Drew University College of Liberal Arts

Do Adults Make Babyface Overgeneralizations When Perceiving Adults Who Have Down Syndrome?

A Thesis in Psychology

by

Jennifer N. Stein

Abstract

Individuals who have the characterizations of a babyface (round face, large eyes, short nose, etc.) are often subject to "babyface overgeneralization." They are more likely to be treated as innocent, submissive/cooperative, warm, compassionate, gullible, honest and trusting while not being seen as manipulative or competitive. Individuals who have Down syndrome are typically described as having a babyface. Research has not been performed comparing the babyface overgeneralization that happens to individuals who have Down syndrome to typically developing individuals who have a neotenous facial structure. The current study assessed participants' tendency to make these babyface overgeneralizations. Participants were 174 individuals recruited through an online site, Amazon's MTurk. Participants were randomly assigned to one one of three conditions: a picture of a typically developing adult, a picture of a typically developing adult who has a babyface, or a picture of an adult who has Down syndrome. After viewing their assigned stimuli, participants were asked 25 questions designed to assess babyface overgeneralization and familiarity with Down syndrome. Results suggested that differences in judgments lie between the non-babyface condition and the Down syndrome condition as well as between the babyface condition and the Down syndrome condition, but not between the typically developing condition and the babyface condition. In the Down syndrome condition, no differences were found between judgments of those who were personally familiar with Down syndrome and those who were not. If someone has Down syndrome they are more likely to be judged harshly than their typically developing counterpart who may have similar facial characteristics (a neotenous facial structure). Because Down syndrome is such a prevalent disorder, these judgments may be made automatically, not based on facial characteristics but instead previous knowledge/lack thereof about the disability.

Introduction

Stereotypes and Stigmas

Individuals have their own schemas, or internal mental frameworks, that are used to fill in gaps in situations where not all of the information is known. In the case of stereotypes and stigmas, an individual's schema reflects what one thinks about a certain type of person, and as a result, how they think that person should be treated (Aronson, Wilson, & Akert, 2010). Stereotypes are cognitions that every individual holds. They are beliefs about both groups of people and individuals (based on that individual's group membership). These thoughts can be either positive or negative. According to Towler and Schnider (2005), there are seven main dimensions for which stereotypes can exist: physical disabilities, mental disabilities, physical appearance, sexual identity, racial identity, being economically disadvantaged or being a social deviant.

It is important to study stereotypes because being stereotyped can have negative effects. Major and Townsend (2010) reported that stereotypes are a basis for both prejudice (how one feels about a person who has a certain 'mark') and discrimination (how one actually treats a person who has a certain 'mark') and that stereotypes lead to stigmas and stigmas lead to discrimination. In other words, an individual's thoughts/cognitions about a group of people lead to his/her actual behaviors towards a group of people. Moreover, individuals can develop a self-schema or internalized schema in which they internalize the negative attitudes that others have about the group they belong to or mark that they have (Stuart, Arboleda-Flórez & Sartorius, 2012). When this occurs, it may affect individuals by decreasing their self-esteem, levels of interaction with others, and even their quality of life. For example, some individuals with a mental illness believe that the stigmas that other people hold toward the mental illness are more

devastating, disabling, and life-limiting than the mental illness itself (Schulze & Angermeyer, 2003). The degradation it creates for the individual causes the situation to become worse than the mental illness alone. Thus, it is clear that being stereotyped against can potentially have very serious consequences.

Alarmingly, developmental psychologists have found evidence to suggest that these cognitions are formed early on and are often part of an individual's culture (Rush, 1998). For example, Cvencek, Nasir, O'Connor, Wischnia and Meltzoff (2015) studied children (ages 9-10 years old) and adolescents (ages 12-13 years old) from different races and examined the stereotype that connects Asians to math. Participants completed measures of both implicit stereotyping (a stereotype that an individual is unaware of) and explicit stereotyping (a stereotype that an individual can verbalize, and that they are aware of). Adolescents showed evidence for implicit racial stereotyping about math, while also explicitly reporting they were aware that this stereotype existed; explicit awareness correlated to implicit stereotypes in both age groups. Even with limited experience, stereotypes are present. This could be representative of the importance of culture in stereotyping and the idea that an individual can hold certain stereotypes based solely on what they hear from others when they are raised. In addition, Cress, Collier and Reitenauer (2005) discussed that people may create stereotypes based on an interaction with a single person from a culture or group. Therefore, one does not have to have a lot of information about or experiences with an individual from a certain population in order to have certain stereotypes about them. In the case of the aforementioned stereotype of Asians being good at math, the children studied likely had little to no experience with Asians who were good at math, but the stereotype was still present most likely due to culture or small amounts of exposure.

Concealable vs Visible Traits

The seven main dimensions for which stereotypes can exist can be broken up into two types: those that are immediately noticeable to others (visible traits) and those that are not (concealable traits) (Pachankis, 2007). Having either of these two types of traits may cause an individual to become a part of an outgroup, and thus become vulnerable to being stereotyped because of their outgroup membership. Concealable traits include (but are not limited to) being Jewish, homosexual, and bulimic. If this trait is known, it may be associated with a stereotype. Although it is assumed that individuals who have concealable traits escape negativity (as the trait is not necessarily known to others), this is not necessarily true. This group is prone to stressors, as they know they have a stereotyped trait, and that knowledge makes them vulnerable (Pachankis, 2007). Individuals with a concealable trait can be put into a difficult predicament as they are pulled between being who they actually are and who society thinks they are if society is unaware of the concealable trait. In addition, there may be consequences of the trait being discovered (for example, if a family does not support homosexuality and an individual in that family identifies as homosexual).

Visible traits, on the other hand, are traits that cannot be hidden (Pachankis, 2007). Some examples include being African American, obese or having a physical handicap. Again, they may or may not be marginalized, but they immediately allow others to become aware that this individual is different from what is considered the 'norm.'

Babyface Overgeneralization

Stereotypes associated with a number of visible traits, such as gender, have been studied extensively (e.g., Lawson, Kooiman, & Kuchta, 2017). However, a visible trait that has received much less attention is having a "babyface." A babyface, also known as a neotenous facial

structure, involves having a small and round face, large eyes, a short nose, thick lips, and thin eyebrows (Moss, 2016). When an individual has a babyface, they are more likely to be treated as innocent, submissive/cooperative, warm, compassionate, gullible, honest and trusting, while not being seen as manipulative or competitive. This concept is known as "babyface overgeneralization" and, given the connotation of the particular dimension of the stereotype, may positively or negatively impact a person.

Past research has shown that overgeneralizations are made based on facial differences that are anomalous (different from the norm in some way) (Zebrowitz & Montepare, 2008). In the case of babyface overgeneralizations though, the individual has facial characteristics that resemble a child. Being part of one of these categories creates a relationship between facial perception and the conclusions drawn by the viewer regarding how that person should be treated. For individuals that have a babyface, they will continue falling into the risk of this overgeneralization throughout their lives, from infancy till older adulthood (Zebrowitz & Montepare, 1992). When babyfaces were studied in all different age groups, the characteristics of a babyface led to individuals in pictures being perceived as having more childlike traits than their age-matched peers. Researchers found that this overgeneralization was independent from attractiveness.

