

**WHAT'S IN A NAME? FORENAMES AS A PREDICTOR OF  
PSYCHOPATHOLOGICAL PERSONALITY TRAITS**

An Undergraduate Research Scholars Thesis

by

NOAH T. REED

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Dr. Gerianne M. Alexander

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I, Noah T. Reed, certify that all research compliance requirements related to this Undergraduate Research Scholars thesis have been addressed with my Research Faculty Advisor prior to the collection of any data used in this final thesis submission.

This project was reviewed by the Texas A&M University Institutional Review Board for Human Subject Research and was determined to be exempt from continued IRB oversight under Category 2 exemption.

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## **ABSTRACT**

What's in a Name? Forenames as a Predictor of Psychopathological Personality Traits

Noah T. Reed  
Department of Psychology  
Texas A&M University

Research Faculty Advisor: Dr. Gerianne M. Alexander  
Department of Psychology  
Texas A&M University

Forenames are commonly recognized as labels used to identify or distinguish ourselves from others and signal varying levels of behavioral traits within a gender group, with some gender-specific forenames appearing as more prototypical than others. Forenames have been discovered to influence how individuals are perceived by others and even how we perceive ourselves. Forenames have also been found to predict one's facial appearance and behave as social tags that aid in the categorization of age and race. Therefore, the proposed study expands upon previous forename literature by exploring the "self-fulfilling prophecy" effect between forenames and personality traits associated with psychopathology. To examine this effect, data from 75 individuals who were administered the Personality Assessment Inventory (PAI) was collected and the forenames of each individual were distributed to participants recruited through a student subject pool. Participants were instructed to "stereotype" a randomized subset of the 75 forenames according to their perceived gender, race, and age. Following the collection of these ratings, the predicted associations between perceptions of personality traits and forenames were examined. While forename stereotypes were consistent with gender differences in disorder-

relevant personality traits, they were not associated with the actual PAI data. These results only provided partial support for the aforementioned self-fulfilling prophecy theory. Therefore, future research should continue to investigate this theory, as the relationship between forenames, personality, and psychopathology holds significant potential for further exploration.

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# 1. INTRODUCTION

From the emergence of psychological research, humans have wrestled with two perennial questions; how much control does one have over their actions and what influences one's behavior? Of course, as time progresses (along with scientific discoveries), we continue to find myriad socio-psychological factors that provide insight into these questions, which perhaps creates a sense of security through the recognition that many of these influences have been unraveled. However, what if we have disregarded some of the more inconspicuous influences that affect behavior – something as simple as a forename given at birth? Ostensibly, a forename is merely a label used to identify or distinguish oneself from others. This "functional fixedness" is instrumental in the forename's ability to appear trivial and remain covert; however, this basic understanding of the forename would not explain why it has been discovered to predict one's location of residence, job title, and even some major life decisions (Pelham et al., 2002; Pilcher, 2017).

In fact, forenames have even been found to predict one's facial appearance by behaving as social tags, which induce a self-fulfilling prophecy effect upon one's facial features in accordance with the socio-cultural norms associated with that name (Chen et al., 2013; Zwebner et al., 2017). These sociocultural norms are often engendered through the process of socialization, which is most salient during childhood and adolescence. It is during this time that we are taught to engage in "gender-appropriate" behavior through continual reinforcement and the exemplars established by the older generation (Maccoby, 1988). Studies have shown that parents often play a seminal role in this process, as fathers typically encourage their sons to behave manly or "macho," while mothers often persuade their daughters to behave and dress in a

more ladylike fashion (Raffaelli & Ontai, 2004). Boys are also socialized to deviate from emotional expression in order to eliminate and prevent the appearance of weakness, while girls are encouraged to do the opposite (Gilligan, 1982). However, as the communicated parental messages become more egalitarian, results show that children/adolescents are less likely to align with conventional gender norms, demonstrating that traditional gender roles can be moderated by the variety of messages conveyed by the parents (Epstein & Ward, 2011).

Schemas, which are mental representations that allow us to organize, interpret, and process information, also appear in the form of gender. According to Martin and Halverson (1981), these gender schemas contain all of the information about what is appropriate/inappropriate for one's in-group (gender category) as well as what is appropriate/inappropriate for the out-group (opposite gender category). The extent to which these schemas are well-developed determines the likelihood that one will act in concurrence with what is deemed gender-appropriate (Martin & Halverson, 1981). This reinforces behavior and personality traits that constitute the domains of masculinity/femininity (or what is socially conceded as such). Within these schemas, and the clusters of information that encapsulate all things associated with gender-typicality, are the gender implications that forenames convey. In western countries such as the United States, it is common practice to select a child's forename according to their sexual identity, with 97% of gender appropriate forenames aligning with their corresponding sexual categories (Alford, 1988; Lieberman et al., 2000). Contrarily, "androgynous" or "gender-neutral" forenames are less frequently assigned to children at birth (Herbert & Aylene, 2014; Pilcher, 2017).

Pilcher (2017) also notes that forenames are instrumental in substantiating whether an individual belongs to the male or female category as well as in one's self-identification of being

masculine or feminine. And while forenames have been shown to convey one's gender identity, this isn't the only category that forenames endorse. Forenames also connote implications for one's socioeconomic status, racial group, and intellectual ability (Kasoff, 1993). For example, it has been noted that individuals of lower socioeconomic status commonly possess forenames beginning with "ta" and "qua" and that these names are longer than average with numerous low-frequency consonants (Figlio, 2005). In fact, forenames even convey certain levels of attractiveness, which can be observed by the perception and ratings of certain forenames as more palatable than others (Kasoff, 1993).

Returning to the aforementioned gender schemas, the clusters of information that comprise the forename/gender trends that we subconsciously encode, are conducive to facilitating the prevalence of stereotyping as well as the automaticity of such judgments. And while a forename that corresponds with one's sexual identity is beneficial in some aspects, it can be deleterious in others. For instance, numerous experimental studies have shown that when evaluating job applications, candidates with relatively identical biographical portfolios were given preference if their forename signified male sexual identity (Moss-Racusin et al., 2012). Other experimental studies have yielded similar results, as teachers' performances are rated almost a point higher (on a five-point scale) when assigned a male-typical name as opposed to a female-typical name (MacNeill et al., 2015). Utilizing Martin and Halverson's (1981) schematic processing model, such stereotypes can be understood as a consequence of the information that we accumulate concerning the implications of forenames and gender. Through a sort of confirmation bias, our presuppositions are confirmed by our narrow perceptual lenses that magnify anything that is consistent with these implicit expectations. These findings not only

emphasize the discrepancies in perceptions of gender, but also illustrate that the significance of forenames far surpasses what they have been perceived to represent.

