

January 01, 2010

## A descriptive assessment on the prevalence and qualitative characteristics of peer attention

Kylie Marie Roberts  
*Northeastern University*

---

### Recommended Citation

Roberts, Kylie Marie, "A descriptive assessment on the prevalence and qualitative characteristics of peer attention" (2010). *Applied Behavioral Analysis Master's Theses*. Paper 17. <http://hdl.handle.net/2047/d20000124>

This work is available open access, hosted by Northeastern University.

A Descriptive Assessment on the Prevalence and  
Qualitative Characteristics  
of Peer Attention

A Thesis Presented

by

Kylie Marie Roberts

The Department of Counseling and Applied Educational Psychology

In partial fulfillment of the requirements

For the degree of

**Master of Science**

**in the field of**

**Applied Behavior Analysis**

Northeastern University

Boston, Ma

January 2010

NORTHEASTERN UNIVERSITY

Bouvé College of Health Sciences Graduate School

Thesis Title: A Descriptive Assessment on the Prevalence and Qualitative Characteristics of Peer Attention

Author: Kylie Roberts

Department: Counseling and Applied Educational Psychology

Approved for Thesis Requirements of Master of Science Degree

---

(Jessica Sassi PhD)

---

(Eileen Roscoe PhD)

---

(Paula Braga-Kenyon)

A Descriptive Assessment on the Prevalence and  
Qualitative Characteristics  
of Peer Attention

By

Kylie Marie Roberts

B.S., University of Central Florida

Submitted in partial fulfillment of the requirement for the degree of  
Masters of Science in Applied Behavior Analysis  
in the Bouve College of Health Science Graduate School  
of Northeastern University, January 2010

## **Prevalence & Characteristics of Peer Attention**

### **Acknowledgments**

I would like to thank Jessica Sassi for serving as my thesis chair and providing assistance throughout the process of developing, conducting, and writing my thesis. I would also like to thank Eileen Roscoe and Paula Braga-Kenyon for serving on my thesis committee and providing helpful guidance and feedback. I would also like to thank Carrie Lawton, Liz Spring, and Allison Berry for assisting with data collection and IOA.

## Prevalence & Characteristics of Peer Attention

### Abstract

Studies have shown that in some cases, peer attention can maintain students' problem behavior (e.g., Northup et. al., 1995). These studies tend to use confederate peers and similar topographies of attention across all participants (reprimands). Information on events that typically follow problem behavior in the natural environment may provide some empirical validation for the use of peer-delivered consequences during functional analyses. Thompson & Iwata (2001) conducted a descriptive assessment to determine what types of consequences typically follow problem behavior in the natural environment, and although attention was a relatively common consequence, they reported that peer attention was rarely observed. The current study consists of two descriptive assessments that focus on peer attention as a consequence in a middle-school classroom. The first descriptive assessment is an extension of the Thompson and Iwata (2001) study and consists of a study on the prevalence of peer attention as a consequence for problem behavior in a middle school classroom. The second descriptive assessment consists of a study on the topographies of peer attention provided in the natural environment. Results from the first study indicated that the probability of peer attention following problem behavior was greater than unconditional probability of peer attention for eight of the eleven students, suggesting that peer attention is a common consequence for the problem behavior of middle school children. The results from second study indicated that the topography of peer attention varied widely, but rarely included statements regarding the behavior or reprimands.

## Prevalence & Characteristics of Peer Attention

### Table of Contents

A. Acknowledgements.....	4
B. Abstract.....	5
C. Introduction.....	7
D. Study 1	
a. Participant & Setting.....	10
b. Response Measurement & Interobserver Agreement.....	11
c. Procedure.....	12
d. Data Analysis.....	13
e. Results.....	13
E. Study 2	
a. Participant & Setting.....	14
b. Response Measurement & Interobserver Agreement.....	15
c. Procedure.....	16
d. Data Analysis.....	17
e. Results.....	17
F. General Discussion.....	18
G. References.....	22
H. Table 1.....	24
I. Table 2.....	25
J. Figure Captions.....	26
K. Figure 1.....	27
L. Figure 2.....	28

Functional analysis (FA) methods (Iwata, Dorsey, Slifer, Bauman, and Richman, 1982/1994) are often used to identify variables maintaining problem behavior and do so through the systematic manipulation of environmental events. Functional analyses typically include contingent escape, contingent attention, alone, and control conditions. The identification of the variable maintaining problem behavior provides the therapist with the information needed to select and implement the appropriate function-based intervention. However, in some cases the conditions used in a traditional FA do not evoke problem behavior due to idiosyncratic variables. In these cases, modifications to one of the traditional conditions may be needed to evoke the behavior.