Masip, Garrido, and Herrero (2004) found evidence for this overgeneralization. Researchers measured both behavior-tendency and trait scales when examining pictures of the same person that were computer-manipulated to either have a babyface, be mature faced or be in-between the two. Results supported the existence of the babyface overgeneralization effect while also showing that those who had a more mature face were perceived to be both more credible and trustworthy.

Zebrovitz (1997) demonstrated a positive effect of having a babyface for African Americans. Zebrovitz found that African Americans with a babyface were perceived to be less hostile compared to African Americans who did not have a babyface. Keating, Randall, Kendrick, and Gutshall (2003) examined babyfaces and the likelihood of receiving help from a stranger. Researchers sent 'wrong' passports to homes on purpose (using the lost letter technique). Researchers found that people were more likely to help individuals who had a babyface. Compared to passports of individuals who did not have a babyface, passports of individuals who did have a babyface were more likely to be returned to the passport's 'owner.'

On the other hand, having a babyface can work negatively against an individual. Because individuals who have babyfaces are regarded as innocent, other individuals perceive them as less suitable to be good leaders (Rule & Ambady, 2008). Rule and Ambady (2008) asked 100 undergraduate students to examine the faces of CEOs who worked at various companies from the 2006 Fortune 500 and rate them on various traits. They found a negative correlation between an individual having a naïve-looking face (i.e., a babyface), and ratings of leadership qualities. Similarly, Gorn, Jiang, and Johar (2008) found evidence for differences in attitudes towards a CEOs who did not have a babyface compared to one that did.

However, Livingston and Pearce (2009) found the opposite effect for individuals who were Black. Researchers referred to this concept as the teddy-bear effect. They examined Black individuals who were in CEO positions and found that those who had a babyface were more likely to be in high positions of leadership than other Black males who did not have a babyface. The reason for this may be due to the stereotypical perceptions of non-babyface Black males being threatening and therefore those who have a babyface are perceived as less threatening and so employees are more likely to want them to hold higher positions of leadership in companies.

Within the legal realm, Berry and Zebrowitz-McArthur (1988) examined the effect facial maturity had on perceptions. Participants were told that the individual in the picture had either committed a negligent or an intentional crime. Participants were more likely to think that the individual in the picture had a negligent offense against them if he had a babyface while they thought those who had more mature looking faces were more likely to have committed an intentional crime. Babyface overgeneralizations are prevalent in so many different aspects and may affect individuals who have babyfaces positively and negatively.

Down syndrome, a special case of babyface overgeneralization

The craniofacial appearance of individuals who have Down syndrome, a visible disability, is sometimes categorized as infantile and immature (Fidler & Hodapp, 1999). The phenotypic expression of Down syndrome includes having a short and wide head, large tongue, a flat nose with a wide bridge, small ears and slanting eyes (Bivina, Moghaddam, & Wardinsky, 2013). In other words, there is a large overlap between the phenotype of an individual who has Down syndrome and the classic babyface as presented in studies of babyface overgeneralization. As a result, Fidler and Hodapp hypothesized that people would believe that those who have Down syndrome have pleasant personalities. Fidler and Hodapp showed participants images of children from three groups: (1) a child who had Down syndrome, (2) a child who was typically developing, and (3) a child who had a disorder other than Down syndrome. All of these images were Caucasian males. Participants then rated each face on a scale that measured aspects under the umbrella of babyface overgeneralization (these included both traits and behaviors – e.g., warmness). Fidler and Hodapp exploration on the physiognomic features (assessments of character or personality based on an individual's physical appearance) of Down syndrome concluded that higher babyface ratings (which people with Down syndrome received) received

higher trait ratings than the lower babyface rating group. These higher trait and behavior ratings showed that participants believed that children who had Down syndrome were thought to be more honest, naïve, warm and kind compared to their typically developing peers.

Familiarity

Previous research has examined the role of familiarity in the reduction of stereotypes. For example, Cerully, Collins, Wong, Seelam and Yu (2018) examined this concept in relation to mental health issues. Over the course of the study, participants attended different programs educating them about various aspects of mental health. These contact-based educational programs added to participants' levels of familiarity with mental health issues. Pre-study and post- study surveys suggested that stereotypes about mental health decreased after participants became more familiar with aspects relating to mental health.

Familiarity also plays a role in perception of outsiders, which can affect stereotypes one has toward members of the outgroup. Zebrowitz, Bronstad and Lee (2007) examined differences on stereotypes made toward those who were similar to participants and those who were not. Participants were either white or Korean college students who examined pictures and rated them on measures such as likeable, intelligent, hostile, and trustworthy. They found that, as hypothesized, familiarity was a mediator for both ingroup favoritism and outgroup stereotypes. Being a member of the outgroup, with whom individuals are less familiar, leads to more stereotypes as these individuals may be seen as all being the same, while individuals of the ingroup are thought of as being more individualized.

Delgado, Ariño, Betancor, and Rodríguez-Pérez (2017) examined the same concept, the role familiarity has on stereotypes and stigmas, but in relation to Down syndrome. They assessed 144 undergraduate students and the stigmas they held toward individuals who have Down

syndrome. They discovered that stereotypes were both positive (acceptance, compassion) and negative (low capacity, aggressiveness, restriction of opportunities). They examined the effects these stereotypes had on prejudice and discrimination, and the role intergroup anxiety plays in these phenomena. Researchers found that participants had high intergroup anxiety when interacting with people of the outgroup (in this case, individuals who have Down syndrome), as doing so caused discomfort. High intergroup anxiety may have an effect on stereotypes as individuals who feel uncomfortable interacting with people who have Down syndrome will be less likely to interact with people from the Down syndrome population and therefore not have experience with how these individuals actually are in their daily lives.

For example, the more familiar people are with Down syndrome, the fewer stereotypes they have. Wishart and Johnston (1990) studied adults and their perspectives on the personalities of individuals who have Down syndrome by looking at participants' degree of contact they had had with children who had Down syndrome. The 90 participants were broken up into three groups based on if they were a parent, a student or a teacher. Results showed that stereotype consistency (how accurate the stereotypes that were brought up were to actual characteristics and abilities of children who have Down syndrome) varied depending on the amount and type of contact the participant had had with children who have Down syndrome. Those with less experience veered toward a stereotype that children who have Down syndrome have a common identity, unlike typically developing children who seemed to have individual personalities. Wishart and Johnston's hypothesis that having more experience with individuals can lower stereotypes was upheld, which supports the idea that experience with individuals who have developmental disabilities, specifically Down syndrome, can modify impressions. The researchers concluded that adults who had more contact with individuals who had Down

syndrome were less likely to rate the personality of children with Down syndrome as stereotypical, and instead more individualistic; all individuals who have Down syndrome have a unique personality. This data is consistent with the outgroup homogeneity effect that Zebrowitz, Brostand and Lee (2007) examined.

