Understanding Bullying Related Behaviors in Youth with Autism Spectrum Disorder

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Abstract

Aggression is known to increase bullying related behaviors in youth with Autism Spectrum Disorder (ASD). To address problems with behavior and aggression, mental health services and ASD behavioral interventions are often used. However, there is limited research on if these services have an impact on bullying related behaviors. This study sought to identify if there is a relationship between demographic variables and bullying related behaviors as well as mental health and behavioral services and bullying related behaviors. Aligned with previous research, gender was not found to be significant in predicting bullying-related behaviors, thus contrary to some studies we found that boys were not more likely to bully. Those who received behavioral interventions or saw a mental health professional or needed a mental health professional were more likely to bully. Age was also found to be significant, as age increases, bullying decreased.

Keywords: Autism Spectrum Disorder, bullying, aggression, mental health

Introduction

It is not uncommon to hear about bullying taking place in schools.Bullying can include general harassment, physical aggression, relational aggression, and verbal aggression (Vaillancourt McDougall, & Hymel, 2008). Approximately 30% of students are bullied at some point in their childhood (Nansel, Overpeck, Pilla, Ruan, Simons-Morton, & Scheidt, 2001).Bullying not only has a significant impact on the victim, but on the bully as well. Research in this area has found that bullying can have negative effects psychologically, socially, physically, and academically (Nansel et al. 2004; Sterzing et al. 2012; Vreeman and Carroll 2007). Bullying is not just limited to typical students. Aggression is a common problem in youth with ASD (Kanne & Mazurek, 2011). More recent studies are focusing on bullying and bullying related behaviors in youth with ASD (Fink, Goossens, van der Meijden, & Begeer, 2018; Hwang, Shin Kim, Koh, & Leventhal, 2018; Rex, Charlop, & Spector, 2018). A myriad of behaviors are associated with ASD including physically and verbally aggressive behaviors (Kanne and Mazurek, 2011). Understanding bullying related behaviors in youth with ASD is critical since 1 in 59 children in the U.S. are diagnosed with this disorder (Kurzius-Spencer et al. 2018). Aggressive behaviors are believed to decrease overtime as youth gain skills in emotional regulation, communication, and adaptation (NICHD Early Child Care Research Network 2004). This population is also known to have higher mental health needs (Deavenport-Saman et al. 2016). Since bullying and being bullied are related to mental health (Lee & Vaillancourt, 2018), it is important explore the relationship between these two areas.

Mental Health Services

For youth with Autism, receiving mental health treatment can be a challenge. Mental health professionals report frustration serving clients with ASD because existing treatments are not effective (Brookman-Frazee at al. 2012; Hwang & Hughes, 2000).

Mental health professionals often adapt and make modifications in their evidence-based practices to best fit their client's needs (Cooper et al, 20016; Stirman et al. 2013). This may include augmenting or reducing the length and pacing of the evidence-based practice (Lau et al, 2017). The intervention *An Individual Mental Health Intervention for Children with ASD*is a modified mental health intervention used specifically for youth with autism by mental health professionals (AIM HI; Brookman-Frazee & Drahota, 2010). Dyson, Chlebowski, and Brookman-Frazee (2018) found that even a specialized intervention for youth with ASD still requiremany adaptations by mental health professionals. These researchers found that typical adaption of the AIM HI was the need for modified language, slower pacing, integrations of other treatments, involving others, and out of session components (Dyson, Chlebowski, and Brookman-Frazee, 2018). Based on the literature, mental health services for youth with ASD is still changing and evolving.

Although these mental professionals are trying to meet the needs of this population, this is under the assumption that these youth have access to these mental health services. Karpur, Lello, Frazier, Dixon, and Shih (2018) sought to investigate disparities in access to health care services among children with Autism Spectrum Disorder in comparison to children without Autism Spectrum Disorder. The researchers used data from the 2016 National Survey of Children's Health for this analysis.The researchers investigated the relationship between each of the factors associated with unmet health care needs. Through an analysis of the data, the researchers found that children with Autism Spectrum Disorder had "four times higher odds" of unmet health care needs compared to those without disabilities. Children with other disabilities were two times more likely to have unmet health care needs when compared to children without disabilities.