Several studies have shown that idiosyncratic stimuli may play a role in either evoking or maintaining problem behavior. For example, although escape conditions typically include task presentation and escape from work contingent on problem behavior, McCord, Iwata, Gallensky, Ellingson, & Thompson (2001) found that escape from loud noise (rather than demands) maintained 2 participants' problem behavior. Likewise, a variable relevant to attention-maintained problem behavior may be the person delivering the attention. Ringdahl and Sellers (2000) conducted a study to determine if the familiarity of the therapist in a FA (caregiver vs. clinical staff) would result in differential response rates. The authors found that response rates were higher in the conditions in which the caregivers delivered the contingencies relative to the conditions in which the clinical staff delivered the contingencies. The authors suggested that this effect could be attributed to the caregivers functioning as a discriminative stimulus for problem behavior. Another variable that may function as a discriminative stimulus for the availability of social consequences may be the presence of a peer in the environment. Several studies have

## **Prevalence & Characteristics of Peer Attention**

evaluated the effects of peer presence in the attention condition of a FA (Northup, et al., 1995; Broussard & Northup 1997; Northup et al., 1997; Jones, Drew & Weber 2000; Flood, Wilder, Flood & Mesuda 2002). These studies have reported that peer attention can maintain problem behavior.

Given that there are a number of studies on peer attention, it may be assumed that peer attention occurs frequently, yet there is little research on the prevalence of peer attention or what topographies of peer attention are more common. One way to address this question is to conduct a descriptive assessment (DA) and identify the common topographies and conditions under which peer attention is typically delivered. A DA uses direct observation to identify environmental variables that may influence the target behavior. Thompson and Iwata (2001) conducted a DA to determine if the consequences arranged in a traditional FA commonly occurred in the natural environment. Twenty-seven developmentally disabled adults who lived in a residential institution participated. The authors reported that the consequences typically implemented in FAs were all naturally-occurring events observed during the DA, and that attention was the most common consequence for problem behavior. It is interesting to note that although the authors reported collecting data on peer attention as a consequence, it was rarely observed. McKerchar and Thompson (2004) replicated the Thompson and Iwata study in a preschool population, and results showed that attention was the most common consequence to follow problem behavior; however, no information on peer attention was reported. Results of these studies suggest that peer attention may be a relatively uncommon phenomenon, yet several studies have shown that peer attention can maintain problem behavior in school-aged children. Thus, it remains unclear whether peer attention is a naturally-occurring environmental event that often occurs. One way to determine the prevalence of peer attention as a consequence in the

## **Prevalence & Characteristics of Peer Attention**

school environment would be by conducting a descriptive assessment.

A descriptive assessment may also be helpful in determining whether certain topographies of attention are more frequently provided by peers in the natural environment. Research has shown that certain topographies of attention may be more likely to maintain problem behavior during a functional analysis. Kodak, Northup, and Kelley (2007) conducted an evaluation of different forms of therapist attention. During this evaluation, attention was always delivered contingent on problem behavior; however, the topography of the attention delivered varied across conditions. The results of this study showed that some topographies of attention, such as eye contact, produced higher rates of behavior for one participant, whereas attention in the form of unrelated comments produced high rates of behavior for the other participant. Studies that have included a peer attention condition typically asked the peer confederate to be their “helper” and instructed them to provide attention, in the form of a reprimand, contingent on the target response. Currently, there is no information on the typical topography of peer attention delivered in the natural environment.

Given that several studies have used functional analyses to demonstrate that peer attention can, in some cases, maintain problem behavior (Northup et al. 1995; Broussard et al. 1997; Northup et al. 1997; Jones et al. 2000; & Flood et al. 2002), information on the prevalence of peer attention as a consequence for problem behavior may be of interest.