However, when interviewing parents and teachers, Gunn and Cuskelly (1991) found support for certain stereotypes relating to individuals who have Down syndrome. They found that people who are familiar with the disability (parents and teachers) confirmed that some of the stereotypes formed toward individuals who have Down syndrome are actual characteristics of people with the disability (for example, a stereotype of individuals who have Down syndrome is that they are overly friendly, which was found to be true) (Bull, 2011). Mothers and teachers completed two different questionnaires relating to temperament of children who have Down syndrome. In addition, participants were asked questions relating to children who have Down syndrome compared to their typically developing peers and siblings (if they had them). It was found that many individuals who have Down syndrome are more positive and distractible than their typically developing peers, but less active and persistent. In addition, parents and teachers reported that individuals who had Down syndrome tended to be amiable and placid, just as some people would believe to be true for this population.

Although some research has shown that some of the stereotypes associated with Down syndrome may be true (Gunn & Cuskelly, 1991), it has also been demonstrated that the role familiarity plays on stereotypes, in relation to Down syndrome but also other populations, is a reduction of stereotypes (e.g., Wishart & Johnston, 1990, Cerully et al., 2018). When the outgroup homogeneity effect is taken into consideration, it is apparent that the more one is familiar with a group, the less likely they are to consider individuals as the same, or

'stereotypical'. Prothro and Melikian (1955) discuss that stereotypes often generalize cultural traits, just as people do when making judgments regarding people in the outgroup. In this case though, being familiar with a certain group of people, even if there is some evidence of these stereotypes to be true, creates opportunities for individualistic thoughts to be present as opposed to stereotypical ones.

Because Down syndrome is a specific case of having a babyface as the two have similar physical facial characteristics, the judgments made toward individuals who have Down syndrome may fall into the category of babyface overgeneralization. Familiarity with the disorder affects the judgments made by others toward them, and therefore may also affect babyface overgeneralizations. Just as Cress, Collier and Reitenauer (2005) discovered, a single interaction with an individual can be the basis for a stereotype about that individual's population. In this case, meeting just one individual who has Down syndrome can create stereotypes for a person that may be generalized to the broader Down syndrome population. In addition, never meeting someone who has Down syndrome can also be the basis for stereotypes as lack of experience may lead to generalizations or assumptions about this group.

The Current Research

Previously, research has been done examining the effects of babyface overgeneralizations in individuals who are typically developing and have neotenous facial structures (e.g., Keating, Randall, Kendrick, & Gutshall, 2003). We also know that individuals who have Down syndrome have this same neotenous facial structure and the generalizations made toward these individuals regarding behavior are consistent with those of babyface overgeneralizations; the more prominent the neotenous facial features are, the larger the generalizations were in the direction of those expected for babyface overgeneralizations (Fidler & Hodapp, 1999). Familiarity with

Down syndrome also plays a role in judgments; the more familiar an individual is with the syndrome, the fewer assumptions (due to stereotypes) are made about personality traits (Wishard & Johnston, 1990). In addition, those who are familiar are more likely to identify personality traits as individualistic than as representative of the whole population.

However, no research has been performed comparing the babyface overgeneralization that happens to individuals who have Down syndrome to the overgeneralizations made toward typically developing individuals who also have a neotenous facial structure. Because Down syndrome is such a prevalent disorder (occurs in about one in 714 people and affects all races, genders and ethnicities equally (Dierssen, 2012)), it is important to understand the connection between the disorder and babyface overgeneralizations. Whether an individual is typically developing or not, if babyface characteristics are present, similar judgments should be made. Moreover, because research suggests that the extent to which a person is familiar with Down Syndrome reduces the stereotypes made, the current research explores both the possible overlaps between the babyface overgeneralization of typically developing individuals (with and without a babyface) and individuals who have Down syndrome, while also assessing the effects of familiarity with Down syndrome on judgments made.

To assess babyface overgeneralization, participants in the current research viewed one of three pictures (a typically developing individual who does not have a babyface, a typically developing individual who has a babyface, and an individual who has Down syndrome), and then completed a survey designed to assess the traits associated with babyface overgeneralization as well as the participants' familiarity with Down syndrome.

There were two main hypotheses of the current research. First, the judgments made of the picture of a typically developing individual who has a babyface and the picture of an individual

who has Down syndrome will be more similar compared to the judgments made of the picture of a typically developing individual who does not have a babyface. Moreover, the judgments made toward the individual who has Down syndrome will be most consistent with those of babyface overgeneralizations; the individual who is typically developing and has a babyface will be similar but a little less severe; and the judgments made toward the typically developing individual who does not have a babyface will be least consistent with the judgments related to babyface overgeneralizations. Previous research has shown that individuals who have Down syndrome have the same babyface characteristics that put typically developing individuals who have a babyface into the babyface category and therefore that this overgeneralization occurs in Down syndrome. Therefore, the judgments made to these two groups should be more similar than those made toward the typically developing individual who does not have a babyface, as these characteristics are not present and so the same judgments will not be made. The second hypothesis concerned familiarity with Down syndrome. In the condition of a picture of an individual who has Down syndrome, there will be differences between those who are familiar with Down syndrome compared to those who are not; participants will make stronger babyface judgments if they are unfamiliar with Down syndrome compared to those who are familiar with Down syndrome due to the fact that individuals who are unfamiliar with Down syndrome will make judgments based off the cognitive stereotypes they associate with Down syndrome as well as the facial characteristics of their babyface. Moreover, being familiar will lead to less stereotypes as the stereotypes associated with Down syndrome for individual who are unfamiliar with the syndrome will take into consideration more than just the babyface overgeneralizations they will be making, but also the cognitive components of this stereotype.

Method

Participants

Participants were 333 individuals recruited through an online site, Amazon's MTurk. They were compensated $0.75 for participating in the study. One hundred eighteen were female, 210 were male, and two identified as other. The age of most participants was between 25 and 34 years old and all were at least 18. All participants had completed at least a high school level education and most had earned at least a bachelor's degree. Thirty-nine participants were excluded from the study because they failed to answer the attention checks correctly and three did not agree to the informed consent. Of the remaining participants, 117 participated in a separate study. Data from the remaining 174 participants were used for this study.

Procedure

Participants were re-directed from MTurk to Qualtrics, an online survey site. After accepting the informed consent form and being asked three demographic questions (see appendix A), Qualtrics randomly assigned participants to one of three conditions. The three conditions only differed by the stimuli that were presented to the participants for judgment: a picture of a typically developing adult without a babyface (i.e., "Non-Babyface condition"), a picture of a typically developing adult who has a babyface (i.e., "Babyface condition"), or a picture of an adult who has Down syndrome (i.e., "Down syndrome condition") (see appendix B). Pictures for each condition were purchased from iStock photos and matched as close as possible on gender, age, and features unrelated to babyface or Down syndrome (hair color, background of the picture, etc.).