Bullying

Youth with ASD experience higher levels of peer victimization when compared to their peers (Adams, Fredstrom, Duncan, Holleb, & Bishop, 2014). Bullying of youth with ASD is just not one sided, youth with ASD also engage in bullying-related behaviors (Begeer at al., 2016; van Roekel, Scholte, & Didden, 2010). The most common factors associated with bullying-related behavior in typical developing children are: gender, age, and level of emotional and behavioral problems (Cook et al, 2010). While few studies have investigated bulling based on gender in youth with ASD, the findings report that both boys and girls are equally victimized (Cappadocia et al,. 2012; Hebron & Humphrey, 2014) but there is limited support to state any difference between boys and girls engaging in bully-related behavior (Fink, Olthof, Goossens, van der Meijden, & Begeer, 2018).

Fink, Olthof, Goossens, van der Meijden, & Begeer (2018) were the first to explore bullying-related behaviors such as bullying victimization, defender and outsider behaviors with age, gender, emotional and behavioral problems and autism severity.The results of their study concluded that autism severity and gender were not associated with bullying related behaviors. Age was associatedwith bullying, in such that as age increased the bullying related behaviors decreased. Fink et al. (2018) also found that bullying related behaviors were associated with conduct problems, hyperactivity, and lower levels of peer problems. When looking at victimization, the researchers found an association with emotional problems, conduct problems, hyperactivity, peer problems, and less prosocial behaviors. Since emotional and behavioral problems are associated with youths with ASD (see Dyson, Chlebowski, & Brookman-Frazee, 2019; Fink, Olthof, Goossens, van der Meijden, & Begeer, 2018; Hwang, Kim, Koh, &Leventhal, 2018), it is important to explore the treatment for mental health as an influence on bullying-related behaviors.

This study seeks to identify the relationship of bullying related behaviors with the following areas in youth with ASD: age, gender, mental health services, and ASD level. The following four research questions will be examined.

- Does age decrease how often youth with ASD engage in bullying related behaviors?
- Does the gender of youth with ASD have an impact on engaging in bully-related behavior in school, or receiving treatment or counseling form a mental health professional?
- Do youth with ASD engage less in bullying-related behavior when they receive treatment or counseling from a mental health professional or behavioral treatment for ASD?
- Does the level of ASD increase how often youth engage in bully-related behavior in school?

Method

This is an analysis of bullying-related behaviors related to youth with Autism Spectrum Disorder (ASD) who participated in the 2016-2017 National Survey of Children's Health. This survey was conducted by the United States Census Bureau on behalf of the United States Department of Health and Human Services. Approximately 364,150 households across the United States were mailed invitations asking for adults who are familiar with the child's health and health care to complete a short screener questionnaire. This was done usingeither a paper copy or online submission. The adult then filled out the age specific questionnaire for one randomly selected child in the household. These age specific questionnaires were separated as follows: 0-5, 6-11, and 12-17. Of all the eligible participants, 50,212 completed both questionnaires. The participant's responses were weighted and information regarding this data set and the missing data can be found in the National Survey of Children's Health Methodology Report. Participants used for this study included those who selected yes for "Has a doctor or other health care provider EVER told you that this child has Autism or Autism Spectrum Disorder (ASD), thisincludes diagnoses of Asperger's Disorder or Pervasive Development Disorder (PDD)". The sample was then further restricted based on the response to "Does this child CURRENTLY have the condition?" Since the bullying related questions were only asked for youth ages 6-17, these were the only ages included in the analysis.

Fink, Olthof, Goossens, van der Meijden, & Begeer (2018) investigated gender, age, autism severity, emotional and behavioral problems, and bullying related behaviors. Their study included 120 participants ranging in ages 11 to 20 years old attending a school in Amsterdam. This study will use the same variables of gender, age and level of ASD to investigate youths with ASD in the United States. Since emotional and behavioral problems are associated with youths with ASD (see Dyson, Chlebowski, & Brookman-Frazee, 2019; Fink, Olthof, Goossens, van der Meijden, & Begeer, 2018; Hwang, Kim, Koh, & Leventhal, 2018), the researcher choose to include mental health and behavioral treatment as an additional variables to investigate this influence on bullying-related behaviors.