The study by Thompson and Iwata (2001) may be the only larger-scale descriptive analysis that reports the frequency of peer attention, and their results suggest it is quite uncommon. However, the Thompson and Iwata study included adults as participants, whereas studies including a peer attention condition in their functional analyses have included school-aged children as participants. One purpose of this study is to extend the Thompson and Iwata

## Prevalence & Characteristics of Peer Attention

study by identifying the prevalence of peer attention as a social consequence in a middle school classroom for children diagnosed with Autism Spectrum Disorders. A second purpose of this study is to identify common topographies of peer attention in the natural environment.

### GENERAL METHOD

#### Study 1-Prevalence of Peer Attention

##### *Participant and Settings*

Eleven individuals who attended a school for children with Autism Spectrum Disorders participated in Study 1. All participants attended a middle school classroom for students aged 12-14 and had been diagnosed with an Autism Spectrum Disorder. Students were selected based on their weekly attendance in the academic classroom setting. During observations, one student was identified as the target student and all other students present in the classroom served as peers. In this sense all participants served as both peers and target students during the study. Chrissy was a 14-year-old female who communicated using two to three-word utterances and had a history of off-task, disruptive, and aggressive behavior. Doug was a 13-year-old male who communicated using full sentences and had a history of off-task, disruptive, aggressive, and self-injurious behavior. Ike was a 12-year-old male diagnosed who communicated using full sentences and had a history of off-task, disruptive, aggressive, and self-injurious behavior. Ryan was a 14-year-old male who communicated using two to three-word utterances and had a history of off-task, disruptive, and aggressive behavior. Wade was a 13-year-old male who communicated using full sentences and had a history of off-task and disruptive behavior. Bob was a 14-year-old male who communicated using two to three-word utterances and had a history of off-task, disruptive, aggressive, and self-injurious behavior. Caiden was a 14-year-old male who communicated using full sentences and had a history of off-task, disruptive, aggressive, and

## **Prevalence & Characteristics of Peer Attention**

self-injurious behavior. Caleb was a 13-year-old male who communicated using full sentences and had a history of off-task and disruptive behavior. Jackson was a 10-year-old male diagnosed with Autism. He communicated using two to three-word utterances and had a history of off-task, disruptive, aggressive, and self-injurious behavior. Ashton was a 13-year-old male diagnosed with Autism. He communicated using full sentences and had a history of off-task, disruptive, and self-injurious behavior.

Observations were conducted in a classroom that contained a desk, chairs, and educational materials. Five to eight students were in the classroom during each scheduled observation time, with one student identified as the target student and all remaining students serving as peers. The staff-to-student ratio in the classroom ranged from 1:1 to 1:3 across observations. All students had formal behavioral management programs, including criteria to exit the classroom for problem behavior, in place throughout the duration of the study.

### *Response Measurement and Interobserver Agreement*

Target behavior for Study 1 were identified through informal observation and teacher report. The information gathered was used to operationally define a broad range of problem behavior, which allowed the authors to collect data consistently across all participants and capture a variety of response topographies. Target behavior for Study 1 included aggression (hair pulling, hitting, kicking, biting, and scratching others), self-injury (hair pulling, self biting, head and body hitting, and banging body against objects) and disruptive behavior (loud vocals, getting out of seat, and property destruction). Data were also recorded on peer attention, which included vocal interactions (reprimands, contingency statements, demands and questions) and physical interactions (orienting towards the target student, laughing, pointing, clapping, and touching). Observations were 10 min in duration. Sessions were divided into 10-s intervals and

## Prevalence & Characteristics of Peer Attention

partial interval data were collected.

Interobserver agreement was collected for 29% of all observations by having a second observer collect simultaneous but independent data. Observer records were compared on interval by interval basis. The number of agreements was divided by the number of agreements plus disagreements and multiplied by 100%. The mean agreement for problem behavior across participants was 99.7% (range, 97% to 100%). The mean agreement for peer attention across participants was 96% (range, 92% to 100%).

### Study 1-Prevalence of Peer Attention

#### *Procedure*

Trained observers collected a minimum of four observations for each participant. Across all observations, the target student was seated at a desk faced away from the wall in a corner. This allowed the observers to stand behind the target student and collect data on the responses of all the peers in the classroom. The number of the peers in the room at any one time ranged from 3-7 peers. If less than five 10-s intervals of problem behavior occurred during the initial four observations, an additional two observations were conducted to ensure adequate opportunity for capturing peer attention as a consequence for problem behavior.. Because the purpose of this study was to collect data on prevalence of peer attention, observations were conducted only when peers were in the environment. Peers were able to enter and exit the academic classroom during the observations, but if all peers or the target student left the academic classroom for more than 3 s, data collection was suspended until the target student or at least one peer returned. There were 11 occasions in which observations were shortened because of unplanned departures. However, the range of mean observation times for participants was 8 min 20 s to 10min

Observations were collected Monday through Friday between the hours of 9am and 3pm.