Participants answered 25 questions in each condition. The questions were designed to assess stereotypes and stigmas related to babyface overgeneralization (see appendix C). Questions were randomized for each participant. Included in these questions were attention

checks to ensure participants were reading the questions they were being asked (see appendix C). Lastly, participants answered a question designed to assess their familiarity with atypical development, and more specifically, Down syndrome (see appendix D). They were then given a debriefing form that explained the purpose of the study, the methodology, additional resources and who to contact with any questions.

Measures

Participants answered questions that were designed to assess the five main traits associated with babyface overgeneralization: innocence/naivety, honesty, non-manipulative, competitive and easy going.

Innocence/naivety. Participants answered four questions related to the innocence and naivety of the individual in the picture. These questions were answered on a scale from 1 (extremely likely) to 7 (extremely unlikely). A single score for innocence/naivety was calculated for each participant by calculating the mean of their answers to the four questions.

Honesty. Participants answered four questions related to the honesty of the individual in the picture. These questions were answered on a scale from 1 (extremely likely) to 7 (extremely unlikely). A single score for honesty was calculated for each participant by calculating the mean of their answers to the four questions.

Manipulative. Participants answered four questions related to how manipulative the individual in the picture was. These questions were answered on a scale from 1 (extremely likely) to 7 (extremely unlikely). A single score for manipulativeness was calculated for each participant by calculating the mean of their answers to the four questions.

Competitive. Participants answered four questions related to the competitiveness the individual in the picture. These questions were answered on a scale from 1 (extremely likely) to

7 (extremely unlikely). A single score for competitiveness was calculated for each participant by calculating the mean of their answers to the four questions.

Easy-going. Participants answered four questions related to how easy-going the individual in the picture was. These questions were answered on a scale from 1 (extremely likely) to 7 (extremely unlikely). A single score for honesty was calculated for each participant by calculating the mean of their answers to the four questions.

Familiarity. Participants answered a question about whether they personally knew anybody who has Down syndrome.

Results

The main objective of the present experiment was to determine the extent to which babyface overgeneralization judgments differed as a function of phenotypic expression of babyface. I first hypothesized that the judgments made of the Babyface condition and the Down syndrome condition will be more similar compared to the judgments made toward the Non-Babyface condition. More specifically, the Down syndrome condition would have judgments most consistent with babyface overgeneralizations, the Babyface condition would have judgments similar to those but a little less severe, and the Non-Babyface condition would have judgments least consistent with babyface overgeneralizations. Second, I hypothesized that, when looking at just the Down syndrome condition, participants will make stronger babyface judgments if they are familiar with Down syndrome compared to those who are not familiar with Down syndrome based on the stereotypes associated with both the babyface overgeneralizations in addition to other stereotypes that are associated with the syndrome.

To address the first hypothesis, the five main traits were separated based on high in babyface overgeneralization (honesty, innocence and easy-going), or whether they should be low

in babyface overgeneralization (competitiveness and manipulativeness). Because differences between traits within each of these subsets were not a theoretical interest, composite scores were calculated such that each participant's mean scores were summed to create two new variables: total high babyface and total low babyface. Two separate one-way ANOVAs were conducted to determine if judgments differed as a function of condition. These means are presented in Table 1 (high babyface traits) and Table 2 (low babyface traits).

The ANOVA on the traits assumed to be high in babyface overgeneralization (honesty, easy-going and innocence) yielded a marginally significant main effect of condition, F (2, 173) = 2.47, p = .087. Tukey's HSD post hoc tests revealed that the Non-babyface condition (M= 13.25, SD = 1.87) was not significantly different from the Babyface condition (M= 13.20, SD = 1.71), although while it was marginally higher than the Down syndrome condition (M= 12.58, SD = 1.82). The Babyface condition (M= 13.20, SD = 1.71) was also marginally significantly higher than the Down syndrome condition (M= 12.58, SD = 1.82). Although there were differences between some of the conditions, they were not where expected. In addition, the differences between conditions were in the opposite direction as expected; the Non-babyface condition scored higher in babyface characteristics than the babyface condition, which scored higher than the Down syndrome condition.

The ANOVA on the traits assumed to be low in babyface (competitiveness and manipulativeness) yielded a main effect of condition, F (2, 173) = 6.92, p <.001. Tukey's HSD post hoc tests revealed that the Non-babyface condition (M= 8.5, SD = 1.73) was significantly different from the Down syndrome condition (M= 7.15, SD = 2.35), as was the Babyface condition (M= 8.06, SD = 1.81), but there was no difference between the Non-babyface condition and the Babyface condition. The judgments made were in the expected directions for

babyface overgeneralizations. However, the differences between conditions did not support hypothesis one as the Non-babyface condition and the Babyface condition were not significantly different, while the Down syndrome condition was significantly different from each of these. Overall, the results of this study did not support our first hypothesis, the judgments made in the babyface and Down syndrome conditions were not similar, or stronger, than the judgments made in the Non-babyface condition.

To address the second hypothesis, that participants will make stronger babyface judgments if they are unfamiliar with Down syndrome compared to those who are familiar with Down syndrome, two one-way ANOVAs were performed for composite high babyface, F (1, 57) = 0.023, p >.05, and low babyface trait scores, F (1, 57) = 0.028, p >.05, with familiarity as a between subjects factor. Only the Down syndrome condition was used in this analysis because familiarity with Down syndrome while looking at either the Non-Babyface condition or the Babyface condition should not change the judgments made toward each of these pictures. The means that were compared in these analyses can be seen Table 3 and Table 4. No significant differences were found between those who were familiar with Down syndrome compared to those who were not; hypothesis two was not supported.

Discussion

The current study examined the concept of babyface overgeneralization made by adult participants when examining an individual who had Down syndrome compared to both an individual who had a babyface and an individual that did not have a babyface. Babyface overgeneralization is when an individual has child-like facial features such as large eyes, thick lips, etc. and is therefore assumed to have characteristics such as being more innocent, compassionate, and trusting and consequently may be treated more so as such than individuals

who do not have a babyface. The strong visible characteristics present in Down syndrome may result in certain judgments being made as this babyface facial structure is present. The current experiment examined two hypotheses**.** The first was that the judgments made in the Babyface condition and the Down syndrome condition would be more similar compared to the judgments made of the Non-babyface condition. More specifically, I predicted that judgments made in the Down syndrome condition would be most consistent with those of babyface overgeneralization, the Babyface condition would be a little less in this direction, and the Non-Babyface condition would be least like these judgments. Second, I hypothesized that participants would make stronger babyface judgments if they were unfamiliar with Down syndrome compared to those who were familiar with Down syndrome when looking at just the Down syndrome condition. Neither hypothesis was supported.

