module. For Module 3, ratings ranged from 3 – 5 with most activities averaging a 4.5 rating. The "talking about gender" activity had the lowest average rating of four out of five.

Based on qualitative expert feedback for Module 1, the audio recordings were re-recorded with slower speech, the parent interview video was edited, terminology was added at the beginning of the module, and a fourth writing prompt was added about the participants' hopes and dreams for their child. Each educational video within Module 2 was revised based on expert feedback. Finally, the parent interview video, educational videos about pronouns, the scenario prompts, writing prompts, and multiple-choice answers were revised based on expert feedback for Module 3. The only expert feedback that was not incorporated was including more interviews with parents of color. Limits on time and funding prevented more parents of color from being interviewed for the videos in this initial study. However, pictures were added throughout each module that included images of parents from a variety of racial minority backgrounds to increase the representation of parents of color in the intervention content.

Description of Intervention

The following is a description of the finalized version of the Parent Support Program used in the pilot study after revisions based on parent and expert feedback were made.

Module 1. The first module was designed to decrease parents' psychological distress through normalizing their emotional experiences and helping them feel less isolated. Initially, parents identified the emotions they experienced when first learning their child was transgender or non-binary. Psychodynamic therapies claim that identifying and expressing emotions is a key component in reducing negative psychological symptoms (Hilsenroth, 2007). The multiple, sometimes contradictory emotions that parents experience were normalized and validated through psychoeducational materials (audio recordings and text) and written quotes from other parents. Next, parents identified the factors that are contributing to their distress from a checklist of factors based on review of the literature (e.g., fear of telling my family and friends). Participants then watched a ten-minute video of four parents discussing their initial experiences and emotions when learning their child was transgender and what factors made it hard for them to accept and support their child. The goal of the activity was to help the participant feel less isolated and provide hope for overcoming barriers to acceptance. The third activity provided information about the complicated grieving process that parents of transgender youth often experience. Parents completed four short response questions that asked them to identify their current emotions about their child's identity. Then they completed 4 longer writing exercises designed to help them process their emotions related to loss and grief. Finally, participants were asked to identify three coping strategies they would engage in during the next week. The module was then summarized in a 2-minute video with power-point slides. It was anticipated that Module 1 would take 30 min – 60 min to complete.

Module 2. The second module aimed to increase parental knowledge about gender diversity and decrease negative attitudes and beliefs about transgender people. First, participants were provided information about gender diversity and through six short videos (2 – 5 minutes) that dispelled common myths about being transgender. The videos were framed as the following questions: 1. Aren't sex and gender the same thing? 2.What do you mean more than two genders? 3. Is being transgender a choice? 4. Is being transgender a new fad? 5. Aren't transgender people just really gay? And 6. Is being transgender a sign of mental illness? Participants then watched a 7 min 20 second video of three trans youth discussing their experiences and what their parents did that felt supportive. The trans youth interviewed were a White trans girl (age 10), a White trans boy (age 16), and a multi-racial (Asian and White) trans man (age 18). This video was intended to create more intergroup contact with trans youth and to build empathy. Participants then engaged in a social perspective taking exercise where participants were given a brief description of transgender teenager accompanied by an image of the teenager described. Participants were then asked to writing a "coming out letter" from the perspective of the transgender teen to their parents in first person. The goal of the activity was to create empathy and understanding of their transgender child. Finally, participants learned about the impact of parental acceptance and rejection through a short educational video of the researcher discussing transgender mental health with a PowerPoint presentation that included images of families with a trans child. It was anticipated that it would take participants 30 – 60 min to complete this module.

Module 3. The final module was focused on changing parents' behavioral intentions and self-efficacy to engage in transgender supportive behaviors. The module began with a seven-minute video of parents discussing what helped them support their child and providing advice to other parents. The majority of the module was organized by six different behavioral

skills titled: talking about gender, openness to exploration, pronouns and names, coming out, becoming an ally/advocate, and making medical decisions. Participants were instructed to choose between three to six skills to learn more about. Each skill will be presented through various activities including: instructional videos with examples, practicing the skill, choosing a behavior after reading a scenario, developing a plan for coming out, and other psychoeducational materials. The module ended with a writing exercise aimed to reinforce newly learned skills and promote self-compassion. It was anticipated that Module 3 would take participants 60 – 90 min to complete.

Part 2 - *Pilot test*

Participants

Participants of the pilot study were 80 (53 control and 27 intervention) adult U.S. parents, legal guardians, or primary caregivers of youth age 10 to 18 who identified as a gender different from the sex they were assigned at birth (e.g., transgender boys, transgender girls, and non-binary youth). Most participants were middle aged (M = 45.66; SD = 6.8, range 29 – 62). The vast majority of participants (n = 73, 91%) were cisgender women. Only five participants (6%) were cisgender men and two were genderqueer or non-binary. In "check all that apply" format, 97.5% (n = 78) of the sample were European American/White, 3.8% (n =3) were Latina/o/x or Hispanic, and 1.3% (n = 1) was American Indian/Alaska Native. About three quarters of the sample identified as Heterosexual (n = 59, 73.8%), 10% (n = 8) identified as bisexual or pansexual, 10% (n = 8) identified as queer, questioning, or unlabeled, 7.6% (n = 6) identified as lesbian or gay, and 1.3% (n = 1) identified as asexual. The sample was highly educated with 67% of the sample reporting they completed a Bachelor's degree or a higher degree, and the remaining 33% indicating an education level of Associate's degree or less. Almost half the sample rated their socioeconomic status at six or

seven (47.3%) with an average rating of 5.41 (*SD* = 1.85) on a scale from one to nine (Adler et al., 2000). Most participants reported no religious affiliation or identified as Atheist (38.8%). The next largest religious group was Christian (33.8%), followed by Catholic (16.3%), Other (6.3%), Jewish (3.8%), and Buddhist (1.3%). Only 6.3% of the sample said that religion was "very important," whereas 28.7% said religion was "fairly important," and 65% said religion was "not very important" in their life. The majority of participants identified their political views as "very liberal" (46.3%) or "liberal" (43.8%) and identified as Democrat (77.5%). Participants lived in 28 different states with California and Wisconsin being the most common states where participants resided (n = 10 each). Three quarters of participants reported living in a suburban area, 18.8% in a rural area, and 6.3% in an urban area. See Table 1 for breakdown of the completed sample demographics.

Among the participants' trans children, the average age of was 14.59 years old (range 10 – 18). The majority (72.5%) were assigned female at birth and 27.5% were assigned male at birth. Slightly over half (56.3%) identified as transgender boys, 26.3% identified as transgender girls, and 17.5% identified as either non-binary, bigender, genderfluid, or other. The majority of participants reported their children had not changed their gender identity more than once (83.8%). Table 2 shows the percentage of trans youth who engaged in various types of transition related behaviors and the types of resources parents had previously sought out. Almost half of participants (48.1%) had become aware of their child's trans identity over 2 years ago, 21.5% over 1 year ago, 15% six months to a year ago, and 15.2% less than six months ago. About one quarter of the sample reported that they knew ten or more transgender people and over half of participants reported knowing four or fewer transgender people.

Measures

The structure, format, and reliability of the measures are described below. A more detailed description of the measure distributions, reliability, and validity in the current study is provided in the results section given that this information relates to the feasibility and acceptability of the measures. Each measure is included in appendices (D – Q).

Pre-test measures.

Eligibility questions. Once participants provided consent to participate, they completed an initial screening to determine whether they were eligible to participate in the study. Three questions were used to assess whether the participant was eligible: 1) Do you live in the United States? 2) Are you a parent, legal guardian, or primary caretaker of a child age 10 – 18 who identifies as transgender, non-binary, or any gender different from the gender assigned to them at birth? 3) Have you participated in providing any feedback to this project before? Participants who were ineligible were directed to a resource page for parents of transgender and non-binary youth.

Demographics and pre-test questions. Participants were asked to fill out a demographic form with information about themselves and their transgender child. The participant was asked to provide their age, gender, assigned sex, race, sexual orientation, socioeconomic status, education, religion, and geographic environment. Participants were asked the age, assigned sex, and gender of their child. Participants were also asked whether their child had changed their gender identity more than once and what transition related actions their child had taken (e.g., changed their pronouns). Other pre-test variables that were hypothesized to relate to outcome measures were assessed through the following questions: 1) How many transgender people you know? 2) What resources have you accessed prior to the intervention? and 3) How long have you been aware of your child's transgender identity? See appendix D.

Psychological distress. Psychological distress among parents of transgender youth was measured by the Brief Symptom Inventory 18 (BSI – 18) (Franke, Jaeger, Glaesmer, Barkmann, Petrowski, & Braehler, 2017). The measure contains three, six-item scales, somatization, depression, and anxiety. The 18-iem subscale demonstrated strong reliability in a previous sample with an of alpha (α = .82) for the somatization subscale, (α = .87) for the depression subscale, and (α = .84) for the anxiety subscale. The combined global distress index (GDI) showed strong reliability (α = .87) and demonstrated adequate validity in a confirmatory factor analysis in a previous study (Franke et al., 2017). Each item is measured on a 4-point Likert scale from "0=not at all" to "3=nearly every day." (See Appendix E).

Loneliness. To measure feelings of isolation and loneliness the Roberts Version of the UCLA Loneliness Scale (RULS-8; Roberts, Lewinsohn, & Seeley, 1993) was used. The scale was an 8-item scale was measured on a four-point scale with response options including "never (0)", "rarely (1)," "sometimes (2)," and "often (3). Scale scores ranged from 0 – 24. The instrument has demonstrated adequate reliability (α = .79) and validity (Pinquart & Sörensen 2001). An example item from the emotional loneliness subscale was "I lack companionship." (See Appendix F)

Post-test measures.

Current emotional state. The participants' emotional state following Module 1 was measured with the Positive and Negative Affect Schedule, (PANAS; Watson, Clark, & Tellegen, 1988). The scale consisted of 20 items that measured two subscales, positive affect and negative affect. Each item listed a "positive" or "negative" emotion and participants were asked to rate how much they experienced the emotion on a 5-point Likert scale from "1 – Very slightly or not at all" to "5-extremely." Both subscales showed good reliability in previous samples (PA, α = .86 - .90, NA, α = .84 - .87) (See Appendix G).

Knowledge. To date no published measure exists for knowledge about gender diversity or transgender people. Therefore, the author created a 16-item measure designed to test knowledge about constructs of gender and experiences of transgender people. Based on a previous study the 16-item questionnaire was revised to a 7-item measure based on inter-item correlations (Matsuno & Israel, in preparation). The 7-item measure previously demonstrated strong reliability ($\alpha = .84$) and was strongly correlated with a measure of sex-essentialist beliefs demonstrating convergent validity. The items included multiple choice questions and true/false questions that were recoded into correct/incorrect responses. Therefore, the scale scores range from (0 – 7). (See Appendix H).

Essentialist beliefs. Essentialist beliefs about sex and gender was measured by a subscale (sex essentialism) of the Transgender Prejudice Scale (TPS) (Davidson, 2014). The sex essentialism subscale contains 16 of the 25 items on the TPS. Items were measured on a 6-point scale from strongly disagree to strongly agree with no neutral option. The sex essentialism subscale was intended to measure the extent to which individuals conceptualize gender as dichotomous, unchanging, and biologically determined. For example, one item states, "Transwomen were born as men and will therefore always be men." The sex essentialism subscale showed excellent reliability in a previous sample ($\alpha = .99$) (See Appendix I).

Beliefs about etiology. Casual and controllability attributions of gender atypical behaviors/expressions was measured using a modified version of the Beliefs about the Etiology of Sexual Orientation (BESO) scale (Frias-Navarro, 2009). The measure consisted of two subscales Genetic Etiology and Learned Etiology, with 4-items each. Both subscales showed a high internal consistency reliability in previous samples with alpha values of .93 for the Genetic Etiology subscale and .88 for Learned Etiology (Frias-Navarro, Monterdi-i-

Bort, Pascual-Soler, & Badenes-Ribera, 2013). The scale was modified by replacing "homosexual sexual orientation" with "transgender identity" and other terms that related to sexual orientation were changed to reflect gender identity or gender nonconformity instead. For example, the item "The homosexual sexual orientation is an inevitable behavior that depends on genetics" will be replaced with "A transgender identity is an inevitable behavior that depends on genetics." A Likert scale with 5 response options was used ranging from 1 (completely disagree) to 5 (completely agree). (See Appendix J).

Attitudes toward transgender people. The Attitudes Toward Transgender Individuals Scale (ATTI) (Walch et al., 2012). The 20-item measure had response options on a 5-point scale from "strongly agree" to "strongly disagree." Exploratory and confirmatory factor analyses previously revealed a single-factor structure with high internal consistency reliability and evidence of convergent and discriminant construct validity. The measure previously demonstrated strong reliability in a study with parents of transgender youth (α = .93) and was significantly correlated with other measures of attitudes toward transgender people (Matsuno & Israel, in preparation) (See Appendix K).

Behavioral intentions. There were no existing measures of behavioral intentions to engage in transgender supportive parenting behaviors and therefore a measure was developed based on the psychological literature. Some items were adapted from the U.S. transgender survey (2016) that included questions about supportive and rejecting parenting behaviors (James et al., 2016). Items from a study on LGBT family acceptance were also adapted for the new measure (Ryan et al., 2010). Items reflected the five areas of transgender affirming parenting skills identified from the literature in chapter 2. Items were measured on a 7-point Likert scale ranging from 1 (unlikely) to 7 (likely). An example item is: "I plan to tell my

child I respect and support them." The original 25-item scale was reduced to 18 items based on the scale reliability (See Appendix L).

Self-efficacy. There were no existing measures of self-efficacy regarding transgender affirming parenting behaviors and therefore a measure was developed based on guidelines from Bandura's (2006) "guide for constructing self-efficacy scales." The items were similar or identical to items from the behavioral intentions scale that were based on the psychological literature on supportive parenting practices. The 19- item scale had response options on a 5-point scale from 1 (not at all confident) to 5 (highly confident). An example item is "Use my child's preferred gender pronouns." The scale items are listed in Appendix M.

Self-compassion. Self-compassion was measured by adapting the self-kindness subscale of the Self-Compassion Scale – Short Form (SCS-SF) (Raes, Pommier, Neff, & Van Gucht, 2011). The subscale demonstrated adequate reliability in a previous sample ($\alpha = .78$) (Raes et al., 2011). The five items were adapted by adding "as a parent of a trans/non-binary child" at the end of each item to measure self-compassion related to parenting a trans child. An example of an item is "I am loving towards myself as a parent of a trans/non-binary child." Items were rated on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). (See Appendix N).

Feasibility. Feasibility was assessed for the intervention itself as well as the feasibility of conducting an efficacy study. Feasibility was assessed through the attrition rate for intervention and control participants. Data was collected on what points participants dropped out and drop-out participants were asked about the barriers that preventing them from completing the intervention (See Appendix O). Feasibility was also assessed by measuring the amount of time participants engaged with intervention and how often they

exited and returned to the intervention. The feasibility of the recruitment method was evaluated by the time it took to recruit enough participants and the diversity of the recruited sample.

Acceptability, appropriateness, and feasibility. The acceptability, appropriateness, and feasibility of the intervention was assessed by the Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measure (IAM), and Feasibility of Intervention Measure (FIM) respectively (Weiner et al., 2017). Each measure contained 4 items measured on a 4-point Likert scale from "completely disagree" to "completely agree." The measures were given after each module and the scale questions were modified by specifying which module was being evaluated. An example item after Module 1 is, "Module 1 meets my approval." All three measures demonstrated strong reliability after each module (α's from0.85 to 0.91). Acceptability of the intervention was further assessed by open-ended qualitative questions about what the participants liked about each module and what they believe could be improved about each module (See Appendix P).

Follow up measures.

Supportive behaviors. Self-reported parenting behaviors were measured through a revised version of the behavioral intentions measure. The items captured the frequency of the behaviors identified in the behavioral intentions scale in the past month. Response options ranged from 1 (never) to 5 (frequently) based on item anchors from the Ryan et al. (2010) measure on family acceptance. The original 25-item scale was reduced to 18 items based on achieving adequate internal consistency reliability (See Appendix Q). Psychological distress, loneliness, attitudes towards transgender individuals, self-efficacy, and self-compassion were also measured at follow up and are described above.

Study Design

The main objective of the pilot study was to gather acceptability and feasibility data. Preliminary efficacy data was analyzed in part to examine the feasibility and acceptability of the research design and analysis to be used in a larger efficacy study. An experimental research design with a one month follow up study was used for the pilot study as this was the design desired for an efficacy study. A waitlist control condition was chosen because during the one-month period between initial data collection and follow up, participants would be using the resources that they would have naturally chosen, replicating a "treatment as usual" approach. Approximately, two-thirds of recruited participants were randomly assigned to the intervention and one-third were randomly assigned to the waitlist control for the purpose of gathering more acceptability and feasibility data for the intervention. See figure 1for study design overview.

Procedure

Inclusion Criteria. The sample size was determined the general rule of thumb to have approximately 25 participants per group for pilot studies with small effect sizes estimated (Whitehead, Julious, Cooper, & Campbell, 2016). In order to meet inclusion criteria for the pilot study, participants had to be adult U.S. parents, legal guardians, or primary caregivers of youth age 10 to 18 who identified as a gender different from the sex they were assigned at birth (e.g., transgender boys, transgender girls, non-binary youth). Participants with children who had a gender non-conforming gender expression (i.e., outward appearance, clothing, interests that do not conform with the expectations of the assigned sex), but identified with sex they were assigned at birth were not eligible to participate. Parents who participated in providing feedback to the intervention were ineligible to complete the study.

The age criteria of youth were chosen based on few factors. First, transgender youth age 18 or younger are more likely living at home with their parent or caregiver and therefore their home environment is likely heavily influenced by their parents during this period. Second, transgender youth are likely to "come out" to their parents between ages 10 and 18. Although, many transgender people realize their gender is different from their assigned sex at an age younger than ten years old, many do not have the language to understand themselves as transgender and often do not tell others about their gender until adolescence or young adulthood (James et al., 2016). Furthermore, the onset of puberty often triggers feelings of gender dysphoria that motivate transgender youth to tell their parents about their gender (Edwards-Leeper & Spack, 2012; Spack et al., 2012).

Finally, although many supportive parenting behaviors are the same for transgender youth under the age of ten and older than the age of ten, medical interventions become an option for parents and youth to consider starting in pre-puberty stages (approximately age 10). There are options for younger transgender children to socially transition, but no medical options exist until the child reaches tanner stage two of puberty (Vance et al., 2014). Therefore, once children hit pre-teen age, parents are faced with difficult decisions about medical interventions and their child may experience more gender dysphoria related to changes in their bodies (Ehrensaft, 2011). Due to the increased parenting challenges that often occur for transgender adolescence, the Parent Support Program was designed to support parents of transgender youth ages 10 – 18.

Parents of gender non-conforming children who have not endorsed a gender identity different from their assigned were excluded from participating. Although, these parents may face similar challenges as parents of transgender youth because of the societal stigma associated with gender non-conforming expressions, there are different challenges that

parents of transgender youth face. For example, parents of transgender youth often have to adjust to a new name and pronouns, as well as re-conceptualizing their child's identity. The intervention was designed to support common issues for parents of transgender youth specifically.

Participants' psychological distress, attitudes toward transgender people, and parenting behaviors were likely to differ depending on the amount of time they had been aware of their child's transgender identity. For example, parents often become more accepting over time and learn supportive parenting behaviors through seeking support (Brill & Kenney, 2016). For the pilot study of the Parent Support Program, feedback from parents who are highly accepting and supportive was still valuable, even if the final intervention is geared toward parents who are struggling with their child's identity. Therefore, there were no restrictions on the time since becoming aware of their child's gender for this initial study.

Based on the makeup of samples from previous studies with parents of transgender youth, it was anticipated that more female caregivers would access this resource compared to male caregivers (Matsuno & Israel, in preparation; Davidson, 2014). Female caregivers may be most likely to seek both online and in-person resources about parenting transgender youth. This could be due to the stigma associated with help-seeking behaviors for men (Vogel, Heimerdinger-Edwards, Hammer, & Hubbard, 2011) or because, compared to women, men tend to have more negative attitudes toward transgender people (Hill & Willoughby, 2005; Norton & Herek, 2013).

Recruitment. Participants were recruited online from January 21st 2019 until April 1st 2019 through email and on Social Media (i.e., Facebook, YouTube, and Twitter). The majority of recruitment messages were shared with PFLAG groups via email and on Facebook. In total, 391 PFLAG groups were sent recruitment emails. Additionally,

approximately 30 trans organizations were sent recruitment emails and 26 individuals were sent recruitment emails and were asked to share the message with relevant contacts. On Facebook, approximately 300 trans related groups or organizations including PFLAG groups were sent a recruitment message that asked the group or organization to share the message on their page. The recruitment message posted on the researcher's personal Facebook page was shared by others a total of 93 times.

