

WISCONSIN TWIN RESEARCH NEWSLETTER



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Spotlight on Research Temperament and Rule-Breaking Behavior

Utilizing data from one of our twin studies, we investigated how certain temperamental traits are related to rule-breaking behavior and empathy. In recent analyses, we explored the temperamental traits of inhibitory control, impulsivity, and empathy. We sought to replicate previous studies that demonstrated age and gender differences in children's rule-breaking behavior, with older children having higher inhibitory control, lower impulsivity, and higher levels of empathy than younger children. In addition, we predicted that girls would exhibit higher inhibitory control, lower impulsivity, and higher levels of empathy than boys. We are interested in the processes and mechanisms underlying behavioral development since there are many possible roots and the interplay among them is not yet well understood.

The sample consisted of 81 children, 47 of which were boys; they ranged in age from six to ten years. Observations of the children were performed during a home visit. Rule-breaking

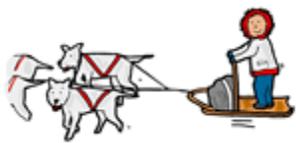
behavior was observed during a "throwing game" designed to be nearly impossible to win; children were

assessed on the presence or absence of rule breaking. A behavioral assessment of empathy was assessed based upon the child's decision to tear or not to tear a friendly stranger's favorite picture during the "picture tearing game." Their responses to both behavioral assessments fell into one of three categories: (1) child neither tears the picture nor breaks rules; (2) child either tears the picture or breaks rules; (3) child both tears the picture and breaks rules. In addition, information was gathered from mothers, who rated their child on questionnaire scales measuring impulsivity, inhibitory control, and empathy.

Interestingly, the results confirmed a few, but not all, of our hypotheses. Children who were

rated high on inhibitory control by their mothers showed less rule-breaking; conversely, maternal reports of impulsivity were associated with more rule-breaking. This is somewhat intuitive if you consider that inhibitory control requires self-restraint, which is a trait needed to avoid breaking rules. Therefore, those who haven't fully developed self-restraint are more likely to break rules. In the picture tearing game, those who had higher empathic temperament were less likely to tear the stranger's picture. Boys tore the picture significantly more often than girls, which might be interpreted as girls having higher levels of empathy. However, no differences existed between the genders on rule-breaking behavior, perhaps reflecting that girls' higher level of empathy did not stop them from breaking rules. While older children were reported to show more inhibitory control and less impulsivity, age was not related to rule breaking. Unlike what we predicted, neither maternal report of empathy nor observed behavioral empathy correlated significantly with rule-breaking behavior.

These results may suggest that other factors are involved in the relationship among empathy, inhibitory control, and rule-breaking. As this is a preliminary investigation and data collection is still in progress, we are eager to analyze the entire sample to see whether any other trends emerge. We will also be able to compare identical with fraternal twins, and the question of genetic influences. Future research will need to explore other factors that may moderate rule-breaking behavior, such as need for approval and parental influence. Also, it is important to note that children go through stages of moral reasoning and the development of the conscience, with some developing it more rapidly than others. Providing positive, prosocial role models early may help to make transitions through these stages easier for children.





Bedtime Woes

Does your child have trouble falling asleep at night? Does he or she wake up during the night and need your help to get back to sleep? You are not alone; sleep difficulties are common in around 30% of young children. According to an article by Reid and colleagues¹, other than the obvious bedtime inconveniences of childhood sleep difficulties, parents report increased parental stress, family tension, family dissatisfaction, irritability, and lack of control in response to bedtime difficulties. Sleep difficulties may also contribute to a child's irritability during daytime hours and be associated with a child's eating problems, crying, and tantrums.

Common childhood sleep difficulties involve misbehavior at bedtime and troubles in getting the child to settle in. Waking up during the night is also common of childhood sleep difficulties. Often times, significant parental involvement is required for the child to resettle. Researchers have found that untreated sleep difficulties in young children often develop into later difficulties with sleep patterns. Because of the stability and the vast array of problems associated with sleep difficulties, many treatments have been studied and tested for effectiveness. Parents should consult their pediatrician before trying any treatment option.

Behavioral interventions are a popular choice for treating sleep difficulties. Standard ignoring is one popular technique. This technique consists of putting the child to bed and ignoring the child's crying thereafter, with the exception of potentially dangerous situations. Studies reported by Reid and colleagues give evidence that standard ignoring techniques reduce bedtime misbehaviors and awakenings during the night. Pairing standard ignoring with positive bedtime rituals or routines, and techniques such as loss of privileges, also decrease both misbehaviors at bedtime and nighttime awakenings. Advantages of standard ignoring include a straightforward procedure and production of rapid results. However, there are disadvantages. Parents frequently have difficulty complying with the behaviors necessary for standard ignoring to be successful. In addition, children may initially show an increase in negative behaviors when the parent begins standard ignoring. This may cause some parents to attend

to their children, thereby inadvertently reinforcing the misbehavior.

Variations of the standard ignoring technique, such as the graduated ignoring have been developed to remedy potential disadvantages of standard ignoring. One popular graduated ignoring technique entails waiting increasingly longer durations of time between checking on the child after he or she is put to bed. Another graduated extinction variation involves immediate response, but parents then gradually decrease the amount of time they spend with the child. The modified extinction techniques have been shown to be effective and have higher rates of parental compliance compared to standard ignoring, mainly due to the incorporation of child checking. It is important to note that both standard ignoring and its modifications are more easily implemented and effectively sustained with support from the family's pediatrician.