It was expected that for positive babyface traits, the Non-babyface condition would have lower babyface trait ratings than the Babyface condition and for negative babyface traits, the Non-babyface condition would have higher babyface trait ratings than the Babyface condition. However, no significant differences were found between these two groups in either direction. These results did not confirm the previous research found on babyface overgeneralizations that suggested that seeing an individual with a babyface, when compared to an individual who did not have a babyface (both typically developing), the individual who had a babyface would be more prone to being treated differently (e.g., Zebrovitz, 1997).

When looking at the Non-Babyface condition and the Down syndrome condition, it was expected that for positive babyface traits, the Non-babyface condition would have lower babyface trait ratings than the Down syndrome condition and for negative babyface traits, the Non-babyface condition would have higher babyface trait ratings than the Down syndrome

condition. However, results showed that for positive traits, the Non-Babyface condition had higher ratings than the Down syndrome condition, a finding in the opposite direction expected of babyface overgeneralization. For negative traits, the non-babyface condition also had higher ratings than the Down syndrome condition, which was in the expected direction. The Down syndrome condition provoked significantly different judgments than the Non-babyface condition did, but because these judgments are not consistent with the direction expected for babyface overgeneralizations, it's difficult to know how to interpret these effects.

In comparing the Babyface condition and the Down syndrome condition, it was expected that the judgments made for the positive traits would be higher in the Down syndrome condition than the Babyface condition and for the negative traits they would be lower for the Down syndrome condition than the Babyface condition. At the very least, the two conditions should be the same (no significant differences), as they both have babyface characteristics. However, results showed significant differences for these two conditions; the Babyface condition had higher babyface ratings for both positive traits (these were in the opposite direction than expected) and negative traits. Again, the inconsistent pattern of findings makes it difficult to interpret these results. Because Down syndrome is such a visible disability, seeing images of individuals who have this syndrome provokes more extreme judgments than seeing a typically developing individual who has a babyface. Although both of these faces have visible traits that differ from a typical, non-babyface face, the stereotypes provoked from Down syndrome are much stronger than those provoked from a babyface as awareness of a babyface may be more implicit than explicit.

Previous research has shown that individuals who are familiar with Down syndrome have reduced stereotypes toward individuals who have the syndrome (e.g., Wishart & Johnston,

1990). However, this study did not lend additional support to this finding as it found that no significant differences in judgments were made toward the Down syndrome condition for those who were familiar with Down syndrome compared to those who were not. In this study, the way familiarity was measured asked participants if they personally knew an individual who has Down syndrome. It is possible that participants may not know someone who has this disorder but were still familiar with the syndrome. Down syndrome is a widely known disorder and therefore an individual might not necessarily need to know someone who has it to be able to make judgments about the disability. The measure of familiarity in the current study may not have been an accurate representation assessing familiarity about Down syndrome as there could be other factors that lead to this as well.

Because Down syndrome is a visible disability, one that cannot be concealed, those who have it cannot escape the generalizations other people make toward them (Pachankis, 2007). Viable traits bring about stronger judgments because whatever is being critiqued is always present. In this study, I examined Down syndrome, a visible disability that, when other people see it, mark it as 'different' from the norm whether or not they know what Down syndrome is. Because the visible characteristics in individuals who have Down syndrome also imply other non-visible (cognitive) markers compared to individuals who are typically developing and have a babyface (where these non-visible markers are not present), the judgments made toward these two groups are also significantly different. Having a visible disability and being different from the norm puts individuals at risk of being judged in certain ways. Because differences were found between the Down syndrome condition and both the Non-babyface condition and the Babyface condition, this study was able to display the differences in judgments made toward individuals who have visible traits (in this case, a disability) compared to individuals who do not

have any clear visible differences. There may be another dimension present here as both the Non-babyface condition and the Babyface condition were typically developing individuals while Down syndrome is a very apparent visible disability that not only has physical/visible differences in facial characteristics, but has cognitive differences as well. In this case, the stereotypes may be based off what one does, or does not know, about this disability. Seeing the picture of the individual who has Down syndrome can provoke different judgments automatically as opposed to seeing both the Non-babyface condition or the Babyface condition in which the participant is looking at a typically developing individual who does not have a visible disability or trait associated with them (having a babyface is not outright apparent and the judgments made toward individuals who have a babyface are more implicit and unconscious). The facial characteristics of Down syndrome are very visible and therefore strong stereotypes are associated with it, unlike the implicit judgments that come about with similar babyface characteristics in a typically developing individual.

Being different from the norm in any way puts individuals at risk for being stereotyped (Aronson, Wilson, & Akert, 2010). A stereotype, the cognitive component of the self in which people hold schemas (mental frameworks) towards people who differ from the norm in some way, affects the stigmas people make toward those who differ from the norm. A stigma is how one thinks they should treat a member of the stereotyped group. Individuals hold different stereotypes and stigmas for every group and may get this stereotype through a single experience they had with a member of that group, television shows, social media or through things they may hear from friends/family. These are not always part one's conscious awareness but even so, one's stereotypes (schemas) affect the stigmas they have (how they believe they should treat individuals who have some sort of mark) and therefore lead to discrimination (the actual

treatment of these individuals) (Major & Townsend, 2010). Nevertheless, judgments will be made toward individuals who are different. If someone has a visible disability, like in the case of Down syndrome, they are more likely to be both stereotyped and stigmatized. The judgments made in the Down syndrome condition were significantly different than those made in the Non-babyface condition and the Babyface condition, while these two had no differences. Having Down syndrome sets individuals apart from the 'norm,' changing how participants perceived them. Because having a babyface does not provoke a conscious response or stereotype, the judgments made toward these individuals may be subtler than outright seeing a visible trait, as in the case of Down syndrome. Had results been more similar in the Babyface condition and the Down syndrome condition when compared to the Non-babyface condition, this may have suggested that having a babyface, whether typically developing or in the case of Down syndrome, provoked the same sorts of judgments due to facial characteristics. However, in the case of Down syndrome, these facial characteristics are less subtle and therefore could be the reason stronger judgments were made toward the Down syndrome condition and similar ones were made toward the Babyface and Non-babyface conditions.

Stereotypes may also be a basis for discrimination. Discrimination is behavioral; how an individual actually acts toward or treats an individual who they have stereotyped due to a certain mark that person has (Gilbert, Fiske, & Lindzey, 1998). Previous research has shown that familiarity about disabilities, specifically Down syndrome, changes the thoughts associated with that group and makes them more 'accurate' toward the population being discussed. However, because no differences were found in this study, this could suggest otherwise. Knowing an individual who has Down syndrome may not affect people's judgments. However, knowing an individual may also not be an accurate representation of familiarity. Someone may be familiar

with the disorder without actually knowing somebody who has it through taking a class on atypical development, doing internet research, or reading informative books/articles. More generally, having a babyface, something that people are not necessarily explicitly aware of, may cause implicit judgments to be made. Individuals who have Down syndrome also have the same babyface features that are present and therefore similar judgments will be made toward people in each of the two groups of individuals who do not have these babyface characteristics.