Analysis Variables

The dependent variables used for this study was bullying others. This variable was defined as child who bullies others, picks on them, or excludes them. The variable was split into three categories on the survey: definitely true, somewhat true, and not true. To separate those who bullied from those who did not, this variable recoded into a dichotomous variable with definitely and somewhat true recoded as a "1" and not true coded at "0" with all missing variables removed.

The independent variables were split into two sets. The first set of variables used were demographic characteristics: age, gender, level of ASD. The age variable was a continuous variable that ranged from 6 to 17. Gender was recoded to identify males as "0" and females "1". The level of autism was categorized in the survey as mild, moderate, and severe. These variables were recoded into three different dichotomous variables for each category (0= No; 1=Yes). The second set of variables included the types of services the youth with ASD received: mental health treatment and ASD behavioral treatment. The mental health variable was defines as the child needed to receive any treatment or counseling from a mental health professional in the last 12 months. This variable separated into three categories in the original survey as: yes, no but needed to, and no this child did not need to. This variable was recoded into three different dichotomous variables as no "0" and yes "1" for each variable. The final variable, ASD behavioral treatment, is defined as in the past 12 months, did this child receive behavioral treatment for ASD? This variable was recoded as a dichotomous variable with "1" and true and "0" and not true.

Data Analysis

Logistical regression analysis using STATA was used to examine the odds of a child bullying using demographic characteristics and mental health services/behavioral treatments as independent variables. By separating the independent variables into two sets allows for exploration of the demographic variables alone. The second model includes these demographic variables as well as the service variables.The variance inflation factors (VIF) was 1.14 in the full model, thus indicating there is no problems with multicollinearity.

Results

The sample size of the youth participants included only those who currently had an ASD diagnosis ages 6 to 17, with no missing variables; N=1,450. Descriptive statics for the variables are shown in Table 1.

The participants included 1,163 (80%) males and 287 (20%) females. Only 15% of the sample were identifies as having bullying behaviors, approximately 217 participants. More than half the participants see a mental health professional (52%) and 60% are receiving ASD specific behavior interventions or treatments.

The first logistical regression model included only the demographic factors. The likelihood ratio test was significant, $\chi2$ (4, N = 1,450) = 603.39, p =.01, Pseudo R2= 0.01. In this model, age was found to be significant, p=.03. Youth with a moderate level of ASD were found to be significant, p=01, when compared to those with mild level of ASD in having bullying related behaviors. In the full logistical regression model, the services variables were added. The likelihood ratio test was significant, $\chi2$ (7, N = 1,450) = 579.53, p < .001, Pseudo R2=.05. The Pseudo R2 is larger in the full model, thus determining that this model explains bullying behaviors better with the service variables add in. By testing the two models, $\Delta\chi2$ (3, N = 1,450) = 47.73, p < .001, the full model was found to be significant. These variables explain variation in bullying related behaviors better than nothing alone, thus we reject the null hypothesis that bullying is due to chance alone with a probability of .13.

From the results, age, moderate level of ASD, saw a health professional, needed to see a health professional, and ASD specific treatment were all found to be significant. In age, there is a 5% decrease in bullying related behaviors while holding all other variables constant. The moderate level of ASD was found to be significant in that we expect a 37% increase in bullying related behaviors while holding all other variables constant. For participants who saw a health professional, there is a 139% chance that this participant is engaging in bullying related behaviors. When parents identified that the youth needed mental health care but did not currently have it, there is a 326% probability that these youth are engaging in bullying related behaviors. And finally, youth who are receiving an ASD behavior treatment or intervention we expect a 45% increase in bullying related behaviors while holding all other variables constant.

Discussion

The findings associated to bullying related behaviors were a little surprising, especially investigating services. The first area that was investigated was demographic characteristics associated with bullying. Age was found to be significant in that as a child grows older, they were less likely to engage in bullying related behaviors. The could be due to these youth receiving behavioral treatments and interventions or mental health service so over time they are able to learn and implement these strategies to help them with their aggressive behaviors. It could also be that as youth age they are observing and learning through their peers. In general, youth seem to grow out of bullying and picking on each other. Thus, the youth with autism may be learning and copying these came behaviors, so they are decreasing the bullying related behaviors over time. For parents, knowing that bullying related behaviors decrease over time can be very helpful to know there a better future ahead. More research would be needed to determine factors that are associated with this decrease in bullying over time.

