Effects of Stigma on Facial Judgment

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Abstract

Research indicates that the stigma associated with mental illness impacts perceptions of danger, and desired social distance, which could be translated into friendliness. The averageness hypothesis states that the average face is preferred over low attractive or high attractive faces. We presented paired stigma and non-stigma Words randomly with computer generated composite Faces at three levels (low attractive, average, and high attractive) to participants (N=20) and asked them to rate the faces using a Likert scale (*1-7*) for perceived friendliness, safety, and attractiveness. A Word was presented for 5 s, followed by one of 18 randomized Faces (5 s), and finally a prompt to rate the image. Results were analyzed using a 2 x 3 (Word by Face) ANOVA. The results indicated a significant interaction between the stigma Word and the Face for the rating of friendliness. Specifically, the average Face was most negatively impacted by the introduction of the stigma Word. The presence or absence of the stigma Word singularly affected ratings of safety and friendliness, while the attractiveness level of the Face had a significant impact on all three variables (safety, friendliness, and attractiveness). Our results are consistent with the averageness hypothesis, as well as with current research regarding the negative stigma associated with mental illness.

Keywords: stigma, attractiveness, mental illness

Effects of Stigma on Facial Judgment

Mental illness is a growing problem that can negatively affect a person's life. According to the National Institute of Mental Health (2014), in 2012 over 18% of adults had been diagnosed with a mental disorder. The negative stigma often associated with mental illness creates many issues for those diagnosed, often leading to reduced opportunities for housing, employment, and relationships (Kvaale, Gottdiener, & Haslam, 2013). There have been recent efforts to reduce stigma by identifying mental illness as biogenetically caused and out of the patients control; however, these efforts have not had the desired results. Although, associating mental illness with a biogenetic cause results in decreased blame towards the patient for their illness, it may also increase associated negative stigma, ratings of danger, and a desire for social distance. Kvaale, et al. performed a meta-analysis of 25 studies regarding the relationship of biogenetic explanations for mental illness and associated perceptions of blame, dangerousness, and desired social distance. They found that increased perceptions of dangerousness were consistent across the span of mental disorders, and increased desire for social distance and perceptions of blame were high for schizophrenia. These findings indicate that encouraging a biogenetic explanation of mental illness may not be ideal for reducing stigma associations.

The biogenetic label is only one of the labels that psychologists have attempted to apply to mental illness. Angermeyer and Matschinger (2003) examined how the common person would label someone depicted as having either schizophrenia or depression. Over 70% of those surveyed labeled schizophrenia as a "mental illness", while over 60% labeled depression as such. They also found a positive correlation between labeling someone as "mentally ill" and perceptions of danger, fear, and anger. They also found that these perceptions lead to an increased desire for social distance. These negative attributes were not applied when the person

depicted was labeled as having major depression. This indicates that some labels may induce more negative stigma than others may.

A known diagnosis is not required for the label or the stigma of mental illness to be attached to a person. Without knowing that a person is mentally ill, the attributes of mental illness may be applied to them based on social cues (Corrigan, 2004). Correct or incorrect judgments of mental illness are often assigned based on visible symptoms, social-skills issues, and physical appearance. Not only do stigmas associated with mental illness come from others, a person suffering from a mental illness may place stigma on himself based on cultural views related to his illness. The knowledge of this associated stigma is often what leads one to avoid seeking diagnosis and the treatment they need. By avoiding diagnosis, they hope to avoid the label and the stigma. Demographics such as age and race also affect perceived stigma and the likelihood of treatment. Younger people are more likely to attach negative stigma to mental illness diagnoses; however, those over 65, with a greater level of stigma attachment to mental illness, were more reluctant to seek treatment. It is also important to note that African Americans and Hispanics are less likely to seek psychiatric services, than European Americans. It seems that non-Caucasians seem to have a greater prejudice against using the medical system for mental health care, while also expressing a greater worry about potential family reactions. This indicates that there are some cultural differences related to how one perceives stigma.

Mental illness perceptions and stigma may be related to a sense of control. A survey of Chinese adults by Mak, Chong, and Wong (2014) indicated that those who judged mental illness to be something that is not caused by biological, personality, or life events, judged patients as having a lower ability to manage their symptoms, and out of control. This lack of controllability was aligned with increased stigma and decreased acceptance. The unpredictable and

uncontrollable nature of mental illness may be what causes fear, leading to an increased sense of danger, and results in the attached stigma. This study indicates focusing the public's attention on psychosocial causes, rather than on biological causes of mental illness, as Kvaale, Gottdiener and Haslam (2013) indicated, may lead to reduced stigma and negative perceptions of mental illness.