A vast majority of research on stereotypes and stigmas has been on race, gender, and homosexuality (e.g., Andreoletti, Leszczynski & Disch, 2015, Cveneck *et al.*, 2015), both visible and concealable dimensions that may set people apart from the 'norm.' Despite the fact that no significant results were found with regards to babyface overgeneralizations and Down syndrome in this study, this is still an important area to study; there are similar physical characteristics present between individuals who are typically developing and have a babyface and individuals who have Down syndrome, yet judgments between the two are different. Because these judgments were different, yet the same facial characteristics are present, it is important that we continue to further explore this field.

Future Research

This study examined the effects of viewing a picture of an individual on certain judgments made about various individuals. A future study could examine the label of "Down syndrome" and the affect this label might have on the judgments made toward reading a story that uses the label of Down syndrome compared to one that does not. Labels are powerful; in order to stereotype a group, it must first be labeled (Jones, Farina, Hastorf, et al., 1984). As discussed earlier, groups are stereotyped based on 'marks' that set people apart from norms in some way, and these marks can also be considered labels. It is possible that perhaps labels may

actually be stronger than stereotypes because in order to be stereotyped, you first need to be labeled. The label of Down syndrome, without even seeing an image, may be the reason certain judgments are made because when one hears the label itself, they are prone to automatically think a specific way, whether positive or negative, based on what they know (or do not know) about Down syndrome itself.

This study also contained one major limitation. It used three pictures (one per condition); a typically developing individual who did not have a babyface, a typically developing individual who had a babyface, and an individual who had Down syndrome. Although the picture of the individual who had a babyface had characteristics like those described for babyface overgeneralization, a more in-depth study would have conducted a preliminary study to find the best match for this condition ensuring it was the most 'babyfaced' option. There is a possibility that the picture used for the babyface condition did not have extreme enough characteristics to provoke the babyface overgeneralizations that were expected.

Stereotypes are a powerful source for both stigmatization and discrimination. It is important to continue work in this field as individuals who have Down syndrome are prone to being stereotyped based off both their physical features, those that resemble a babyface, and their cognitive abilities. Work in this field may continue to examine the relationship between stereotyping of these two categories within this population. If we can further understand the basis of these stereotypes and the role familiarity plays in decreasing them, outsiders may be able to see this population more positively and create communities of inclusion and acceptance instead. If we can do this for the population of Down syndrome specifically, we can later generalize it to other forms of atypical development as well; reducing stereotypes (and therefore stigmatization and discrimination) for all.

References

Alexander, M., Petri, H., Ding, Y., Wandel, C., Khwaja, O., & Foskett, N. (2016). Morbidity and medication in a large population of individuals with Down syndrome compared to the general population. *Developmental Medicine & Child Neurology*, *58*(3), 246-254. doi:10.1111/dmcn.12868

Andreoletti, C., Leszczynski, J. P., & Disch, W. B. (2015). Gender, race, and age: The content of compound stereotypes across the life span. *The International Journal Of Aging & Human Development*, *81*(1-2), 27-53. doi:10.1177/0091415015616395

Aronson, E., Wilson, T.D., & Akert, R.M (2010). *Social Psychology, 7th Edition*. NJ: Prentice Hall.

Bartesaghi, R., Haydar, T. F., Delabar, J. M., Dierssen, M., Martínez-Cué, C., & Bianchi, D. W. (2015). New perspectives for the rescue of cognitive disability in Down syndrome. *The Journal Of Neuroscience*, *35*(41), 13843-13852. doi:10.1523/JNEUROSCI.2775-15.2015

Benson, A., O'Toole, S., Lambert, V., Gallagher, P., Shahwan, A., & Austin, J. K. (2016). The stigma experiences and perceptions of families living with epilepsy: Implications for epilepsy-related communication within and external to the family unit. *Patient Education And Counseling*, *99*(9), 1473-1481. doi:10.1016/j.pec.2016.06.009

Berry, D. S., & Zebrowitz-McArthur, L. (1988). What's in a face? Facial maturity and the attribution of legal responsibility. *Personality And Social Psychology Bulletin*, *14*(1), 23-33. doi:10.1177/0146167288141003

Bivina, L., Moghaddam, B., & Wardinsky, T. D. (2013). Down syndrome. In R. L. Hansen, S. J. Rogers, R. L. Hansen, S. J. Rogers (Eds.) , *Autism and other neurodevelopmental disorders* (pp. 127-146). Arlington, VA, US: American Psychiatric Publishing, Inc.

Bull, M. J. (2011). Health supervision for children with Down syndrome.*Pediatrics*, *128*(2), 393-406.

Cerully, J. L., Collins, R. L., Wong, E., Seelam, R., & Yu, J. (2018). Differential response to contact-based stigma reduction programs: Perceived quality and personal experience matter. *Psychiatry Research, 259*302-309. doi:10.1016/j.psychres.2017.10.027

Couzens, D., Haynes, M., & Cuskelly, M. (2012). Individual and environmental characteristics associated with cognitive development in Down syndrome: A longitudinal study. *Journal Of Applied Research In Intellectual Disabilities*, *25*(5), 396-413. doi:10.1111/j.1468-3148.2011.00673.x

Cress, C. M., Collier, P. J., & Reitenauer, V. L. (2005). *Learning Through Serving: A Student Guidebook for Service-learning Across the Disciplines* (Second ed.). Stylus Publishing, LLC.

Cvencek, D., Nasir, N. S., O'Connor, K., Wischnia, S., & Meltzoff, A. N. (2015). The development of math–race stereotypes: 'They say Chinese people are the best at math'. *Journal Of Research On Adolescence*, *25*(4), 630-637. doi:10.1111/jora.12151

Delgado, N., Ariño, E., Betancor, V., & Rodríguez-Pérez, A. (2018). Intergroup trust and anxiety: The two sides of stigma towards people with Down syndrome. *Anales De Psicología,* 34(1), 117-122. doi:10/6018/analesps.34.1.267311

Dierssen, M. (2012). Down syndrome: The brain in trisomic mode. *Nature Reviews Neuroscience*, *13*(12), 844-858. doi:10.1038/nrn3314

Fidler, D. J., & Hodapp, R. M. (1999). Craniofacial maturity and perceived personality in children with Down syndrome. *American Journal On Mental Retardation*, *104*(5), 410-421. doi:10.1352/0895-8017(1999)104<0410:CMAPPI>2.0.CO;2

Frable, D. S., Platt, L., & Hoey, S. (1998). Concealable stigmas and positive self-perceptions: Feeling better around similar others. *Journal Of Personality And Social Psychology*, *74*(4), 909-922. doi:10.1037/0022-3514.74.4.909

Fuermaier, A. M., Tucha, L., Koerts, J., Mueller, A. K., Lange, K. W., & Tucha, O. (2012). Measurement of stigmatization towards adults with attention deficit hyperactivity disorder. *Plos ONE*, *7*(12),

Gilbert, D. T., Fiske, S. T., & Lindzey, G. (1998). *The handbook of social psychology*. Boston : McGraw-Hill ; New York : Distributed exclusively by Oxford University Press, 1998.

