

Undergraduate Research Symposium May 20, 2016 Mary Gates Hall

Online Proceedings

POSTER SESSION 1

MGH 241, Easel 147

11:00 AM to 1:00 PM

National Trends in Opioid Prescribing for U.S. Children & Families: 1996-2012

John Thomas (Tom) Gebert, Senior, Neurobiology

Innovations in Pain Research Scholar, UW Honors

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Mentor: Tonya Palermo, Anesthesiology and Pain Medicine

The Executive Office of the President has declared opioid misuse among youth a national epidemic owing to its prevalence and the severe associated consequences. Little research has been conducted on the types of opioid prescriptions provided to children and their family members, which are the primary source of misused opioids. Knowledge of the trends in opioid prescriptions to children and families could help us better understand the rise in misuse. Therefore, our aim was to uncover trends in the quantity, type and reason for opioid prescriptions as well as sociodemographic factors associated with opioid prescriptions to children and adolescents ages 0-17 and their families from 1996-2012. Secondary data analysis was performed on a population-based sample from the Medical Expenditures Panel Surveys (MEPS). MEPS are a set of surveys that collect data on the healthcare of a nationally representative sample of approximately 40,000 US citizens annually. We abstracted information on demographics, type of opioid prescribed, number of opioid prescriptions per participant, whether a family member received an opioid prescription, and medical diagnoses associated with opioid prescriptions. We found that while the number of opioid prescriptions to the family members of children and adolescents increased by 71% from 1996 to 2012, the portion of children and adolescents prescribed opioids remained stable at around 2.8% annually. Among children and adolescents, those who were white-non-Hispanic, older in age, and had private insurance had higher odds of being prescribed opioids. Furthermore, we found that codeine was the most commonly prescribed opioid in pediatric populations, accounting for 40% of all pediatric opioid prescriptions despite guidance from the U.S. Food & Drug Administration to limit codeine prescriptions in youth. These findings add to our understanding of opioid prescribing trends and will be important for guiding future research and clinical practice to ensure adequate, safe, and effective use of opioids.

POSTER SESSION 1

Commons East, Easel 65

11:00 AM to 1:00 PM

How do Brief Implicit Association Test (BIAT) Race Attitude Measures Differ from Standard IAT Measures?

Anh Van Huynh, Graduate,

McNair Scholar, UW Honors Program

Mentor: Tony Greenwald, Psychology

Since the mid-1990s, the Implicit Association Test (IAT) has been used in psychological experiments to measure the strength of a person's automatic associations between concepts and attributes. The Brief IAT (BIAT) uses a procedure similar to the standard IAT, but with simplified instructions and different task structures. Unlike the standard version, the BIAT instructs subjects to focus on only two of four categories (focal categories) and respond to them with a "focal" key and to the other two categories (non-focal categories) with a "non-focal" key. By means of the BIAT, the present study examined whether race categories (represented by surnames) are associated with positive or negative valence (represented by pleasant-meaning or unpleasant-meaning words). It also correlated the BIAT's association strengths with those obtained from the standard IAT. One hundred and ten volunteer undergraduate students from the University of Washington completed six BIATs and two standard IATs. Three of the six BIATs differed from the other three only in the identity of the fourth category (e.g., Black American versus White American names). The two standard IATs, which used the same four categories as their BIAT equivalents, also differed from each other in the identity of their fourth category. Self-report measures of race attitude were administered. D scores, an effect-size measure, were calculated to estimate the strengths of association between categories. The significance of this research lies in its potential to support the development of more valid and useful IAT methods for evaluating a person's implicit attitudes toward socially-sensitive concepts.

POSTER SESSION 3

Commons East, Easel 75

2:30 PM to 4:00 PM

Can Propositions be Used in the Implicit Association Test?

Yao Lu, Senior, Economics, Psychology

UW Honors Program

Mentor: Tony Greenwald, Psychology

Propositions are cognitive structures centered on verbs of action or existences (e.g., *Maria plays golf* or *Maria is a golfer*). Implicit Association Tests (IATs) measure associations among concepts in the simpler form of categories that can often be represented by single words (e.g., nouns, adjectives, verbs). To test whether IATs can measure associations involving propositions, this research tested variations of an IAT measuring implicit-attitude associations of Democrat and Republican categories with valence. The first two variations replaced the two political party categories with concepts that could be exemplified by propositions (*Democrat victory* and *Republican victory*). A *one-verb* variation used exemplars in the form of recognizable names (e.g., Obama, Romney) followed by the verb “wins”. This worked successfully and was comparable in properties to the basic 2-category IAT. An *opposed-verb* variation used exemplars incorporating opposed verbs (e.g., *Obama wins* and *Romney loses* for the *Democrat victory* concept). This proved difficult for subjects, in addition to which the resulting IAT measure did not correlate as expected with self-reported political attitudes. A final phrase IAT variation returned to the two parties as concepts, but used exemplar stimuli in the form of short phrases (e.g., *common core*) extracted from full statements of Republican and Democrat policy positions (e.g., *The U.S. government should specify basic requirements (‘common core’) for public education*). Subjects received initial practice linking the short phrases to the full policy statements. The phrase IAT was easier for subjects than the opposed-verb IAT and correlated as expected with self-report measures, indicating its possibility of being used more generally to measure associations involving proposition-level concepts.