It would also appear that the influence of one's peers with respect to identity and behavioral expression is crucial for understanding the potential implications of forename stereotyping. For instance, the common misconception of female's inaptitude for mathematics is usually adopted into children's belief systems by the age of nine, grows stronger as they enter into adolescence, and has direct consequences on their academic achievement and career preferences (Steffens et al., 2010). This self-fulfilling prophecy that is carried out through stereotypical principles is particularly relevant to the process of peer socialization. During adolescence, individuals have an incessant desire to conform to and be accepted by their peers (Brechwald & Prinstein, 2011). Therefore, it is not unreasonable to postulate that through peer socialization, the need to belong is accompanied by increased malleability and susceptibility to behavioral modification. After all, it has been shown that one is inclined to adopt the stereotypes that are imposed upon them by another if they desire that individual's approval (Sinclair et al., 2009). This may result in degeneration of the psychological defenses that prevent the internalization of the stereotypes associated with one's forename, consequently affecting an individual's personality and behavioral expression.

Having been made aware of the ubiquity of gender stereotyping throughout society, it is only natural to then inquire about the credibility accompanying these generalizations. Meta-analyses have provided evidence that while the stereotypes that we possess do hold some bearing, the actual magnitude of differences between genders is much smaller than what is generally supposed (Hyde, 2005). However, when examining the subcategories of personality (using the Big-Five model), it is evident that the magnitude in gender differences also varies

across cultures (Hyde, 2014). In the United States, where women are generally expected to exhibit higher levels of neuroticism and agreeableness, we find that women score significantly higher in these categories when contrasted with Japanese or Black South African women (Costa et al., 2001). Hyde (2014) remarks that these observations provide support for the influence of culture on personality, as more persistent stereotypes within one's culture can often become self-fulfilled among members of the actual population.

When analyzing gender differences in interests, researchers observe that men are more interested in things while women are more interested in people, and while these differences are robust, they appear to be primarily attributed to sociocultural norms (Hyde, 2014; Su et al., 2009). Another frequently perpetuated stereotype is that men are more aggressive than women. Through research and meta-analyses in particular, it would seem that the stereotype of aggression is consistent with the actual behavior and personality traits that are attributed to the male gender, and can even be observed in early childhood and among different cultures (Archer, 2004). Therefore, while there is a vast array of literature that illuminates the influence of sociocultural factors with regards to the existence of gender differences (no matter how trivial), to claim that these differences are nonexistent would be an unfounded statement.

Gender is also relevant when examining patterns within psychopathology and mental disorders. About twice as many men are diagnosed with attention-deficit hyperactivity disorder (ADHD) and obsessive-compulsive personality disorder (OCPD) compared to women (Hartung & Lefler, 2019). In fact, some studies have yielded results reporting this ratio to be as large as nine to one in ADHD diagnoses (Rucklidge, 2009). In addition, four times as many men are diagnosed with antisocial personality disorder (APD) and about three times as many women are diagnosed with borderline personality disorder (BPD) (Comer & Comer, 2018; Hartung &

Lefler, 2019). Women in the United States also account for between 1.5 and 3 times the amount of suicide attempts as men (AFSP, 2017; Comer & Comer, 2018).

While this statistic is fairly disconcerting, it is not entirely fortuitous given the discrepancy in rates of depression and susceptibility to negative affect between genders. The magnitude in rates of depression (for adults) is similar to that observed in ADHD, yielding a 2:1 ratio (women to men) and persists into old age (Hankin et al., 1998; Luppala et al., 2012). Researchers also propose that there are affective, biological, and cognitive factors interacting with negative life events to accelerate rates of depression among females from the beginning of adolescence and onward (Hyde et al., 2008). This, coupled with factors such as the stress from puberty, sexual harassment, and elevated body consciousness lead to higher susceptibility to negative affect and provide potential explanations for the gender differences in rates of depression/suicide attempts (Hyde, 2014).

Similar to Chen and colleagues' (2013) findings with regards to forenames and facial features, the present study addresses a potential self-fulfilling prophecy effect between forenames and personality traits. Previous literature emphasizes the influence of forenames on our perceptions and judgements as well as the implications that these labels have on one's identity. These implicit expectations engender observable differences between genders in multiple aspects of personality such as aggression and agreeableness (Hyde, 2014). Gender differences are also prevalent in numerous psychological disorders, which potentially suggests that forename/gender stereotypes can be attributed to these discrepancies. Therefore, we hypothesized that gender-typical forenames would be associated with personality traits characterizing gender-linked psychological disorders and could be used to predict one's personality traits. If our predictions are correct, this will further illuminate the significance of

forenames as signifiers that influence personality and behavioral expression. Furthermore, these findings could also buttress the idea that the etiology of mental disorders is a consequence of sociocultural factors.

## 2. METHODS

### 2.1 Participants

Overall, 292 undergraduate student participants provided the data for this study. Of those participants, 150 were male, 137 were female, 1 identified as “Other”, and information for the remaining four participants was missing. The average age of the sample was 18.81 ( $SD = 1.07$ ). The ethnicity of participants was largely Caucasian (226 White, 69 Hispanic-American/Latino, 35 Asian, 10 Black/African American, 2 American Indian/Native American, 2 Native Hawaiian/Pacific Islander, 12 “Prefer not to answer”, and information for five participants was missing). Participants were recruited through the student subject pool at Texas A&M University. Participants provided informed consent prior to completing the protocol, which met the criteria for Exemption as determined by the Institutional Review Board.

### 2.2 Study Design and Procedure

This study used multiple regression to determine whether perceived/stereotyped characteristics of individuals (solely based upon their forenames) could predict traits derived from scales on the Personality Assessment Inventory (PAI). Data from 75 individuals who had previously taken the PAI was collected and their forenames were inserted into a Qualtrics survey. Each forename was accompanied by a series of items that corresponded with different traits on the PAI. These items, and their corresponding PAI traits, constituted the outcome variables for the experiment. The predictors included the perceived gender, age, and race of the individual to whom the forename belonged to. The forename stereotypes were also correlated with the PAI data of the 75 individuals in order to determine the accuracy of their predictions. Participants signed up for the study online and were then redirected to the Qualtrics survey. Once

inside the survey, they were instructed to "stereotype" a randomized subset (12 of the 75 forenames) according to the aforementioned predictors. For example, participants were questioned, "How anxious is Jonathan?" and "How often does Jonathan experience stress?" After completing the study, participants were awarded credit toward a course requirement for their participation. For the complete list of forenames see Appendix A.