The researcher became aware that participants were not representative of the general population particularly in regards to race and gender identity, with over 90% of the initial sample identifying as White women. In attempt to recruit a more diverse sample, targeted recruiting began on February 6th 2019 and occurred until the end of the recruitment period. Recruitment emails and social media posts from this point forward included a message that men and racial/ethnic minorities were particularly encouraged to participate. However, there were no restrictions placed on who could participate beyond the general eligibility. Additionally, recruitment messages were sent to LGBTQ organizations that focused on people of color. A YouTube video of the researcher discussing recruitment for fathers and parents of color was shared on Facebook on February 16th and was viewed 65 times.

Study Participation. Following informed consent and eligibility questions, participants were randomly assigned to complete the intervention or act as a wait-list control. Each module was designed with targeted outcomes. A visual depiction of the components within each module, targeted outcome variables, and theoretical frameworks are illustrated in Appendix R. Participants completed most of the targeted outcome measures following the module theorized to change the targeted outcomes. The targeted outcomes for Module 1, psychological distress and loneliness, were theorized to change overtime rather than

immediately after the module. Therefore, these measures were captured at pre-test and follow up.

Additionally, participants provided feedback on the acceptability, appropriateness, and feasibility of each module after completing the module. Participants selected how long the module took them from a drop-down list of times and reported whether they completed the module in one sitting. Qualitative feedback was collected after each module on what the participants liked about the module and what could be improved. Upon completion of the study, participants were taken to a debriefing page that included a resource list for families of transgender youth. Participants that dropped out were emailed a one-question survey inquiring about what barriers prevented them from completing the study.

Intervention participants were informed that their responses would remain anonymous and that their progress would automatically be saved. Participants were instructed that the same link would return them to where they left off and that they could start and stop as many times as they would like within a 3-week period. The instructions stated the program would likely take 2 to 3.5 hours in total and participants were advised to complete one module per week. Participants were sent a weekly reminder via email to complete the intervention until they completed the intervention or the three-week time period had passed. Approximately one-month after participants complete the intervention they were sent a follow-up survey via their email. Participants randomly assigned to the control condition completed the demographic form, pre-test, and post-test measures. Participants were then sent an email approximately one month later inviting them to complete a follow up survey. Once the follow up survey was complete, participants were invited to complete the Parent Support Program without the outcome measures.

Chapter 4: Results

The results are organized by the research questions. First, data preparation will be discussed followed by information related to feasibility. Within the area of feasibility, assessment of the recruitment will be discussed first followed by attrition including: attrition rates, what points participants dropped out, what barriers inhibited participants from completing the intervention and demographic trends. Next, participant interaction with the intervention will be discussed to further evaluate feasibility. Acceptability will be examined through both qualitative and quantitative participant feedback. Finally, feasibility and acceptability of the outcome measures will be discussed followed by preliminary efficacy data.

Data Preparation

All data were analyzed using SPSS version 25. Data were screened for random or illegitimate responding through several attention check items spaced throughout the intervention (Konstan, Rosser, Ross, Staton, & Edwards, 2005). A total of 5 participants missed one out of four attention check items but did not appear to otherwise be responding in an illegitimate or systematic way and therefore were retained in data analyses. No participants missed more than one attention check item. Participants who dropped out before completing outcome measures were excluded from analyses. However, the feasibility and acceptability data was used for participants that dropped out after Modules 1 or 2. Given minimal missing data among complete responses (< 5%) and failing to reject the null hypothesis that data were missing completely at random (MCAR) $\chi^2(1234, N = 80) = 709.57$, $p = 1.0$ (Schlomer, Bauman, & Card, 2010), listwise deletion was used for analyses. Prior to analyses, statistical assumptions pertaining to the general linear model, including homogeneity of variance, independence among covariates and treatment effects, linearity,

and univariate normality (Tabachnick & Fidell, 2013) were checked and bootstrap analyses were applied analyses with variables that violated these assumptions.

Feasibility

Assessment of recruitment methods. Recruitment methods were assessed by the time to complete recruitment, number of responses from each recruitment platform, and the diversity of the sample before and after targeted recruitment. During the 66-day recruitment period the survey link was clicked a total of 762 times. If clicks were spaced evenly across days, the used recruitment strategy generated 11.5 clicks per day. It took approximately 2.4 days to produce 1 completed response for the intervention. If 250 intervention participants were needed for an efficacy study, it would take approximately 600 days to recruit this sample size using the current recruitment method. Approximately, 450 recruitment messages were sent via email and yielded 290 clicks. The recruitment message was shared to Facebook pages approximately 300 times and yielded 448 clicks. In other words, each email message produced 0.64 clicks and each Facebook message produced 1.49 clicks. One YouTube video was posted and yielded three clicks and one recruitment post was shared via twitter which yielded two clicks.

The overall recruited sample of participants (intervention and control) who completed the demographic questionnaire (N = 200) is displayed in table 1. The sample was fairly geographically representative of the U.S. with participants living in 35 out of 50 states. In comparison U.S. census data, the recruited sample had a higher percentage of women (92% compared to 51%) and White people (92% compared to 77%) (U.S. Census, 2018). The sample was seven times more likely to be a sexual minority compared to the general population (31.5% compared to 4.5%) (Williams Institute, 2019). The sample was also highly skewed in terms of political ideology with 86% of the sample identifying as “very

liberal" or "liberal" in comparison to only 26% of the U.S. population identifying as liberal (Saad, 2019). The sample had more education with 67% of the sample reporting an education level or a Bachelor's degree or higher compared to 31% of the U.S. population (U.S. Census, 2017). The sample was also slightly more likely to live in a suburban area than the general population (67% compared to 55%). The recruited sample was more likely to report that religion was "not very important" in their lives, (63% versus 22%) and were less likely practice a Christian denomination (e.g., Protestant, Catholic) (48% versus 70%) compared to the U.S. population (Pew Research Center, 2014).

Given the lack of representation particularly in terms of race/ethnicity and gender identity, targeted recruitment began 15 days into the recruitment period. In total, 123 participants were recruited prior to targeted recruitment over the course of 15 days and 77 were recruited after targeted recruiting began over the course of 51 days. Prior to targeted recruitment, 94.4% of participants who completed the demographic questionnaire identified as cisgender women and 92.7% identified as White and no other racial/ethnic group. Participants who responded after targeted recruitment began were 89.6% cisgender women and 90.9% White and no other racial/ethnic group.

Attrition. To assess the feasibility of an efficacy study, attrition rates were examined. Two types of attrition have been distinguished in web-based treatments (Melville, Casey, & Kavanagh). *Nonuse attrition* is defined as failing to access the intervention after completing initial assessments and *dropout attrition* refers to when participants start the intervention, but dropout before completion. Of the 762 total clicks of the survey link, 217 participants met eligibility criteria, 201 participants completed demographic survey, and 100 participants completed the study. Additionally, 76 participants who clicked the survey link were returning to the program to continue where they left off. Therefore, approximately 15% of the total

clicks (not counting returners) led to completed responses. The overall attrition rate among participants who met eligibility criteria and began the study was 53.9%.

Among the 71 waitlist control participants who met eligibility criteria, 91.5% (n = 65) completed the demographic questionnaire and 74.6% (n = 53) completed the outcome measures. Therefore, the attrition rate for the waitlist control group was 25.4%. Among the 146 intervention participants who met eligibility criteria, 93.2% (n = 136) completed the demographic questionnaire, 32.2% (n = 47) completed Module 1, 19.8% (n = 29) completed Module 2, and 18.5% (n = 27) completed the entire intervention. In total, 81.5% of eligible intervention participants dropped out.

Figure 2 shows the number of participants who dropped out at various points during the study. On average, participants completed 37% of the intervention, which equates completing Module 1. The *nonuse attrition* rate was 21.2% indicating that this portion of participants dropped out after completing the demographic questionnaire, but before starting Module 1. Over a third of eligible participants (39.7%) started Module 1, but dropped out before completing the first module. The largest dropout point within Module 1 (10.3% or participants) was before right the "processing grief" writing exercises. The next largest portion of participants dropped out right after completing Module 1 (9.6%). The attrition rate for those who started the intervention was 53.5%, which would be the *dropout attrition rate*. The attrition rates indicate that approximately 5 times the desired number of intervention participants and 1.25 times of the desired number of control participants should be recruited for an efficacy study. If no changes were made to the intervention or procedures except that 50% of the sample was randomly assigned to either the intervention or control, 2,500 participants would need to be recruited to ensure sample size of 500 intervention participants. Ways to improve the attrition rates are addressed in the discussion section.

Of the 80 participants who were contacted to complete a follow up survey approximately one month after completing the study, 50 participants started the follow up survey and 43 participants completed the follow up survey. All together, 54% of participants who completed either the control or intervention completed the follow up survey. Among intervention participants, 52% completed the follow up survey and among control participants 55% completed the follow up survey. Given these attrition rates, 10 times the desired follow up sample size should be recruited for an efficacy study. Therefore, if the desired follow survey sample size remained at 500 participants, 5000 participants would need to be recruited to capture a large enough sample at follow up.

Demographic trends. The investigator conducted a visual comparison of demographic characteristics of participants who completed the intervention compared and those who dropped out at any point (see table 2). Given the small sample size, the patterns detected here may not remain in a larger sample. Compared to those who completed the intervention, participants who dropped out appeared more likely to be bisexual (16% compared to 4%); have no college education (12% compared to 0%), have no political party affiliation (32% compared to 15%), and live in urban or rural settings (38% compared to 18%). In a similar vein, participants who completed the intervention were more likely to be heterosexual (82% compared to 68%), atheist (26% compared to 7%), identify as a Democrat (85% compared to 62%), and live in a suburban environment (89% compared to 70%).

Besides demographic differences, there were differences in other variables measured at pretest between those who completed the intervention and those who dropped out (See table 3). Compared with those who completed the intervention, dropout participants were: more likely to report their child had changed gender identities more than once (20% compared to 7%), less likely to have sought resources from websites (48% compared to 67%)

and from a medical doctor (42% compared to 59%), and less likely to have known about their child's trans identify for over two years (45% compared to 59%). Participants who dropped out had slightly lower levels of support from friends and extended family and had higher levels of anxious, depressive, and somatic symptoms and loneliness compared with those who completed the intervention. Additionally, drop-out participants showed higher levels of psychological distress including symptoms of somatization, depression, and anxiety, as well a loneliness compared with intervention completers (see table 4).

Data was collected in Module 1 about the emotions that participants experienced when they first learned their child was transgender and the challenges that participants experienced as a parent of a trans child. Frequency of each emotion and challenge was visually compared by the researcher between those who dropped out after completing Module 1 and those who completed the entire intervention. It appears that dropout participants were more likely to experience fear (80% vs. 67%), confusion (60% vs. 41%), and anxiety (70% vs. 48%), compared with those who completed the intervention. Dropout participants were more likely to endorse "fear my child will be bullied or hurt" (100% vs. 74%) and "being afraid of making mistakes and hurting my child" (65 vs. 41%) as challenges compared to completers. See table 5 for comparisons of all emotions and challenges.

Barriers to completion. A one question survey was sent to participants who dropped out at some point after completing the demographic questionnaire inquiring about the reasons for their attrition. In total, the survey was sent to 109 dropout participants and 59 out of the 109 participants completed the survey. The question was in a "check all that apply" format and included a write in option. The most common reason for dropping out among the listed options was not having enough time (n = 24, 40.7%). The next most common response was "I forgot to come back" (n = 21, 35.6%), followed by "my progress wasn't saved" (n = 15,

25.4%), “I already knew the information” (n = 10, 16.9%), “it was too time consuming” (n = 9, 15.3%), and “the content was not engaging (n = 3, 5.1%). One participant indicated “the content was not relevant” and no one selected “I found other resources” or “I’m not ready to support my child’s transgender identity.”

The 23 write in responses were coded by the researcher and were audited by another psychologist for accuracy. No changes in coding were made based on the auditor’s feedback. See table 6 for coding breakdown. The most common code was being “too busy” or experiencing unexpected delays (n = 11). For example, one participant responded “I took over as chapter president and couldn’t make this a priority. Sorry.” The next most common response was that the participant actually had finished the survey (n = 9). Some participants within this category indicated that they started the survey multiple times, which may explain why they were sent the dropout survey (e.g., “I was unable to get back into my original survey start and so completed a different one.”). Three participants reported their progress was not saved in their written response. Four parents reported they were unable to finish the survey because they were attending to their transgender child’s mental health needs, including one participant who reported their child attempted suicide. Other response codes were not having enough time (n = 4), not being able to find the survey link (n = 2), the content being too painful or emotionally draining (n = 2), the writing portion being too time consuming (n = 2), and the content not being relevant (n = 1).

Intervention length. Feasibility of the intervention was examined by the length of time it took to complete each module. Participants were provided a drop-down list of time increments ranging from “10min” to “2 hours or more” to indicate how long it took to complete the module. Of the 44 participants who responded to this question for Module 1, the most frequent response was 30 minutes (34%, n = 15). The majority of participants (81%,

n = 36) reported that they completed module one in less than one hour. For Module 2, the most frequent response for amount of time that it took to complete the module was 20min and 30min (n = 10 each). All participants (100%, n = 28) reported that they completed the module in less than one hour. Finally, participants most frequently indicated that Module 3 took 30 minutes to complete (n = 10). The majority of participants reported that the module took less than one hour to complete (89%, n = 23). Qualtrics provided information on the total time that it took for participants to complete the intervention. However, because participants were allowed to exit and return over the course of 21 days, the information collected was not an accurate representation of how long participants took to complete the intervention. Some participants may have kept the survey open on their computer for days. Therefore, this data was not used. However, information was collected on how many days it took for participants to complete the intervention. On average, it took participants 7 days to complete the program ranging from 1 day to 22 days. Most participants completed the intervention in one day (44.4%). About two thirds of the sample complete the intervention within one week (63%), 11% completed the intervention between one and two weeks, and 26% of the sample completed the intervention between two and three weeks.

Participant interaction with the intervention. To evaluate how participants interacted with the intervention, they were asked whether they completed each module in one sitting and how many times total they exited the program and returned. For Module 1, 82% of participants completed the module in one sitting. All but two participants completed Module 2 in one sitting (93%). The vast majority of participants completed Module 3 in one sitting (96%). Participants who completed the entire intervention were asked how many times they exited the program and returned. Response options ranged from zero times to

"more than 10 times" with the most frequent response being zero times (31%, n = 8). About three quarters of participants (73%, n = 19) reported exiting and returning two times or less.

Qualtrics tracked how long each participant spent on pages that included the writing activities and videos. Participants were grouped into "high engagement" and "low engagement" groups based on how many times participants spent less than one minute on 13 pages total (4 writing exercises, 7 educational videos, and 2 interview videos). The time spent on the interview video from Module 1 was not recorded due to a technical error. Videos from Module 3 were not used in this criterion given the tailored nature of the module. The writing prompts instructed participants to spend 3 – 5 minutes on each writing activity and the length of the videos ranged from 2.5 minutes to 8 minutes. Participants who spent less than one minute on six or more pages out of the thirteen were coded as "low engagement" users and those who spent less than one minute on five or fewer pagers were coded as "high engagement" users. In total, 17 participants were coded as high engagement users and 10 were coded as low engagement users.

Demographic data and pre-test variables were visually examined between high engagement and low engagement users to decipher if there were any differences that might have influenced engagement (see tables 5 and 7). Participants with low engagement appeared more likely to have an education level of an Associate's degree or less (50% compared to 12%). Participants in the low engagement group appeared more likely to have support from extended family and from friends, have known about their child's identity for over two years, and personally know more than 10 transgender individuals in comparison to the high engagement group. Low engagement users had higher total psychological distress as well as higher anxious, depressive, and somatic symptoms compared to high engagement users.

However, high engagement users endorsed higher levels of loneliness in comparison to low engagement users.

In addition to examining differences between high and low engagement users, timing data was examined to compare participant engagement with different types of activities. In order to identify patterns in engagement with various types of activities (videos or writing), the researcher labeled activities as either "complete" (participants spent longer than 1 minute) or "skipped" (participants spent less than 1 minute). Participants were more likely to engage with the writing activities compared with the intervention videos. Most participants (81.5%) completed all four writing prompts in Module 1, whereas only 33.3% of participants completed on all seven educational videos in Module 2. About one third of participants skipped all seven videos in Module 2. Participants were more likely to watch the two interview videos (one with parents and one with trans youth) compared to the psychoeducational videos. Almost three quarters (70.4%) of the sample watched both interview videos, 22.2% watched one of the two videos, and only 7.4% skipped both.

Among the participants who completed Module 1 (n = 47), two participants did not write a response for the forth writing prompt. Besides this, participants wrote something for all four writing prompts. It was estimated that the four grief related writing prompts would take three to five minutes each. The trimmed means were used to examine the average time spent on each writing activity. The trimmed means were used eliminate extreme values in the largest 5% of mean values and smallest 5% of mean values. The first writing activity asked participants to write about the experiences they have shared least with others and took an average of 7 minutes and 19 seconds to complete. The second writing activity asked participants to describe their grief in the form of a metaphor or image and took participants an average of 2 minutes and 40 seconds. The third writing exercise took an average of 2

minutes and 39 seconds and asked participants to write about the hopes and dreams they used to have for their child and the hopes and dreams that would replace the old hopes and dreams. Finally, participants were asked to write about their journey as a parent of a trans child in the third person, that took an average of 5 minutes and 16 seconds to complete.

The "percentage watched" of each intervention video for each participant was calculated by dividing the time participants spent on the video page by the video length. Videos that were watched at least 90% through were coded as "finished", videos that were watched 10% – 90% of the way through a video were coded as "partial," and videos that were watched less than 10% of the way through were coded as "skipped" for each participant. For each video most participants either finished or skipped them with only a small percentage of participants watching part of a video. More participants finished watching the interview style videos (66.7% each) compared to the educational videos from Module 2 (37% - 55.6%). More participants skipped the interview video with trans youth compared to the interview video with parents, but more participants partially watched the parent interview video compared to the trans youth interview video. Among the educational videos from Module 2, the video titled, "Is being transgender a choice?" had the highest number of participants who finished watching and the video titled "Aren't trans people really gay?" had the lowest number of participants who finished watching. However, the videos titled, "Is being transgender a fad?" and "Is being transgender a sign of mental illness?" were the most often skipped videos. See table 8 for the complete breakdown of participant interaction with intervention videos.

Data collected from intervention activities provided valuable information about the emotions and experiences of the sample. In one activity, participants were asked to click up to five emotions from a list of emotions that they experienced when learning their child was

transgender. Among all the participants who completed Module 1 (n = 47), the top five emotions reported were: worried, love, fear/afraid, anxious, and confused. Participants were also asked to identify the challenges they experienced that made it difficult to support their child in a "check all that apply" format. The most common challenges endorsed were: fear of their child being bullied or hurt, being afraid of making mistakes and hurting their child, and other family members not being supportive. Nine participants also wrote in challenges that were not listed. Six of these responses related to making medical decisions about transition. Parents reported fear of the negative medical side effects including infertility, the financial strain of such procedures, and the inability for their child to have surgery until age 18. One participant discussed difficulty correcting and educating others about their child's name and pronouns. Another reported fears about others "not loving" their child. Finally, one participant reported fear of being mistreated at work if they disclosed they had a transgender child. Within Module 3, participants had the option to choose between 3 – 6 skills to learn more about. The two most commonly chosen skills were "navigating medical decisions" and "becoming an ally/advocate" and the least chosen skill was "coming out."

Acceptability

Quantitative feedback. The acceptability, appropriateness, and feasibility of the intervention modules were measured by the Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measures (IAM), and Feasibility of Intervention Measure (FIM) respectively (Weiner et al., 2017). Each scale had scale scores ranging from 1-5 with 5 indicating the highest level of satisfaction. All Modules were rated higher than "4" on acceptability, appropriateness, and feasibility (See table 9). When comparing acceptability, appropriateness, and feasibility for Module 1 between those who dropped out after Module 1

and those who completed the entire intervention, the dropout group (n = 18) averaged slightly higher scores on the AIM, IAM, and FIM (see table 10).

Qualitative feedback. Acceptability, appropriateness, and feasibility were also assessed through qualitative feedback solicited from participants following each module. Two questions were asked after each module, "what did you like about the module?" and "what could be improved?" The researcher created a coding scheme for each module by adapting a coding scheme from a study assessing acceptability of an online intervention for LGBT individuals (Israel et al., in preparation). The coding scheme organized feedback themes into "positive codes", "negative codes", and "neutral codes. Each qualitative response was assigned one or more codes. The coding scheme, assigned codes, and code counts were completed by the researcher and audited by a psychologist for accuracy. Codes were revised to be more detailed based on the auditors' feedback.

