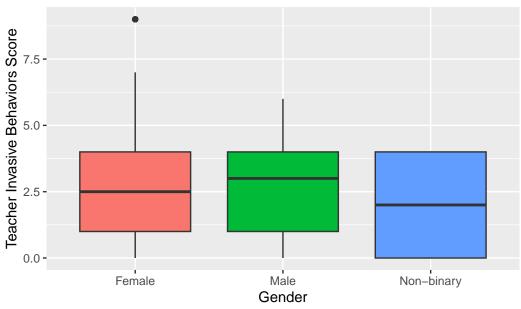
manuscript

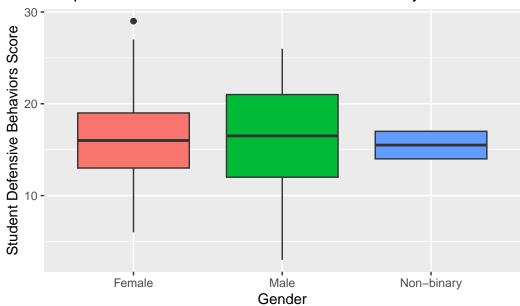
Leah Peterson, Alexus Rock, and Ben Pfingston

Data Visualizations

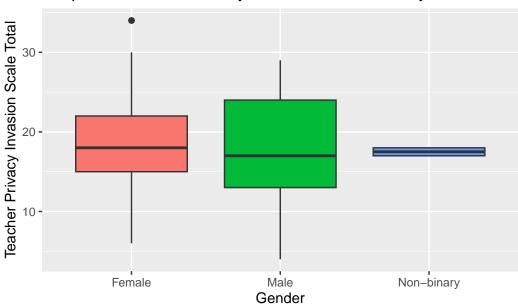
Boxplot of Teacher Invasive Behaviors Score by Gender



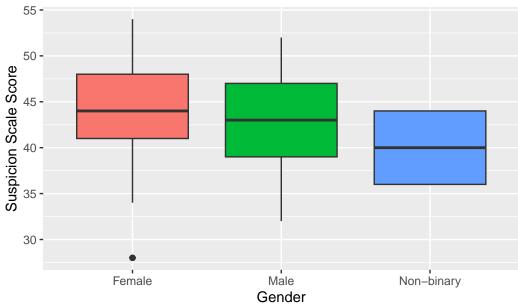
Boxplot of Student Defensive Behaviors Score by Gender



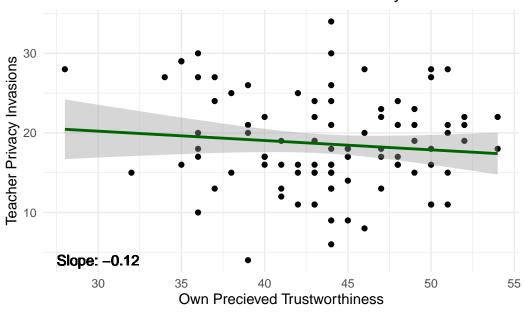
Boxplot of Teacher Privacy Invasion Scale Total by Gender







Student's Trustworthiness and Teacher Privacy Invasions



Introduction

By the time a child turns 18, they have spent approximately 15% of their life at school (Wherry 2004). Thus, for many young adults, teachers they've encountered are often some of the most

influential people in shaping their current knowledge base. In addition to influencing student learning and test-scores, supportive teacher communication behaviors have been shown to impact feelings of satisfaction and self-efficacy (Blazar and Kraft 2016; Frymier and Houser 2000; Chesebro and McCroskey 2000). Additionally, Bruney (2013) found that teacher relationships are crucial for a young adult's independent thinking skills, which can lead to a greater life satisfaction. While childhood is often associated with growth and development, young adulthood is also a time of great advancement in life (Parks 2005). During this period, young adults are beginning to apply the knowledge they have gained throughout their lives without direct guidance from a parent or authority figure. As such, to be successful in this stage of life, young adults need a strong foundation in independent thinking (Bruney 2013). In order to build that foundation, experiences of trustful interpersonal relationships with authority figures, such as teachers, are essential in providing support as young adults reconfigure their identities (Parks 2005). Yet, there is a dearth of research focused on investigating the ways in which overall trust of young adults may be influenced by teachers' communicative behaviors.