### **2.3 Personality Assessment Inventory**

The PAI is a self-administered, objective personality/psychopathology test, which contains 344 items and assesses for traits that are grouped into four different sets of scales. These include 4 validity scales, 11 clinical scales (corresponding with the DSM nosology), 5 treatment scales, and 2 interpersonal scales (Morey, 2003). These scales measure traits such as dominance, antisocial features, suicidality, and anxiety. Morey's (2003) PAI is also shown to have high levels of divergent validity and high levels of convergent validity with personality tests such as the Minnesota Multiphasic Personality Inventory (MMMPI) and the Revised NEO Personality Inventory.

### **2.4 Predictor Variables**

#### *2.4.1 Gender*

Participants indicated the perceived gender of the individual to whom the forename belonged to by selecting 1 (*male*) or 2 (*female*). Because gender exists on a continuum, this was scored as a continuous variable in our analyses by calculating the overall mean of the perceived genders for each forename. Means that were closer to 1 indicated that the forename was rated more frequently as belonging to a male, while means closer to 2 indicated that the forename was rated more frequently as belonging to a female.

### 2.4.2 Age

Participants indicated the perceived age of the individual by selecting 1 (*young*) or 2 (*old*). Because age also exists on a continuum, this was scored as a continuous variable in the analyses by calculating the overall mean of the perceived ages. Means that were closer to 1 indicated that the forename was rated more frequently as belonging to a younger individual, while means closer to 2 indicated that the forename was rated more frequently as belonging to an older individual.

### 2.4.3 Race

Participants indicated the perceived racial category of the individual by selecting 1 (*White*), 2 (*American Indian/Native American*), 3 (*Native Hawaiian/Pacific Islander*), 4 (*Asian*), 5 (*Black/African American*), or 6 (*Other*). Participants indicated if the individual was Hispanic-American/Latino by selecting 1 (*Yes*) or 2 (*No*). Race was also measured as a continuous variable by converting each racial category into a percentage of total responses for the item. Likewise, the question regarding Hispanic-American/Latino identity was measured by calculating the percentage of “Yes” responses for the item.

## 2.5 Outcome Variables

### 2.5.1 PAI Clinical Scales

This section of the survey was modeled after the PAI Clinical Scales and consisted of 12 items. These items measured for traits such as depression, anxiety, mania, and paranoia. Example items included, “Overall, how anxious is Jonathan?” and “Overall, how suspicious of others is Jonathan?” Several items were reverse coded and combined to create composite variables for borderline features ( $\alpha = .731$ ) and antisocial features ( $\alpha = .633$ ). Items were measured as

continuous variables, with participants indicating their responses using a sliding scale from 0 (*not at all*) to 10 (*extremely*). For the complete list of items see Appendix B.

### 2.5.2 PAI Treatment Consideration Scales

This section of the survey was modeled after the PAI Treatment Consideration Scales and consisted of five items. These items measured for traits such as aggression, suicidal ideation, and stress. Example items included, “Overall, how angry, hostile, and aggressive is Jonathan?” and “How often does Jonathan experience stress?” Participants indicated their responses using a sliding scale from 0 (*not at all*) to 10 (*extremely/very frequently*). For the complete list of items see Appendix C.

### 2.5.3 PAI Interpersonal Scales

This section of the survey was modeled after the PAI Interpersonal Scales and comprised four items. The items, “How controlling/independent is Jonathan?” and “How submissive/dependent is Jonathan?” measured for dominance ( $\alpha = .667$ ). The items, “How supportive/empathetic is Jonathan?” and “How cold/apathetic is Jonathan?” measured for warmth ( $\alpha = .749$ ). Participants indicated their responses using a sliding scale from 0 (*not at all*) to 10 (*extremely*).

### 2.5.4 The Big Five Personality Traits

Additional items were included in order to assess the Big Five Personality Traits. These included openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Items on this measure were, “How open to new experiences is Jonathan?”, “How conscientious (diligent, organized, and disciplined) is Jonathan?”, “How extraverted is Jonathan?”, “How agreeable (friendly/kind) is Jonathan?”, and “How neurotic (emotionally

unstable) is Jonathan?" Participants indicated their responses using a sliding scale from 0 (*not at all*) to 10 (*extremely*).

### 3. RESULTS

#### 3.1 Descriptive Statistics

Descriptive statistics for the predictor and outcome variables are presented in Table 3.1. Before interpreting the data below, it is important to note that analysis was carried out by converting each name into an individual case. Therefore, values represent the average ratings for the 75 forenames, rather than the average rating of the participants who stereotyped the forenames. The majority of forenames were stereotyped as belonging to white females, while black males were the most infrequent demographic. Additionally, forenames were stereotyped as belonging to individuals with moderate levels of anxiety, dominance, and extraversion, but low levels of depression, schizophrenia, and neuroticism. See Table 3.2 for the correlations between predictor and outcome variables.

*Table 3.1: Descriptive Statistics for Model Variables*

Variable	M	SD
<b>Predictors</b>		
Gender	1.68	.40
Age	1.31	.20
<b>Race</b>		
White	54.45%	28.88%
Hispanic	25.29%	23.74%
Black	11.20%	15.80%
<b>Outcomes</b>		
<b>PAI Clinical</b>		
Anxiety	4.18	1.65
Depression	2.87	.50
Mania	5.30	.66
Paranoia	3.97	.42
Schizophrenia	2.32	.39
Borderline Features	4.42	.47
Antisocial Features	5.44	4.05
Drug/Alcohol Usage	4.01	.66
<b>Treatment Consideration</b>		
Aggression	3.42	.55
Suicidal Ideations	2.26	.35

Table 3.1: Continued

Variable	M	SD
Stress	4.77	.33
Nonsupport	5.76	.49
Treatment Rejection	4.86	.49
<b><i>PAI Interpersonal</i></b>		
Dominance	5.59	.46
Warmth	6.30	.47
<b><i>Big Five Traits</i></b>		
Open	5.58	.69
Conscientious	5.62	.57
Extraverted	5.48	.72
Agreeable	6.13	.45
Neurotic	3.56	.48

*Note.* Racial predictors represent the percentage of endorsement for the perceived race of the individuals to whom the forename belonged to. Nonsupport was measured with higher numbers indicating more social support and treatment rejection was measured with higher numbers indicating more willingness to make personal/psychological improvements to oneself.