For Module 1, a total 38 participants out of the 47 who completed the module wrote a response in the "what did you like" question and 18 participants answered the "what could be improved" question. In total, 59 positive, 13 negative, and 1 neutral codes were assigned. For the full breakdown of coding scheme and code counts see table 11. Of note, participants "liked the writing exercises" (n = 14) and reported experiencing a "positive impact on emotions through reflecting on emotions or expressing emotions (n = 13). One participant's response exemplifies the essence of both of these codes: "I liked being able to think about and release all my feelings- positive and negative-through writing." Other themes that emerged were that the module was "informative or thought provoking" (n = 7) and "helpful or relevant" (n = 7). Participants also reported enjoying the video with interviews of parents of trans youth (n = 5). The most common negative feedback was disliking the writing exercises (n = 8). Some did not like the writing exercises all together (e.g., "The open-ended

journaling questions asks a lot for those of us who are not writers and who do not enjoy journaling."). Others coded in this category provided suggestions for improving the writing prompts (e.g., "A little more focus on the writing prompts. They were a little vague."). The neutral coded response was related to the information not being new.

For Module 2 out of 29 participants, a total of 23 responded to "what did you like about the module?" and 12 responded to "what could be improved?" A full breakdown of the coding scheme and counts is shown in table 12. In total, 34 positive, 8 negative, and 4 neutral codes were assigned. The most common positive feedback was liking the video of trans youth (n =11), that the module was informative or thought provoking (n = 9) and liking writing the coming out letter (n = 6). One participant stated, "I enjoyed listening to the various kids talk and was especially interested in what their parents did to make them feel supported." Each negative code was assigned two or fewer times and included wanting more information about topics not covered (n = 2), disliking the general format (n = 2), and not liking the writing exercise (n = 2). Four participants noted that the information was not new or was too basic and were coded as neutral.

For Module 3 (N = 27), a total of 18 responded to the "what did you like about the module" question and 9 responded to the "what could be improved" question. The coding scheme and code counts are displayed in table 13. The most common codes for this module were enjoying writing the letter to a friend and reading it back (n = 4), the module being informative or thought provoking (n = 4), appreciating the information on medical transition (n = 3), and liking the videos (n =3). One participant noted, "Writing the letter was good. It made me feel like I had something worth sharing." The most common negative code was wanting more information about topics not covered (n = 3). For example, one participant

wrote “Maybe talk about some of the legal pieces-name changes, new birth certificates or passports.”

Feasibility and Acceptability of Measures

The appropriateness and acceptability of the pre-test and post-test measures was evaluated by the scale reliability, validity, and distribution. Of the scales that were previously developed and validated by other researchers, the Brief Symptom Inventory (BSI), Roberts Brief Loneliness Scale (RBLS), Positive Affect and Negative Affect Scale (PANAS), Sex Essentialism, and Short Form Self-Compassion Scale demonstrated strong inter-item reliability (α’s from 0.83 to 0.99). The BSI, RBLS, PANAS, Sex Essentialism, and Self-Compassion scales also demonstrated convergent validity by correlating with theoretically related variables (see table 14). The Positive Affect Scale was the only scale among these that showed a normal distribution. The RBLS and Negative Affect Scale were slightly positively skewed (1.1 – 1.3) and had slight kurtosis (1.04 – 1.6). The self-compassion scale was slightly negatively skewed (-1.35) and showed a slight kurtosis (1.5). The BSI was non-normally distributed with positive skew of (2.14) and kurtosis of (5.08) with more participants indicating low scores (fewer symptoms). The Sex Essentialism Scale was non-normally distributed with positive skew of (4.18) and high kurtosis (21.67). Approximately three quarters (76.25%) of the total sample (N=80) scored the lowest possible scale score for sex essentialism indicating a floor effect.

The Attitudes Towards Transgender Individuals (ATTI) scale showed unacceptable reliability at post-test (α = 0.41) and follow up (α = 0.57). The scale was non-normally distributed with a slight positive skew (1.65) and high kurtosis (2.27). Approximately half of the sample scored the lowest possible scale score indicating a floor effect. The ATTI was

significantly correlated with the Sex Essentialism subscale and the Learned Etiology subscale ($p < .01$), demonstrating convergent validity.

The Genetic Etiology (GE) and Learned Etiology (LE) subscales were adapted from the Beliefs about the Etiology of Sexual Orientation (BESO). The GE subscale demonstrated good internal consistency reliability. However, the GE subscale failed to demonstrate convergent validity as it was not significantly correlated with any other attitude or beliefs measure. The LE subscale showed poor internal consistency reliability, but was significantly correlated with other attitude and belief scales demonstrating convergent validity. Both the GE and LE showed normal distributions with the LE showing a slight positive skew (0.46) and negative kurtosis (-0.72) and the GE showing a slight negative skew (-0.06) and negative kurtosis (-.43).

The researcher created the Knowledge, Behavioral Intentions, Self-Efficacy, and Supportive Behavior scales based on the existing literature and content of the intervention. The 7-item knowledge scale showed unacceptable reliability. The scale was highly negatively skewed (-2.95) and had a high kurtosis (8.57). The histogram of this scale shows a ceiling effect with 87.5% of the sample scoring the highest possible score. Two out of the seven items showed no variance indicating they were answered correctly by all participants. The second question of scale showed the most variance and was answered correctly by 93.75% of the sample (75 out of 80). The knowledge scale was significantly correlated with Sex Essentialism as well as the behavioral intentions and self-efficacy scales showing convergent validity.

The Self-Efficacy scale showed strong internal consistency reliability at post-test and follow-up and therefore all items were kept for data analysis. The scale was non-normally distributed with a high negative skew (-2.33) and a high kurtosis (5.45). The histogram

shows a ceiling effect for this scale with approximately half of the sample scoring the highest possible score. The questions that showed the least variance were “tell my child I support them,” “tell my child I love them unconditionally,” and “listen to my child’s experiences and feelings.” The items that showed the most variance were “practice using my child’s preferred name/pronouns when they are not around,” “research options for medical transition related procedures,” and “seek advice from a trans-affirming therapist.”

The Behavioral Intentions scale initially showed poor internal consistency reliability with the full 25 items. Items were deleted based on corrected item-total correlation and the alpha if the item was deleted. The final scale consisted of 18 items and showed acceptable reliability. The scale did not have a normal distribution, was negatively skewed (-3.0) and had a high kurtosis (9.79). The histogram and stem and leaf plot indicated a ceiling effect with 45 out of 80 participants scoring the highest possible score (56.25%). The item “blame my child if they are bullied based on their child” showed no variance. Items showing a variance of less than 0.1 were “advocate for my child if they are mistreated,” “tell my child I love them unconditionally,” “support my child’s gender expression,” and “listen to my child’s experiences and feelings.” The items with the highest variance were “research options for medical transition related procedures,” “prevent my child from accessing hormones or other medical interventions,” and seek advice from a trans-affirming therapist.” The Behavioral Intentions and Self-Efficacy scales were significantly correlated with each other demonstrating convergent validity.

The Supportive Behavior Scale consisted of the same 25 items as the Behavioral Intentions scale but had response options that corresponded to frequency of the behavior over the last month. The items “prevented my child from participating in LGBT activities” and “blamed my child for being bullied based on their gender” showed zero variance and

therefore were removed from the scale. Five addition items were removed based on the corrected item-total correlation and the alpha if the item was deleted. The final 18-item scale demonstrated good internal consistency reliability. However, the scale was not significantly correlated with the self-efficacy scale at post-test or follow up and was not correlated with the Behavioral Intentions Scale at post-intervention. The lack of significant correlations with these related measures indicates questionable validity. The scale showed a normal distribution with a slight negative skew (-.75) and negative kurtosis (-.04). The items with variance less than .1 were "respected my child's decision to be called daughter, son, or child," "used my child's preferred name and pronouns," and "listened to my child's experiences and feelings." The items showing the greatest variance were "sought advice from a trans-affirming medical provider," "attended an LGBT event with my child," and "researched options for medical transition related procedures."

Preliminary efficacy data analysis

For the pilot study of the Parent Support Program, all efficacy data analysis was exploratory in nature and the small sample size limited the power of each analysis. Due to the analyses being underpowered, true statistical differences cannot be inferred. The means and standard deviations for all measures for control, intervention, high engagement, and low engagement groups at pre-test, post-test, and follow up are displayed in tables 15 and 16. The means and standard deviations for all pre-test measures were examined to evaluate whether there were pre-existing differences between the control group and intervention group. Based on the size of the mean differences, independent-samples t-tests were conducted on two out of seven pre-test variables to test for significant differences. An independent samples t-test indicated that levels of loneliness for control group participants (M = 5.33, SD = 4.48) and intervention participants (M = 3.96, SD = 3.52) were not significantly different $t(75) = 1.32$,

$p = .19$. An independent samples t-test indicated that levels of psychological distress for control group participants (M = 6.1, SD = 6.68) and intervention participants (M = 3.5, SD = 4.14) were not significantly different $t(74) = 1.75$, $p = .08$.

To assess risk for harm to participants, independent-samples *t*-tests were used to examine whether the intervention and control conditions differed significantly in negative and positive affect after Module 1. Negative affect was not significantly different across conditions $t(77) = .21$, $p = .83$ and positive affect was not significantly different across conditions, $t(77) = -.46$, $p = .65$, indicating that Module 1 did not generate negative affect.

To assess the immediate impact of the intervention on outcome measures a one-way MANCOVA was conducted using measures that showed sufficient reliability ($\alpha < .8$). Loneliness, support from extended family, and support from friends were used as covariates based on their correlations with outcome measures. Based on Wilk's lambda criteria, the combined dependent variables (behavioral intentions, self-efficacy, sex essentialism, self-compassion, and genetic etiology) were not significantly different between conditions F (5, 72) = 1.2, $p = .32$. The effect size was medium (partial eta-squared = .09) and the observed power was .4. Tests of between-subject effects were conducted and are shown in table 17.

Another one-way MANCOVA was conducted to assess whether there were significant differences in the outcome measures based on participant engagement. Based on Wilk's lambda criteria, the combined dependent variables (behavioral intentions, self-efficacy, sex essentialism, self-compassion, and genetic etiology) did not significantly differ between engagement levels F (5, 23) = .79, $p = .57$. The effect size was large (partial eta-squared = .22) and the observed power was .21. Tests of between-subject effects were conducted and are shown in table 18.

To assess whether there were differences between conditions at the month one follow up, line graphs were created to visually depict change in outcome measures (Figures 3 - 6). Based on the line graphs, a one-way MANCOVA was conducted to assess differences in psychological distress, loneliness, and self-compassion at follow up, with the psychological distress, loneliness, and self-compassion pre-test scores as covariates. Based on Wilk's lambda criteria, the combined dependent variables (psychological distress, loneliness, and self-compassion) were not significantly different between conditions F (3, 39) = .3, p = .83. The effect size was small (partial eta-squared = .03) and the observed power was .1. Tests of between-subject effects were conducted and are shown in table 19.

To assess whether frequency of supportive behaviors differed between intervention and control groups, we used independent-samples *t*-tests. Frequency of supportive behaviors was not significantly different across conditions $t(40) = -.13$, $p = .90$ at the one month follow up.

Power analysis and estimated sample size. The effect sizes of the MANCOVA's were used to calculate the sample size needed to have sufficient power (.8). Comparing outcomes at the one month follow up had the smallest effect size (partial eta-squared = .03) and if all intended outcome variables (6 total) are used in the efficacy study, 448 participants will need to complete the follow up study. If the attrition rate remained the same for the efficacy study approximately 4,448 participants would need to be recruited to meet the sample size goal at follow up. A one-way MANCOVA was run with only three follow up measures: behaviors, psychological distress, and loneliness to examine the effect size detected with only the variables expected to change at the one-month time period. The analysis estimated a slightly larger effect size (partial eta-squared = .06). With this effect size and 3 outcome variables the follow up sample size would need to be 176 to obtain sufficient

power. With this change in analyses, 1,176 participants would need to be recruited in order to have enough participants at follow up.

The comparison of outcome measures at posttest between conditions indicated a medium effect size (partial eta-squared = .09). If all 8 intended outcome measures are used in the efficacy study, a sample size of 160 participants would yield sufficient power. If the attrition rate remains at 20% a total 800 participants need to be recruited to ensure 160 participants will complete the study.

Chapter 5: Discussion

The discussion section first addresses main findings in the following order: recruitment, attrition, intervention content, measures, and efficacy. Then implications for conducting an efficacy study will be discussed, followed by implications for future research and practice. The section ends with limitations and conclusions.

Findings about Recruitment

The majority of participants were recruited during the first two weeks of the two-month long recruitment period. Recruitment during the first two weeks consisted primarily of email recruitment and Facebook postings to PFLAG groups. There were hundreds of PFLAG group emails publicly available, which made recruitment messaging easy and convenient. Furthermore, PFLAG may be the most well-known national organization that supports parents of LGBT youth and may be an avenue to reach parents in many geographic locations. Additionally, recruitment emails to individuals that the researcher personally knew were sent during this time period and the recruitment message was posted on the researcher's personal Facebook profile. More people may have been recruited during this time period due to first- or second-hand contact with the researcher, which may have built more trust in the intentions of the research.

The vast majority of recruitment messaging occurred via email and on Facebook. Therefore, evaluation of recruitment through social media sites such as YouTube and Twitter was limited due to these methods only being used one time each. Facebook yielded a higher overall rate of clicks per posting indicating that Facebook pages may reach more potential participants and/or participants may be more likely to respond to a Facebook posting compared to an email recruitment message. Another explanation is that organizations may be more willing to share recruitment messages via Facebook compared to sharing through email

listservs. While the total number of times the message was shared to each platform was calculated, it was undetermined how often the message was shared on email listservs and Facebook pages by the organizations contacted. These findings indicate that it may be more fruitful to focus recruitment efforts on Facebook rather than email, although email to PFLAG groups may still be convenient enough to be a sufficient recruitment method. Other recruitment methods such as Facebook advertisements and recruitment on other social media sites such as Tumbler or Twitter could be alternative online recruitment methods that could be explored in the efficacy study.

The recruited sample consisted of mainly White, cisgender, well-educated, upper-middle class, liberal, women, living in suburban areas. Although, the majority of participants were heterosexual, the sample had a much higher percentage of sexual minorities compared to the general population. There are several potential reasons for the demographic differences in the sample when compared with the general US populations. The age of participants may contribute to the higher levels of education, SES, and participants living in suburban areas. Most participants were middle aged ($M = 44$) and therefore may have had the opportunity to receive higher education and earn more income compared to the general adult population that includes younger adults age 18 – 40. Online samples in general are more likely to be college educated and liberal leaning (Heen, Lieberman, & Miethe, 2014). Additionally, according to the Pew Research Center (2019), a higher percentage of US women use Facebook compared to men (75% vs. 63%) and a higher percentage of college educated people use Facebook compared to those with a high school education or less (74% vs. 61%). However, there were no differences in the percentage of White, Black, and Hispanic users of Facebook. Therefore, using Facebook as one of the primary forms of recruitment could contribute to the greater

portions of women and highly educated participants in the sample, but does not explain the over representative of White people in the sample.

The intervention subject may have attracted participants who already had at least some acceptance of LGBT individuals, which may explain the high levels of sexual minorities, liberals, and women participating. Research has consistently shown that women have more positive attitudes towards transgender populations compared to men (Elischberger et al., 2016; Hill & Willoughby, 2005; Norton & Herek, 2013). Liberal ideology has also been shown to significantly predict more positive attitudes towards transgender people (Elischberger et al., 2016; Worthen et al., 2017). There are several reasons why sexual minority parents would have higher levels of acceptance of their transgender children, which may have motivated their participation. First, cisgender sexual minorities are more likely to have contact with transgender individuals as public LGBT community spaces are often shared between sexual and gender minorities. Additionally, sexual minority parents may have more empathy towards trans youth based on their own experiences of marginalization. Stigma towards sexual minorities is often, in part, driven by discomfort with gender non-conforming gender expression and therefore, sexual minorities may be able to more closely empathize with the stigma their children face. If sexual minority parents experienced family rejection themselves based on their sexual orientation, they may be even more likely to actively support their transgender child.

There are a few potential reasons for obtaining a predominately White sample. First, one study found across three Internet samples, the online samples were 85.3% White compared to 76.6% of the general population. Additionally, the online samples had lower percentages of Hispanic/Latinx and Black/African American participants compared with the U.S. population, whereas other racial ethnic groups were closer in proportion to the U.S.

population (Heen et al., 2014). In general, people of color may be warier of participating in psychological research, due to the history of marginalized communities feeling taken advantage of by researchers who study them for professional and personal gain rather than to give back to the marginalized groups themselves (Warner, 2008). Another potential reason for the racial make-up of the sample could be related to PFLAG being the primary organization contacted for recruitment. It is unknown what the overall demographic breakdown of PFLAG members is, however, many LGBTQ oriented organizations and communities have a history and reputation of being predominately White spaces (Goode-Cross & Tager, 2011, Ward, 2008). This could be a barrier for parents of color to become members of PFLAG groups.

Finally, there are several cultural and religious factors may make it more difficult for parents of color to accept their transgender child or participate in a research study on this topic. Research has yet to examine attitudinal differences based on race/ethnicity towards transgender people specifically. However, research shows that trans youth of color may be at higher risk of experiencing parental rejection (Koken et al., 2009; Singh & McKleory, 2011). Also, research has found higher levels of negative attitudes towards sexual minorities among Black/African Americans (Mason, 2010), Latinx populations (Ellison, Acevedo, & Ramos-Wada, 2011), and East Asian populations (Chi & Hawk, 2016). Given that attitudes towards sexual minority populations and trans populations are highly correlated (Norton & Herek, 2013), it is possible that racial minority groups hold more negative attitudes towards trans people than their White counter parts. This hypothesis can be explained by many mediating factors rather than notion that racial minorities are inherently more biased. Religiosity may explain the higher levels of negative attitudes towards sexual minorities among racial minorities (Mason, 2010). Black and Latinx people are more likely to report that religion is

"very important" in one's life and are more likely to attend religious services than White people (Pew Research Center, 2014). Religion may be vital to the resilience of people of color who experience pervasive racism (Comas-Díaz, 2012; Scott, Wallander, & Cameron, 2015). However, both identifying as "religious" and "Christian" are significant predictors of negative attitudes towards transgender people (Campbell, Hinton, & Anderson, 2019). Additionally, in Asian cultures being openly LGBT may be considered shameful to one's family and given the predominance of collectivist values in Asian cultures it may be difficult for Asian American parents to be openly accepting of their trans child if others in their family or community would find it shameful (Bridges, Selvidge, & Matthews, 2003).

It appears that the targeted recruitment strategy slightly increased the diversity of the sample, but did not make a drastic difference on the overall gender and racial make-up of the sample. Furthermore, participants were recruited at a much slower rate during targeted recruitment in comparison to general recruitment. This is likely because personal acquaintances and PFLAG organizations were contacted prior to targeted recruitment and may have drawn more participants. It may also be that there were interested participants who would have participated during the targeted recruitment period, but did not because they were not part of the targeted group, leading to fewer recruits during this time.

The recruited sample provides valuable information for recruitment considerations in the efficacy study. It could be that White, liberal, educated, cisgender women are more likely to utilize this type of intervention and would benefit from the program in this online format. Although the participants are not representative of the general population, the intervention may be most suitable for this group. However, if pre-existing acceptance was one of the underlying factors that led to the demographic make-up of the sample, the recruitment strategy may need to be adjusted to reach parents who may benefit to a greater degree from

the program. Recruitment strategies could be adjusted in a few ways to reach parents who are struggling to accept and support their transgender child. First, there could more specification in recruitment advertisements that the program is designed for parents who recently learned their child was transgender or who are in some way struggling to accept or support their child. Additionally, other recruitment platforms may useful to try such as Facebook and Google advertisements that may reach parents who are not members of parent support groups, but have searched for resources related to parenting a transgender child. It may be helpful to solicit recruitment from organizations not associated with the LGBT community such as religious organizations, schools, and pediatricians.

Understandably, there may be skepticism especially by marginalized groups in the intentions and content of the program, which may have prevented some from participating. To account for this, recruitment messages can include the researcher's social identities and clearly state the intentions of the program. Additionally, it may be helpful to have well known transgender organizations endorse the program. Parents who previously completed the program could also endorse the program through writing a review that could be publicly shared in advertisements of the program. It would be especially helpful to have fathers and parents of color write reviews to initiate more trust among these groups and normalize who can benefit from the program. The researcher could more intentionally solicit snowball sampling by asking each participant to share with others. At the end of the program, participants could be provided with a pre-written recruitment message that could be a convenient way for the participant to share with others.