(Dis)Trust & Invasive Behaviors

Trust is a multifaceted concept that encompasses elements such as honesty, connectedness, reliability, and competency (Simpson 2007; Raider-Roth 2005). Further, trust is not an automatic feature in a relationship. Caring for and emotional investment in interactions has been shown to be an important factor for building trust (Kuhlmann and Saks 2008; Smith-McIlwain 2005). When there is trust in a relationship, commonly individuals act consistently, follow through, and work to meet expectations (Lewicki and Wiethoff 2006). Alternatively, when trust has not been cultivated in a relationship, individuals exhibit greater anti-social behaviors and have impaired psychological adjustment (Simpson 2007). Additionally, trust in relationships can be broken. Specifically, broken trust that is accompanied by invasive behaviors or deception creates the most harm in a relationship and that trust may never fully recover (Schweitzer, Hershey, and Bradlow 2006).

According to Ledbetter and Vik (2012), invasive behaviors are those that intend to violate an individual's privacy. There are three main categories for invasive behaviors: subversive or spatial invasions, direct or verbal invasions and mediated invasions (Ledbetter and Vik 2012; Petronio 2002). Subversive or spatial invasions are acts such as eavesdropping and listening to phone conversations or searching through belongings (Ledbetter and Vik 2012; Petronio 2002). Direct or verbal invasions are when something is said directly to the individual who is keeping their information private (Ledbetter and Vik 2012; Petronio 2002). Lastly, mediated invasions are when an investigation for information happens through going on someone's social media account, reading emails or text messages or tracking phone activity (Ledbetter and Vik 2012). When trust is broken, individuals commonly are less likely to maintain or create relationships with others in the future, experience anger, become less cooperative in group settings, and give negative evaluations of others (Ledbetter and Vik 2012; Lount et al. 2008; Simpson 2007).

Thus, it is hypothesized that individuals who are more trustworthy will perceive less privacy invasions.

Trust & Gender

Socialization perspectives on gender differences propose that women are more inclined to define themselves in relational terms compared to men (Cross and Madson 1997). This inclination makes women particularly motivated to cultivate positive and nurturing relationships (Cross, Bacon, and Morris 2000; Amanatullah, Morris, and Curhan 2008). In the context of social relationships, trust has commonly been viewed as the "glue" that holds the relationship together (Rotenberg 1995). Additionally, following a trust transgression, women are more likely than men to maintain trust in the relationship (Haselhuhn et al. 2015). Thus, it is hypothesized that there will be differences in how female, male, and non-binary individuals perceive their own levels of trust towards others, and how they experience privacy invasions.

Method

Sample

98 participants were recruited primarily through an undergraduate student body located in Minnesota. The participation criteria required that participants be at least 18 years old (M = 20.92, SD = 1.47) and have interacted with a teacher in a school setting. Demographic information, such as gender identity and ethnic-racial identity, was also collected.

Procedure

Participants were provided with a link to the survey, which was conducted through the online system Qualtrics. Before the survey began, each participant was given an online consent form that provided information about the length of the survey, confidentiality, their ability to withdraw from the study at any time and contact information for the researchers.

Measures

To measure different aspects of student-teacher trust interactions, items were modified from the Ledbetter and Vik (2012) Parental Privacy Invasions Scale (PPIS) and the Levine and McCornack (1991) Suspicion Scale.

Modified Parental Privacy Invasions Scale

Eleven items were adapted from the Parental Privacy Invasions Scale to reflect teacher, rather than parental, interactions. Each item was measured on a five-point Likert scale, ranging from 0 to 4, with response options including, "Never", "Rarely", "Often", "Sometimes", and "Always".

Three items were modified the Parental Invasive Behavior subscale of the PPIS to measure student perceptions of invasive behaviors from their teachers. One example item from this subscale is, "My teachers demand that I change my behavior in some area of my life."