Another demographic characteristic that was found to be significant is the moderate level of ASD. Youth with mild ASD could be more likely to be taught in the general education classroom. They also may be more likely to copy and mimic appropriate behaviors from their other peers. Youth with severe levels of ASD are most likely placed in self-contained classrooms. These classes are designed to meet the unique needs of students with severe disabilities. Thus, these youth are mostly likely not able to get away with bullying other students as much as a student in the general education classroom would. Youth with moderate levels of ASD could be having more problems with bullying because these kids have a more severe disability than those students with mild ASD, but these students may be still being placed in the general education classroom. It is this combination that could be the catalyst for more bullying related behaviors. More researcher would be needed to identify classroom placement to determine if this is a factor in bullying related behaviors.

Mental health services and behavioral treatments and interventions were also found to be significant for increasing bullying related behaviors. This finding could be significant because the aggressive behaviors associated with bullying could be the reason these student's parents are seeking mental health services or behavioral help. Further researcher would be beneficial to identify how this trend proceeds into the adult ages.

These findings demonstrate the varieties of variables that go into increasing bullying related behaviors. Bullying is a complex issue for all students, so finding ways to reduce bullying is beneficial for everyone. More research can be done to help youth with ASD reduce bullying related behaviors that best fits their unique needs.

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Table 1

Descriptive Statistics of Study Variables			
Variables	n	M	Range
Bulling	1,450	.15	
Demographics			
Age	1,450	12.23 (3.28)	6 - 17
Females	1,450	.20	
Autism (mild)	1,450	.52	
Autism (moderate)	1,450	.38	
Autism (severe)	1,450	.10	
Services			
Saw a health professional	1,450	.52	
Needed a health profession	1,450	.08	
No health professional	1,450	.41	
ASD Behavior Treatment	1,450	.59	