## **Prevalence & Characteristics of Peer Attention**

The times were based on the target students' scheduled weekly academic classroom periods and varied from week to week. Regular academic and leisure programs were implemented as prescribed by the student's individual behavior guidelines. Prior to the beginning of data collection, observers informed staff that they would be collecting data and asked the staff to behave as they usually would. Observations were collected over a period of 2 months.

### *Data Analysis*

Data were analyzed to identify the proportion of intervals in which peer attention occurred (the unconditional probability of attention) and the proportion of instances of problem behavior that were followed by peer attention (conditional probability) in the same or the following 10-s interval. The conditional probability was calculated by dividing the number of intervals in which problem behavior and peer attention occurred in either the same interval or 10-s interval following an instance of problem behavior by the total number of intervals of problem behavior. Because the conditional probability calculation for peer attention given problem behavior included attention delivered in the same or the subsequent 10-s interval (up to a 20-s interval), the unconditional probability was also calculated using a 20-s interval. The unconditional probability of peer attention was calculated by dividing the total number of 20-s intervals in which peer attention occurred by the total number of 20-s intervals in the observation. These calculations are similar to those used by Vollmer et al. (2001).

### *Results*

A total of 56 observations were completed during the course of Study 1. The number of observations collected varied (from 4-6) across participants due to their frequency of problem behavior. The mean duration of observations and frequency of problem behavior per individual student are shown in Table 1. There were six students for whom additional observations were

## Prevalence & Characteristics of Peer Attention

required. Two of the six students never engaged in any problem behavior.

A comparison of the conditional and unconditional probabilities showed that the probability of peer attention following problem behavior was greater than the unconditional probability for eight of the eleven participants, as shown in Figure 1. Ike was the only student whose data showed a higher unconditional probability of peer attention relative to the conditional probability. As noted earlier, two participants did not engage in any problem behavior during the course of the study and therefore were excluded from Figure 1. It is also interesting to note the unconditional probability of attention across participants showed little variability. The aggregated total for all eleven participants' conditional and unconditional probability is depicted in Figure 1. The aggregated data also show that probability of peer attention following problem behavior is greater than the unconditional probability of peer attention. These data suggest that peer attention may be a common consequence for problem behavior, warranting additional research on the subject.

### Study 2: Qualitative Characteristics of Peer Attention

#### *Participants and Setting*

Five target student/peer dyads of students participated in Study 2. Each target student/peer dyad consisted of the target student (the student for whom data were collected on the frequency of problem behavior) and the peer (the student in which data was collected on the topography of peer attention). Some students participated in two target student/peer dyads; however, no student served as a peer more than once. All participants in Study 2 were participants from Study 1, with the exception of Darla and Sharleen. The target student participants from Study 1 were selected for inclusion in study two based on the frequency of problem behavior. The peer was selected based on a review of which students were frequently in

## Prevalence & Characteristics of Peer Attention

the same environment as the selected target students. The target student/peer dyads consisted of: Steve(target student) and Ashton(peer), Ike(target student) and Jackson(peer), Ashton(target student) and Jackson(peer), and Doug(target student) and Ike(peer), as well as an additional target student/peer dyad that was identified based on informal observation indicating that their problem behavior was frequently followed by peer attention (Darla and Sharleen). Darla was a 17-year-old female diagnosed with an Autism Spectrum Disorder. She communicated using full sentences and had a history of off task, disruptive, aggressive and self injurious behavior. Sharleen was a 13-year-old female diagnosed with Angelman's Syndrome. She communicated using sign language and had a history of off-task, disruptive, and aggressive behavior.

Observations took place in the student's academic classrooms, homeroom classrooms, and common rooms at their residences. The staff -to-student ratio ranged from 1:1 to 1:3 over the course of the study.