Table 3.2: Correlations Between Predictor and Outcome Variables

	Gender	Age	White	Hispanic	Black
Anxiety	.535*	-.360**	.302*	-.114	-.251*
Depression	.068	-.106	.211	-.118	-.094
Mania	.308**	-.669**	.204	-.083	.116
Paranoia	-.001	.332**	-.324**	.093	.196
Schizophrenia	-.110	.208	-.099	-.169	.072
Borderline Features	-.274*	-.275*	.145	.003	.203
Antisocial Features	-.375**	-.048	.073	-.047	.167
Drug/Alcohol Use	-.368**	-.253*	.234*	.004	.107
Aggression	.552**	.260*	-.157	.090	.243*
Suicidal Ideations	.008	-.085	.031	-.178	.082
Stress	.277*	-.200	.159	.015	-.100
Nonsupport	.347**	-.287*	.125	.029	-.098
Treatment Rejection	.436**	-.309**	.001	-.015	-.045
Dominance	-.598**	.465**	-.266*	.159	.211
Warmth	.495**	-.305**	.009	.140	-.086
Open	.071	-.677**	.173	.003	.141
Conscientious	.141	.350**	-.090	.017	-.193
Extraverted	.174	-.552**	.273*	-.025	.207
Agreeable	.169	-.449**	.046	.094	-.032
Neurotic	.370**	-.362**	.327**	-.142	.003

Note. Racial variables represent the percentage of responses that stereotyped a forename as belonging to each racial category. For gender, positive values are associated with names that were more frequently stereotyped as belonging to females and negative values are associated with males. For age, positive values are associated with names that were more frequently stereotyped as belonging to older individuals, while negative values are associated with younger individuals. \* $p < .05$ , \*\*  $p < .01$ .

### 3.2 Regression Models

A series of simultaneous multiple regressions were used to examine the association between forename-related predictors and normative/disorder-relevant personality traits.

#### 3.2.1 PAI Clinical Scale Traits

Multiple regression analyses assessed whether forename-related predictors (gender, age, race) were associated with perceived personality traits derived from the PAI Clinical Scale. For anxiety, the overall model was significant ( $F(5, 69) = 9.03, p < .001$ ) and accounted for 39.6% of the variance in perceived levels of anxiety for the individuals to whom the forenames

belonged to. The only significant predictor for this model was gender ( $b = .595, p < .001$ ), indicating that forenames stereotyped as belonging to females predicted higher levels of anxiety. The overall model for mania was also significant ( $F(5, 69) = 15.56, p < .001$ ) and accounted for 53.0% of the variance in perceived levels of mania. For this model, forenames stereotyped as belonging to younger individuals ( $b = -2.038, p < .001$ ) and the Black individuals ( $b = .015, p = .004$ ) predicted higher levels of mania.

When examining paranoia, the overall model was significant ( $F(5, 69) = 2.92, p = .019$ ) and accounted for 17.4% of the variance in perceived levels of paranoia for the individuals to whom the forenames belonged to. Age positively predicted this trait ( $b = .606, p = .021$ ), indicating that names stereotyped as belonging to older individuals were predictive of higher levels of paranoia. For borderline features, this model was also significant ( $F(5, 69) = 8.86, p < .001$ ) and accounted for 39.1% of the variance in perceived levels of borderline features. While each predictor in this model was significantly predictive of this trait, age ( $b = -.722, p = .005$ ) and gender ( $b = -.466, p < .001$ ) were the strongest predictors of borderline features. Here, forenames stereotyped as belonging to younger individuals and males significantly predicted borderline features.

The model for antisocial features was also significant ( $F(5, 69) = 4.37, p = .001$ ) and accounted for 25.2% of the variance in perceived levels of antisocial features. For this trait, forenames stereotyped as belonging to males positively predicted antisocial features ( $b = -.484, p < .001$ ). The Black racial category ( $b = .011, p = .008$ ) and White racial category ( $b = .006, p = .024$ ) also positively predicted this trait. Lastly, for drug/alcohol use, the overall model was significant ( $F(5, 69) = 11.768, p < .001$ ) and accounted for 46.0% of the variance in perceived levels of this trait. Similar to borderline features, age ( $b = -.484, p < .001$ ) and gender ( $b = -.484,$

$p < .001$ ) negatively predicted alcohol/drug use. This indicated that forenames stereotyped as belonging to younger individuals and males significantly predicted the use of alcohol and drugs. The remaining two models for this section, depression and schizophrenia, were non-significant. To see all of the coefficients in the aforementioned traits, please refer to Table 3.2.1.

*Table 3.2.1: Simultaneous Multiple Regression Models Predicting PAI Clinical Scale Traits*

Models	<i>b</i>	SE	$\beta$	<i>t</i>	<i>p</i>	95% CI <i>b</i>
<b>Anxiety</b>						
Gender	.595	.123	.472	4.825	.000	[.349, .841]
Age	-.475	.260	-.189	-1.827	.072	[-.994, .044]
Black	-.007	.004	-.217	-1.636	.106	[-.015, .002]
White	.000	.003	.009	.063	.950	[-.005, .005]
Hispanic	-.003	.003	-.158	-1.336	.186	[-.008, .002]
<b>Depression</b>						
Gender	.036	.113	.039	.319	.751	[-.189, .261]
Age	-.069	.238	-.038	-.291	.772	[-.544, .405]
Black	.000	.004	.007	.041	.967	[-.008, .008]
White	.002	.002	.180	.976	.333	[-.002, .007]
Hispanic	-.001	.002	-.049	-.332	.741	[-.005, .004]
<b>Mania</b>						
Gender	.217	.143	.131	1.517	.134	[-.069, .503]
Age	-2.038	.302	-.614	-6.738	.000	[-2.641, -1.434]
Black	.015	.005	.348	2.980	.004	[.005, .024]
White	.005	.003	.219	1.683	.097	[-.001, .011]
Hispanic	.002	.003	.073	.699	.487	[-.004, .008]
<b>Paranoia</b>						
Gender	.113	.121	.106	.931	.355	[-.129, .354]
Age	.606	.256	.286	2.370	.021	[.096, 1.115]
Black	.001	.004	.040	.258	.797	[-.007, .009]
White	-.003	.003	-.219	-1.274	.207	[-.008, .002]
Hispanic	.000	.002	.008	.058	.954	[-.005, .005]
<b>Schizophrenia</b>						
Gender	-.042	.116	-.043	-.360	.720	[-.274, .190]
Age	.294	.245	.152	1.200	.234	[-.195, .784]
Black	-.003	.004	-.125	-.769	.444	[-.011, .005]
White	-.003	.002	-.218	-1.212	.230	[-.008, .002]
Hispanic	-.004	.002	-.275	-1.897	.062	[-.009, .000]
<b>Borderline Features</b>						
Gender	-.466	.117	-.392	-3.991	.000	[-.699, -.233]
Age	-.722	.246	-.304	-2.935	.005	[-1.213, -.231]
Black	.018	.004	.589	4.429	.000	[.010, .026]
White	.009	.002	.547	3.701	.000	[.004, .014]
Hispanic	.007	.002	.332	2.786	.007	[.002, .011]