Labels are not the only factor that create social stigma. As Corrigan (2004) noted appearance alone is enough for one to establish perceptions of mental illness and social stigma. Facial attractiveness is assessed on a variety of factors, and may affect judgments about others. Fink and Penton-Voak (2002) noted that attractiveness judgments are determined on factors of symmetry, averageness, and hormone markers. Facial Symmetry is highly correlated to both attractiveness, and assumed health of an individual; yet, asymmetric faces have generally been preferred to symmetric faces in studies. Perrett, et al. (1999) showed that this preference for asymmetry might be a result of a variety of confounding factors, regarding how the composite faces were combined. Increased preference for symmetrical faces may be a result of equating symmetry to health and youth, rather than symmetry itself. Jones, et al. (2001) found a correlation between a participant's judgment of the health of the individual being rated, and their attractiveness level. The averageness hypothesis states that faces that are more common, or consistent with those seen most often, are considered more attractive. Komori, Kawamura, and Ishihara (2009) compared averageness and symmetry and found that averageness is the most important factor in determining what one finds attractive. Contrary to the averageness theory, the contrast theory of facial attraction states that perceived attraction increases or decreases with distance from mean attractiveness level. The findings of DeBruine, Jones, Unger, Little and Feinberg (2007) supported the contrast theory, and indicated that while averageness is a component in attractiveness, it is not the only component. Rashidi, Pazhoohi, and Hosseinchari

(2012), showed that judgment of attraction can occur in as little as .2 s, and that those who

viewed facial images for shorter times judged the faces as more attractive than those who viewed

them for longer. The qualities of facial attraction can work with other factors to affect the

positive and negative attributes that are associated with a person.

There are many negative terms associated with mental illness, some of which evoke more

stigma than others. Szeto, Luong, and Dobson (2012) found that there is a distinct difference

between general labels, such as "mental illness", and more specific labels like depression. Their

surveys indicated that the more general terms containing the word "mental" were more likely to

be judged as something that was biological or caused by external factors. The term "depression"

resulted in lower ratings of friendliness, and unpleasantness, and was judged more negative

overall. The survey responses indicate a possible lack of understanding of the overlap of general

mental disorders and specific labels. Some results also indicated a feeling that depression was

more controllable, and temporary, while the more general terms were considered to be biological

or functional problems, beyond the patients' control. When asked to state what terms come to

mind in response to the term depression, such negative feelings as hopeless, sad, and stressed

were common responses, with less common responses including delusional. Alternatively, the

terms that came to mind in response to the more general terms were more severe, and included

schizophrenia, psychopath, and delusional. Overall, the study indicated that specific labels carry

a higher level of stigma than the more general terms associated with mental illness.

Judgment of facial attractiveness can be made in a seconds. In our study we continued

with the methods provided by Rashidi, et al. (2012), regarding the speed at which judgments of

attractiveness can be made. We combined these methods with the negative labels resulting from

the Szeto, et al. (2012) study by displaying stigmatizing and non-stigmatizing words related to

mental health with computer generated facial images to determine if viewing these words prior to the faces would affect the participants judgments of attraction, safety, and friendliness. In this study, we hypothesized that the ratings of friendliness, safety, and attractiveness would be influenced by the presence or absence of stigma Word, creating a main effect for Word. We also hypothesized that there would be a main effect for Face, in that the ratings would be influenced by the attractiveness level of the Faces. Finally, we hypothesized that there would not be an interaction between the Word and the Face, but rather that each would be independent.

Method

Participants

College students ($N = 20$) participated in the experiment for extra credit. Participants knew the purpose of the study and were involved in creating and collecting the data. There was no random assignment. Visual inspection of the session indicated that the majority of the participants were over 21 (75%), female (95%), and white (80%). Ethical guidelines established by the American Psychological Association were followed.

Design

A 2 x 3 (Word x Face) within subjects design was used to examine the impact of stigma words and attractiveness levels on ratings of friendliness, danger, and attractiveness. Words presented were either neutral or stigma words related to mental health. The stigma words were chosen to induce negative psychological response based on the design of Szeto, et al. (2013). Stigma and non-stigma words were paired for length. Facial stimuli included low attractive, average, and high attractive faces. Words were randomly paired with faces, and faces were rated on a Likert scale of *1-7* for unfriendliness to friendliness, dangerous to safe, and unattractive to attractive.

Materials

A total of 18 images were embedded twice in a Powerpoint program; these included six high attractive, six average, and six low attractive faces (Figure 1). Braun, Gruendl, Marberger, and Scherber (2001) provided the computer-generated, morphed, composite images. Image sizes varied and ranged from 3.75 in to 7 in. Faces included an equal number of white men and women, with brown hair pulled away from the face. A practice trial displaying an unrelated neutral image of a college mascot and the unrelated neutral word "house" were created using the same font and image layout. Images were randomly sequenced and paired with either stigma or non-stigma words.

Words were displayed in black, Calibri light 88 point font on a gray background for 5 s, followed by images displayed for 5 s. Participants were then shown a gray slide with a prompt to respond, using the printed rating sheet, for 7 s. Stigma and non-stigma Words were matched and chosen for length, ranging from 3 - 13 letters. Stigma words were chosen to induce negative psychological reaction. We began our word list using the negative stereotype words that Szeto, et al. (2013) found to be associated with depression and mental illness.