### *Response Measurement and Interobserver Agreement*

Observers recorded the occurrence or non occurrence of target student problem behavior and various topographies of peer attention. The topographies for which data were collected on included reprimands, contingency statements, demands, statements about the behavior, orienting, laughing, clapping, physical contact, and imitative behavior. *Reprimands* were defined as the peer participant making a statement specifying for the target student to cease behavior (i.e., "stop, don't do that") and/or indicating dislike for the target behavior. *Contingency statements* were defined a statement indicating a possible consequence regardless if it an actual consequence. *Demands* were defined as a statement stating for target student to engage in a specified behavior (i.e., "sit down and do your work"). *Statements about problem behavior* were defined as the peer making a vocal statement that mentioned the target behavior. *Orienting* was

## Prevalence & Characteristics of Peer Attention

defined as turning the body or head 90 degrees to face target student or lifting the chin 45 degrees while facing towards the target student, pointing or gesturing towards student and handing an object to the target student. *Laughing* was defined as audible laugh (including snorting), body shaking and covering mouth. *Clapping* was defined as contact between the palms of both hands. *Physical contact* defined as any physical contact between the peer and the target student. *Imitative behavior* was defined as the peer student repeating the physical movements, audible sounds, or the problem behavior of the target student.

Interobserver agreement was collected on 33% of all observations for each student. Observer records were compared on an interval-by-interval basis. The mean agreement for problem behavior across participants was 98.9% (range, 97% to 100%). The mean agreement for peer attention across participants was 99.9% (range, 99.6% to 100%).

### *Procedure*

A total of six 10-min observations were videotaped for each target student/peer dyad of participants. The purpose of this study was to collect data on the topography of peer attention; therefore, data were only collected when both students were in the environment. If the peer or the target student left the environment for more than 3 s, the session timer was stopped until they returned, at which point the observation resumed.

Observations were collected across a variety of settings across the day. Observations were scheduled during time when student target student/peer dyads were regularly grouped or in the same environment. During the scheduled observation times, data were collected while the students participated in their regularly scheduled activities (academic, meal time, group work, etc.). Individual behavior programs were conducted as written. The one exception was Sharleen, who had a differential reinforcement of other behavior program for decreasing her

## **Prevalence & Characteristics of Peer Attention**

delivery of attention following peer problem behavior; during this study, stimuli correlated with this program were removed and the staff provided no consequences when Sharleen attended to Darla's problem behavior. During the scheduled observation time, the observers informed staff that they would be collecting data and reviewed any modifications to the students' current behavior program, then asked the staff to behave as they usually would in regards to all other behavior.

### *Data Analysis*

Data were analyzed to determine topographies of peer attention that commonly followed problem behavior in the natural environment. The topography of peer attention was counted as following the problem behavior if it occurred in the same or following 10-s interval. The proportion of a particular topography of attention occurring contiguous to problem behavior was calculated by dividing the number of intervals in which that topography of peer attention occurred by the total number of intervals in which any topography of peer attention occurred contiguous to problem behavior.

### *Results*

The results for Study 2 are depicted in Figure 2. The most common topographies of attention varied across participants. The first target student/peer dyad consisted of Ashton (target student) and Steve (peer). Ashton engaged in problem behavior during 5 intervals. Orienting and statements regarding the behavior were the only topographies of peer attention delivered, and the probability of both topographies was equal. The second target student/peer dyad consisted of Ike (target student) and Doug (peer). Ike engaged in problem behavior during 15 intervals. Doug provided attention in the form of laughing most frequently, followed by orienting, and then imitation. The third target student/peer dyad consisted of Jackson (target

## Prevalence & Characteristics of Peer Attention

student) and Ike (peer). Ike provided attention exclusively in the form of orienting towards the target student. The fourth target student/peer dyad consisted of Jackson (target student) and Ashton (peer). Ashton provided attention exclusively in the form of orienting towards the target student, Jackson. The last target student/peer dyad consisted of Darla (target student) and Sharleen (peer). It is important to note that Sharleen communicated non-vocally and therefore no data were collected on verbal attention. Sharleen provided attention most frequently in the form of laughing, followed by orienting towards Darla, and then imitation. When the data were aggregated across participants, the most common topographies of peer attention were laughing ( $M = 56\%$ ) and orienting ( $M = 50\%$ ). Other forms that were observed included imitation ( $M = 17\%$ ), clapping ( $M = 5\%$ ), and statements ( $M = 2\%$ ).