Table 3.2.1: Continued

Models	<i>b</i>	SE	$\beta$	<i>t</i>	<i>p</i>	95% CI <i>b</i>
<b>Antisocial Features</b>						
Gender	-.484	.123	-.427	-3.929	.000	[-.730, -.238]
Age	-.251	.260	-.111	-.966	.337	[-.769, .267]
Black	.011	.004	.401	2.718	.008	[.003, .020]
White	.006	.003	.377	2.302	.024	[.001, .011]
Hispanic	.003	.002	.180	1.367	.176	[-.002, .008]
<b>Drug/Alcohol Use</b>						
Gender	-.816	.153	-.492	-5.328	.000	[-1.121, -.510]
Age	-.912	.323	-.276	-2.825	.006	[-1.556, -.268]
Black	.022	.005	.540	4.315	.000	[.012, .033]
White	.015	.003	.639	4.592	.000	[.008, .021]
Hispanic	.010	.003	.360	3.217	.002	[.004, .016]

Note. Bold text denotes the outcome variable of each model. The other variables are the predictor variables in the model. Racial predictors represent the percentage of responses that stereotyped a forename as belonging to each racial category. For gender, positive values are associated with names that were more frequently stereotyped as belonging to females and negative values are associated with males. For age, positive values are associated with names that were more frequently stereotyped as belonging to older individuals, while negative values are associated with younger individuals.

### 3.2.2 PAI Treatment Consideration Scale Traits

Multiple regression analyses assessed whether forename-related predictors (gender, age, race) were associated with perceived personality traits derived from the PAI Treatment Consideration Scale. For aggression, the overall model for this trait was significant ( $F(5, 69) = 9.24, p < .001$ ) and accounted for 40.1% of the variance in perceived levels of aggression for the individuals to whom the forenames belonged to. For this trait, gender ( $b = -.727, p < .001$ ) and racial categories, Black ( $b = .013, p = .005$ ) and Hispanic ( $b = .006, p = .027$ ), significantly predicted levels of perceived aggression. This indicated that forenames stereotyped as belonging to males, Blacks, and Hispanics, predicted higher levels of perceived aggression. For nonsupport, the overall model was significant ( $F(5, 69) = 2.67, p = .029$ ) and accounted for 16.2% of the variance in perceived levels of social support. The only significant predictor of this trait was gender ( $b = .350, p = .015$ ), indicating that forenames stereotyped as belonging to females predicted higher levels of perceived social support.

Lastly, when examining treatment rejection, the overall model was significant ( $F(5, 69) = 4.78, p = .001$ ) and accounted for 25.7% of the variance in perceived willingness to make psychological/personal improvements. Significant predictors of this trait included age ( $b = -.641, p = .027$ ) and gender ( $b = .480, p = .001$ ). This indicated that forenames stereotyped as belonging to younger individuals and females were predictive of more perceived willingness to make psychological/personal improvements. The remaining two models for this section, suicidal ideation and stress, were non-significant. For an entire view of the coefficients for models in the PAI Treatment Consideration section, view Table 3.2.2.

Table 3.2.2: Multiple Regression Models Predicting PAI Treatment Consideration Scale Traits

Models	<i>b</i>	SE	$\beta$	<i>t</i>	<i>p</i>	95% CI <i>b</i>
<b>Aggression</b>						
Gender	-.727	.135	-.526	-5.406	.000	[-.996, -.459]
Age	.363	.284	.131	1.278	.206	[-.203, .929]
Black	.013	.005	.384	2.911	.005	[.004, .022]
White	.005	.003	.258	1.760	.083	[-.001, .010]
Hispanic	.006	.003	.267	2.261	.027	[.001, .012]
<b>Suicidal Ideation</b>						
Gender	-.007	.109	-.008	-.066	.947	[-.224, .210]
Age	-.182	.229	-.103	-.794	.430	[-.639, .275]
Black	.001	.004	.033	.198	.843	[-.007, .008]
White	-.001	.002	-.052	-.280	.781	[-.005, .004]
Hispanic	-.003	.002	-.188	-1.261	.212	[-.007, .002]
<b>Stress</b>						
Gender	.195	.099	.234	1.971	.053	[-.002, .392]
Age	-.156	.208	-.094	-.751	.455	[-.572, .259]
Black	.000	.003	.018	.111	.912	[-.006, .007]
White	.002	.002	.138	.767	.445	[-.003, .006]
Hispanic	.001	.002	.065	.453	.652	[-.003, .005]
<b>Nonsupport</b>						
Gender	.350	.141	.286	2.487	.015	[.069, .630]
Age	-.474	.297	-.195	-1.599	.114	[-1.066, .117]
Black	-.001	.005	-.034	-.215	.830	[-.011, .009]
White	.000	.003	.024	.139	.890	[-.005, .006]
Hispanic	.001	.003	.029	.207	.836	[-.005, .006]

Table 3.2.2: Continued

Models	<i>b</i>	SE	$\beta$	<i>t</i>	<i>p</i>	95% CI <i>b</i>
<b>Treatment Rejection</b>						
Gender	.480	.135	.386	3.564	.001	[.211, .748]
Age	-.641	.284	-.259	-2.258	.027	[-1.208, -.075]
Black	-.005	.005	-.163	-1.113	.270	[-.014, .004]
White	-.005	.003	-.271	-1.661	.101	[-.010, .001]
Hispanic	-.003	.003	-.150	-1.138	.259	[-.009, .002]

Note. Bold text denotes the outcome variable of the model. The other variables are the predictor variables in the model. Nonsupport was measured with higher numbers indicating more social support and treatment rejection was measured with higher numbers indicating more willingness to make personal/psychological improvements to oneself.