The other 8 modified items came from the Children's Defensive Behavior subscale, which captured the young adults' self-reports of behaviors to safeguard their privacy from their teachers. An example of an item from this subscale is, "I avoid going to see my teacher outside of normal school/class hours. (such as before or after class, during break, before or after school tutoring)."

Modified Suspicion Scale

Twelve items were adapted from the Suspicion Scale to capture young adults' suspicion toward their teachers. Each item was measured on a seven-point Likert scale, ranging from 0-6, with response options including, "Strongly Disagree", "Somewhat Disagree", "Disagree", "Neither Agree nor Disagree", "Somewhat Agree", "Agree", and "Strongly Agree". Example items from the scale include, "Basically I am a trusting person", and "Most teachers follow the saying honesty is the best policy."

Results

We used R (Version 4.3.2; R Core Team (2023)) and the R-packages *ggplot2* (Wickham 2016), here (Müller 2020), janitor (Firke 2023), rio (Chan et al. 2023), and tidyverse (Wickham et al. 2019) for all our analyses.

Privacy invasions and self-rated trustworthiness were not found to be correlated. Self-rated trustworthiness was not a significant predictor of privacy invasions b = -0.12, 95% CI [-0.34, 0.11], t(94) = -1.03, p = .307

Gender differences existed for teacher invasive behaviors. Non-binary individuals perceived their teachers behaviors as being less invasive than females and males perceptions. Gender differences existed for teacher privacy invasion. Males perceived their teachers invading their privacy less than female and non-binary individuals. There were gender differences in the amount of suspicion towards teachers. Females had the highest levels of suspicion towards their teachers, and non-binary individuals had the least amount of suspicion.

There were no gender differences in student defensive behaviors.

Discussion

In this study, self-reported trustworthiness had no influence on perceived privacy invasions. Individuals who were more trustworthy did not perceive less privacy invasions than those with less trustworthiness. Levels of trustworthiness has no influence on how students perceive their privacy being invaded by teachers.

There were gender differences in how female, male, and non-binary individuals perceived their own levels of trust towards others, and how they experienced privacy invasions. Non-binary individuals perceived their teacher's behaviors as being less invasive than female and male individuals. Males perceived their teachers invading their privacy less frequently than female and non-binary individuals. Females had the highest levels of suspicion towards their teachers, and non-binary individuals had the least amount of suspicion.

There were no gender differences in student defensive behaviors. Students were not more defensive towards their teachers depending on student gender.