Gorn, G. J., Jiang, Y., & Johar, G. V. (2008). Babyfaces, trait inferences, and company evaluations in a public relations crisis. *Journal Of Consumer Research*, *35*(1), 36-49. doi:10.1086/529533

Gunn, P., & Cuskelly, M. (1991). Down syndrome temperament: The stereotype at middle childhood and adolescence. *International Journal Of Disability, Development And Education*, *38*(1), 59-70. doi:10.1080/0156655910380106

Jones, E. E., Farina, A., Hastorf, A. H., Markus, H., Miller, D. T., & Scott, R. A. (1984). *Social stigma: the psychology of marked relationships*. New York: W.H. Freeman and Co.

Keating, C. F., Randall, D. W., Kendrick, T., & Gutshall, K. A. (2003). Do Babyfaced Adults Receive More Help? The (Cross-Cultural) Case of the Lost Resume. *Journal Of Nonverbal Behavior*, *27*(2), 89-109. doi:10.1023/A:1023962425692

Kloza, E. M., Haddow, P. K., Halliday, J. V., O'Brien, B. M., Lambert-Messerlian, G. M., & Palomaki, G. E. (2015). Evaluation of patient education materials: The example of circulating cell free DNA testing for aneuploidy. *Journal Of Genetic Counseling*, *24*(2),

259-266. doi:10.1007/s10897-014-9758-8

Koike, S., Yamaguchi, S., Ojio, Y., & Ando, S. (2018). Social distance toward people with schizophrenia is associated with favorable understanding and negative stereotype. *Psychiatry Research*, *261*264-268. doi:10.1016/j.psychres.2017.12.081

Langer, E. J., Bashner, R. S., & Chanowitz, B. (1985). Decreasing prejudice by increasing discrimination. Journal Of Personality And Social Psychology, 49(1), 113-120. doi:10.1037/0022-3514.49.1.113

Lawson, K. M., Kooiman, L. Y., & Kuchta, O. (2017). Professors' behaviors and attributes that promote u. S. Women's success in male-dominated academic majors: Results from a mixed methods study. *Sex Roles,* doi:10.1007/s11199-017-0809-0

Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review Of Sociology*, *27*363-385. doi:10.1146/annurev.soc.27.1.363

Livingston, R. W., & Pearce, N. A. (2009). The teddy-bear effect: Does having a baby face benefit Black chief executive officers?. *Psychological Science, 20*(10), 1229-1236. doi:10.1111/j.1467-9280.2009.02431.x

Lott, I. T., & Dierssen, M. (2010). Cognitive deficits and associated neurological complications in individuals with Down's syndrome. *The Lancet Neurology, 9*(6), 623-633. doi:10.1016/S1474-4422(10)70112-5

Major, B., & Townsend, S. S. M. (2010). Coping with bias. In J. F. Dovidio, M. Hewstone, P. Glick, & V. M. Esses (Eds.), *The Sage Handbook of Prejudice, Stereotyping and Discrimination*. Web resource: *SAGE Reference Online*.

Masip, J., Garrido, E., & Herrero, C. (2004). Facial appearance and impressions of credibility: The effects of facial babyishness and age on person perception. *International Journal Of*

Psychology, *39*(4), 276-289. doi:10.1080/00207590444000014

Moss, S. (2016, July 5). Babyface overgeneralization effect. Retrieved October 26, 2017, from https://www.sicotests.com/psyarticle.asp?id=340

Pachankis, J. E. (2007). The psychological implications of concealing a stigma: A cognitive-affective-behavioral model. *Psychological Bulletin*, *133*(2), 328-345. doi:10.1037/0033-2909.133.2.328

Povee, K., Roberts, L., Bourke, J., & Leonard, H. (2012). Family functioning in families with a child with Down syndrome: A mixed methods approach. *Journal Of Intellectual Disability Research*, *56*(10), 961-973. doi:10.1111/j.1365-2788.2012.01561.x

Prothro, E. T., & Melikian, L. H. (1955). Studies in stereotypes: V. Familiarity and the kernel of truth hypothesis. *The Journal Of Social Psychology*, *41*3-10.doi:10.1080/00224545.1955.9714248

Quinn, D. M., & Earnshaw, V. A. (2013). Concealable stigmatized identities and psychological well-being. *Social and Personality Psychology Compass, 7*, 40-51.

Rule, N.O., & Ambady, N. (2008). The face of success: Inferences from chief executive officers' appearance predict company profits. *Psychological Science*, 19, 109-111.

Rush, L. L. (1998). Affective reactions to multiple social stigmas. *The Journal Of Social Psychology*, *138*(4), 421-430. doi:10.1080/00224549809600397

Schulze, B., & Angermeyer, M. C. (2003). Subjective experiences of stigma. A focus group study of schizophrenic patients, their relatives and mental health professionals. *Social Science & Medicine (1982)*, *56*(2), 299-312.

Stuart, H., Arboleda-Flórez, J., & Sartorius, N. (2012). *Paradigms lost: Fighting stigma and the lessons learned*. New York, NY, US: Oxford University Press.

Towler, A. J., & Schneider, D. J. (2005). Distinctions Among Stigmatized Groups. *Journal Of Applied Social Psychology*, *35*(1), 1-14. doi:10.1111/j.1559-1816.2005.tb02090.x

Varughese, S. J., & Luty, J. (2010). Stigmatised attitudes towards intellectual disability: A randomised crossover trial. *The Psychiatrist*, *34*(8), 318-322. doi:10.1192/pb.bp.109.027789

Wishart, J. G., & Johnston, F. H. (1990). The effects of experience on attribution of a stereotyped personality to children with Down's syndrome. *Journal Of Mental Deficiency Research*, *34*(5), 409-420.

Zebrowitz, L. A. (1997). *New directions in social psychology. Reading faces: Window to the soul?* Boulder, CO: Westview Press.

Zebrowitz, L. A., Bronstad, P. M., & Lee, H. K. (2007). The contribution of face familiarity to ingroup favoritism and stereotyping. *Social Cognition*, *25*(2), 306-338. doi:10.1521/soco.2007.25.2.306

Zebrowitz, L. A., & Montepare, J. M. (2008). Social psychological face perception: Why appearance matters. *Social And Personality Psychology Compass*, *2*(3), 1497-1517. doi:10.1111/j.1751-9004.2008.00109.x

Zebrowitz, L. A., & Montepare, J. M. (1992). Impressions of babyfaced individuals across the life span. *Developmental Psychology*, *28*(6), 1143-1152. doi:10.1037/0012-1649.28.6.1143

Tables and Figures

Table 1: Scores for participants from each condition for innocence, honesty and easy-going (high babyface traits).

	Mean	Standard deviation	Range
Non-Babyface Condition	13.25	1.87	9.00
Babyface Condition	13.20	1.71	8.00
Down Syndrome Condition	12.58	1.82	11.50

Table 2: Scores for participants from each condition for competitiveness and manipulativeness (low babyface traits).