### 3.2.3 PAI Interpersonal Scale Traits

In this section, multiple regression analyses assessed whether forename-related predictors (gender, age, race) were associated with perceived personality traits derived from the PAI Interpersonal Scale. For dominance, the overall model was significant ( $F(5, 69) = 14.64, p < .001$ ) and accounted for 51.5% of the variance in perceived dominance for the individuals to whom the forenames belonged to. This trait was significantly predicted by age ( $b = .743, p = .001$ ) and gender ( $b = -.599, p < .001$ ), indicating that forenames stereotyped as belonging to older individuals and males predicted higher levels of perceived dominance. Furthermore, racial categories for Blacks ( $b = .007, p = .037$ ) and Hispanics ( $b = .005, p = .017$ ) positively predicted this trait.

The overall model for warmth was also significant ( $F(5, 69) = 5.89, p < .001$ ) and accounted for 29.9% of the variance in perceived warmth for the individuals to whom the forename belonged to. In contrast to dominance, forenames stereotyped as belonging to females positively predicted higher levels of perceived warmth ( $b = .519, p < .001$ ). All other predictors for this model were non-significant. To view the coefficients for the models of dominance and warmth, please refer to Table 3.2.3.

Table 3.2.3: Multiple Regression Models Predicting PAI Interpersonal Scale Traits

Models	<i>b</i>	SE	$\beta$	<i>t</i>	<i>p</i>	95% CI <i>b</i>
<b>Dominance</b>						
Gender	-.599	.102	-.513	-5.860	.000	[-.803, -.395]
Age	.743	.216	.319	3.444	.001	[.313, 1.173]
Black	.007	.003	.252	2.125	.037	[.000, .014]
White	.002	.002	.130	.987	.327	[-.002, .006]
Hispanic	.005	.002	.259	2.440	.017	[.001, .009]
<b>Warmth</b>						
Gender	.519	.123	.442	4.203	.000	[.273, .765]
Age	-.493	.260	-.211	-1.895	.062	[-1.013, .026]
Black	-.003	.004	-.089	-.624	.534	[-.011, .006]
White	-.002	.003	-.131	-.826	.411	[-.007, .003]
Hispanic	.001	.003	.068	.530	.597	[-.004, .006]

Note. Bold text denotes the outcome variable of the model. The other variables are the predictor variables in the model. Racial predictors represent the percentage of responses that stereotyped a forename as belonging to each racial category. For gender, positive values are associated with names that were more frequently stereotyped as belonging to females and negative values are associated with males. For age, positive values are associated with names that were more frequently stereotyped as belonging to older individuals, while negative values are associated with younger individuals.

### 3.2.4 Big Five Traits

The multiple regression analyses contained within this section assessed whether forename-related predictors (gender, age, race) were associated with perceived personality traits derived from the Big Five Traits. The overall model for open was significant ( $F(5, 69) = 18.22$ ,  $p < .001$ ) and accounted for 56.9% of the variance in perceived openness to experience for the individuals to whom the forename belonged to. For this trait, age ( $b = -2.388$ ,  $p < .001$ ) was the strongest predictor for openness to experience. This indicated that forenames stereotyped as belonging to younger individuals were predictive of higher levels of openness to experience. Additionally, all racial categories positively predicted this trait: Blacks ( $b = .019$ ,  $p < .001$ ), Whites ( $b = .007$ ,  $p = .022$ ), and Hispanics ( $b = .006$ ,  $p = .039$ ).

The overall model for conscientious was also significant ( $F(5, 69) = 5.55$ ,  $p < .001$ ) and accounted for 28.7% of the variance in perceived conscientiousness for the individuals to whom the forename belonged to. The strongest predictors for this trait were age ( $b = 1.123$ ,  $p = .001$ ) and gender ( $b = .380$ ,  $p = .015$ ), indicating that forenames stereotyped as belonging to older

individuals and females predicted higher levels of conscientiousness. However, in contrast to the model for openness to experience, racial categories negatively predicted conscientiousness: Blacks ( $b = -.016, p = .003$ ) and Whites ( $b = -.006, p = .046$ ). The overall model for extraverted was significant ( $F(5, 69) = 18.26, p < .001$ ) and accounted for 57.0% of the variance in perceived extraversion. While gender was not a significant predictor of this trait, forenames stereotyped as belonging to younger individuals strongly predicted extraversion ( $b = -1.625, p < .001$ ). Racial categories for Blacks ( $b = .032, p < .001$ ), Whites ( $b = .017, p < .001$ ), and Hispanics ( $b = .011, p = .001$ ) were positive predictors of this trait.

For the overall model of agreeableness, this was also significant ( $F(5, 69) = 3.87, p = .004$ ) and accounted for 21.9% of the variance in this trait. While forenames stereotyped as belonging to younger individuals strongly predicted agreeableness ( $b = -1.041, p < .001$ ), all remaining predictors for this model were non-significant. Lastly, the overall model for neuroticism was significant ( $F(5, 69) = 6.14, p < .001$ ) and accounted for 30.8% of the variance in perceived neuroticism. Here, forenames stereotyped as belonging to females predicted higher levels of neuroticism ( $b = .348, p = .008$ ). Racial categories for Blacks ( $b = .009, p = .034$ ) and Whites ( $b = .007, p = .007$ ) were also significant predictors of perceived neuroticism. To view the coefficients for The Big Five models, please refer to Table 3.2.4.

Table 3.2.4: Multiple Regression Models Predicting Big Five Traits

Models	$b$	SE	$\beta$	$t$	$p$	95% CI $b$
<b>Open</b>						
Gender	-.233	.143	-.134	-1.626	.109	[-.519, .053]
Age	-2.388	.302	-.690	-7.904	.000	[-2.991, -1.786]
Black	.019	.005	.432	3.862	.000	[.009, .029]
White	.007	.003	.291	2.340	.022	[.001, .013]
Hispanic	.006	.003	.211	2.103	.039	[.000, .012]