Findings about Intervention Content

Overall, feedback about acceptability of the intervention content was vastly positive. Both quantitative and qualitative responses found that participants thought each module was

highly acceptable and appropriate. There were few distinguishable patterns of negative feedback indicating there were no egregious components to the intervention. Additionally, only a very small portion of participants selected "the content was not engaging" as a reason for their attrition. This suggests that most participants found the intervention content to be engaging, but dropped out for other reasons. The qualitative responses allowed for more specific feedback on the module activities to be examined and provided additional evidence that each module met its intended goals.

Decreasing distress and feelings of isolation. The primary goal of Module 1 was to decrease distress and feelings of isolation by increasing self-awareness of emotions, normalizing and validating emotions, and having participants express their emotions. The qualitative feedback supported the notion that module goals were being met. A majority of participants discussed enjoying and appreciating the writing prompts and many reported the writing activities inspired greater reflection and expression of their emotions. However, a sizable portion of participants indicated that they disliked the writing activities. This feedback indicates that writing exercises have the potential for a strong positive effect on emotional processing, but might not be a good fit for everyone. In particular, a few participants noted that it was "odd" and "difficult" to write in the third person. This writing prompt could be removed or adjusted to be more acceptable for future participants. It seems important to keep the writing activities in the program given the majority of participants liked the writing activities and discussed the ways it allowed for greater emotional processing. However, having an alternative option to the writing prompts that reduces distress and feelings of isolation may be more acceptable to a wider range of participants.

Increasing knowledge and empathy. The main goals of Module 2 were to increase knowledge and empathy towards transgender people by providing psycho-education about

common misconceptions related to gender identity and about the importance of parental acceptance. Several participants reported the module was informative and thought-provoking, which aligns with the goals of the module. A striking asset that helped increase empathy was the video with trans youth discussing their own experiences, as almost half of participants mentioned this in their feedback. The other commonly liked activity was the social perspective taking exercise where participants took the role of a trans teen and wrote a coming out letter. The feedback indicates that activities related to increasing empathy for transgender youth are appreciated and useful for parents of trans youth. These activities will remain and potentially be expanded in the revised version of the program.

There were no prominent themes of negative feedback for the activities geared at increasing knowledge and empathy. The most notable theme was that participants did not find the information to be new or useful, but noted that it would be helpful for other parents who had not been previously exposed to such information. In the current version of the program, all six psychoeducation videos were required for Module 2. Examining the recorded times on each video page revealed that many participants skipped some or all videos. Given that many participants were skipping the videos, changing the format of the module to allow for more tailored choice may increase participant satisfaction with the module. This feedback may indicate the psychoeducational videos would be most useful to parents who do not know as much information on gender diversity and/or more recently learned their child was transgender.

Increasing supportive behaviors. The main goal of Module 3 was to increase affirming behaviors by providing psychoeducation about affirming behaviors and in some cases practicing behaviors (e.g., writing using correct pronouns). There were fewer distinct patterns of positive feedback from participants for this module and it was more difficult to

discern from participant feedback whether the module goals were met. The self-compassion exercise and video of parent interviews received more positive feedback than other specific activities within the module. Participants shared appreciation for information about medical interventions. The interest in medical transition information was further supported by "making medical decisions" being the most commonly chosen skill within Module 3 and concerns about medical transition being identified a common challenge that parents experience. Therefore, expanding the "navigating medical interventions" skill could be a helpful revision to the program.

There were no prominent themes of negative feedback for Module 3. Some participants noted that they already knew the information and a few participants appreciated having choice in what skills they wanted to learn about. Therefore, it seems reasonable to keep a format that allows for a more tailored experience by allowing participants to choose which skills to focus on. Participants suggested additional material that could be addressed including: more information and personal stories about medical transition, information about legal name and gender change, guidance for couples with one parent who is unsupportive, and providing links to support groups. Parents struggling to navigate their family relationships when one parent was unsupportive was a common theme that emerged in a previous study on experiences of parents of trans youth (Matsuno & Israel, in preparation) and was also reported by parents in the focus groups. All of these additional topics will be considered as additions to the revised version of the program.

Findings about Attrition

Attrition rates for online psychological interventions have been documented to be higher than face-to-face treatment attrition (Van Ballegooijen et al., 2014). A meta-analysis of Internet-based interventions for psychological disorders found that dropout rates ranged

from 2% to 83% with an average dropout rate of 35% (Melville, Casey, & Kavanagh, 2010), indicating that the attrition rate for the Parent Support Program (81.5%) was high when compared to other online interventions. However, most online interventions seek to change behaviors for the participants' own benefit (e.g., treatment for depression or substance use), whereas the Parent Support Program is designed to change one's behavior primarily for their child's benefit as well as their own. Typically, other feasibility studies report higher nonuse attrition rates compared to dropout attrition for participants who start the intervention (Price, Gros, McCauley, Gros, & Ruggiero, 2012). For the current study, a greater portion of participants started the intervention and dropped out at some point before completion than those who dropped out prior to starting the intervention. The portion of participants who completed the one month follow up survey was comparable to other one month follow up studies conducted online (McCambridge et al., 2011).

Participant reported reasons for attrition. There are several factors that may explain the high attrition rates. The dropout survey and qualitative feedback from participants provided valuable information about attrition. One of the most prevalent reasons participants dropped out was not having enough time. A few participants emailed the researcher asking for extended time to complete the program further indicating that the time frame contributed to the attrition rate. Participants were allotted a three-week time frame to complete the intervention to limit confounding variables from interfering with the efficacy analysis. However, the extending the time-frame could decrease attrition. Another option to address this barrier to completion would be to shorten the length of the intervention. The qualitative responses from the intervention modules indicated that the writing prompts and some videos were particularly time consuming. Reducing the number of writing activities and reducing the number of videos or length of the videos could also decrease attrition rates.

Another common reason participants dropped out was "forgetting to come back." Additionally, participants who did not exit the program were more likely to complete the program. This barrier to completion could be addressed in several ways. First, the intervention could be framed as a one-session intervention rather than a three-session intervention. The current program encouraged participants to take breaks between each module and the instructions recommended that participants complete one module per week. This format was chosen to account for participant fatigue due to the intervention length, but could also have contributed to participant attrition. Second, sending email reminders more frequently than once per week and in a more personalized manner could decrease attrition. Other online platforms may be able to send automated emails on a more frequent basis compared to using the researcher's personal email to send reminders. Additionally, it may be helpful to encourage participants to continue the program by sharing how much of the program they have left to complete. For example, an email message that states, "You only have about 20 minutes left to fully complete the Parent Support Program. You can do it! Click here" may be a stronger persuader for participants to return.

Using a different online platform to host the program may also decrease attrition by decreasing technical issues that prevented participants progress from being saved. Several participants indicated their progress was not saved and a few participants emailed the researcher asking for solutions to this problem. The inability to create log-in information on Qualtrics led to participants having to re-enter their information if their progress wasn't saved, which was a major deterrent to completing the study. Qualtrics claims that it automatically saves participant progress, but if the participant tries to re-enter the program from a different device with a different IP address, Qualtrics will start the participant from the beginning of the survey. Additionally, some participants reported having problems even

when using the same device and web browser when trying to return to the program. Using a web platform that can collect survey data and use a participant log-in function would reduce these technical issues. Platforms that host online courses could be a viable alternative for the efficacy study.

Some participants indicated a reason for their incompletion was due to already knowing the information. This feedback was provided in the dropout survey and in qualitative feedback after Module 2 and Module 3. Additionally, the ceiling effects on the knowledge and attitude questionnaires indicate that most participants already had accepting attitudes and knowledge on gender diversity. Recruiting participants who have less accepting attitudes and less pre-existing knowledge on gender diversity may increase the relevance of the intervention and decrease attrition. Another alternative is to include more tailored options for participants. Participants indicated liking the format of Module 3 in which participants chose which skills they wanted to learn more about. Although, it is important that parents know the basics of gender diversity, it may increase participant engagement and completion rates to allow participants to choose which topics they learn about in Module 2. Another option for tailoring the intervention is to split the intervention into different levels such as "introductory" and "advanced." This could shorten the length of the intervention by focusing on the information most relevant to each level. Participants could either self-select which level they felt was most relevant to them based on written descriptions or participants could be matched to different levels based on pre-test screening. For example, pre-existing levels of knowledge, attitudes, and behaviors could determine which tailored intervention the participant would have access to. Separating the intervention into different levels could increase participant engagement and decrease attrition, however, it may complicate the research design by essentially two different treatments to evaluate.

Another common reason that participants dropped out was being "too busy." For some participants, being "too busy" meant that they were having family emergencies related to their trans child's mental health. This could be a common experience for this population that may limit parents' ability to participate. For other participants, being "too busy" meant having too many other commitments and not having time to complete the study. One participant emailed the researcher and said they would participate if the study was open in the summer when they had fewer work commitments. The study recruited participants over a two-month period. The recruitment period could be extended to allow for more opportunities for participants to have enough time in their schedules to participate. A meta-analysis of studies on web-based psychological interventions showed that most studies had recruitment periods of at least 5 months (Melville et al., 2010).

Demographic influences on attrition. Beyond reported reasons for dropping out, there were demographic differences between the participants who dropped out and participants who completed the intervention. Given the small sample size, it was difficult to conclude whether these differences were interpretable. Compared to completers, dropout participants were more likely to be bisexual, less educated, more religious, have no political party affiliation and live in urban or rural settings. Given that most participants dropped out before completing Module 1, specific qualitative feedback from participants with these characteristics could not be examined. Other variables measured at pretest may help explain the demographic differences noted between dropouts and completers. Compared with completers, dropout participants were more less likely to have sought out resources on the websites and from medical doctors. They were more likely to report their child's gender identity changed multiple times and had become aware of their child's transgender identity more recently. Dropout participants had higher levels of psychological distress including

depressive, anxious, and somatic symptoms and higher levels of loneliness compared to completers. Additionally, dropout participants were more likely to endorse being afraid, confused, and anxious when their child came out to them as transgender and were more likely to report fear of bullying and fear of making mistakes as challenges they faced.

One hypothesis to explain these differences is that pre-existing levels of acceptance influenced participant attrition. Participants who were struggling to a greater degree to accept their child may have dropped out because they didn't feel ready to take steps towards accepting their child's transgender identity. Parents who had recently become aware of their child's identity may be more likely to be struggling to accept their child and may have less information about the subject. Having a child who has changed their identity more than once may lead parents to believing their child's identity is a phase or invalid, making it more difficult to accept and support them. Additionally, it makes sense that parents who are less accepting would resist seeking resources in general and especially from a medical doctor. Other studies have found that people who are more religious, less educated, and more conservative tend to have more negative attitudes towards transgender individuals (Norton & Herek, 2013), which would explain the higher rates dropout participants with these characteristics.

Another factor that may influenced attrition is pre-existing levels of psychological distress. In particular, dropout participants appeared to be more anxious and were more likely to endorse fear related challenges than completers. Anxiety and other symptoms of distress may have made focusing on a long intervention more difficult. Additionally, symptoms of distress and level of support are likely related. It could be that participants who are less accepting experience more distress when learning that their child is transgender or that participants who already experience more distress have a more difficult time being

supportive. The results indicate that the intervention in its current form may be best suited for parents who have lower psychological distress and a baseline of pre-existing acceptance and that parents who are experiencing may more distress and difficulty supporting their child may need other supports such as in-person therapy or support groups.

However, participants with higher levels of pre-existing acceptance may also be likely to drop out if they felt like they already knew the information provided in the intervention. Some participants indicated this as a reason for dropping out in the drop out survey. The overall sample had larger portion of bisexual participants compared with other sexual minority groups potentially because bisexual people are more likely to have children (Biblarz & Savci, 2010). Therefore, the factors that led bisexuals to drop out were likely related to being sexual minorities rather than being bisexual specifically. Sexual minorities may have higher levels of knowledge and acceptance due to more exposure to the LGBT community and therefore may have dropped out due to having more pre-existing acceptance rather than less.

Attrition of the intervention and control groups. The attrition rates among the intervention and control groups were vastly different (81.5% compared with 25.4%). Although, participants were randomly assigned to conditions, the difference in attrition rates may introduce bias into the samples and lead to inequivalent groups. There appeared to demographic patterns among those who dropped out and if the attrition rates remained similar in the efficacy study the sample groups are likely to differ. Additionally, in the current study two-thirds of the recruited participants were assigned to the intervention to gather more acceptability and feasibility data and even with this distribution of assignment, the control sample ended up being twice as large as the intervention group. The researcher stopped recruitment to the control condition 23 days into recruitment in order to obtain a

large enough sample size of intervention participants. Although there were no significant differences in pre-test measures between control and intervention conditions, there appeared to be differences in the demographic make-up (i.e., sexual orientation, education, political party, and living environment) of the samples. These variables were not significantly correlated with the attitudes, behavioral intentions, or self-efficacy. Therefore, it is unclear whether these are covariates that would impact the results of the efficacy analyses.

There are few things that can be done to account for the differences in samples found between conditions. First, creating a control condition that would evoke similar attrition patterns as the intervention would likely decrease group differences in pre-test variables. Additionally, a few different strategies in randomization can be taken to balance the influence of covariates (Suresh, 2011). Potential cofounding variables can be balanced between the intervention and control group through covariate adaptive randomization, which assigns participants to groups based on specified covariates and previous assignments of participants. Covariate adaptive randomization has been recommended as a valid alternative to simple randomization by several researchers (Fleiss, Levin, & Paik, 2013).

Findings about Measures

The current study provided valuable information about the feasibility and acceptability of the outcome measures. Eight out of the sixteen total scales used in the study demonstrated strong enough reliability, validity, and distributions to remain in the efficacy study as they currently exist. These scales were previously validated and included measures of psychological distress, loneliness, positive and negative affect, self-compassion, feasibility, acceptability, and appropriateness.

Behaviors. The scales related to behaviors (i.e., behavioral intentions, self-efficacy, and behavioral frequency) were created by the researcher and with elimination of some items

all three scales demonstrated strong reliability and validity. However, the scales were highly skewed indicating a ceiling effect with most participants scoring the highest possible scores indicating the highest level of supportive behaviors. These findings indicate that the scales could be further revised to capture more variance, which would allow for group differences to be more easily detected. For the efficacy study, the behavior related scales will be revised by removing the items with the least variance and potentially adding items that may produce more variance. Another option that could help increase the variance captured among these scales would be to increase the response option range from 7 points to 10 points. Another option for accounting for the ceiling effect found among the behavior related scales would be to add individual items that measured the participants perceived change in behaviors and feelings of self-efficacy between the intervention and follow up. Since many parents scored the highest possible score at both points, it was hard to distinguish if there were positive changes at follow up. Adding this item could help capture the impact of the intervention on self-efficacy and behaviors.

Attitudes. The measures of attitudes, and beliefs were among the most problematic in terms of reliability, validity, and distribution. Although the same attitude measure showed strong reliability in a previous study with parents of transgender youth conducted in 2017 (Matsuno & Israel, in preparation), the measure showed poor reliability in the current study indicating alternative measures should be chosen for the efficacy study. The attitude and sexual essentialism scales were highly skewed and demonstrated ceiling and floor effects. More sensitive measures will be considered for the efficacy study to capture more variance. For example, 101 – point feeling thermometers may be a better option to capture more subtle differences in attitudes among participants (Norton & Herek, 2013). Additionally, the function of social desirability in self-reported explicit attitudes may have contributed to the

ceiling effect among this measure. Another alternative would be to measure implicit attitudes which are less susceptible to the influence of social desirability (Wang-Jones et al., 2017).

Knowledge. The knowledge measure similarly showed poor reliability and was highly skewed despite previously demonstrating adequate reliability with this population (Matsuno & Israel, in preparation). The knowledge questionnaire could be improved by removing items that yielded zero variance and creating new questions of higher difficulty that would hopefully reduce the ceiling effect found in the current study. Creating more multiple choice or matching style questions rather than true/false style questions could help increase the variance of participant responses (Parkes & Zimmaro, 2016). Write-in short answer response questions could also increase variance found in knowledge, but would require the researcher to code written responses. The new knowledge questionnaire should be pilot tested before use in the efficacy study to ensure adequate reliability and validity. Additionally, measuring perceived levels of knowledge or perceived change in knowledge could be added to further support the detection of changes in knowledge.

Beliefs. Beliefs in sex essentialism and etiology were measured because they were hypothesized to be associated with attitudes towards transgender individuals. The current study found sex essentialist beliefs and learned etiology to be significantly correlated with attitudes as predicted, however, beliefs in genetic etiology was not significantly correlated with any outcome measures including attitudes. Given the lack of relationship between beliefs in genetic etiology with attitudes or other outcome measures, it may not be necessary to measure in the efficacy study. The learned etiology scale showed weak reliability and therefore may also not be an adequate measure for the efficacy study. Although the sex essentialism scale demonstrated strong reliability and good validity, the distribution was highly skewed with an extreme kurtosis value. Therefore, it may be beneficial to remove all

three belief scales to allow for other measures of attitudes and knowledge to be used without needing to increase the sample size to maintain sufficient power.

Findings about efficacy

Due to the small sample size, conclusions about the efficacy of the intervention cannot be drawn. Additionally, given the differences in attrition rates and observed demographic differences between the control and intervention conditions, it is likely that the two groups were not equivalent making the efficacy data analysis inconclusive. The mean differences between the control and intervention groups were small and often going in the opposite direction than hypothesized. The graphical representation of the changes in outcomes for the control and intervention groups at the one month follow up was the most supportive evidence of intervention effectiveness. Although no statistically differences were found, there appears to be a greater decrease in loneliness and greater increase in self-compassion for intervention participants compared to control participants one month following the intervention. The preliminary analyses provided useful information about the effect sizes and observed power found for each analysis. For post-test analyses, medium - large effect sizes were found, that potentially a smaller sample would be sufficient for the efficacy study. Additionally, the low observed power indicated that significant differences were likely undetectable for the preliminary analyses, but may become detectable with more power.

Implications for further use of the Parent Support Program

Acceptability. The intervention in its current form was highly acceptable and would be appropriate for parents of trans youth and for participants in a larger efficacy study. Participant feedback about the modules was overwhelmingly positive and the reasons for dropout were not related to the acceptability of the intervention content. Even with the many

strengths of the study, improvements can be made to further increase the acceptability and appropriateness of the intervention. Some participants commented that they already knew the information provided and the sample seemed to have high pre-existing levels of knowledge and acceptance. A couple of strategies can be implemented to increase the relevance to participants. First, more effort can be made to recruit parents with less pre-existing knowledge and acceptance through more deliberate snowball sampling techniques, changing the recruitment advertisement, and expanding recruitment strategies to include Facebook and Google advertisements. Second, the intervention can include pre-test screening procedure before each module to provide more tailored experience. For example, participants with higher levels of knowledge can have the option to skip some of the psychoeducational videos in module two and participants will less knowledge can be required to watch all the module videos.

Another consideration for increasing participant engagement in the revised version of the program is to add a "live" discussion component. Other internet-based psychological interventions have found that including an online chat function where participants can interact with and provide support to each other yielded positive results in measured outcomes and participant engagement (Lelutiu-Weinberger, Pachankis, Gamarel, Surace, Golub, & Parsons, 2015). There are a variety of formats for adding a live discussion component to the intervention. Either, scheduled sessions can take place where participants enter a live chat room (either video or text) and discussion can be facilitated by the researcher or chats can be unscheduled and take place at each participant's own convenience. In either format, it would be helpful to have someone monitoring the conversations to ensure that participant responses would not lead to harm or decreased support for other participants and it could be useful to have discussion prompts to elicit participant engagement. This additional component may be

especially helpful for this population as one goal of the intervention is to decrease parents' feelings of isolation. Additionally, many participants in current study indicated appreciation for the video recordings of other parents and a live chat function may have a similar impact and allow the participant to be an active in providing feedback to others. Receiving social support online is a common practice (White & Dorman, 2001), especially among groups who experience a stigmatized identity (Mehra, Merkel, & Bishop, 2004) and therefore adding this type of component seems like a wise choice.

Feasibility. The intervention and recruitment methods used for the current study would not be feasible for conducting a larger efficacy study. With the current attrition rate and data analysis plan, 4,448 eligible participants would need to be recruited to have sufficient power for the follow up study. If the recruitment rate remained the same, it would take over 3 and a half years to recruit this sample size which is not feasible. However, an efficacy study could be feasible with some changes made to the intervention content, design, and recruitment strategies.

In terms of recruitment, there are several measures that can be taken to make the efficacy more feasible. First, the recruitment period can be expanded from 2 months to 6 months to allow for more participant recruitment. Also, expanding participant eligibility will expand the sampling pool. The current study restricted participants to be parents of trans youth age 10 – 18. With more tailored options, the program would be relevant to parents of trans youth in a broader age range. Recruitment strategies can be expanded to include Facebook and Google advertisements to reach more parents and parents who may benefit more from the intervention if they are not already involved in a parent support group. Participants who are motivated and in need of the intervention content may be more likely to complete the study. Understandably, parents may be reluctant to participant in research if

they are unsure of the researcher's intentions, motivation, and background. Greater efforts can be made for this information to be transparent and to build partnerships with organizations that support parents of trans youth. Having endorsements and program reviews by trans affirming organizations and parents who completed the program could also make recruitment more successful. Finally, snowball recruitment strategies are often useful in recruitment of populations who are stigmatized or hard to reach. In the efficacy study, participants can be asked to provide contact information for others who may benefit from the intervention and participants can be encouraged and reminded to share the study with others they know.