## GENERAL DISCUSSION

Descriptive assessments were conducted on eleven students in Study 1 to identify the prevalence of peer attention. The results showed that peer attention was a relatively frequent event and that the conditional probability of peer attention following problem behavior was higher than the unconditional probability of peer attention. These findings suggest that peer attention occurs frequently enough to warrant further research into peer attention and its relation to problem behavior. It is interesting that these results differ from those reported by Thompson and Iwata (2001). As noted earlier, Thompson and Iwata reported that peer attention was rarely observed during their descriptive assessment, and therefore no information on peer attention was included in their results. The discrepancy between the results of these studies might be due to the difference in the populations. For example, the age of the participants in the Thompson and Iwata were adults, aged 30 to 57, and the population in Study 1 was middle-school students, aged 12 to 14. In addition to age, there are many other factors that may play a role including

## Prevalence & Characteristics of Peer Attention

communication repertoire, functioning level, sex, etc.

In, Study 2 of this study, descriptive assessments were conducted on five target student/peer dyads, who were selected based on previous data or caregiver information suggesting that peer attention frequently occurred following their problem behavior. The purpose was to identify what topographies typically occur in the natural environment. Previously, researchers who have included a peer attention condition in an FA have asked the peer to deliver a reprimand contingent on target behavior. The results of Study 2 suggest that the topography of peer attention varies widely across individuals. However, statements regarding the problem behavior were observed the least, only occurring about 2% of the time, and reprimands were never observed. If the form of attention does in fact play a role in the rate of problem behavior, it may be important to identify common topographies of attention provided by peers in the natural environment prior to the functional analysis. In some cases, the use of reprimands as contingency in the peer attention condition may be inappropriate and in fact may not function as a reinforcer for the target behavior. Future research might use procedures similar to those used by Kodak et al. (2007) to determine if the rate of responding changes when the topography of peer attention is manipulated.

Studies that have included peer attention conditions in functional analyses have typically used confederate students as the peer and little explanation is provided as to why that particular peer was chosen. One exception was Solomon and Wahler (1973), who noted that the peer confederates were selected if (a) they ranked high on a student popularity survey, and (b) they cooperated with a training program. The familiarity of the peer (or a history of attention from that particular peer) may be relevant in evoking problem behavior maintained by peer attention in a functional analysis. Although this is an interesting empirical question, previous research has

## **Prevalence & Characteristics of Peer Attention**

shown that in at least some cases, problem behavior will occur regardless of whether the peer included in the FA condition is the peer providing attention in the natural environment (Northup et al. 1995; Broussard et al.1997; Northup et al. 1997; Jones et al. 2000; & Flood et al. 2002). Therefore the extent to which the inclusion of the appropriate peer may affect the response rate in the peer attention condition is unknown. However, future researchers may find it useful to determine if the familiarity of the peer does play role, and to what extend that variable controls the rate of responding.

The current study has some limitations that deserve comment. First, problem behavior may have occurred at lower levels during Study 1 due to contingencies in effect in the classroom. In Study 1, 11 of the observations were ended early. Second, because all of the Study 1 observations took place in the one academic classroom, these data do not speak to the generality of these results with respect to peer attention in other environments. Third, the population used in this study were children, aged 12-17 diagnosed with a developmental disability. Therefore, it is unknown if similar results would be found in a typical teenage school setting. Or, as mentioned earlier, across populations that varied in other factors such as sex, socioeconomic status, functioning level, etc. Finally, there were a few students who exhibited relatively low rates of problem behavior (Doug, Bob and Ike in Study 1 and Shawn in Study 2) which limited the opportunity to observe peer attention in the natural setting.

The procedures used in this study were developed to look at the prevalence and the topography of peer attention. Because the study was purely descriptive in nature, the results do not speak to the function of the participants' problem behavior. Rather, the purpose was to evaluate whether peer attention is a common phenomenon, and in that regard, provide support for previous studies that have included a peer attention condition. Given the apparent prevalence

### **Prevalence & Characteristics of Peer Attention**

of peer attention as a consequence in the classroom, further research on how related variables (topographies of attention, familiarity of peers in the condition, etc.) may be warranted.