Table 3.2.4: Continued

Models	<i>b</i>	SE	$\beta$	<i>t</i>	<i>p</i>	95% CI <i>b</i>
<b>Conscientious</b>						
Gender	.380	.153	.264	2.490	.015	[.076, .685]
Age	1.123	.322	.391	3.485	.001	[480, 1.765]
Black	-.016	.005	-.451	-3.133	.003	[-.027, -.006]
White	-.006	.003	-.324	-2.028	.046	[-.013, .000]
Hispanic	-.005	.003	-.203	-1.577	.119	[-.011, .001]
<b>Extraverted</b>						
Gender	.018	.150	.010	.120	.905	[-.281, .317]
Age	-1.625	.316	-.449	-5.146	.000	[-2.254, -.995]
Black	.032	.005	.712	6.370	.000	[.022, .043]
White	.017	.003	.665	5.355	.000	[.010, .023]
Hispanic	.011	.003	.362	3.622	.001	[.005, .017]
<b>Agreeable</b>						
Gender	.050	.125	.044	.396	.693	[-.200, .300]
Age	-1.041	.265	-.462	-3.936	.000	[-1.569, -.513]
Black	.000	.004	.013	.084	.934	[-.008, .009]
White	-.001	.003	-.068	-.406	.686	[-.006, .004]
Hispanic	.002	.003	.082	.609	.545	[-.004, .007]
<b>Neurotic</b>						
Gender	.348	.127	.287	2.747	.008	[.095, .600]
Age	-.453	.267	-.188	-1.188	.094	[-.986, .080]
Black	.009	.004	.307	.307	.034	[.001, .018]
White	.007	.003	.436	.436	.007	[.002, .012]
Hispanic	.001	.003	.072	.072	.564	[-.004, .007]

Note. Bold text denotes the outcome variable of the model. The other variables are the predictor variables in the model. Racial predictors represent the percentage of responses that stereotyped a forename as belonging to each racial category. For gender, positive values are associated with names that were more frequently stereotyped as belonging to females and negative values are associated with males. For age, positive values are associated with names that were more frequently stereotyped as belonging to older individuals, while negative values are associated with younger individuals.

### 3.3 Forename Stereotypes and PAI Data

Associations between forename stereotypes (gender, age, and race) and the actual data of the 75 individuals who took the PAI were examined. Overall, the majority of the correlations were small and non-significant (i.e.,  $r < .20$ ,  $p < .05$ ); however there were several notable exceptions. Forenames stereotyped more frequently as belonging to females were associated with higher levels of anxiety ( $r(78) = .33$ ,  $p = .003$ ) and lower levels of dominance ( $r(78) = -.25$ ,  $p = .025$ ). Forenames stereotyped more frequently as belonging to older individuals were associated with higher levels of mania ( $r(78) = .25$ ,  $p = .028$ ) and stress ( $r(78) = .29$ ,  $p = .009$ ).

Furthermore, forenames stereotyped more frequently as belonging Black individuals were also

associated higher levels of mania ( $r(78) = .23, p = .038$ ) and stress ( $r(78) = .29, p = .008$ ) in addition to aggression ( $r(78) = .24, p = .036$ ). Lastly, forenames stereotyped as belonging to White individuals were associated with lower levels of social support ( $r(78) = -.26, p = .018$ ). To view correlations between forename stereotypes and PAI data, see Table 3.3.

Table 3.3: Correlations between Forename Stereotypes and PAI scores

	Gender	Age	White	Hispanic	Black
Anxiety	.331**	-.047	.012	.094	.001
Depression	.190	.047	-.091	-.047	.039
Mania	-.211	.246*	-.044	-.171	.232*
Paranoia	-.022	.204	-.165	-.074	.179
Schizophrenia	-.013	.211	-.217	-.041	.134
Borderline Features	.174	.019	.014	-.016	.082
Antisocial Features	-.190	.171	-.014	-.165	.160
Alcohol Use	-.082	.064	.037	.007	.070
Drug Use	.011	.103	-.028	-.117	.140
Aggression	.079	.044	.023	-.167	.235*
Suicidal Ideations	.009	.077	-.178	-.048	.122
Stress	.056	.291**	-.116	-.173	.294**
Nonsupport	-.091	.146	-.264*	-.060	.206
Treatment Rejection	-.161	.093	-.085	-.088	.077
Dominance	-.250*	.050	-.001	-.127	.176
Warmth	.115	-.018	-.076	.140	.163

*Note.* Racial variables represent the percentage of responses that stereotyped a forename as belonging to each racial category. For gender, positive values are associated with names that were more frequently stereotyped as belonging to females and negative values are associated with males. For age, positive values are associated with names that were more frequently stereotyped as belonging to older individuals, while negative values are associated with younger individuals. Nonsupport was measured with higher numbers indicating more social support and treatment rejection was measured with higher numbers indicating more willingness to make personal/psychological improvements to oneself. \* $p < .05$ , \*\*  $p < .01$ .

## 4. DISCUSSION

A forename is typically considered to be nothing more than a label we are given at birth that serves as a tool to distinguish ourselves from others. However, when examining past research, forenames have been shown to possess far more utility than the role they are commonly perceived to represent. Not only have they been utilized to predict one's facial appearance, but they can also be used to predict the sequence of letters within one's job title, location of residence, and some major life decisions (Pelham et al., 2002; Zwebner et al., 2017). Forenames are also linked to categories such as gender and race, with some gender-specific forenames appearing as more prototypical than others (Kasoff, 1993; Van Fleet & Atwater, 1997). Therefore, recognizing that there are gender differences that are evident among psychological disorders and personality traits, the current study was designed to examine whether these gender trends could be predicted solely based upon one's forename.

Utilizing the forenames of 75 individuals who had previously taken the PAI, data was collected for the perceived gender, age, and race of the individuals to whom the forenames belonged to. Forenames stereotyped more frequently as belonging to a female were associated with higher levels of anxiety, while forenames rated more frequently as belonging to a male were associated with higher levels of antisocial features. These stereotypes corresponded with gender differences within the actual population, as males are diagnosed more frequently with antisocial personality disorder and more women are diagnosed with anxiety and disorders of negative affect (Hyde, 2014; Paris, 2004). Furthermore, perceptions of forenames were consistent with other gender differences as well. These included ratings for aggression, social support, dominance, warmth, conscientiousness, neuroticism, and drug/alcohol use (Buccelli et al., 2016;

Reevy & Maslach, 2001; Weisberg et al., 2011). However, gender was a non-significant predictor for stress, suicidal ideation, agreeableness, openness to experience, and extraversion.

When examining age, this appeared to be primarily consistent with the ratings of the Big Five Traits. As individuals grow older, they tend to exhibit higher levels of agreeableness and conscientiousness, and lower levels of neuroticism, extraversion, and openness to experience (McCrae et al., 1999). In the current study, ratings of agreeableness did not follow this trend; however, forenames rated as older were strongly predicted by and consistent with trends in openness to experience, conscientiousness, extraversion, and neuroticism. For racial categories, forenames stereotyped as belonging to Whites, Blacks, or Hispanics were associated with numerous traits; however, the effect sizes for race were diminutive when compared with gender and age. Lastly, when comparing the results of forename stereotypes with the actual PAI data, the majority of these correlations were small and non-significant. This indicated that forename stereotypes were inconsistent with the personality of the 75 individuals to whom the forenames belonged to.