Another behavioral technique places its focus on teaching the child appropriate bedtime routines. Kuhn and colleagues² suggest that parents temporarily enforce a later bedtime when the child will more likely fall asleep naturally. In addition, parents develop a relaxing and enjoyable bedtime routine leading the child to sleep. The bedtime is then gradually and systematically moved earlier in the evening, eventually reaching a bedtime goal. Advantages include a decrease in bedtime struggles of the child, and faster results when compared to graduated ignoring techniques. However, disadvantages include an increased time commitment when compared to other techniques, and the requirement of initially moving the child's bedtime to a later one.

There are many treatment options for childhood sleep difficulties. It is crucial to find the best treatment option based on family circumstances. However, pediatric consultation is important and the most effective technique will probably vary from child to child.



¹Reid, M. J., Walter, A. L., & O'Leary, S. G. (1999). Treatment of young children's bedtime refusal and nighttime wakings: A comparison of "standard" and graduated ignoring procedures. *Journal of Abnormal Child Psychology*, 27, 5-16.

²Kuhn B. R., & Weidinger, D. (2000). Interventions for infant and toddler sleep disturbance: A review. *Child & Family Behavior Therapy*, 22, 33-50.



Adolescent Twins

Adolescence is a challenging and important time for all people and can be negotiated differently by twins. During adolescence, twins face social challenges ranging from dealing with new expectations at schools, to new relationships, to finding a job for the first time, to dealing with their changing body and changing world. More than anything, adolescence can be a time to establish oneself as an independent person. This time can also be very challenging for parents and family members. Parents may want to remain an important part of their children's lives but also give their children freedom. Parents may want to protect their children from the world but also let them experience things and learn some things on their own. Luckily, parents of teen twins have something to be happy about; studies show that twins have no more trouble during adolescence than singletons and some twins find it to be easier.

Dr. Elizabeth Pector, a mother and family physician from Naperville, IL, suggests that it is best to encourage twins to distinguish themselves from one another early in childhood. This can encourage each twin to search for his or her own area of expertise and avoid conflicts and competition in middle and high school. Twins who participate in the same activity know that only one of them can be the best, which can be a source of tension. However, it is also important to point out that many twins who participate in activities together enjoy participating with their co-twin and thrive in these activities. Additionally, Dr. Pector states that parents should approach difficult tasks, such as teaching their children how to drive, one child at a time while remembering that each child has his or her own strengths and weaknesses.

Finally, she reminds parents that they can never encourage their children too much. Praise and adoration started at an early age and maintained through adolescence can be an important part of creating a healthy family atmosphere and providing tools to negotiate adolescence. Such praise can help twins during adolescence and provide the support for becoming responsible adults.

It Takes Two--Fun for All Ages!

Barrel of Laughs!

Mother: "Doctor, doctor, my son swallowed my pen! What should I do?"

Doctor: "Use a pencil until I get there!"

Make your own stamps!

You will need:

- 1 teaspoon flavored gelatin
- 2 teaspoons of boiling water**
- small pictures from books, magazines, or ones you have drawn on sturdy paper.

Stir together gelatin in boiling water in a small bowl until gelatin is dissolved. Let it cool. With a small brush, coat the back of each picture cut out with the solution. When the solution dries you can lick the pictures and stick them on paper or glass--just like real stamps!

**Kids, you will need an adult to help with this one since it involves boiling water!

Twins and Autism

We still need your help!

We estimate that there are as many as 100 pairs of twins under the age of 16 years in Wisconsin in which one or both twins has autism, or some other form of pervasive developmental disorder (PDD-NOS or Asperger's Syndrome). We have great personal and scientific interest in these disorders, and we just received a major grant from the National Institute of Health to begin a twin research study to help understand these complex disorders.

Thus far, we have located over 70 twin pairs in which one or both has autism or a related challenge; however, this is an insufficient number to do our research. We would appreciate a phone call or email from the parents of any twin with autism (identical or fraternal, boy or girl, regardless of whether the co-twin has a disorder or not) living anywhere in Wisconsin. We would appreciate our readers mentioning our efforts to parents of twins with autism spectrum disorders. All we need to know at this time are the age and diagnosis of the twins, as well as contact information for the future. We would like to know about the existence of all such twin pairs, even if they might not choose to participate in the study.

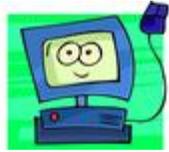


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THANK YOU!

As an expert on your own twins, you possess important knowledge. We appreciate the time you take to talk on the phone, fill out questionnaires, and visit with us. Each piece of information furthers research in child development.



We value your input!

DO YOU HAVE COMMENTS, QUESTIONS, OR SUGGESTIONS?

- If your twins are under the age of 3 years, contact Carrie Arneson at clarneso@wisc.edu or (608) 265-2674.
- If your twins are over the age of 3 years, contact Nicci Schmidt at nlschmidt2@wisc.edu or Cory Schmidt at ckshmidt@wisc.edu or (608) 265-2674.
- If you want to relay information to us about a twin or set of twins with autism or other related disorder, please contact Dr. Hill Goldsmith at (608) 262-9932 or hgoldsm@wisc.edu.

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