*p<.05

Table 2
Logistic Regression Demographic and Services Variables in Bullying

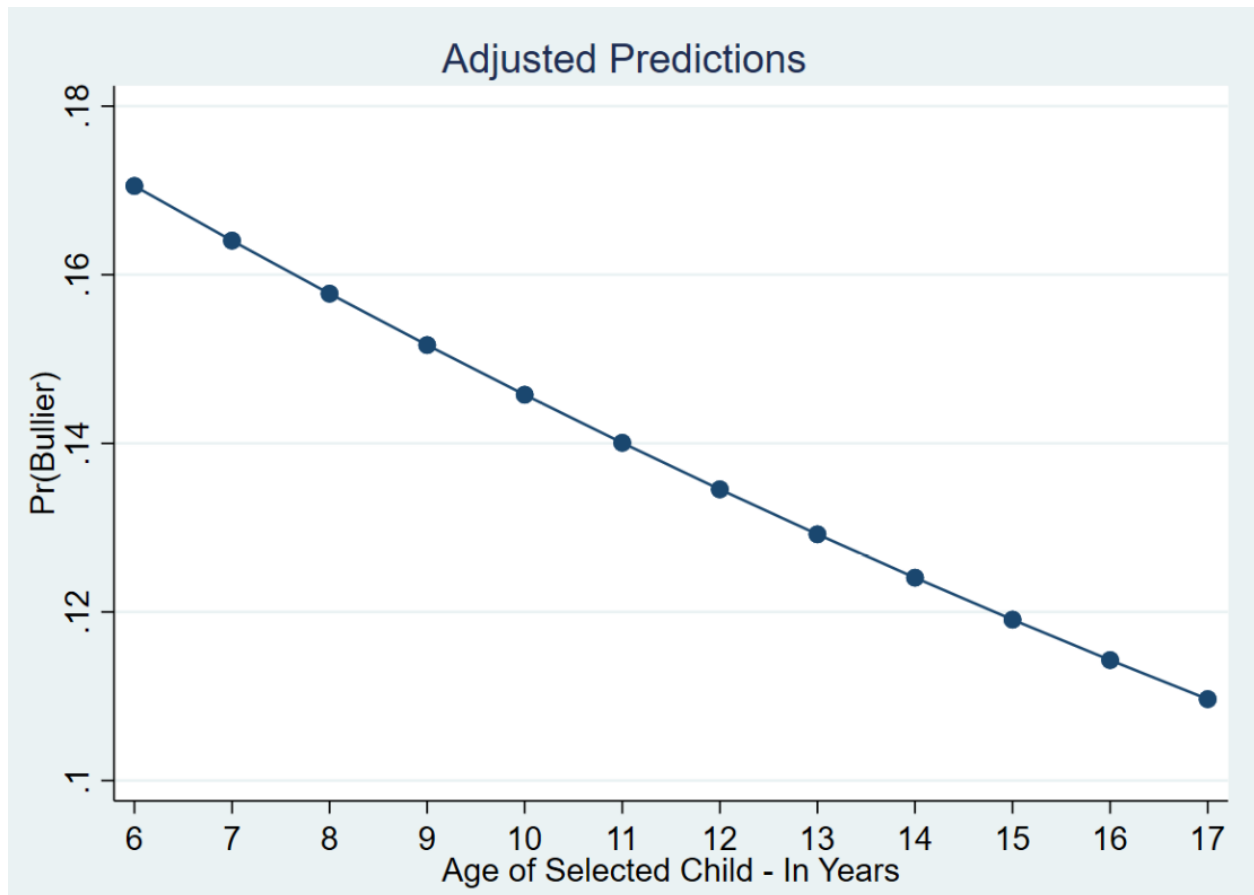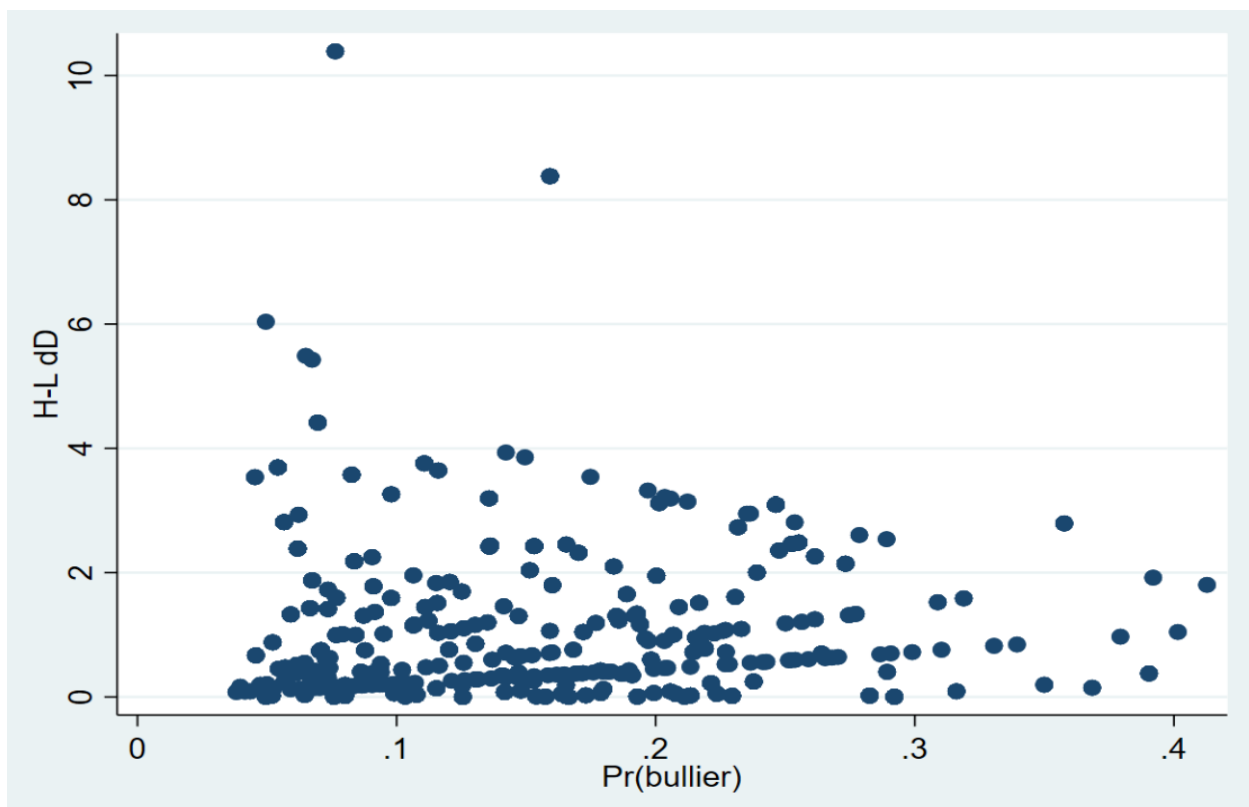|	Model 1	Model 2	OR	95% CI
Demographics				
Age	-.05	-.047	.95	[.91, 1.0]
Females	-.06*	-.09	.92	[.63, 1.34]
Autism (moderate)	.44*	.31	1.36*	[1.0, 1.87]
Autism (severe)	.02	-.23	.79	[.46, 1.37]
Services				
Saw a health professional		.87	2.39*	[1.64, 3.46]
Needed a health profession		1.45	4.26*	[2.50, 7.26]
ASD Behavior Treatment		.37	1.45*	[1.01, 2.08]