## Prevalence & Characteristics of Peer Attention

### References

- Broussard, C., & Northup, J. (1997). The use of functional analysis to develop peer interventions for disruptive classroom behavior. *School Psychology Quarterly, 12*, 65-76.
- Flood, W., Wilder, D., Flood A., & Mesuda A. (2002). Peer mediated reinforcement plus prompting as treatment for off-task behavior in children with attention deficit hyperactivity disorder. *Journal of Applied Behavioral Analysis, 35*, 199-204.
- Iwata, B. A., Dorsey, M. F., Slifer, K. J., Bauman, K. E., & Richman, G. S. (1982/1994). Toward a functional analysis of self-injury. *Journal of Applied Behavior Analysis, 27*, 197-209. (Reprinted from *Analysis and Intervention in Developmental Disabilities, 2*, 3-20, 1982)
- Jones, K., Drew, H., & Weber, N. (2000). Noncontingent peer attention as treatment for disruptive classroom behavior. *Journal of Applied Behavior Analysis, 33*, 343-346.
- Kodak, T., Northup, J., & Kelley, M. (2007). An evaluation of the types of attention that maintain problem behavior. *Journal of Applied Behavior Analysis, 40*, 167-171.
- McCord, B. E., Iwata, B. A., Galensky, T. L., Ellingson, S. A., & Thomson, R. J. (2001). Functional analysis and treatment of problem behavior evoked by noise. *Journal of Applied Behavior Analysis, 34*, 447-462.
- McKerchar, P. M., & Thompson, R. H. (2004). A descriptive analysis of potential reinforcement contingencies in the preschool classroom. *Journal of Applied Behavior Analysis, 37*, 431-444.
- Northup, J., Broussard, C., Jones, K., George, T., Vollmer, T. R., & Herring, M. (1995). The Differential effects of teacher and peer attention on the disruptive classroom behavior of 3

## Prevalence & Characteristics of Peer Attention

children diagnosed of ADHD. *Journal of Applied Behavioral Analysis*, 28, 227-228.

Northup, J., Jones, K., Broussard, C., DiGiovanni, G., Herring, M., Fusilier, I., & Hanchey, A.

(1997). A preliminary analysis of interactive effects between common classroom contingencies and methylphenidate. *Journal of Applied Behavior Analysis*, 30, 121-125.

Ringdahl, J. E., & Sellers, J. A. (2000). The effects of different adults as therapists during

functional analyses. *Journal of Applied Behavior Analysis*, 33, 247-250.

Solomon, R. W., & Wahler, R. G. (1973). Peer reinforcement control of classroom behavior.

*Journal of Applied Behavioral Analysis*, 6, 49-56.

Thompson, R. H., & Iwata, B. A. (2001). A descriptive analysis of social consequences

following problem behavior. *Journal of Applied Behavior Analysis*, 34, 169-178.

Vollmer, T. R., Borrero, J. C., Wright, C. S., Van Camp, C., & Lalli, J. S. (2001). Identifying

possible contingencies during descriptive analyses of severe behavior disorders. *Journal of Applied Behavior Analysis*, 34, 269-287.

## Prevalence & Characteristics of Peer Attention

Table 1

*Unconditional & Conditional Probabilities of attention, Frequency of problem behavior, and Number of Observations Completed per Individual during Phase 1.*

Student	P:A	P:A follow PB	Intervals with PB	# of observations completed
Jackson	.18	.87	22	8 min 20 s
Doug	.12	.67	3	10 min
Steve	.19	.66	20	10 min
Ashton	.33	.65	10	9 min 45 s
Bob	.22	.50	2	10 min
Caleb	.17	.48	10	10 min
Chrissy	.13	.44	9	8 min 25 s
Ryan	.18	.25	8	9 min 21 s
Ike	.13	0	1	10 min
Caiden	.20	0	0	9 min 20 s
Wake	.21	0	0	8 min 37 s

## Prevalence & Characteristics of Peer Attention

Table 2

*Percentage of Problem Behavior followed by Topography*

Topography	Shawn	Doug	Ike	Ashton	Sharleen	Aggregate totals
Reprimand	0%	0%	0%	0%	0%	0%
Contingency	0%	0%	0%	0%	0%	0%
Statement						
Demand	0%	0%	0%	0%	0%	0%
Statement about	33%	0%	0%	0%	0%	2%
Behavior						
Orienting	0%	41%	57%	6%	38%	50%
Laughing	0%	53%	0%	0%	74%	57%
Clapping	0%	0%	0%	0%	9%	5%
Physical Contact	0%	0%	0%	0%	0%	0%
Imitation	0%	6%	0%	0%	29%	17%
Attention following	33%	88%	57%	6%	100%	
Problem Behavior/ Problem Behavior	(1/3)	(15/17)	(8/14)	(1/18)	(34/34)	