There are many changes that can be made to the intervention format that will likely increase feasibility. First, changing the intervention platform to one that has a participant log-in option will prevent the technical difficulties that Qualtrics demonstrated, particularly the issues with saving participant progress. Shortening the intervention length and tailoring the modules by making some components optional depending on baseline knowledge and attitudes are other strategies that are likely to decrease attrition and make the program more feasible to complete. Given that participants who exited and returned fewer than 2 times were the most likely to complete the program, participants can be encouraged to exit the program as little as possible, rather than encouraging participants to take breaks after each module. Finally, expanding the amount of time allotted for participants to complete the intervention from 3 weeks to 1 month and sending personalized email reminders twice per week would also likely elicit more participant completion.

Lastly, changes to the planned data analysis could reduce the sample size needed to have adequate power. Reducing the number of measures used would decrease the sample size needed to have adequate power. The measures that did not perform well in the current study

could be eliminated for the efficacy study. Additionally, fewer measures could be included in the follow up as the follow up analysis yielded the smallest effect size and requirement for more participants. If only three outcome measures were used in the follow up analysis, the total number of eligible participants needed would reduce from 4,446 to 1,176. This sample size is estimated based on the current attrition rates. Therefore, if the attrition rate decreased than the recruited sample size needed would likely be less than 1,000. Qualitative data could be collected on the participants' perception of the impact of the study to further support the efficacy of the program if quantitative analysis were under powered.

The pilot study also generated important information for the feasibility of the intervention after the efficacy study. It appeared that personal connections and well-established organizations that serve parents of trans youth such as PFLAG were the most successful avenues for recruitment. Parents of trans youth may be skeptical of resources and may be more likely to commit the time necessary to complete the program if it is offered by or sponsored by a well-established trans affirming organization such as PFLAG or Gender Spectrum. Partnerships with these organizations will be considered for future dissemination of the intervention. Additionally, efforts will be made to have information about the program creator and their intentions available to increase trust in the program. Program reviews from other parents will be made publicly available to increase use of the intervention. Having the program on its own website platform may help parents find it through a Google search and may reach more parents who are struggling to support their child.

Implications for research

Beyond a future efficacy study of the Parent Support Program as a whole, there are many other future directions for research. With interventions that include multi learning components and multiple modes of intervening, it is hard to discern which components

influence different outcomes. Although, each component of the intervention is designed to build on the previous intervention content to ultimately initiate behavior change, it is unclear if all components of the intervention are necessary for behavior change to occur. Future research could evaluate the impact of different intervention components on outcomes in comparison to the impact of the combined components. For example, participants could be split into different experimental treatment groups that each measure one component of the intervention (e.g., writing activities only, educational videos only, interview videos only, and entire program). This research design would uncover which intervention components impact the various outcome measures collected (e.g., distress, knowledge, attitudes, and behaviors). If the smaller intervention components have a significant impact on outcome measures, they could stand alone and function as more feasible intervention for parents. Even if smaller intervention components individually made an impact on outcomes, it would be helpful to know if the combined intervention components created a stronger impact on outcomes. Furthermore, it would be valuable to know if different demographic characteristics influenced the efficacy or acceptability/feasibility of the various intervention components.

It would be helpful for the behavioral scales created in the pilot study to be further developed through exploratory and confirmatory factor analysis. In general, there are no published validated scales that measure LGBT supportive behaviors among parents. More measures on this topic are needed to evaluate the effectiveness of parent support groups, therapy, and other psychological interventions that aim to increase supportive behaviors among parents of trans youth. In addition to a lack of behavioral scales, there are no published scales that measure knowledge or attitudes as they relate to parenting a transgender child. The current study used measures that generally measured knowledge about gender diversity and attitudes towards transgender people. Parents may have generally positive

attitudes towards transgender people as a whole and have more negative attitudes about their own child being transgender. The development of a knowledge and/or attitudes scale specifically for parents of transgender youth would be helpful in accurately evaluating interventions aimed at increasing parental acceptance.

In addition to evaluating the impact of the Parent Support Program through the self-report of the participants, it may be useful disseminate surveys to the trans children of the participants and evaluate their perceptions of change in supportive behaviors among their parents. By expanding measurement to the transgender children of parents, it could also be evaluated whether the intervention impacts the psychological well-being of the transgender child. The ultimate goal of the Parent Support Program is to support the mental health of trans youth through increasing parental supportive behaviors and accepting attitudes. If the program is found to be effective in increasing supportive behaviors, it would be helpful to evaluate whether the increase in supportive parenting behaviors actually protects trans youth from negative mental outcomes and increases their resilience. Therefore, measuring the impact of the intervention on trans youth mental health outcomes and resilience and examining whether these outcomes were moderated or mediated by changes in parental support would be an opportunity to fully evaluate whether the program meets its goal.

Implications for practice

Many of the intervention components could be translated into other formats such as in-person therapy or a work-book. The writing exercises could be expanded and re-formatted to create a work-book for parents to process their emotional reactions when learning their child is transgender. To date, no work-books on this topic exist and the content of the Parent Support Program could easily be translated to this format, indicating that this could be a promising next step of the program. Additionally, one participant recommended that the

program should be revised into workbook. The efficacy of a workbook could be researched through a quantitative experimental study or through qualitative study with focus group interviews.

The current study provides important information for therapists who work with parents of transgender youth either in individual, family, or couples therapy and for therapists who facilitate support groups for parents of trans youth. Over half of the recruited sample had previously sought therapy related to learning their child was transgender. Additionally, almost half of the sample had been to an in-person parent support group and two thirds had attended an online support group. This data shows that parents of transgender youth are seeking support from mental health providers, emphasizing the need for more research and clinical guidance about therapy with this population.

The module activities provide therapists with information on topics that could be important to explore with parents in therapy. The intervention outlines six behavioral skills that therapists can help their clients utilize. The pilot study indicated that parents wanted the most support with navigating medical interventions, advocacy, communicating with their child, and developing an openness to their child's gender expression. However, participants who completed the intervention were more likely to have known about their child's identity for over two years and therefore helping clients adjust to names and pronouns and come out to others may be useful topics for clients who have more recently learned about their child's trans identity.

This study was one of the few studies to examine the experiences of parents of trans youth. It appears that many parents experience anxious emotions (e.g., worry, fear) when learning their child is trans and the most common challenges that parents experienced were fear based (e.g., fear of making mistakes, fear their child will be hurt). Therefore, therapy

interventions that help clients manage their anxiety may be a helpful first step and can allow parents to process their other emotions that might arise after the initial anxiety, such as grief and loss. It also appeared that most participants experienced a mixture of emotions including worry, sadness, and love. Therefore, it may be helpful for therapists to normalize this emotional process for parents of trans youth. Sone participants noted feeling "guilty" for experiencing "grief" because they also supported their child's transition. Parents often feel isolated and may not feel comfortable discussing their grief or any "negative emotions" they experience related to their child's identity at LGBT organizations out of fear of not appearing affirming. However, processing these emotions is an important step for parents own well - being and their ability to support their child. Therapy can be a non-judgmental setting where parents can process their mixture of emotions. The qualitative feedback from participants supported the positive impact of the intervention on addressing the grieving process and normalizing parents' emotional process.

Many of the intervention activities could be translated to a therapy context or the Parent Support Program could be completed in combination with therapy. One of the difficulties of a multi-component online intervention is tailoring the experience to the needs of the participant. However, individual therapy provides a tailored experience that can address the specific issues coming up for the client at their own pace. Additionally, an online intervention misses the interpersonal connection that one of the foundations of creating positive change in psychotherapy (Wampold, 2015). The grief writing prompts are easily translatable to topics to be discussed in therapy. Additionally, they could be used as "therapy homework" to initiate more emotional expression in therapy, which may be even more impactful due to the interpersonal context of therapy. The self-compassion writing activity may be another activity that would work well in a therapy context as it might be helpful for a

therapist to give client's permission or encouragement to be kind and compassionate towards themselves.

Finally, it is crucial for therapists working with parents and families of trans youth to stay knowledgeable about gender diversity topics. Therapists are often seen as experts by their clients and therefore have the power to educate their clients and influence their behavior. Holding this power underscores the importance of therapists having knowledge about transgender identities and gender diversity including what the research says about parental support and acceptance. A couple of published books provide guidance for clinicians working with trans youth and their families (i.e., Keo-Meier & Erhensaft, 2018; Nealy, 2017). It is important that more professional training and published clinical guidance is developed for clinicians working with family members of transgender people and it would be helpful to incorporate this topic into graduate training programs, especially marriage and family therapy programs.

Therapists may want to get specialized training to help parents navigate medical treatment options. Given that parents must provide consent for gender affirming treatments if their child is a minor, parents are often tasked with making important medical decisions for their child which can be daunting and stressful. Therapists can help parents navigate these decisions by informing them about the risks and benefits of various medical procedures and helping them process the emotions that occur related to these decisions. Additionally, interdisciplinary collaboration with medical providers can help provide wholistic treatment to families considering medical gender affirming procedures.

Limitations

A limitation of the study was the lack of diversity in the recruited sample. The sample was predominately White, liberal, cisgender women and therefore we can cannot conclude

whether the intervention is acceptable or feasible for other demographic groups such as men, people of color, or people with conservative political views. To address this limitation more data could be collected specifically from these groups to evaluate whether the program is acceptable and feasible among these populations. If the current intervention is found to lack acceptability among these groups, it would be helpful collect more qualitative data on what changes could be made to better address their needs. Additionally, it would be beneficial to explore other recruitment methods to learn more about how to reach these populations. However, the self-selection by participants in this study may also indicate that the intervention is meeting a specific need among White, liberal, cisgender women and therefore the Parent Support Program may be most suitable for this population. Another limitation noted by expert feedback was the lack of racial/ethnic diversity among the parents and youth filmed for the interview videos. Due to limited funding and time, additional interviews could not be recorded for this initial study. However, it will be important to ensure that parents of color feel represented in the intervention content in the revised version of the program.

Another limitation of the current study was using a waitlist control group rather than developing a control intervention. The vastly different attrition rates between the intervention and control groups likely led to nonequivalent groups. Non-equivalent groups pose a threat to internal validity, making it difficult to accurately interpret group differences. If groups are non-equivalent, it is uncertain whether group differences are caused by the intervention itself or other pre-existing differences between the groups. To address this limitation, other randomization strategies should be considered as well as creating a control intervention that would yield a similar attrition rate.

Many of the measures used were problematic by having unacceptable reliability, validity, and highly skewed distributions and therefore were not used in the efficacy analysis.

The use of these measures would prove to be a limitation in an efficacy study. However, given the goals of the pilot study, the information about the measures was useful to make adjustments for the future efficacy study. The problems found with some outcome measures did not impact the feasibility and acceptability data collected.

Conclusion

This project created the Parent Support Program, a three module, interactive, multi-media, theory-based online intervention. The program was developed based on psychological theories of change as well as the input from parents of transgender youth and experts. The program included adapted psychological interventions about grief, social perspective taking, and self-compassion. In total, the intervention included ten writing activities, fifteen educational videos, and three edited interview videos, as well as interactive quizzes, several trans affirming images and audio recordings of text. The intervention content was highly acceptable and appeared to meet the needs for an underserved population.

The pilot study provided key information on how the recruitment strategy, intervention content, platform, and format, and data analysis can be revised to ensure the feasibility and acceptability of intervention and efficacy study. Some changes include creating a more tailored experience and on a more reliable platform, increasing snowball sampling and adding recruiting methods such as Google advertisements, lengthening the recruitment period, replacing knowledge and attitude measures, and changing the data analysis to use fewer outcome measures. The pilot study of the Parent Support Program is the first step in creating an evidence-based intervention that increases supportive behaviors among parents of trans youth, which in turn, will help decrease the devastating mental health risks that trans youth face.

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Figures and Tables

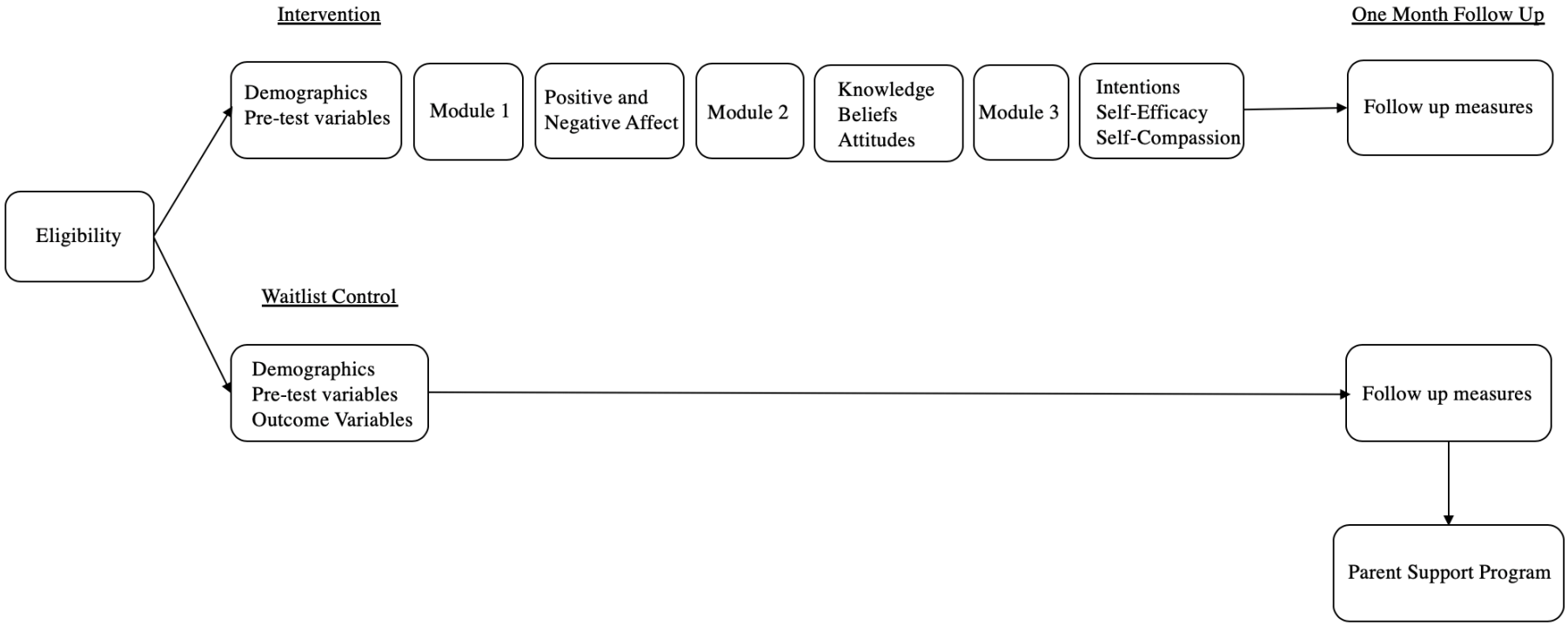

Figure 1. Visual representation of study design.

Table 1
Sample Demographics

	Recruited (N = 200)	Completed (N = 80)	Intervention (N = 27)	Control (N = 53)
Characteristic	**n (%)**	**n (%)**	**n (%)**	**n (%)**
Mean Age (SD)	44.29 (6.72)	45.66 (6.8)	47.19 (7.74)	44.89 (6.21)
Gender Identity				
Cisgender Woman	184 (92%)	73 (91%)	25 (93%)	48 (91%)
Cisgender Man	10 (5%)	5 (6%)	2 (7%)	3 (6%)
Non-binary	5 (3%)	2 (3%)	0	2 (4%)
Sexual Orientation				
Heterosexual	137 (69%)	59 (74%)	22 (82%)	37 (70%)
Bisexual/Pansexual	33 (17%)	8 (10%)	2 (8%)	7 (13%)
Lesbian/Gay	11 (6%)	6 (7%)	2 (8%)	5 (8%)
Unlabeled/Queer	13 (7%)	8 (10%)	1 (4%)	5 (8%)
Asexual	5 (3%)	1 (1%)	0	1 (2%)
Race/Ethnicity				
White Only	184 (92%)	76 (95%)	26 (97%)	51 (96%)
Latinx	7 (4%)	3 (4%)	1 (4%)	2 (4%)
American Indian	4 (2%)	1 (1%)	1 (4%)	0
Black/African American	3 (2%)	0	0	0
Asian	2 (1%)	0	0	0
Other	4 (2%)	0	0	0
Education				
Trade school or less	18 (9%)	2 (3%)	0	2 (4%)
Some college	31 (16%)	15 (19%)	4 (15%)	11 (21%)
Associate's degree	17 (9%)	10 (13%)	3 (11%)	7 (13%)
Bachelor’s degree	50 (25%)	22 (28%)	8 (30%)	14 (26%)
Some graduate school	13 (7%)	7 (9%)	3 (11%)	4 (8%)
Graduate/Professional	71 (36%)	24 (30%)	9 (33%)	15 (28%)
Income				
Mean (SD)	5.33 (1.85)	5.41 (1.85)	5.43 (1.81)	5.39 (1.89)
Religion				
Catholic	35 (18%)	13 (16%)	7 (26%)	6 (11%)
Christian	60 (30%	27 (34%)	5 (19%)	22 (42%)
No religion	49 (25%)	20 (25%)	5 (19%)	15 (28%)
Atheist	21 (11%)	11 (14%)	7 (26%)	4 (8%)
Jewish	8 (4%)	3 (4%)	1 (4%)	2 (4%)
Buddhist	1 (1%)	1 (1%)	1 (4%)	0
Muslim	3 (2%)	0	0	0
Unitarian Universalist	9 (5%)	1 (1%)	1 (4%)	0
Pagan or Wiccan	6 (3%)	2 (3%)	0	2 (4%)
Religion Importance				
Very important	20 (10%)	5 (6%)	2 (7%)	3 (6%)
Fairly important	54 (27%)	23 (29%)	7 (26%)	16 (30%)
Not very important	126 (63%)	52 (65%)	18 (67%)	34 (64%)
Political Views				
Very liberal	80 (40%)	37 (46%)	10 (37%)	27 (51%)

Liberal	92 (46%)	35 (44%)	15 (56%)	20 (38%)
Neither	27 (14%)	7 (9%)	2 (7%)	5 (9%)
Conservative	1 (1%)	1 (1%)	0	1 (2%)
Political Party				
Democrat	136 (68%)	62 (78%)	23 (85%)	39 (74%)
Republican	5 (3%)	2 (3%)	0	2 (4%)
Not affiliated	51 (26%)	13 (16%)	4 (15%)	9 (17%)
Geographical Environment				
Urban	30 (15%)	5 (6%)	2 (7%)	3 (6%)
Suburban	133 (67%)	60 (75%)	22 (82%)	38 (72%)
Rural	37 (19%)	15 (19%)	3 (11%)	12 (23%)

Note. SD = Standard deviation.

