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## Hello, BUTP Families!

We've made great progress this year, thanks to all of you. Twins are very special (as you already know), and your participation in a twin study makes you part of an important group. There are twin studies worldwide that examine the influence of genes and the environment on various topics, and your contribution adds to this invaluable body of scientific research. Thank you! We hope you enjoy our recent BUTP updates.

PLEASE CONTACT US WITH ANY QUESTIONS.

## BUTP Study Progress -----

### Our new study

As we mentioned in our last newsletter, our current study is looking at temperament in preschool children and how it develops and changes during this period (we'll be seeing the twins once a year at ages 3, 4 and 5). For example, are kids who are shy at 3 still shy at 5? By looking at twins we'll be able to investigate the genetic and environmental influences on the development of children's early personalities.

### Recruitment

Thanks to the participation, support and suggestions from all of you, we are making steady progress in recruiting new BUTP families. We currently have 85 twin pairs; however, we need a total of 300, so we're still recruiting more twins. If you are able, we would appreciate you passing along our information to any eligible and interested families of same-sex twins who will be turning three within the next couple of years. We start seeing twins within a month (more or less) of their

third birthday, but interested families of younger twins can contact us as well and we'll keep their information on file.

So far we've only seen 3 year-olds, but this fall we'll start following up our earlier twins to see them again when they are four years old. We can't wait to see all of you, and we look forward to seeing how the twins have grown!

### Study 1 Follow-up

The twins from our first BUTP study are now in middle school, and we are hoping to do a follow-up study. By doing this, we can see how the influence of genes and environments on behaviors, such as activity level and emotion, change as children develop. It can also help us understand whether behaviors in early childhood will tell us about later behavior. We hope to do this follow-up using online questionnaires, making it easy for families to participate. Once we have more details, we'll start contacting families regarding participation.



### BUTP Updates

We've revamped our website, now nested under the Child Development Labs (CDL) group at BU: [www.bu.edu/cdl/butp/](http://www.bu.edu/cdl/butp/). It's a work in progress, but we hope you like it. Thanks to all of you who contributed amazing feedback on our Twin Project. We've also created a Facebook page, where we make updates on things like our findings, the lab, grad students, and fun facts or pictures. You can "like" us at [www.facebook.com/BUTwinProject](http://www.facebook.com/BUTwinProject).

### BUTP in the News

Our new study looking at how temperament develops in preschoolers was featured in July on the educational web series "Against All Odds", examining real world uses of statistical concepts. BUTP was used as an example of the twin study design in the section on correlations.



## OUR DIFFERENT STUDIES

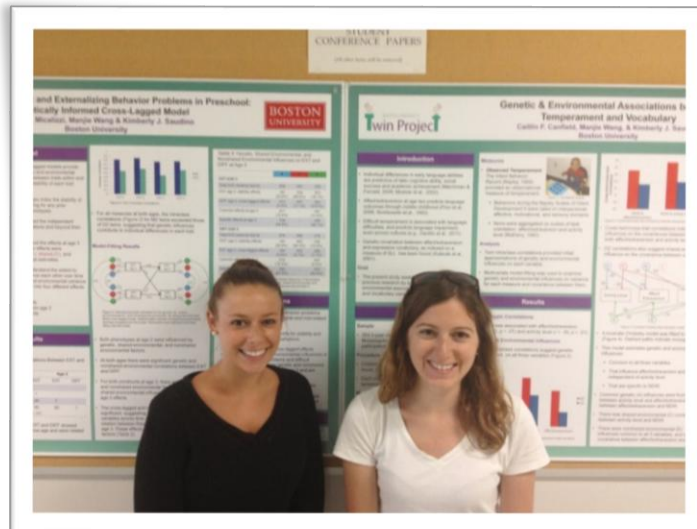
**Study 1** – Study of activity level and related behaviors at ages 2 and 3. Recruitment started in 2002 and ended in 2007.

**Study 2** – Study of temperament and developmental outcomes at ages 3, 4 and 5. Recruitment started in 2013 and is ongoing.

## BUTP Findings

(From Study 1)

- Higher activity levels (as measured by the motion recorders) at age 2 predict more attention problems at age 3, but the reverse isn't true. That is, attention problems at age 2 do not predict activity level at age 3.
- Acting out behaviors (e.g., aggression, defiance) are more likely to be influenced by environmental factors if children have easy temperaments (i.e., are low in anger, impulsivity and are easily calmed when upset). Genes play a more important role in acting out when children have more difficult temperaments.
- Children who are better at controlling their emotions are more cooperative when interacting with their parent. This is influenced by genetics as well as the experiences specific to each child (for example, illness, accidents, etc.).
- Acting out behavior problems and difficult temperament are related to each other at ages 2 and 3. The reason for this is that both, to some extent, are influenced by the same genes.
- How you measure it matters. Genetics play only a minor role in positive emotion as assessed by parent report, but, when we counted the number of smiles and laughs in the lab, genes were more important.



*Lauren and Caitlin with their posters for SRCD.*

- Active, outgoing 3 year-olds were found to use more words. The link between a more outgoing temperament and number of words used was due to both genes and unique environmental experiences.

*This year we've presented our findings at the Society for Research in Child Development (SRCD) and the Behavior Genetics Association (BGA). We've found lots of interesting things from our first BUTP study that we've shared with you here.*

## BUTP Comings and Goings



*Some of the BUTP group. From left to right: Manjie, Sonia, Lianna, Megan, Kim (Lab Director), Lauren and Caitlin.*

**Manjie Wang** completed her Ph.D. in September. This fall she will be a visiting assistant professor at Westfield State University.

**Sonia Chawla** completed her Ph.D. this summer. She currently works at BU helping to make sure that research is done ethically.

**Caitlin Canfield** is currently collecting data for her dissertation on how infants learn words.

**Lauren Micalizzi** is finishing up her third year in the Ph.D. program. She is interested in preschoolers' cognitive abilities.

**Megan Flom** is starting the program in Developmental Science in the fall, and will continue working with our BUTP twins.

**Lianna Wilson** will begin a Clinical Psychology Ph.D. program at Fairleigh Dickinson this fall.

Welcome to our two new research technicians – **Catherine Katinas** and **Tim Stahl**.