#### **4.1 Implications**

Overall, forename stereotypes in this research were consistent with gender differences in disorder-relevant personality traits, providing further support for Martin and Halverson's (1981) schematic processing model. As previously mentioned, the process of stereotyping and socialization begins at a young age and grows stronger as one enters into adolescence (Steffens et al., 2010). Therefore, with the average age of the participants being close to 19 years, it is reasonable to assume that their gender schemas were well-developed and played a significant role in the process of stereotyping each forename. Because forenames are linked to categories such as gender, age, and race, the participants most likely made these judgements based on the

degree to which the forenames corresponded with these categories. Additionally, because the majority of the names were perceived as White and the majority of the participants identified as such, these judgements may have been more automatic, as the participants were most likely associating the forenames with individuals they have actually known.

While this study confirmed certain aspects of the association between forenames and gender differences within psychopathology, we were also interested in whether the gender-typical strength of forenames may contribute to gender differences within these disorders. We postulated that because forenames are associated with stereotypes and expectations (especially with regards to gender), the assignment of a forename may induce a self-fulfilling prophecy effect. Through the continual usage of one's forename by parents and peers, the information encoded within our gender schemas and self-perceptual lenses is continually reinforced. The result being that an individual may begin to act in accordance with the stereotypes associated with their forename/gender, which could be instrumental in the gender differences observed within mental disorders.

As demonstrated by our results, forename stereotypes were not representative of the actual individuals to whom the forenames belonged to. However, perceptions of the gender, age, and race showed relationships consistent with gender schemas, which provides partial support for the self-fulfilling prophecy theory. That general finding and the consistency between our results and gender differences within the actual population makes it reasonable to infer that this theory has not been disconfirmed by our study. Overall, this study was novel in the sense that forenames have not been used to predict psychopathological personality traits within the population or to illuminate the association between gender differences and psychological disorders.

## 4.2 Limitations

Due to the fact that each forename was accompanied by 30 survey items, it would have been impractical to administer all 75 forenames to each participant, as it would have taken a considerable amount of time to complete the survey and would have compromised the quality of the responses. However, this decreased the levels of power in the study, because participants were only assigned a randomized subset (12 forenames) of the 75 forenames. In addition, while there were 75 forenames, each forename belonged to only 1 individual, which also decreased the likelihood of finding a significant correlation between forename stereotypes and actual PAI data. Therefore, while the results obtained were primarily representative of gender differences in psychopathology, the power concerns may bear some weight on the inconsistency between forename perceptions and the actual traits of the 75 individuals.

Because the participants were undergraduate students and the sample was primarily homogenous, this may have also limited the overall generalizability of the sample. However, it has also been shown that stereotypes are generally shared among members of a society/social group (Krueger, 1996). Not only would this imply that a convenience sample is sufficient for a study such as this, but it also provides some explanation as to why low levels of power were enough to observe significant associations between forenames and gender differences in disorder-relevant personality traits.

Lastly, when examining the 75 individuals who took the PAI, it is important to discuss the validity of their own self-ratings. The PAI assesses for both personality traits and psychopathology. Therefore, it is likely that the individuals completing this assessment were presenting with psychological problems or were psychologically distressed. This may limit the degree to which their responses generalize to their typical behavior or general population of

individuals with the same forename, providing another possible explanation for the lack of significance between the forename stereotypes and PAI data.

### **4.3 Future Directions**

Overall, the present study was sufficient in providing support for the relationship between forename stereotypes and gender differences in disorder-relevant personality traits. Future studies should continue to examine the relationship between forenames, personality, and psychopathology; however, it would be interesting to observe this relationship with a more representative sample and using a larger sample size. In addition, out of the 75 forenames utilized in the current study, each forename belonged to only 1 individual. Therefore, future research should include more individuals with the same forename, as this may also increase the likelihood of finding a significant correlation between forename stereotypes and actual PAI data. Researchers may also be interested in utilizing a different personality assessment tool in order to examine the relationship further. Lastly, researchers should include a measure of participants' own self-perceptions with regards to masculinity/femininity, as this could serve as a moderator for the relationship between forename stereotypes and disorder-relevant personality traits.

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## APPENDIX A: COMPLETE LIST OF FORENAMES

Holly	Cassidy	Cassandra	Laura	Bailey
Courtney	Madison	Zach	Altay	Samira
Natalie	Emily	Ryan	Jonathan	Amanda
Adbur	Scott	Jocelyn	Arthus	Duane
Melodie	Mackenzie	Corrin	Caroline	Chelsea
Carlyle	Angela	Raymond	Cheyenne	Andrea
Sally	Alejandra	Samantha	Selene	Shelby
Trenton	Phelicia	Victor	Caleb	Karawan
Fayola	Lara	Margaret	Phyllis	Brittany
Keisha	Marissa	Jamey	David	Murtaza
Anna	Kenesha	Ben	Bethany	Anyssa
Emmanuel	Benjamin	Veronica	Rhiannon	Diego
Jana	Lydia	Aleena	Siddhi	Chinaemere
Richard	Almah	Krysta	Grace	Eniola
Ashley	Cassie	Monica	Christine	Sarah

## APPENDIX B: PAI CLINICAL SCALE ITEMS

- **(Anxiety)** Overall, how anxious is X?
- **(Depression)** Overall, how depressed is X?
- **(Mania)** Overall, how excited, euphoric, and energetic is X?
- **(Paranoia)** Overall, how suspicious of others is X?
- **(Schizophrenia)** How often does X hallucinate (hear/see things that aren't there)?
- **(Borderline Features)** \*How strong are X's anger management skills? \*How stable are X's relationships with others? How impulsive is X?
- **(Antisocial Features)** \*How respectful is X toward the law? \*How much empathy does X have toward others?
- **(Alcohol Problems)** How often does X drink alcohol?
- **(Drug Problems)** How often does X use drugs (prescription and illicit)?

*Note.* \* Indicates a reverse coded item and X indicates the forename.

## APPENDIX C: PAI TREATMENT CONSIDERATION SCALE ITEMS

- **(Aggression)** Overall, how angry, hostile, and aggressive is X?
- **(Suicidal Ideation)** How often does X contemplate suicide?
- **(Stress)** How often does X experience stress?
- **(Nonsupport)** How strong is X's social support system?
- **(Treatment Rejection)** How willing is X to make personal/psychological improvements?

*Note.* X indicates the forename.