*p<.05
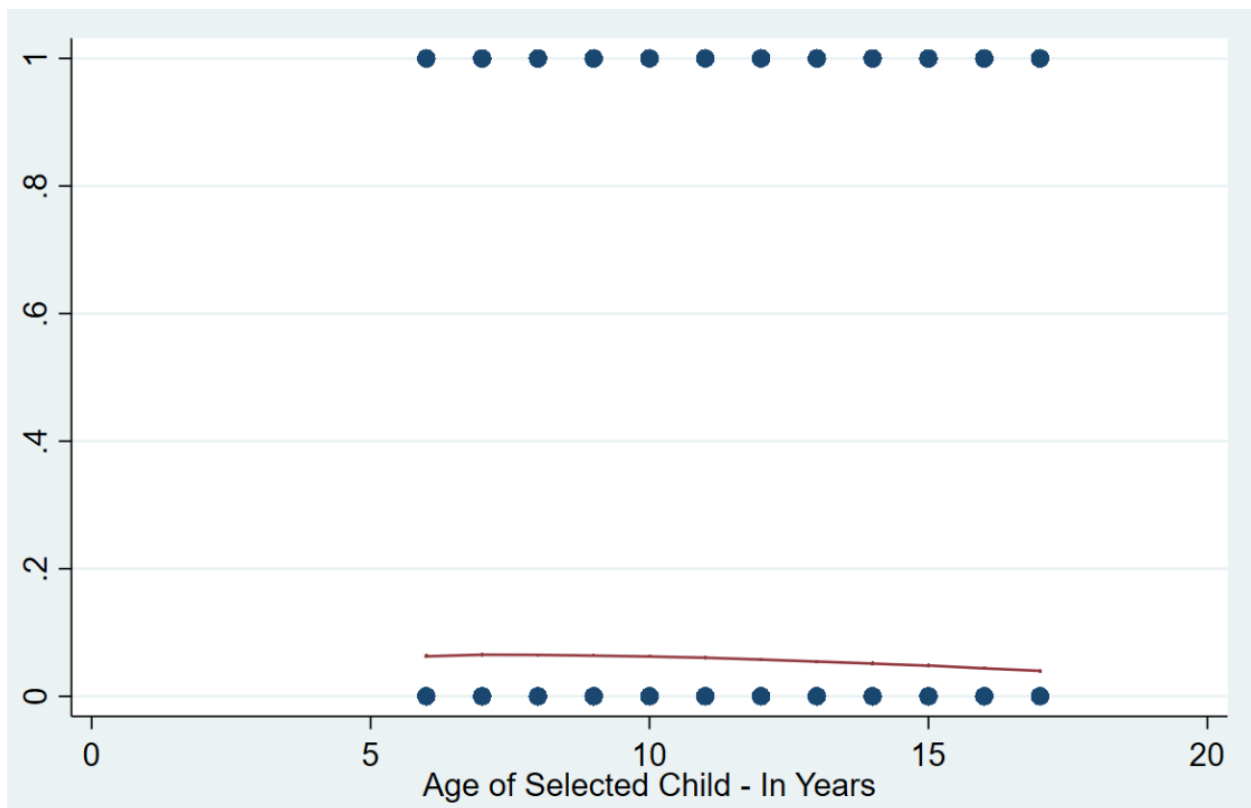
Figure 1. Two Way Scatter Plot Age/Bullying

Figure 2. Adjusted Predictions Age/Bullying

Figure 3. Outliers/Influencers