**Measuring Friendship Qualities in 4-8-Year-Old Autistic and Non-Autistic Youth**

Tyler C. McFayden1,2, Amanda Lee3, Alison S. Russell4, Julia Parish-Morris3,5, John F. Strang6, and Clare Harrop1,7

**Introduction:** Friendships are important, protective social experiences that contribute positively to mental health and wellbeing (Hruschka, 2010). Autistic youth reportedly experience lower quality friendships, fewer positive friendships, and decreased frequency of friendship experiences compared to non-autistic peers (Petrina et al., 2014), which contribute to higher anxiety and depression (O’Connor et al., 2022). Sex differences are also commonly observed in friendships, wherein autistic females often report higher positive friendship quality compared to autistic males (Sedgewick et al., 2019). Most research investigating friendships in autistic individuals focuses on adolescents or adults and much of this literature is based on samples with high male:female ratios (>4:1; Petrina et al., 2014). Therefore, little is known about friendship quality in younger children and whether younger children can reliably report on their friendships. One such measure, the Friendship Qualities Scale (FQS; Bukowski et al., 1994) is a youth self-report and parent-report measure that assesses overall friendship quality as well as companionship, conflict, closeness, security, and helping behaviors. Understanding how to measure friendship quality in young children is imperative to further investigating the protective role of friendships in autistic children.

**Objectives:** The current study sought to characterize measurement validity of the FQS in a young sample of autistic and non-autistic youth, ages 4-8 years, by parent- and self-report.

**Method:** *N*=188 parent-child dyads completed the Friendship Qualities Scale (FQS). The FQS is a 43-item parent- and child-report measure that asks about several friendship domains, including companionship, conflict, closeness, security, and helping behaviors on a 5-point Likert Scale (*0=none of the time*, *5=all the time*). The current study adapted the FQS to be a clinician-led interview with the use of a visual Likert scale for children. Children (*Mage*=6.04yrs; 106 assigned females at birth; 90% non-Hispanic; 73% White) were neurotypical (*n*=120) or autistic (*n*=68). Internal consistency for parent- and child-FQS was measured using Cronbach’s alpha; exploratory analyses evaluated internal consistency as a function of child age. Parent-child agreement was estimated by intraclass correlations (ICCs) between the parent- and child-reported subscales and total. Further, to get a better overview of the type of agreement between parent and child, we calculated how many children reported the same, better, or worse friendships than their parents. Chi Square tests evaluated whether assigned-sex, age, or diagnosis contributed to agreement group.

**Results:** Internal consistency for the FQS overall (23 items) was good, αparent=.885, αchild=.837. However, internal consistency (Table 1) was unacceptable for all subscales (4-5 items each) for both parent- and child-report, with only the parent-reported conflict subscale demonstrating acceptable reliability, α=.853. There were no significant correlations between child age and internal consistency. Parent-child agreement was also poor across subdomains and total FQS, with the majority of intraclass correlations below 0.5 (Table 2). There were no significant differences in ICCs between diagnostic groups, sex, or age. However, when looking at classes of parent-child agreement, significant sex and diagnostic group differences emerged: males, *X2*=6.675, *p*=.036, and autistic children, *X2*=11.105, *p*=.004, were more likely to disagree with parents about their friendship quality than females and non-autistic children. There was no significant sex x diagnostic group interaction.

**Discussion:** Assessing friendships in young children is complicated by poor internal consistency and poor parent-child agreement. Other factors, such as sex and diagnostic status, may further influence parent-child agreement when reporting on friendship quality. Interestingly, interrater agreement and internal consistency did not improve with children’s age. Future research will evaluate predictors of child- and parent-ratings and how friendship rating validity changes longitudinally.

**References:**

Bukowski, W. M., Hoza, B., & Boivin, M. (1994). Measuring friendship quality during pre- and early adolescence: The development and psychometric properties of the Friendship Qualities Scale. *Journal of Social and Personal Relationships, 11*(3), 471–484. Doi:10.1177/0265407594113011

Hruschka, Daniel. (2010). *Friendship: Development, Ecology, and Evolution of a Relationship*. Oakland, CA, California Scholarship Online.