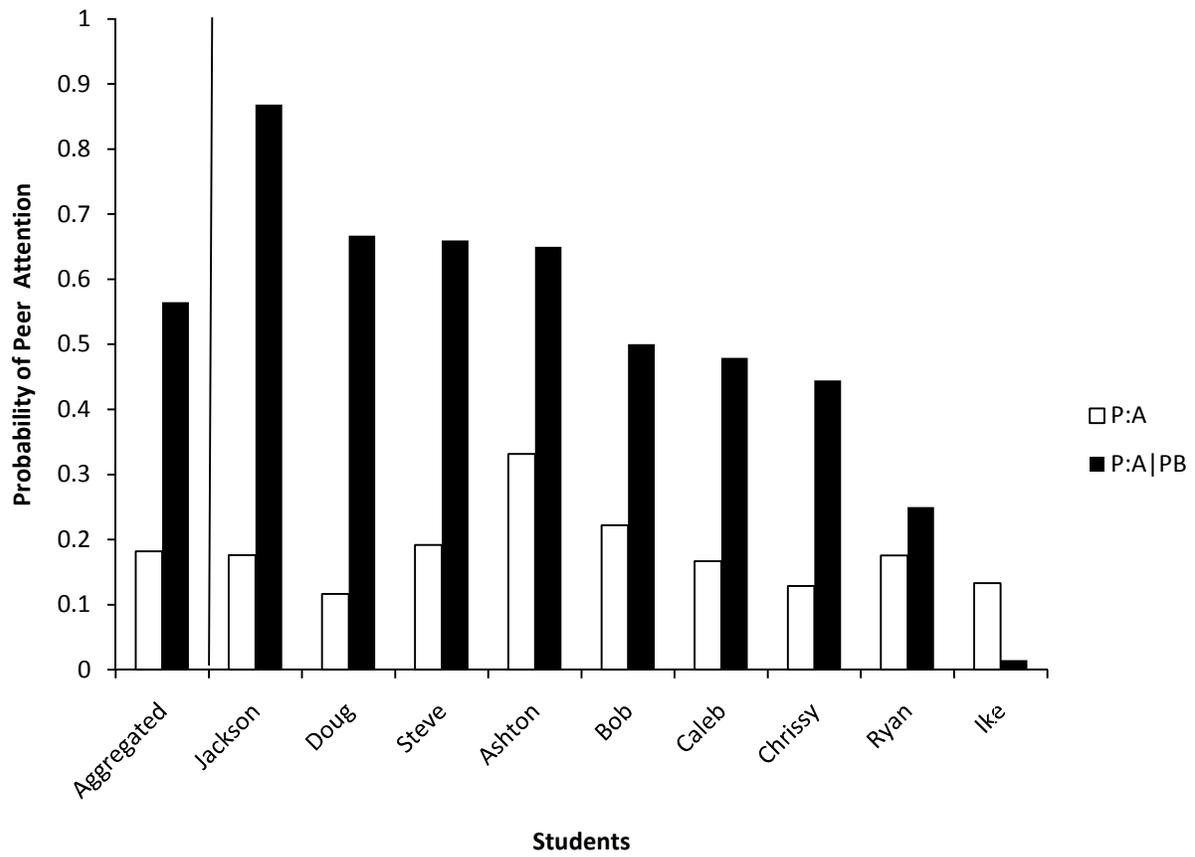
## Prevalence & Characteristics of Peer Attention

Figure 1. Unconditional (left) and conditional (right) probabilities of peer attention. Data set to the far left are mean probabilities across all eleven participants.

Figure 2. Conditional probabilities of topographies of attention being delivered across individual target student/peer dyads. Probabilities of imitation, orienting towards peer, a statement made regarding the behavior, clap, and laugh. Data were not reported on verbal attention for Sharleen because she did not have a verbal repertoire.

## Prevalence & Characteristics of Peer Attention

Figure 1



### Prevalence & Characteristics of Peer Attention

Figure 2