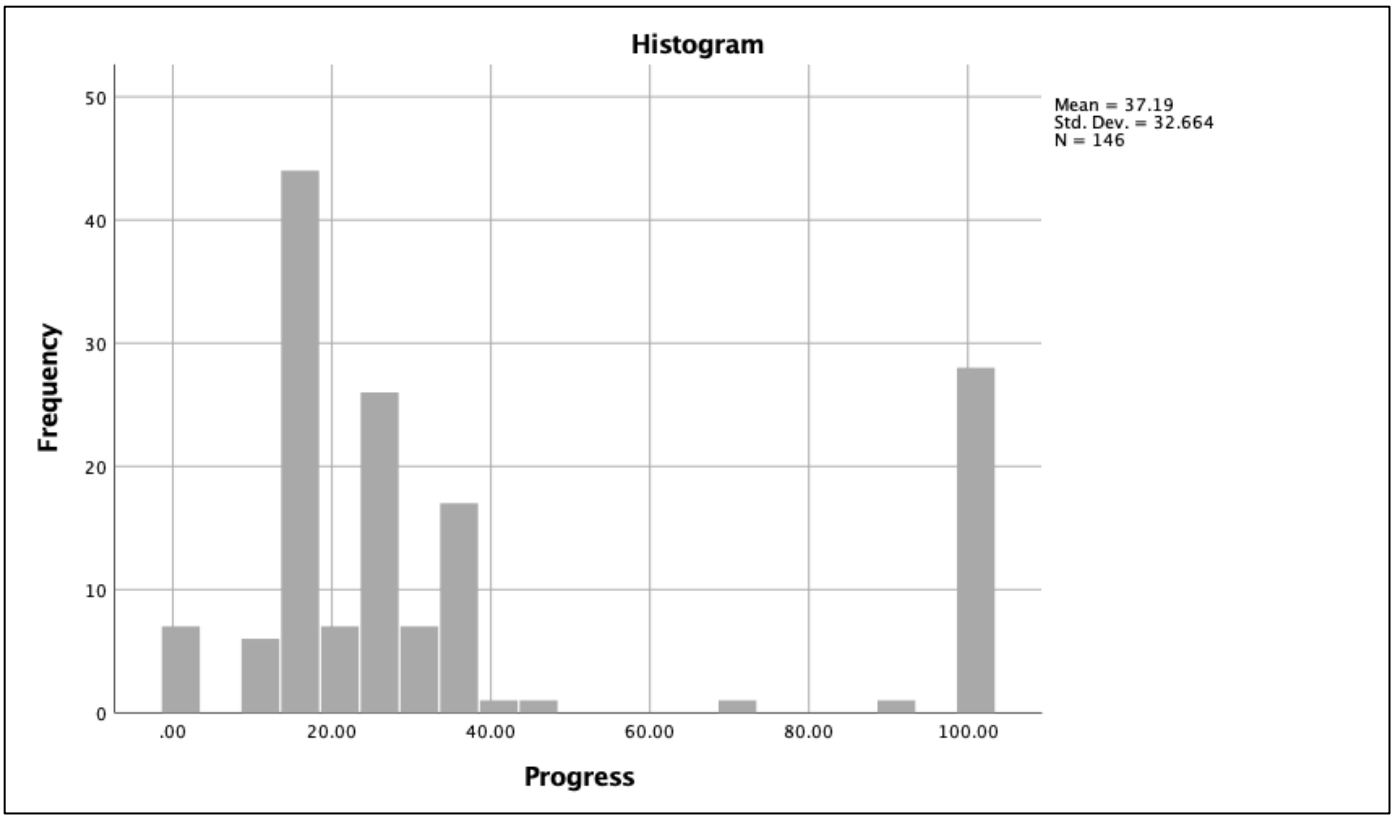

Figure 2. Dropout frequencies at various progress points.

Table 2
Attrition Demographics

	Intervention Drop Out (N = 108)	Intervention Completed (N = 27)
Characteristic	**n (%)**	**n (%)**
Mean Age (SD)	43.48 (6.53)	47.19 (7.74)
Gender Identity		
Cisgender Woman	99 (92%)	25 (93%)
Cisgender Man	5 (5%)	2 (7%)
Non-binary	3 (3%)	0
Sexual Orientation		
Heterosexual	73 (68%)	22 (82%)
Bisexual/Pansexual	21 (19%)	2 (8%)
Lesbian/Gay	5 (5%)	2 (8%)
Unlabeled/Queer	6 (6%)	1 (4%)
Asexual	2 (2%)	0
Race/Ethnicity		
White	103 (95%)	26 (97%)
Latinx	4 (4%)	1 (4%)
American Indian	2 (2%)	1 (4%)
Black/African American	3 (3%)	0
Asian	2 (2%)	0
Other	3 (3%)	0
Education		
Trade school or less	12 (11%)	0
Some college	16 (15%)	4 (15%)
Associate's degree	7 (7%)	3 (11%)
Bachelor's degree	27 (25%)	8 (30%)
Some graduate school	5 (5%)	3 (11%)
Graduate/Professional	41 (38%)	9 (33%)
Income		
Mean (SD)	5.34 (1.84)	5.43 (1.81)
Religion		
Catholic	20 (19%)	7 (26%)
Christian	30 (28%)	5 (19%)
Jewish	5 (5%)	1 (4%)
Buddhist	0	1 (4%)
Muslim	3 (3%)	0
No religion	26 (24%)	5 (19%)
Atheist	7 (7%)	7 (26%)
Unitarian Universalist	8 (7%)	1 (4%)
Pagan or Wiccan	3 (3%)	0
Religion Importance		
Very important	13 (12%)	2 (7%)
Fairly important	29 (27%)	7 (26%)
Not very important	66 (61%)	18 (67%)
Political Views		
Very liberal	41 (38%)	10 (37%)

Liberal	50 (46%)	15 (56%)
Neither	17 (16%)	2 (7%)
Conservative	0	0
Political Party		
Democrat	67 (62%)	23 (85%)
Republican	3 (3%)	0
Not affiliated	34 (32%)	4 (15%)
Other	4 (4%)	
Geographical Environment		
Urban	22 (19%)	2 (7%)
Suburban	65 (60%)	22 (82%)
Rural	21 (19%)	3 (11%)

Note. SD = Standard Deviation.

Table 3
Pre-Test Variables for intervention drop out and completed intervention participants

	Drop Out (N = 108)	**Intervention (N = 27)**
Characteristic	**n (%)**	**n (%)**
Mean Child Age (St. Dev.)	14.7 (2.23)	14.59 (2.44)
Sex Assigned at Birth		
Female	88 (82%)	21 (78%)
Male	20 (19%)	6 (22%)
Gender		
Woman/Girl	13 (12%)	6 (22%)
Man/Boy	71 (66%)	16 (59%)
Non-Binary	23 (21%)	5 (19%)
Child's Gender Changed		
Yes	22 (20%)	2 (7%)
No	76 (70%)	24 (89%)
Not Sure	10 (9%)	1 (4%)
Transition		
Socially changed name	74 (69%)	14 (52%)
Legally changed name	32 (30%)	10 (37%)
Legally changed sex marker	16 (15%)	7 (26%)
Changed pronouns	102 (94%)	26 (96%)
Used puberty blockers	25 (23%)	10 (37%)
Hormone therapy	34 (32%)	11 (41%)
Surgery	7 (7%)	1 (4%)
Resources Sought		
Website	52 (48%)	18 (67%)
Books	39 (36%)	8 (30%)
In person support group	47 (44%)	13 (48%)
Online parent support group	68 (63%)	18 (67%)
Workshop	22 (20%)	5 (19%)
Therapy	59 (55%)	13 (48%)
Medical Doctor	45 (42%)	16 (59%)
Friends/Family	81 (75%)	20 (74%)
Child	101 (94%)	26 (97%)
Total Resources Used		
Mean (SD)	4.87 (1.9)	5.26 (2.21)
Support from extended family		
Mean (SD)	3.6 (1.07)	3.78 (1.01)
Support from friends		
Mean (SD)	4.09 (.88)	4.22 (.75)
Time being out		
Less than 1 year	25 (23%)	6 (22%)
1 year – 2 years	24 (22%)	5 (19%)
Over 2 years	57 (53%)	16 (59%)
Trans People Known		
0-2	21 (19%)	5 (19%)
3-5	41 (38%)	10 (37%)

6-8	9 (8%)	3 (11%)
9+	36 (33%)	9 (33%)

Note. SD = Standard deviation

Table 4
Emotions and challenges endorsed in Module 1

	Drop Out (N = 20)	Completed (N = 27)	High Engage (N = 17)	Low Engage (N = 10)
Characteristic	**n (%)**	**n (%)**	**n (%)**	**n (%)**
Emotions				
Worried	17 (85%)	24 (89%)	14 (82%)	10 (100%)
Fear/Afraid	16 (80%)	18 (67%)	9 (53%)	9 (90%)
Love	15 (75%)	21 (78%)	13 (77%)	8 (80%)
Anxiety	14 (70%)	13 (48%)	8 (47%)	5 (50%)
Confused	12 (60%)	11 (41%)	6 (35%)	5 (50%)
Sadness	10 (50%)	11 (41%)	6 (35%)	5 (50%)
Surprise	9 (45%)	9 (33%)	5 (29%)	4 (40%)
Guilt	5 (25%)	8 (30%)	6 (35%)	2 (20%)
Shock	6 (30%)	7 (26%)	4 (24%)	3 (30%)
Proud	3 (15%)	6 (22%)	3 (18%)	3 (30%)
Relief	1 (5%)	4 (15%)	2 (12%)	2 (20%)
Excited	2 (10%)	2 (7%)	2 (12%)	0
Embarrassed	1 (5%)	2 (7%)	2 (12%)	0
Ashamed	1 (5%)	2 (7%)	2 (12%)	0
Disappointment	0	2 (7%)	2 (12%)	0
Anger	1 (5%)	0	0	0
Joy	1 (5%)	0	0	0
Disgust	0	0	0	0
Challenges				
1. Fear my child will be bullied or hurt	20 (100%)	20 (74%)	12 (71%)	8 (80%)
2. Being afraid of making mistakes	13 (65%)	11 (41%)	10 (59%)	1 (10%)
3. Questioning if my child is really trans	1 (5%)	7 (26%)	6 (35%)	1 (10%)
4. Belief that it is a phase	0	3 (11%)	3 (18%)	0
5. Difficulty adjusting to new name/pronouns	5 (25%)	3 (11%)	2 (12%)	1 (10%)
6. Difficulty adjusting to new appearance	1 (5%)	2 (7%)	2 (12%)	0
7. Fear of telling family/friends	5 (25%)	3 (11%)	3 (18%)	0
8. Other family members are not supportive	5 (25%)	6 (22%)	5 (29%)	1 (10%)
9. Lack of information about trans identities	0	2 (7%)	2 (12%)	0
10. Feeling isolated	4 (20%)	3 (11%)	3 (18%)	0

Table 5
Pre-test psychological measures

	Drop Out	**Intervention**	**Control**	**High Engage**	**Low Engage**
	***M* (SD)**	***M* (SD)**	***M* (SD)**	***M* (SD)**	***M* (SD)**
Distress	7.09 (8.17)	3.5 (4.14)	6.1 (6.68)	2.43 (2.53)	5 (5.5)
Somatization	1.6 (2.65)	.76 (2.5)	1.15 (2)	.2 (.56)	1.6 (3.86)
Depression	2.69 (3.32)	1.12 (1.72)	2.4 (3.1)	1.07 (1.67)	1.2 (1.87)
Anxiety	2.8 (3.37)	1.76 (1.81)	2.54 (2.75)	1.47 (1.41)	2.2 (2.3)
Loneliness	5.68 (4.17)	3.96 (3.52)	5.33 (4.68)	4.31 (3.89)	3.4 (2.91)

Note. Distress was measured by the Brief Symptom Inventory (BSI-18) with higher numbers indicating higher distress. Somatization, Depression, and Anxiety are subscales of the BSI with higher numbers indicating more symptoms. Higher numbers indicated higher levels of loneliness.

Table 6
Qualitative response codes for barriers to complete the intervention

Code and Description	Count
B - Too busy, unexpected delays	11
F - Already Finished	9
T - Did not have enough time	4
H - Health or mental health of trans child	4
P - Progress not saved	3
L - Could not locate link	2
E - Stopped because too painful, emotional	2
W - Writing was too long	2
R - Not relevant	1

Table 7

Demographic variables between high and low engagement users

	Intervention Drop Out (N = 108)	**Intervention Completed (N = 27)**
Characteristic	**n (%)**	**n (%)**
Mean Age (SD)	43.48 (6.53)	47.19 (7.74)
Gender Identity		
Cisgender Woman	99 (92%)	25 (93%)
Cisgender Man	5 (5%)	2 (7%)
Non-binary	3 (3%)	0
Sexual Orientation		
Heterosexual	73 (68%)	22 (82%)
Bisexual/Pansexual	21 (19%)	2 (8%)
Lesbian/Gay	5 (5%)	2 (8%)
Unlabeled/Queer	6 (6%)	1 (4%)
Asexual	2 (2%)	0
Race/Ethnicity		
White	103 (95%)	26 (97%)
Latinx	4 (4%)	1 (4%)
American Indian	2 (2%)	1 (4%)
Black/African American	3 (3%)	0
Asian	2 (2%)	0
Other	3 (3%)	0
Education		
Trade school or less	12 (11%)	0
Some college	16 (15%)	4 (15%)
Associate's degree	7 (7%)	3 (11%)
Bachelor's degree	27 (25%)	8 (30%)
Some graduate school	5 (5%)	3 (11%)
Graduate/Professional	41 (38%)	9 (33%)
Income		
Mean (SD)	5.34 (1.84)	5.43 (1.81)
Religion		
Catholic	20 (19%)	7 (26%)
Christian	30 (28%)	5 (19%)
Jewish	5 (5%)	1 (4%)
Buddhist	0	1 (4%)
Muslim	3 (3%)	0
No religion	26 (24%)	5 (19%)
Atheist	7 (7%)	7 (26%)
Unitarian Universalist	8 (7%)	1 (4%)
Pagan or Wiccan	3 (3%)	0
Religion Importance		
Very important	13 (12%)	2 (7%)
Fairly important	29 (27%)	7 (26%)
Not very important	66 (61%)	18 (67%)
Political Views		
Very liberal	41 (38%)	10 (37%)

Liberal	50 (46%)	15 (56%)
Neither	17 (16%)	2 (7%)
Conservative	0	0
Political Party		
Democrat	67 (62%)	23 (85%)
Republican	3 (3%)	0
Not affiliated	34 (32%)	4 (15%)
Other	4 (4%)	
Geographical Environment		
Urban	22 (19%)	2 (7%)
Suburban	65 (60%)	22 (82%)
Rural	21 (19%)	3 (11%)

Table 8
Participant interaction with intervention videos among intervention completers

Video Title	Skipped n (%)	Partial n (%)	Finished n (%)
Aren't sex and gender the same thing?	12 (44%)	1 (4%)	14 (52%)
What do you mean more than two genders?	11 (41%)	3 (11%)	13 (48%)
Is being transgender a choice?	11 (41%)	1 (4%)	15 (56%)
Is being transgender a new fad?	14 (52%)	2 (7%)	11 (41%)
Aren't trans people really just gay?	12 (44%)	5 (19%)	10 (37%)
Is being transgender a sign of mental illness?	14 (52%)	2 (7%)	11 (41%)
Interview video – trans youth	8 (30%)	1 (4%)	18 (67%)
Interview video -parents	2 (7%)	7 (26%)	18 (67%)

Table 9
Acceptability, appropriateness, and feasibility of intervention modules

	Module 1 (N = 47)	**Module 2 (N = 29)**	**Module 3 (N = 27)**
Scale	***M* (SD)**	***M* (SD)**	***M* (SD)**
Acceptability	4.32 (.63)	4.29 (.65)	4.44 (.62)
Appropriateness	4.41 (.54)	4.35 (.64)	4.49 (.57)
Feasibility	4.21 (.73)	4.36 (.72)	4.42 (.6)

Table 10
Acceptability, appropriateness, and feasibility between dropout and completed participants

	Dropout (N = 18)	**Complete (N = 27)**
Scale	***M* (SD)**	***M* (SD)**
Acceptability	4.39 (.56)	4.31 (.69)
Appropriateness	4.46 (.49)	4.38 (.58)
Feasibility	4.35 (.53)	4.09 (.84)

Table 11
Qualitative response codes feedback to Module 1

Code and Description	Count
Positive Codes	59
PE - Positive impact on emotions through reflecting on emotions or expressing emotions	13
PW – Liked the writing activities or the writing had a positive impact	14
PI – Informative- provided information or was thought provoking	7
PH – Found the module helpful or relevant	8
PF – Liked the format – liked the questions, easy to understand	4
PV – Liked the videos	4
PVP – Liked parent interview videos	5
PP – Generally positive	3
PU – Could be useful in other formats	1
Negative Codes	13
NW – Did not like the writing exercises	8
NL – Too long	2
NV – Did not like the videos	1
NS – Could not save and return	1
NS – Negative emotional reaction, too painful	1
Neutral Codes	11
MX – Information was not new, but may be helpful to others	1
OCF – No comments or feedback	10

Table 12
Qualitative response codes feedback to Module 2

Code and Description	Count
Positive Codes	36
PVY – Liked interview video with trans youth	11
PI – Informative- provided information or was thought provoking	11
PWL – Liked writing coming out letter	6
PV – Liked the videos	4
PE - Positive impact on emotions through reflecting on emotions or expressing emotions	1
PP – Generally positive	1
PU – Could be useful in other formats	1
Negative Codes	8
NW – Did not like the writing exercises or did not complete	2
NF – Did not like the format	2
NI – Would like information about specific topics	2
NL – Too long	1
NV – Did not like the videos or did not watch	1
Neutral Codes	9
MX – Information was not new, but may be helpful to others	4
OCF – No comments or feedback	5

Table 13
Qualitative response codes feedback to Module 3

Code and Description	Count
Positive Codes	24
PWL – Liked self-compassion activity	4
PI – Informative- provided information or was thought provoking	4
PM – Liked the information on medical transition	3
PV – Liked the videos	3
PP – Generally positive	2
PE - Positive impact on emotions through reflecting on emotions or expressing emotions	2
PF – Liked format, liked questions, liked having options	2
PVY – Liked parent interview video	1
PN – Normalized thoughts or feelings	1
PP – Liked writing exercise	1
Negative Codes	8
NI – Would like information about specific topics	3
NW – Did not like the writing exercises or suggestions to improve writing exercises	2
NF – Did not like the format	1
NL – Too long	1
NV – Did not like the videos or did not watch	1
Neutral Codes	7
MX – Information was not new, but may be helpful to others	2
OCF – No comments or feedback	5

Table 14

Correlations between pre-test and outcome variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. SFAM	--													
2. SFD	.36**	--												
3. BSI	-.23	-.05	--											
4. RULS	.-.21	-.21	.62**	--										
5. NA	-.25*	-.33**	.63**	.44**	--									
6. PA	.09	.07	-.47**	-.5**	-.01	--								
7. LE	-.34**	-.35**	.34**	.34**	.32**	-.24*	--							
8. GE	.04	.02	.19	-.22	-.12	.04	-.02	--						
9. ES	-.26*	.27*	.25*	.13	.21	-.2	.42**	-.17	--					
10. Know	.15	-.02	-.13	-.08	-.17	-.01	-.29*	.07	-.58**	--				
11. ATTI	-.09	.08	.03	.16	.01	-.21	.33**	-.1	.35**	-.08	--			
12. BI	.32**	.25*	.05	-.15	.04	.14	-.38**	.06	-.36**	.33**	-.31*	--		
13. SE	.35**	.39**	-.03	0.24*	-.09	.15	-.44**	.02	-.38**	.29*	-.38**	.79**	--	
14. SCS	.2	.12	-.48**	0.28*	-.4**	.34**	-.21	.04	-.27*	.19	.09	.17	.29**	--

Note. SFAM = Support from extended family, SFD = Support from friends, BSI = Brief Symptom Inventory, RULS = Roberts version of the UCLA Loneliness Scale, NA = Negative Affect, PA = Positive Affect, LE = Learned Etiology, GE = Genetic Etiology, ES = Sex Essentialism, Know = Knowledge questionnaire, ATTI = Attitudes Towards Transgender Individuals Scale, BI = Behavioral Intention, SE = Self-Efficacy, and SCS = Self-Compassion Scale

Table 15
Post-test measures means and standard deviations between groups

	Control (N = 53)	**Intervention (N = 27)**	**High Engage (N = 17)**	**Low Engage (N = 10)**
Scale (Scale Range)	***M* (SD)**	***M* (SD)**	***M* (SD)**	***M* (SD)**
Positive Affect	29.46 (9.3)	30.44 (8.59)	30.88 (8.79)	29.7 (8.64)
Negative Affect	17.23 (5.56)	16.96 (4.96)	17.06 (5.52)	16.8 (4.1)
Knowledge	6.87 (.44)	6.81 (.4)	6.94 (.24)	6.6 (0.52)
Sex Essentialism	19.47 (10.13)	19.18 (6.19)	21.06 (7.22)	16 (0)
Attitudes	21.72 (2.74)	21.29 (2.76)	21.43 (2.95)	21.1 (2.6)
Genetic Etiology	13.85 (3.04)	13.46 (3.48)	13.71 (3.62)	13 (3.35)
Learned Etiology	7.34 (2.52)	6.11 (1.95)	6.65 (1.84)	5.2 (1.87)
Self-Compassion	29.3 (6.51)	28.18 (6.94)	29.18 (5.35)	26.5 (9.12)
Behavioral Intentions (1-7)	6.9 (.23)	6.84 (.25)	6.76 (.29)	6.97 (.07)
Self-Efficacy (1-7)	6.84 (.28)	6.83 (.3)	6.76 (.36)	6.94 (.1)

Note. Higher numbers indicate higher levels of the outcome variable.