	Mean	Standard deviation	Range
Non-Babyface Condition	8.50	1.73	7.75
Babyface Condition	8.06	1.81	8.75
Down Syndrome Condition	7.15	2.35	11.50

Table 3: Means of the sums of measures high in babyface overgeneralization for participants who were familiar compared to those who were not from the Down syndrome condition.

	Average sum of honesty, innocence and easy-going scores
Familiar	12.53
Not Familiar	12.61

Table 4: Means of the sums of measures low in babyface overgeneralization for participants who were familiar compared to those who were not from the Down syndrome condition.

	Average sum of competitiveness and manipulativeness scores
Familiar	7.07
Not Familiar	7.18

Appendix A

Demographics

Gender:

- Female (1)
- Male (2)
- Other (3)
- Prefer not to answer (4)

Age:

- 18-24 (1)
- 25-34 (2)
- 35-44 (3)
- 45-54 (4)
- 55-64 (5)
- 65 or older (6)

Education:

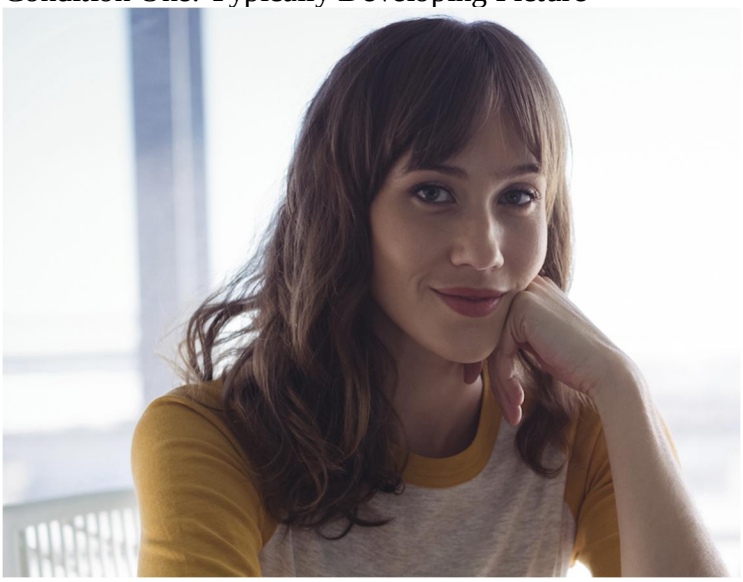
- Did not complete High School (1)
- High School/GED (2)
- Some College (3)
- Bachelor's Degree (4)
- Master's Degree (5)
- Advanced Graduate work or Ph. D. (6)

Appendix B

Conditions

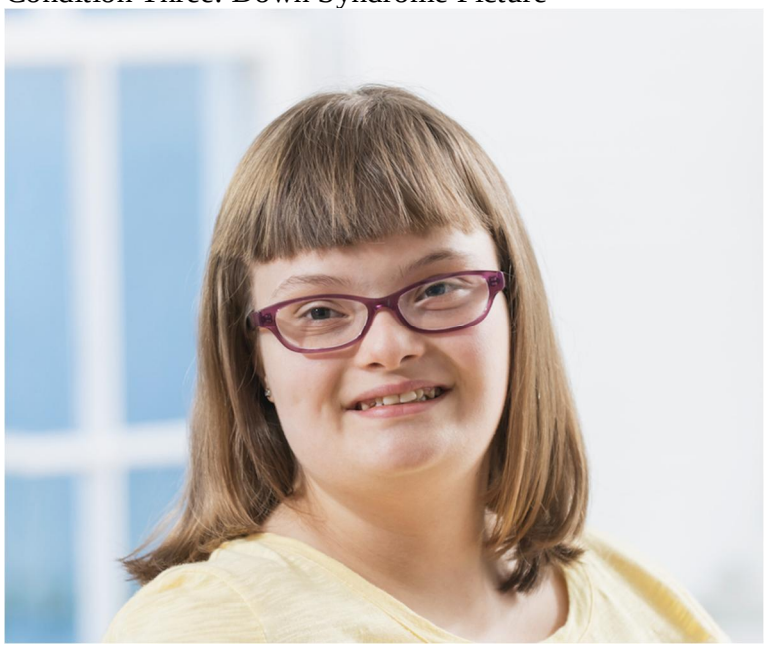
All participants were given one of the following pictures with the caption “This is Emma;”

Condition One: Typically Developing Picture



Condition Two: Babyface Picture

Condition Three: Down Syndrome Picture



Appendix C

Babyface Overgeneralization Questions

The following 25 questions were answered on a scale from one (extremely likely) to seven (extremely unlikely):

Innocence/Naivety:
Given five dollars and told if she waits one week without spending it she can have ten more, how likely would Emma be able to wait the full week?

How likely do you think it is that Emma would believe a far-fetched story you told on April 1st?

If Emma saw two people kissing in a movie theater, how likely do you think she would be to think it was scandalous?

How likely would it be for Emma to understand a sarcastic comment that someone made toward her?

Honesty:
How likely would it be that Emma would lie on her taxes?

How likely would it be for Emma to steal a pack of gum or a candy bar from a grocery store?

How likely would Emma be to tell a lie to her manager if she made a mistake at work?

If Emma did not like what you were wearing, and you asked for her opinion, how likely would it be that she would tell you exactly how she felt about it?

Non-Manipulative:
How likely do you think it would be for Emma to guilt you into doing something that you did not want to do in the first place (for example: drive them to the store after you said you could not)?

How likely do you think it would be for Emma to blame you for something that she did?

How likely do you think it would be that Emma would low ball you (for example: tell you a product she was selling is $20 but leave out that there is a handling fee of $5 so the product actually costs $25)?

How likely do you think it would be that Emma would talk about you negatively behind your back?

Competitive:
How likely do you think it would be for Emma to be upset if she lost her basketball game?

When black Friday shopping, how likely do you think it would be for Emma to push and shove other customers so she could get a certain product?

How likely would it be for Emma to stand up for herself on why she deserves a job more than someone else?

How likely would it be for Emma to flaunt a good score she got on a test if she knew she did well relative to other people?

Easy-going:
If you and Emma spent a day together, how likely do you think she would be to comply with all of your wishes about movie choice, restaurants and when it is time to go home?

How likely would it be that Emma would appreciate a surprise trip to New York City?

If you were out to dinner with Emma and there was only one bread stick left, how likely would she be to offer you the last one?

How likely do you think it would be that Emma would be bothered if she knew that she came up in someone else's group conversation?

Filler questions:
If you are reading the questions, enter "3"?

Enter the number that is between 4 and 6?

Which of the following is a color?

- Saturday
- Pink
- Chair
- Pants
- 3

Who was the first president?

_____

Appendix D

Familiarity Question

Do you personally know anybody who has Down syndrome?

- Yes
- No