Petrina, N., Carter, M., & Stephenson, J. (2014). The nature of friendship in children with autism spectrum disorders: A systematic review. *Research in Autism Spectrum Disorders, 8*(2), 111-126. doi:10.1016/j.rasd.2013.10.016

O'Connor, R. A. G., van den Bedem, N., Blijd-Hoogewys, E. M. A., Stockmann, L., & Rieffe, C. (2022). Friendship quality among autistic and non-autistic (pre-) adolescents: Protective or risk factor for mental health?. *Autism: The International Journal of Research and Practice*, *26*(8), 2041–2051. Doi:10.1177/13623613211073448

Sedgewick, F., Hill, V., & Pellicano, E. (2019). 'It's different for girls': Gender differences in the friendships and conflict of autistic and neurotypical adolescents. *Autism: The International Journal of Research and Practice*, *23*(5), 1119–1132. Doi:10.1177/1362361318794930

1University of North Carolina Chapel Hill, Department of Health Sciences

2University of North Carolina Chapel Hill, Carolina Institute for Developmental Disabilities

3Children’s Hospital of Philadelphia, Center for Autism Research

4University of North Carolina Chapel Hill, Department of Psychology

5University of Pennsylvania, Perelman School of Medicine, Department of Psychiatry

6Children’s National Hospital, Gender and Autism Program

7University of North Carolina Chapel Hill, TEACCH Autism Program

**Table 1.**

*Internal consistency (Cronbach’s Alpha) for the Friendship Qualities Scale by reporter, subscale, and age.*

|  |  |  |
| --- | --- | --- |
|  | **Child** | **Parent** |
|   | **Companionship** | **Conflict** | **Helping** | **Security** | **Closeness** | **FQS Total** | **Companionship** | **Conflict** | **Helping** | **Security** | **Closeness** | **FQS Total** |
| 4 years (n=32) | 0.193 | 0.476 | 0.271 | 0.256 | 0.554 | 0.834 | 0.556 | 0.925 | 0.667 | 0.656 | 0.640 | 0.912 |
| 5 years (n=33) | 0.465 | 0.585 | 0.061 | 0.478 | 0.751 | 0.885 | 0.419 | 0.619 | 0.480 | 0.467 | 0.507 | 0.856 |
| 6 years (n=25) | 0.417 | 0.391 | 0.184 | 0.273 | 0.535 | 0.764 | 0.285 | 0.833 | 0.600 | 0.210 | 0.439 | 0.847 |
| 7 years (n=31) | 0.259 | 0.468 | 0.144 | 0.506 | 0.592 | 0.844 | 0.306 | 0.883 | 0.518 | 0.355 | 0.542 | 0.881 |
| 8 years (n=40) | 0.520 | 0.417 | 0.572 | 0.411 | 0.644 | 0.871 | 0.559 | 0.763 | 0.284 | 0.623 | 0.734 | 0.891 |
| **Entire Sample (n=161)** | **0.342** | **0.455** | **0.21** | **0.401** | **0.604** | **0.837** | **0.413** | **0.853** | **0.516** | **0.551** | **0.609** | **0.885** |
| Note: Cronbach's Alpha values range from:  |  |  |  |  |  |  |  |  |  |
| >0.9: Excellent | 0.9-0.8: Good | 0.7-0.8: Acceptable | 0.6-0.7: Questionable | 0.5-0.6: Poor | <0.5: Unacceptable |  |  |  |  |  |  |  |

**Table 2.**

*Parent-Child agreement (Intraclass correlations) on the Friendship Qualities Scale by age, subscale, diagnostic group, and assigned sex.*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | **Full Sample** | **4-year-olds** | **5-year-olds** | **6-year-olds** | **7-year-olds** | **8-year-olds** | **Autistic** | **Non-Autistic** | **Males** | **Females** |
|   | (n=172 pairs) | (n=27 pairs) | (n=31 pairs) | (n=24 pairs) | (n=27 pairs) | (n=38 pairs) | (n=57 pairs) | (n=116 pairs) | (n=73 pairs) | (n=98 pairs) |
| Companionship | **0.054** | -0.172 | -0.437 | 0.641 | 0.601 | -0.165 | 0.048 | -0.020 | -0.063 | 0.079 |
| Conflict | **0.198** | 0.197 | 0.208 | -0.281 | 0.432 | 0.451 | 0.149 | 0.128 | 0.134 | 0.201 |
| Help | **0.169** | 0.467 | -0.729 | -0.289 | 0.643 | 0.09 | 0.194 | 0.076 | 0.148 | 0.106 |
| Security | **0.143** | 0.157 | 0.411 | -0.627 | 0.269 | 0.166 | 0.373 | 0.036 | 0.207 | 0.249 |
| Closeness | **0.314** | 0.371 | 0.293 | 0.335 | 0.261 | 0.361 | 0.434 | 0.140 | 0.328 | 0.211 |
| **Overall Friendship Quality** | **0.250** | **0.175** | **-0.253** | **0.177** | **0.424** | **0.502** | **0.276** | **0.010** | **0.266** | **0.187** |
|  |  |  |  |  |  |  |  |  |  |  |
| Note: ICC Correlations can be interpreted: |  |  |  |  |  |  |  |  |
| <0.5 = poor |  |  |  |  |  |  |  |  |  |  |
| 0.5-0.75 = moderate |  |  |  |  |  |  |  |  |  |  |
| 0.75-0.9 = Good |  |  |  |  |  |  |  |  |  |  |
| >0.9 = Excellent |  |  |  |  |  |  |  |  |  |  |