References

- Amanatullah, Emily T, Michael W Morris, and Jared R Curhan. 2008. "Negotiators Who Give Too Much: Unmitigated Communion, Relational Anxieties, and Economic Costs in Distributive and Integrative Bargaining." *Journal of Personality and Social Psychology* 95 (3): 723.
- Blazar, David, and Matthew A. Kraft. 2016. "Teacher and Teaching Effects on Students' Attitudes and Behaviors." *Educational Evaluation and Policy Analysis* 39 (1): 146–70. https://doi.org/10.3102/0162373716670260.
- Bruney, Glenda. 2013. "The Teacher-Student Relationship: The Importance of Developing Trust and Fostering Emotional Intelligence in the Classroom." In. https://api.semanticscholar.org/CorpusID:264163210.
- Chan, Chung-hong, Thomas J. Leeper, Jason Becker, and David Schoch. 2023. Rio: A Swiss-Army Knife for Data File i/o. https://cran.r-project.org/package=rio.
- Chesebro, Joseph L., and James C. McCroskey. 2000. "The Relationship Between Students' Reports of Learning and Their Actual Recall of Lecture Material: A Validity Test." Communication Education 49 (3): 297–301. https://doi.org/10.1080/03634520009379217.
- Cross, Susan E, Pamela L Bacon, and Michael L Morris. 2000. "The Relational-Interdependent Self-Construal and Relationships." *Journal of Personality and Social Psychology* 78 (4): 791.
- Cross, Susan E, and Laura Madson. 1997. "Models of the Self: Self-Construals and Gender." *Psychological Bulletin* 122 (1): 5.
- Firke, Sam. 2023. Janitor: Simple Tools for Examining and Cleaning Dirty Data. https://CRAN.R-project.org/package=janitor.
- Frymier, Ann Bainbridge, and Marian L. Houser. 2000. "The Teacher-Student Relationship as an Interpersonal Relationship." *Communication Education* 49 (3): 207–19. https://doi.org/10.1080/03634520009379209.
- Haselhuhn, Michael P., Jessica A. Kennedy, Laura J. Kray, Alex B. Van Zant, and Maurice E. Schweitzer. 2015. "Gender Differences in Trust Dynamics: Women Trust More Than Men Following a Trust Violation." *Journal of Experimental Social Psychology* 56 (January): 104–9. https://doi.org/10.1016/j.jesp.2014.09.007.
- Kuhlmann, Ellen, and Mike Saks. 2008. Rethinking Professional Governance: International Directions in Healthcare. Policy Press.
- Ledbetter, Andrew M., and Tennley A. Vik. 2012. "Parental Invasive Behaviors and Emerging Adults' Privacy Defenses: Instrument Development and Validation." *Journal of Family Communication* 12 (3): 227–47. https://doi.org/10.1080/15267431.2012.686943.
- Levine, Timothy R., and Steven A. McCornack. 1991. "The Dark Side of Trust: Conceptualizing and Measuring Types of Communicative Suspicion." *Communication Quarterly* 39 (4): 325–40. https://doi.org/10.1080/01463379109369809.
- Lewicki, Roy J, and Carolyn Wiethoff. 2006. "Trust, Trust Development, and Trust Repair." The Handbook of Conflict Resolution: Theory and Practice 2: 92–119.
- Lount, Robert B., Chen-Bo Zhong, Niro Sivanathan, and J. Keith Murnighan. 2008. "Getting Off on the Wrong Foot: The Timing of a Breach and the Restoration of Trust." *Personality*

- and Social Psychology Bulletin 34 (12): 1601–12. https://doi.org/10.1177/0146167208324512.
- Müller, Kirill. 2020. Here: A Simpler Way to Find Your Files. https://CRAN.R-project.org/package=here.
- Parks, Charles E. 2005. "Book Review: FROM LATE ADOLESCENCE TO YOUNG ADULT-HOOD. By David Dean Brockman. Madison, CT: International Universities Press, 2003, 307 Pp., \$39.95." Journal of the American Psychoanalytic Association 53 (1): 296–300. https://doi.org/10.1177/00030651050530011401.
- Petronio, Sandra. 2002. Boundaries of Privacy: Dialectics of Disclosure. Suny Press.
- R Core Team. 2023. R: A Language and Environment for Statistical Computing. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.
- Raider-Roth, Miriam B. 2005. "Trusting What You Know: Negotiating the Relational Context of Classroom Life." *Teachers College Record: The Voice of Scholarship in Education* 107 (4): 587–628. https://doi.org/10.1177/016146810510700403.
- Rotenberg, Ken J. 1995. "The Socialisation of Trust: Parents' and Children's Interpersonal Trust." *International Journal of Behavioral Development* 18 (4): 713–26. https://doi.org/10.1177/016502549501800408.
- Schweitzer, Maurice E., John C. Hershey, and Eric T. Bradlow. 2006. "Promises and Lies: Restoring Violated Trust." Organizational Behavior and Human Decision Processes 101 (1): 1–19. https://doi.org/10.1016/j.obhdp.2006.05.005.
- Simpson, Jeffry A. 2007. "Psychological Foundations of Trust." Current Directions in Psychological Science 16 (5): 264–68. https://doi.org/10.1111/j.1467-8721.2007.00517.x.
- Smith-McIlwain, Kathleen. 2005. A Study of Trust in the Motivation and Academic Performance of Disengaged Writers. The University of North Carolina at Greensboro.
- Wherry, John H. 2004. "The Influence of Home on School Success." *PRINCIPAL-ARLINGTON-* 84 (1): 6–7.
- Wickham, Hadley. 2016. *Ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag New York. https://ggplot2.tidyverse.org.
- Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686. https://doi.org/10.21105/joss.01686.