Table 16
Pre-test and follow up means and standard deviations between groups

	Pre-Test Control (N = 28)	**Follow Up Control (N = 28)**	**Pre-Test Intervention (N = 13)**	**Follow Up Intervention (N = 13)**
Scale (Scale Range)	***M* (SD)**	***M* (SD)**	***M* (SD)**	***M* (SD)**
BSI	6.25 (7.18)	8.07 (10)	4.08 (5.07)	5 (6.01)
Somatization	1.25 (2.35)	1.93 (3.35)	1 (3.32)	1.14 (2.96)
Depression	2.14 (2.95)	2.83 (3.73)	1.5 (2.11)	1.64 (2.24)
Anxiety	2.86 (3.25)	3.31 (3.57)	1.62 (1.19)	2.21 (2.26)
Loneliness	5.22 (4.43)	5.28 (3.75)	3.77 (3.37)	3 (1.75)
Attitudes	29.31 (6.77)	22.46 (3.89)	28.5 (6.48)	21.69 (2.46)
Self-Compassion	21.8 (2.58)	22.28 (8.13)	20.55 (1.04)	29.64 (5.89)
Self-Efficacy	6.82 (.27)	6.72 (.41)	6.88 (.23)	6.82 (.28)
Supportive Behaviors		4.31 (.5)		4.33 (.55)

Note. Higher numbers indicate higher levels of the outcome variable.

Table 17
MANCOVA tests of between subject effects by condition at post-test

Outcomes	**Sum of Squares**	**df**	**F**	***p***
Behavioral Intentions	15.99	1	.92	.34
Self-Efficacy	1.07	1	.04	.84
Sex Essentialism	14.86	1	.19	.67
Self-Compassion	88.39	1	2.02	.16
Genetic Etiology	8.52	1	.81	.37

Table 18
MANCOVA tests of between subject effects by engagement at post-test

Outcomes	**Sum of Squares**	**df**	**F**	***p***
Behavioral Intentions	38.32	1	1.77	.2
Self-Efficacy	53.34	1	1.76	.2
Sex Essentialism	21.42	1	.94	.34
Self-Compassion	33.99	1	.59	.45
Genetic Etiology	3.07	1	.22	.64

Table 19
MANCOVA tests of between subject effects by condition at follow up

Outcomes	**Sum of Squares**	**df**	**F**	***p***
Distress	1.56	1	.11	.75
Loneliness	1.88	1	.59	.45
Self-compassion	17.16	1	.49	.49

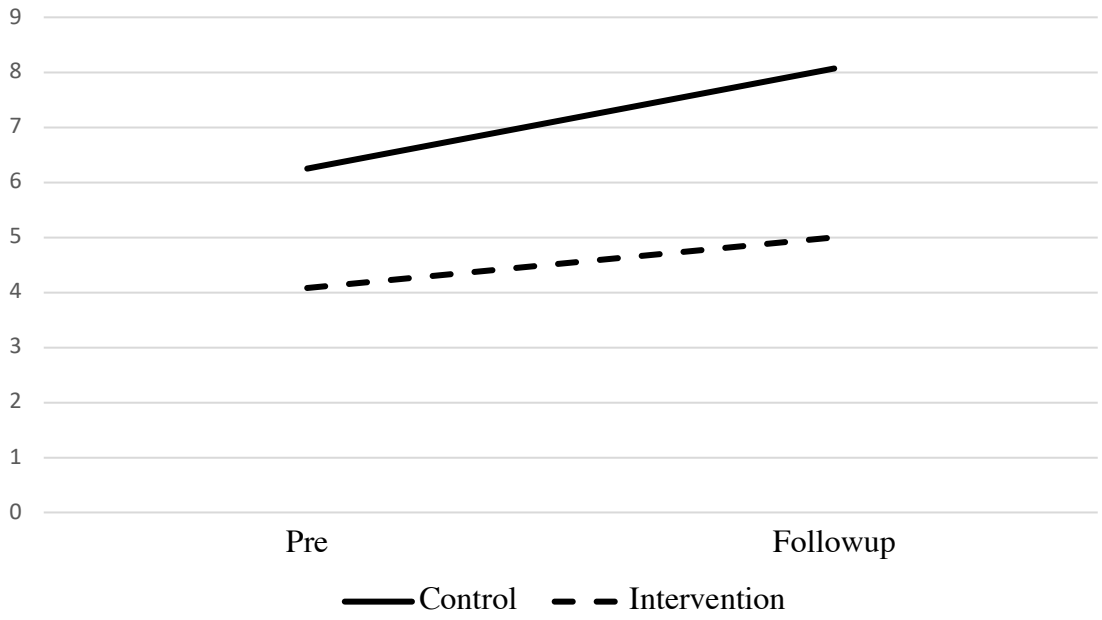

Figure 3. Changes in psychological distress over one-month period between conditions.

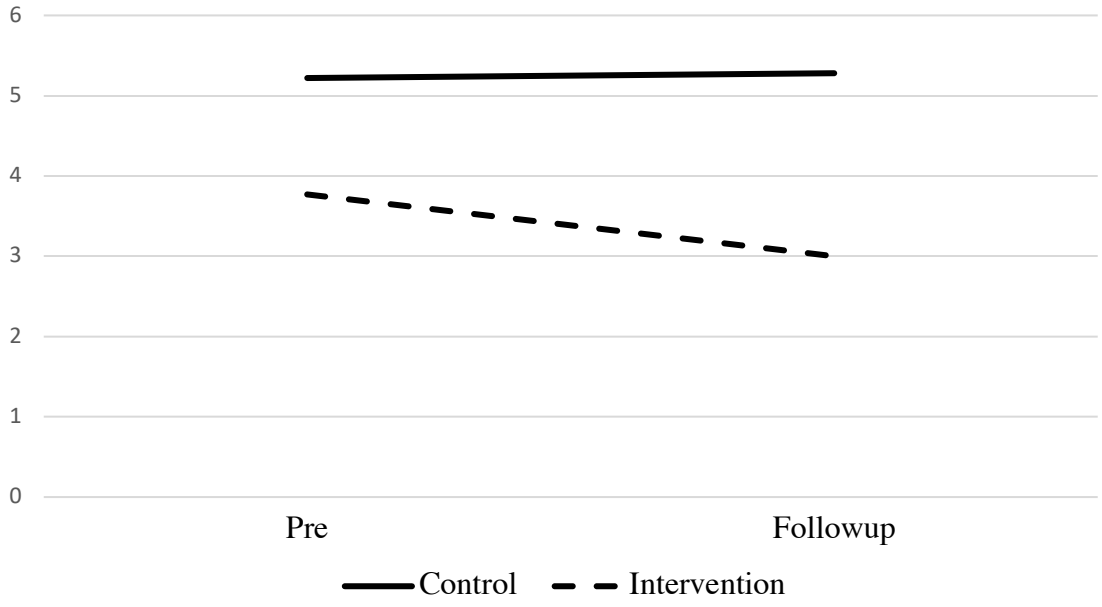

Figure 4. Changes in loneliness over one-month period between conditions.

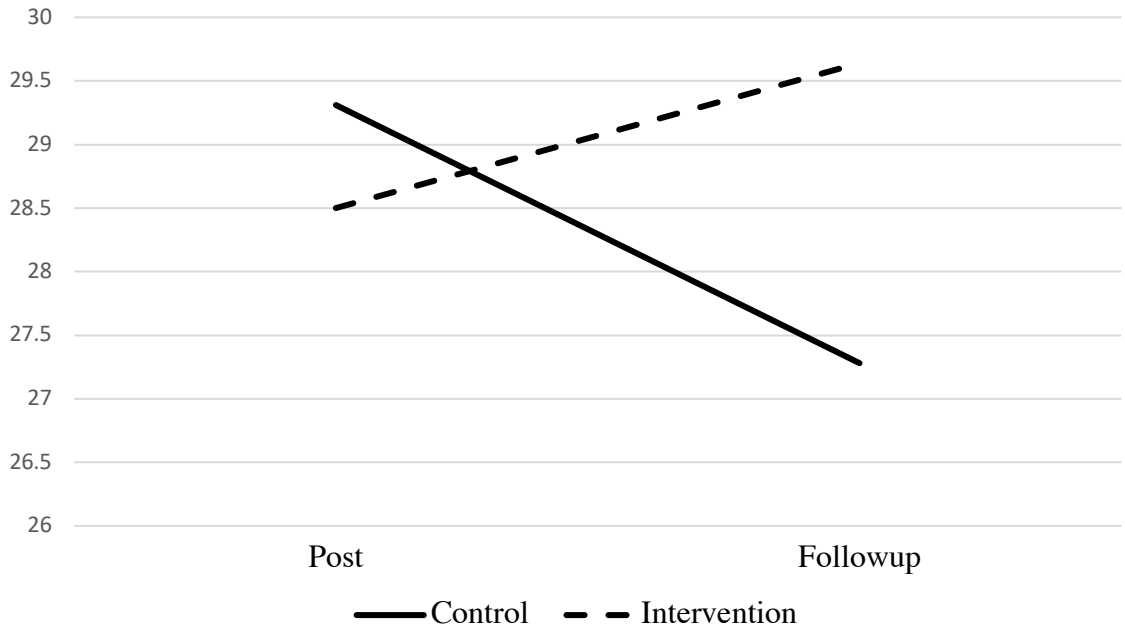

Figure 5. Changes in self-compassion over one-month period between conditions.

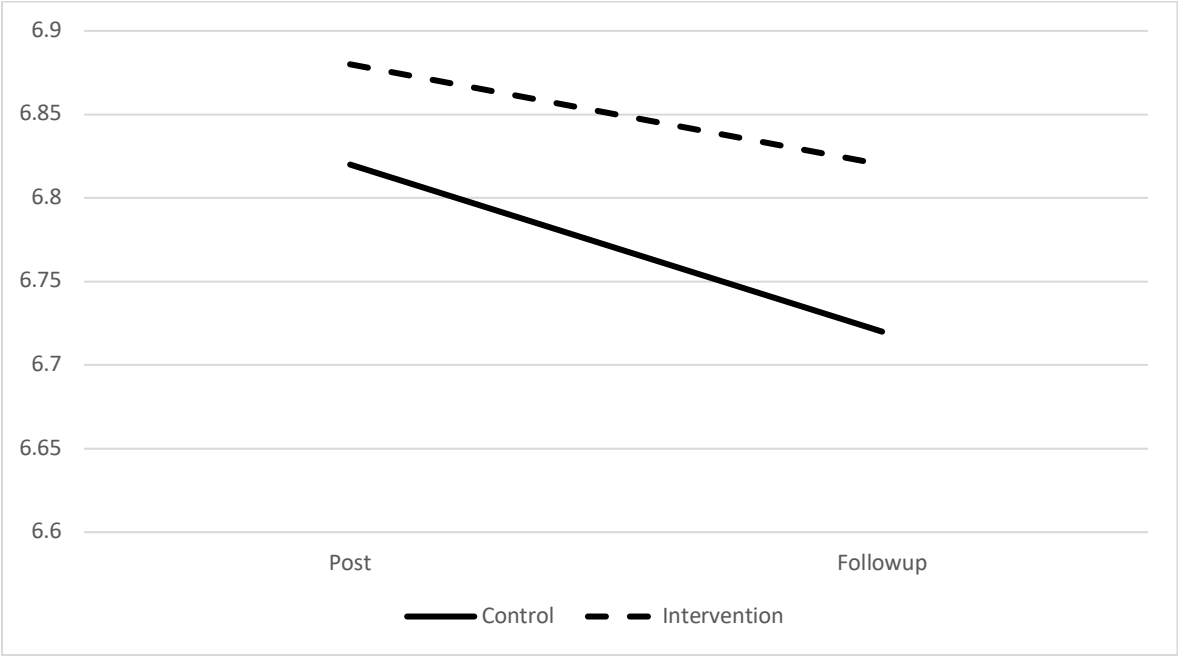

Figure 6. Changes in self-efficacy over one-month period between conditions.

Appendix A

Feedback Questions for Parent Focus Groups:

After each a description of each module and an example activity was presented, participants were asked:

1) Was the content of the module helpful/useful?
2) What aspects about the module did you like?
3) What aspects of the module could be improved?
4) Is there additional content that should be added?
5) Is there any content that should be taken out or is unnecessary?
6) Was there any aspects of the module that might be offensive or off-putting to parents of transgender youth?
7) Was the content engaging? Any suggestions to make the material more engaging?

Participants were asked about the intervention as a whole:

1) Do you believe the intervention is feasible to complete?
2) Do you think the intervention is helpful/useful?
3) Do you believe the modules should be in a different order than proposed?
4) Please share any other thoughts or feedback you have.

Experts were provided the goals for each activity within they module they were reviewing and of the module as a whole.

Experts were asked the following after each module activity.

1) To what extent do you believe this activity accomplishes this goal?

   1 (Not at all) -- 2 -- 3 -- 4 -- 5 (Very Much)

2) What aspects of this activity did you like? What worked well?

3) What aspects of this activity could be improved?

Experts were asked the same questions in regards to the module as a whole.

Appendix B

Original Description of Intervention Modules

Module 1 (30min-60min)
Title: Normalizing Parent Experiences and Supporting Parent Emotional Processes

Goal: Reduce parental psychological distress through the following objectives.

Objectives:

- Normalize the distress and emotional reactions that parents experience when they learn their child is transgender.
- Provide information about the grieving process for families of transgender youth.
- Parents will identify their emotions and express their emotions through writing exercises.
- Expose parents to positive portrayals of transgender youth and accepting families to help mitigate parents' concern for their child's well-being.

Intervention Activities:

1. Normalize Emotions
    - Parents will identify the emotions they are currently experiencing regarding their child.
    - Information will be presented about the range of emotions that parents experience to normalize and validate all feelings. Quotes from parents will be included.
2. Addressing contributors to distress
    - Parents will identify what factors are contributing to their distress.
        - Fear my child will be bullied or hurt for being trans
        - Being afraid of making mistakes and hurting my child
        - Difficulty adjusting to new name/pronouns
        - Fear of telling my family/friends
        - Other family members are not supportive
        - Lack of information about transgender identities
        - Feeling Isolated – not knowing other families
            - Tailored feedback will be provided based on the participant answers. Feedback will include videos of parents discussing their experiences.
3. Processing Grief
    - Meaning – making writing exercise
        - Emotions about loss of previous gender
4. Instilling hope for the future
    - Video of parents discussing overcoming challenges and positive outcomes of supporting their child
    - Writing exercise to identify strengths of their child and themselves
5. Provide resources and encourage attending in person or online support groups.

Module 2 (30min – 60min)
Title.: Changing Beliefs and Attitudes about Transgender People

Goal: Increase parental know about gender diversity and decrease negative attitudes about transgender people.

Objectives:

- Combat common beliefs about transgender people that are harmful through providing information about gender diversity
- Provide information about consequences of acceptance/rejection of transgender youth
- Portray transgender people in a positive way that defy negative stereotypes

Intervention Activities:

1. Participant recalls being judged for something outside of their control and writes about the situation. Identify what emotions the participant felt. -→ Social Perspective taking exercise where parents imagine being in a situation that transgender people often face.

2. Dispel common beliefs about being transgender that are harmful and provide information about gender diversity and transgender well-being
    - Your sex defines your gender
    - There are only two genders
    - People "choose" to be transgender
    - People become transgender from something in their environment "gone wrong"
    - Being transgender is a mental illness (can be changed through therapy)
    - Most transgender people regret medical procedures
- Potentially collaborate with Stanford and use their videos

3. Providing information about the importance of parental acceptance/support (Video with expert)

4. Challenge negative stereotypes through positive counter portrayals
    - Personal stories or videos

Module 3 (60min – 90 min)
Title: Learning and Practicing Supportive Behaviors

Goal: Increase parent's intentions and self-efficacy to engage in transgender supportive behaviors toward their child.

Objectives:

- Learn strategies to communicate with child about gender
- Create an affirmative environment for your child
- Practice using new name and pronouns and apologizing for mistakes
- Develop a plan for how to "come out" to others
- Learn how to navigate oppressive systems (how to advocate for your child)
- Develop a flexible orientation to medical interventions
- Remind participants to take care of themselves and child with compassion

Intervention Activities (participants choose between 3-6 of the following activities):

1. Watch a video with a parent modeling talking to their child about gender. The parent will brainstorm questions that can start a conversation with their child.

2. Read a narrative about a parent who restricts their child's gender expression and ability to go to LGBT events. Parents will then choose alternative more supportive behaviors. Participants will get individualized feedback based on their responses. Identifying supportive behaviors will be positively reinforced.

3. Watch a video of a parent discussing the difficulty adjusting to pronouns/name who also gives tips on how to practice. Participant will write a short narrative about their child using the child's preferred name and pronouns. If child hasn't changed name or pronouns, practice using a different person in mind.

4. Learn different strategies for coming out to others. Develop a "coming out" plan. It may differ depending on who the participant is coming out too.

5. Psychoeducation about what problems may occur for the child in different social systems (i.e. family, school, doctor). Go through a scenario for each situation and choose what actions you would take. For example, the teachers refuse to refer to your child by the correct name and pronouns or a family members says a microaggression around your child.

6. Parents will watch videos of experts in transgender medicine discussing medical intervention options and the potential risks and benefits of these procedures. Recommendations for parents will be discussed.

All participants complete self-compassion activity:

7. Normalize making mistakes. Emphasize what parents are already doing well and that showing compassion goes a long way! Self-compassion exercise: Write an encouraging letter to a parent struggling with the same situation. Read the letter to yourself.

Appendix C

Revised Description of Intervention Modules

Module 1 (30min-60min)
Title: What am I feeling?

Goal: Reduce parental psychological distress and feelings of isolation

Objectives:

- Normalize the distress and emotional reactions that parents experience when they learn their child is transgender.
- Provide information about the grieving process for families of transgender youth.
- Parents will identify their emotions and express their emotions through writing exercises.
- Help parents plan self-care strategies.

Intervention Activities:

1. Am I the only one feeling this way?

- Parents identified the emotions they experienced when learning their child was trans or non-binary.
- Information was presented about the range of emotions that parents experience to normalize and validate all feelings through text and audio recordings. Quotes from parents were included.
- Parents identified their current emotions by completing 4 sentence stems.

2. Identifying the places "where you are stuck"

- Parents identified what factors or challenges were contributing to their distress.
    - Fear my child will be bullied or hurt for being trans
    - Questioning whether my child is really trans
    - Belief that it is a phase
    - Being afraid of making mistakes and hurting my child
    - Difficulty adjusting to new name/pronouns
    - Difficulty adjusting to a new appearance
    - Fear of telling my family/friends
    - Other family members are not supportive
    - Lack of information about transgender identities
    - Feeling Isolated – not knowing other families
    - Other – please specify
- A 10 min 50 second video with four parents of trans youth discussing their experiences was shown. The video included how these parents experienced and approached many of the stressors identified above.

3. That complicated feeling … grief

- Participants learned about ambiguous loss and the grieving process through written text and audio recordings.
- Four writing exercises – each was anticipated to take 3- 5 minutes. The following are abbreviated prompts.
    - Write about the aspects of your experience that you have discussed least frequently with others.

- Thinking about your child, how would you describe your grief or emotions as an image or object?
- What hopes and dreams did you have about your child? What are your hopes and dreams for them now?
- Write your story about your journey as a parent of a trans child in the 3rd person.

4. *Taking care of yourself*
   - Participants chose at least 3 self-care strategies from a dropdown list.

5. Summary Video

Module 2 (30min – 60min)
Title.: What do I need to know?

Goal: Increase parental know about gender diversity and increase empathy towards transgender youth.

Objectives:
- Combat common beliefs about transgender people that are harmful through providing information about gender diversity
- Provide information about consequences of acceptance/rejection of transgender youth
- Use social perspective taking and contact with trans youth to build empathy for trans youth.

Intervention Activities:

1. *So many questions*. – Participants watched 3 – 5 min educational videos on the following topics.
   - Aren't sex and gender the same thing?
   - What do you mean more than two genders?
   - Is being transgender a choice?
   - Is being transgender a new fad?
   - Aren't transgender people really just gay?
   - Is being transgender a sign of mental illness?

2. *Walking in their shoes.*
   - Participants watched a 7 min 25 second video of three trans youth discussing their experiences and what their parents did that made them feel supported
   - Participants wrote a coming out letter from the perspective of a transgender teen writing to their parents.
3. *Acceptance – It's really important.*
   - Participants watched a 4-minute video that discussed the research on parental acceptance and rejection.

Module 3 (60min – 90 min)
Title: What do I need to do?

Goal: Increase parent's intentions and self-efficacy to engage in transgender supportive behaviors toward their child.

Objectives:

- Learn strategies to communicate with your child about gender
- Create an affirmative environment for your child
- Practice using new name and pronouns and apologizing for mistakes
- Develop a plan for how to "come out" to others
- Learn how to advocate for your child
- Develop a flexible orientation to medical interventions
- Remind participants to take care of themselves and child with compassion

Intervention Activities (participants choose between 3-6 of the following activities):

1. Talking about gender: Participants watched three short videos about communicating support to their child.

2. Openness to exploration: Participants learned about the importance of facilitative parenting versus restricting gender expression. Participants were presented with three scenarios about a parent who restricts their child's gender expression, ability to go to LGBT events, and use of they/them pronouns. Parents choose alternative more supportive behaviors and were given individualized feedback based on their responses.

3. Pronouns and Names: Participants watched a video of the researcher discussing the difficulty adjusting to pronouns/name and provided tips on how to practice. Participant wrote a short narrative about their child using the child's preferred name and pronouns. If child hasn't changed name or pronouns, they practiced using they/them and he/him pronouns for Oprah Winfrey.

4. *Coming out – Navigating disclosure:* Participants were given the following tips about coming out. They also created a coming out plan and planned what coping strategies they would use if others were not accepting.
    1. Talk to your child about if, how, and when they want to share their gender with others.
    2. Have a plan for how to tell others.
    3. Start with people you anticipate will be affirming.
    4. Have a plan to take care of yourself if others have a negative reaction.

5. Becoming an ally/advocate: Participants watched a 3 minute 25 second video on the problems that may occur for the child in different social systems (i.e. family, school, doctor) and tips on being an ally/advocate. Participants selected options for a scenario with their child being misgendered by their teacher. Another 3 minute video was shown that discussed ways to intervene when their child was mistreated.

6. Making Medical Decisions: Parents watched a 2 minute video of Dr. Johanna Olson discussion of the benefits of medical interventions. Parents then watched a 10 minute video created by the researcher that discussed the process of making medical decisions and went over the risks and benefits of various medical procedures.

All participants complete self-compassion activity:

7. Don't be too hard on yourself. Emphasized what parents are already doing well and that showing compassion goes a long way! Self-compassion exercise: Parents wrote an encouraging letter to a parent struggling with the same situation and then read the letter to yourself.

Appendix D
Pre-Test Measures

Demographic Questions:

For the following questions, please answer for your child who identifies with a gender different from their sex assigned at birth.

Specifically, how old is your child?

What sex was your child assigned at birth (for example, what gender does their original birth certificate say)?

- Female
- Male
- Intersex
-

What is your child's current gender identity?

- Woman/girl
- Man/boy
- Transgender woman/girl
- Transgender man/boy
- Non-binary
- Genderqueer
- Agender (nongender)
- Bigender
- Genderfluid
- Not sure
- Something else (please specify) _____

Has your child's gender identity changed more than once?
(Yes) (No) (I'm not sure)

Has your child engaged in any of the following? (check all that apply):

- Changed their name (not legally)
- Use different pronouns
- Changed outward gender presentation (e.g. clothing, hairstyle)
- Legally changed their name
- Legally changed their sex marker on birth certificate, driver's license etc
- Used puberty blockers
- Started cross-hormone replacement therapy
- Had any gender-related surgeries (e.g. chest reconstruction)
- None of the above

Please answer the following questions **for yourself.**

What is your age?

What is your sex assigned at birth (for example, what gender does your original birth certificate say)?

- Female
- Male
- Intersex

What is your current gender identity?

- Woman/girl
- Man/boy
- Transgender woman/girl
- Transgender man/boy
- Non-binary
- Genderqueer
- Agender (nongender)
- Bigender
- Genderfluid
- Not sure
- Something else (please specify) _____

How would you describe your sexual orientation (identity):

- Lesbian
- Gay
- Bisexual
- Heterosexual (Straight)
- Queer
- Pansexual
- Questioning
- Unlabeled
- Asexual
- Other (please specify)

How do you describe your ethnicity? (check all that apply)

- African American/Black
- Asian/Pacific Islander
- European American/White
- Latino/a/x or Hispanic or Chicano/a/x
- American Indian/Alaska Native
- Middle Eastern
- Other (please specify)

What is your level of education?

- less than high school diploma
- completed high school or GED
- completed trade/vocational school
- some college, no degree
- completed Associates degree

- completed Bachelors degree
- some graduate school
- completed graduate or professional degree

Think of this bar as representing where people stand in the United States. At the **top** of the ladder are the people who are the best off—those who have the most money, the most education, and the most respected jobs. At the **bottom** are the people who are the worst off—who have the least money, least education, and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom. **Where would you place yourself on this ladder?**

What is your religious background?

- Atheist
- Buddhist
- Catholic
- Christian
- Hindu
- Jewish
- Muslim
- No religious affiliation
- Other (please specify)

How important would you say religion is in your own life?
- Very Important
- Fairly Important
- Not Very Important

What are your political views?
- Very Liberal
- Liberal
- Neither Liberal or Conservative
- Conservative
- Very Conservative

What is your political party?
- Democrat
- Republican
- Not Affiliated
- Other

What state are you currently living in?

Which of the following best describes the area you live in?
- Urban
- Suburban
- Rural
- Other

Additional Questions:
What resources, if any, have you used to learn about being a parent of a transgender child? (check all that apply)

Options: None, Online website (please specify), books (please specify), parent support group, online support group, workshop/conference, attending therapy, seeing a medical doctor, conversations with friends/family, talking to your child, other (please specify)

How many transgender people do you know?
Options: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10+

How supportive do you believe your extending family is or will be of your child's transgender identity?
1 (not at all supportive) – 5 (very supportive)

How supportive do you believe your friends are or will be of your child's transgender identity?
1 (not at all supportive) – 5 (very supportive)

When did you become aware of your child's transgender identity?

- 0-3 months ago
- 3-6 months ago
- 6-12 months ago
- 1-2 years ago
- Over 2 years ago

Appendix E

Brief Symptom Inventory – 18 (BSI – 18)

Please indicate how you have been feeling in the past two weeks from “0 = not at all”, “1 = several days”, “2 = more than half the days” and “3 = nearly every day.”

Scale 1: Somatization (α = .82)

1 Faintness or dizziness
4 Pains in heart or chest
7 Nausea or upset stomach
10 Trouble getting your breath
13 Numbness or tingling in parts of your body
16 Feeling weak in parts of your body

Scale 2: Depression (α = .87)

2 Feeling no interest in things
5 Feeling lonely
8 Feeling blue
11 Feelings of worthlessness
14 Feeling hopeless about the future
17 Thoughts of ending your life

Scale 3: Anxiety (α = .84)
3 Nervousness or shakiness inside
6 Feeling tense or keyed up
9 Suddenly scared for no reason
12 Spells of terror or panic
15 Feeling so restless you couldn’t sit still
18 Feeling fearful

Appendix F

Brief measure of loneliness – Roberts 1993 (RULS-8)

The following statements describe how people sometimes feel. For each statement, please indicate how often you feel that way.

Scale from 1 (never) to 4 (always)

I feel in tune with people around me. (R*) I lack companionship.
I do not feel alone. (R)
I feel part of a group of friends. (R)

I am no longer close to anyone.
I feel left out.
I feel isolated from others.
I can find companionship when I want it. (R)

Appendix G

PANAS Questionnaire

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. Indicate to what extent you feel this way right now, that is, at the present moment OR indicate the extent you have felt this way over the past week (circle the instructions you followed when taking this measure)

1 - Very Slightly or Not at All
2 -A Little
3 - Moderately
4 - Quite a Bit
5 - Extremely

_____ 1. Interested	_____ 11. Irritable
_____ 2. Distressed	_____ 12. Alert
_____ 3. Excited	_____ 13. Ashamed
_____ 4. Upset	_____ 14. Inspired
_____ 5. Strong	_____ 15. Nervous
_____ 6. Guilty	_____ 16. Determined
_____ 7. Scared	_____ 17. Attentive
_____ 8. Hostile	_____ 18. Jittery
_____ 9. Enthusiastic	_____ 19. Active
_____ 10. Proud	_____ 20. Afraid

Appendix H

Transgender Knowledge Questionnaire

1. When Jesse was born, the doctors marked “Male” on Jesse’s birth certificate. However, Jesse identifies as female. Jesse is:
    a. A transgender boy/man
    b. A transgender girl/woman
    c. Intersex
    d. Non-binary
2. Gender Identity is determined by:
    a. Your chromosomes, hormones, and genitalia
    b. Your outward expression, such as clothing, hair, and mannerisms
    c. Your internal sense of self
    d. The gender of the people you’re attracted to
3. There are only two genders.
    a. True
    b. False
4. Being transgender is not itself a mental disorder.
    a. True
    b. False
5. Someone who doesn’t exclusively identify as male or female is:
    a. Non-binary
    b. Intersex
    c. Transitioning
    d. Confused
6. People who don’t identify with or conform to the gender associated with their sex at birth have existed throughout history across cultures.
    a. True
    b. False
7. Which of the following is NOT psychology harmful to transgender people?
    a. Being made fun of for their appearance
    b. Being called a name or pronoun that doesn't match their current identity
    c. Actively concealing their transgender identity
    d. Supporting their decision to transition to a different gender

Appendix I

Transgender Prejudice Scale (sex essentialism) – Davidson (2014)

Please indicate the extent to which you personally agree with the following statements using the provided 6-point scale (1 = strongly disagree, 6 = strongly agree). Please consider each question individually and respond honestly. If you do not know how you feel about any given question, please make your best guess based upon your "gut" feeling.

1= strongly disagree 2= disagree 3=disagree a little 4=agree a little 5=agree 6=strongly agree

Transgender: An umbrella term used to describe the full range of people whose gender identity and/or gender role do not conform to what is typically associated with their sex assigned at birth.
Transgender Man, Transman: Individuals assigned a female sex at birth who identify as men.
Transgender Woman, Transwoman: Individuals with an assigned sex of male at birth who identify as women.

1. Transmen cannot change the fact that they were born as women and will therefore always be women
2. Transwomen are just men who feel feminine.
3. Transwomen cannot go against their biology; they will always be men.
4. Transwomen were born as men and will therefore always be men.
5. I think that transmen are just women acting like men.
6. Because there can only be men or women, transwomen are still just men, regardless of what they may think.
7. A transman cannot be a real man because they were born with a vagina and will always be a woman.
8. Transmen are just women who claim to be men, but they are still just women.
9. Even with a surgically created vagina, transwomen will never truly be women.
10. A transman cannot "become" a man because biology says they are a woman.
11. Transmen are not really men because you can never change your gender.
12. You are either a man or a woman, and you cannot change that.
13. Transwomen may think they are women but because they were born with a penis they will never really be women.
14. Transmen can never really be men because they were not born as men with male genitalia.
15. Because a person's gender is the same thing as a person's sex, which is biological, it is impossible for trans people to change their gender, no matter what they think.
16. It does not matter how they think of themselves, I will always consider transwomen to be men because you cannot change your gender.

Appendix J

Original Scale: Beliefs about the Etiology of Sexual Orientation (BESO) – (Frias-Navarro, 2009)

Genetic Etiology
1. The homosexual sexual orientation is an inevitable behavior that depends on genetics
2. One's sexual orientation is caused by biological factors like genes and hormones
3. Genetic factors are the causes of the homosexual sexual orientation
4. The homosexual sexual orientation is not chosen voluntarily because one is born homosexual

Learned Etiology
1. A child who is raised by same-sex parents will have a greater probability of having a homosexual sexual preference
2. Children need a father and a mother to provide them with masculine and feminine role models
3. I think same-sex parents influence the sexual orientation of their children
4. In many cases, homosexual behaviors are learned.

Modified Version Items

Genetic Etiology
1. A transgender identity is an inevitable behavior that depends on genetics
2. One's gender identity is caused by biological factors like genes and hormones
3. Genetic factors are the causes of transgender identities
4. A transgender identity is not chosen voluntarily

Learned Etiology
1. A child who is raised by gender non-conforming parents will have a greater probability of being transgender
2. Children need a father and a mother to provide them with masculine and feminine role models
3. I think gender non-conforming parents influence the gender expression of their children
4. In many cases, gender non-conforming behaviors are learned.

Appendix K

Attitudes Toward Transgender Individuals Scale (Walsh et al., 2012)

Transgender: An umbrella term used to describe the full range of people whose gender identity and/or gender role do not conform to what is typically associated with their sex assigned at birth.

This questionnaire is designed to measure the way you feel about working or associating with transgender individuals. It is not a test, so there are no right or wrong answers. Answer each item as carefully and accurately as you can by placing a number beside each one as follows: strongly agree = 1, agree = 2, neither agree nor disagree = 3, disagree = 4, strongly disagree = 5.

1. It would be beneficial to society to recognize being transgender as normal
2. Transgender individuals should not be allowed to work with children
3. Being transgender is immoral
4. Transgender individuals should not be allowed in public spaces
5. Transgender individuals are a viable part of our society
6. Being transgender is a sin
7. Being transgender endangers the institution of the family
8. Transgender individuals should be accepted completely into our society
9. Transgender individuals should be barred from the teaching profession
10. There should be no restrictions on being transgender
11. I avoid transgender individuals whenever possible
12. I would feel comfortable working closely with a transgender individual
13. I would enjoy attending social functions at which transgender individuals were present
14. I would feel comfortable if I learned that my neighbor was a transgender individual
15. Transgender individuals should not be allowed to cross dress in public
16. I would like to have friends who are transgender individuals
17. I would feel comfortable if I learned that my best friend was a transgender individual
18. I would feel uncomfortable if a close family member became romantically involved with a transgender individual
19. Transgender individuals are really just closeted gays
20. Romantic partners of transgender individuals should seek psychological treatment

Appendix L

Behavioral Intentions to engage in transgender supportive behaviors

Italicized items were used in final analysis.
Please rate your how likely you are to engage in the following behaviors from 1 (unlikely) to 7 (likely)

Communication

- *Tell my child I support them.*
- Avoid talking to my child about their gender*
- *Listen to my child's experiences and feelings*
- *Discuss coming out and transition options with my child*
- *Tell my child I love them unconditionally*

Support Expression

- Send my child to a profession to stop them from being transgender*
- Prevent my child from participating in LGBT activities*
- *Attend an LGBT event with my child*
- Tell my child I appreciate their clothing and hairstyle, even if it is not typical for their gender
- *Support my child's gender expression*

Adjust language

- *Use my child's preferred name and pronouns*
- Practice using my child's preferred name/pronouns when they are not around
- Continue use the name and pronouns my child was given at birth*
- *Apologize when I make mistakes with their name or pronouns*
- *Respect my child's decision to be called daughter, son, or child*

Advocacy for child

- Stand up to family or friends who disrespect my child
- *Advocate for my child if they are mistreated*
- *Require that other family members respect my transgender child*
- *Intervene if someone makes a negative comment about my child*
- *Blame my child if they are bullied based on their gender**

Openness to transition

- *Research options for medical transition related procedures*
- *Seek advice from a transgender-affirming therapist*
- *Seek advice from a transgender-affirming medical provider*
- *Listen to my child's desires regarding medical interventions*
- *Prevent my child from accessing hormones or other medical interventions**

* reverse scored

Appendix M

Self-efficacy to engage in transgender supportive parenting behaviors

How confident are you in your ability to engage in the following behaviors?
1 (not at all confident) to 7 (highly confident)

Communication

- Tell my child I support them.
- Listen to my child's experiences and feelings
- Discuss coming out and transition options with my child
- Tell my child I love them unconditionally

Support Expression

- Attend an LGBT event with my child
- Tell my child I appreciate their clothing and hairstyle, even if it is not typical for their gender
- Support my child's gender expression

Adjust language

- Use my child's preferred name and pronouns
- Practice using my child's preferred name/pronouns when they are not around
- Apologize when I make mistakes with their name or pronouns
- Respect my child's decision to be called daughter, son, or child

Advocacy for child

- Stand up to family or friends who disrespect my child
- Advocate for my child if they are mistreated
- Require that other family members respect my transgender child
- Intervene if someone makes a negative comment about my child

Openness to transition

- Research options for medical transition related procedures
- Seek advice from a transgender-affirming therapist
- Seek advice from a transgender-affirming medical provider
- Listen to my child's desires regarding medical interventions
- Prevent my child from accessing hormones or other medical interventions*

Appendix N

Compassion Scale – Short Form (Raes, Pommier, Neff, Van Gucht 2011)

Adapted version of self-kindness subscale

Please read each statement carefully before answering. **In this moment,** how much do you agree with the following statements.

Items are rated on a five-point response scale ranging from 1 (strongly disagree) to 7 (strongly agree).

1. I am being understanding towards myself as a parent of a trans/non-binary child.
2. I am kind to myself as a parent of a trans/non-binary child.
3. I am giving myself the caring and tenderness I need as a parent of a trans/non-binary child.
4. I feel tolerant of my own flaws and inadequacies as a parent of a trans/non-binary child.
5. I am loving towards myself as a parent of a trans/non-binary child.

Appendix O

Feasibility and Acceptability Questions

Dropout Survey:
Question for participants who do not complete either the intervention within the three-week time period:

1. Please check of the reasons that you were unable to complete the intervention material and/or questionnaires?
    - Not enough time
    - Content not engaging
    - Content not relevant
    - Found other resources
    - Too time consuming
    - Already knew the information
    - Not supportive of transgender identity
    - Other please specify _____

Appendix P

Intervention Acceptability Measure (AIM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. (INSERT INTERVENTION) meets my approval.	①	②	③	④	⑤
2. (INSERT INTERVENTION) is appealing to me.	①	②	③	④	⑤
3. I like (INSERT INTERVENTION).	①	②	③	④	⑤
4. I welcome (INSERT INTERVENTION).	①	②	③	④	⑤

Intervention Appropriateness Measure (IAM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. (INSERT INTERVENTION) seems fitting.	①	②	③	④	⑤
2. (INSERT INTERVENTION) seems suitable.	①	②	③	④	⑤
3. (INSERT INTERVENTION) seems applicable.	①	②	③	④	⑤
4. (INSERT INTERVENTION) seems like a good match.	①	②	③	④	⑤

Feasibility of Intervention Measure (FIM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. (INSERT INTERVENTION) seems implementable.	①	②	③	④	⑤
2. (INSERT INTERVENTION) seems possible.	①	②	③	④	⑤
3. (INSERT INTERVENTION) seems doable.	①	②	③	④	⑤
4. (INSERT INTERVENTION) seems easy to use.	①	②	③	④	⑤

Qualitative Questions: What did you like about the activities? What could be improved?

Appendix Q
Supportive Behaviors Measure

Italicized items were used in final analysis.

In the last month, please rate **how frequently you have engaged** in the following behaviors.
1 (Never) to 5 (frequently)

Communication

- *Told my child I support them.*
- *Avoided talking to my child about their gender**
- Listened to my child's experiences and feelings
- *Discussed coming out and transition options with my child*
- *Told my child I love them unconditionally*

Support Expression

- Sent my child to a profession to stop them from being transgender*
- Prevented my child from participating in LGBT activities*
- Attended an LGBT event with my child
- *Told my child I appreciate their clothing and hairstyle, even if it is not typical for their gender*
- Supported my child's gender expression

Adjust language

- *Used my child's preferred name and pronouns*
- *Practiced using my child's preferred name/pronouns when they are* not around
- *Continued use the name and pronouns my child was given at birth**
- *Apologized when I make mistakes with their name or pronouns*
- *Respected my child's decision to be called daughter, son, or child*

Advocacy for child

- *Stood up to family or friends who disrespect my child*
- *Advocated for my child if they are mistreated*
- *Required that other family members respect my transgender child*
- *Intervened if someone makes a negative comment about my child*
- Blamed my child if they are bullied based on their gender*

Openness to transition

- *Researched options for medical transition related procedures*
- *Sought advice from a transgender-affirming therapist*
- *Sought advice from a transgender-affirming medical provider*
- *Listened to my child's desires regarding medical interventions*
- Prevented my child from accessing hormones or other medical interventions*

Appendix R
Logic Model of Interventions

Module	Activities	Targeted Outcomes	Theoretical Foundations
Module 1 (30min-60min) Title: What Am I Feeling?	1. Normalize reactions to coming out 2. Identify what factors contribute to stress and watch video of how others cope with stressors 3. Learn about ambiguous loss and engage in meaning-making writing exercise 4. Plan self-care strategies	• Psychological Distress • Loneliness	• Psychodynamic Theory • Social Learning Theory • Ambiguous Loss • Meaning-making • Positive Psychology
Module 2 (30min – 60min) Title: What Do I Need to Know?	1. Psychoeducation about common beliefs 2. Watch a video of trans youth discussing how their parents supported them 3. Social perspective taking exercise 4. Psychoeducation video about parental acceptance/rejection	• Knowledge about gender diversity • Sex essentialist beliefs • Casual and controllability attributions • Attitudes toward transgender people	• Social Perspective Taking Theory • Contact Theory • Education Strategies • Challenge Stereotypes
Module 3 (60min – 90 min) Title: What Do I Need to Do?	1. Watch video with parents giving advice on how to be supportive. 2. Choose 3 -6 of the following: • Watch video modeling how to talk about gender • Choose supportive behaviors for gender expression in a narrative • Practice using different pronouns through writing exercise • Develop a coming out plan • Video about advocacy and scenarios • Video on medical transition 3. Write compassionate letter to another parent in a similar situation and read letter to self	• Behavioral intentions • Self-efficacy • Self-compassion	• Social Learning Theory • Social Cognitive Theory • Planned Behaviors Theory • Self-compassion and motivation