A script was used to guide the participants through the session. The rating sheet included options for each of the 36 images, where participants were asked to rate the images for friendliness, danger, and attractiveness on a Likert scale of *1-7*. A post task questionnaire served as a manipulation check and demographic survey. The post task questionnaire confirmed demographic information such as participant's age, and whether the participants spoke English. The manipulation check questions assessed whether participants could clearly view the images, whether there were any issues or distractions during the study, and if the participants had previously seen the images or completed the study. The post task questionnaire also asked

participants if they personally identified with any of the words displayed. If they indicated that

they did, they were asked to specifically list which words they felt were personally relevant.

Procedure

Participants were randomly assigned a participant number at their computer station and

tested as a group. Consent forms were discussed and questions answered prior to signing.

Participants were guided through a practice trial displaying an unrelated image to ensure that

they understood the procedure. Using the methods from Rashidi, et. al (2012), participants were

randomly presented with a word (5 s), followed by an image (5 s), and then given 7 s to rate the

image on three criteria, using the rating sheet provided. Each of the 18 images was displayed

twice, in random order, for each participant; they were asked to rate each image for

attractiveness, friendliness, and perceived danger. Once all participants were comfortable with

the procedure the experiment began, presenting 36 faces. When all ratings were completed,

participants completed the post-task questionnaire for demographic and manipulation check and

were debriefed before being released. Total session time was approximately 30 min.

Statistics

A scoring key was used to track which images were low attractive, average, or high

attractive faces. Scores entered on the Likert scale for the three dependant variables of

friendliness, safety, and attractiveness were combined and averaged to determine mean results.

Data were missing or double marked for three participants on multiple slides, in these instances

means were calculated by averaging the remaining data. Results were analyzed using 2 X 3

ANOVA using the SPSS program to evaluate the effects of Word and Face on the dependent

variables of safety, friendliness, and attractiveness. Alpha level was set at $p < .05$.

Results

Figure 2 depicts a significant main effect for Word on the judgments of safety, $F(1, 19) = 13.17$, $p = .002$, $\eta_p^2 = .409$. Stigma words resulted in lowered judgments of safety across all Faces. The main effect for Face was also significant, $F(2, 39) = 14.33$, $p < .001$, $\eta_p^2 = .430$. The attractiveness level of the facial stimuli impacted the safety ratings, with low attractive faces judged as most dangerous. There was not a significant Word by Face interaction for safety, $F(2, 38) = 1.28$, $p = .29$.

Figure 2 shows a significant main effect for Word on the judgment of friendliness, $F(1, 19) = 12.91$, $p = .002$, $\eta_p^2 = .405$. Stigma words decreased the friendliness ratings for faces in all attractiveness levels. There was a significant main effect for Face, $F(2, 38) = 12.61$, $p < .001$, $\eta_p^2 = .399$. The low attractive faces had the lowest rating for friendliness, regardless of the presence or absence of stigma word, while average faces were rated as most friendly. Finally, we found a significant Word by Face interaction, $F(2, 38) = 4.10$, $p = .025$, $\eta_p^2 = .177$. This interaction was specific to the average face, where the presentation of the stigma word decreased the attractiveness rating of the average face, while it had little effect on the ratings of either the low attractive or high attractive face.

As seen in Table 2, ratings of attractiveness are determined only on the attractiveness level of the face, and are not impacted by the presentation of stigma or non-stigma word. This indicates a significant main effect for Face, $F(2, 38) = 79.56$, $p < .001$, $\eta_p^2 = .807$. Judgments of attraction showed no main effect for Word, $F(1,19) = 1.52$, $p = .23$. The presentation of stigma or non-stigma word did not affect the attractiveness ratings. There was not a Word by Face interaction for attraction, $F(2, 38) = 1.81$, $p = .18$.

Discussion

Consistent with our hypothesis, the presentation of a stigma Word had an impact on the ratings of safety and friendliness. Faces at all levels of attractiveness were judged to be more dangerous when the stigma Word was presented. This is consistent with the findings of Kvaale, et al. (2013) who found that stigma of mental illness increased perceptions of danger. Presentation of the stigma Word also resulted in lowered ratings of friendliness; however, this effect was greatest when paired with average faces. This may relate to the findings of Kvaale et al. that stigma increased desired social distance. The results also correspond with Corrigan's (2014) findings that the stigma of mental illness can be attached to a person based on visual cues. The presentation of stigma Word did not have a significant effect on ratings of attractiveness. Ratings of attractiveness were based only on the attractiveness level of the Face displayed. This indicates that one's perceptions of danger, or implied mental illness, do not impact their judgment of attractiveness.

Consistent with our hypothesis, the attractiveness level of the Faces impacted the ratings of friendliness, attractiveness, and safety. Specifically, the average Faces in our study were rated higher on all counts than the low attractive faces. These results are consistent with the averageness hypothesis (DeBruine, et al., 2007). The average faces were also rated higher than the high attractive faces for friendliness and safety. There was no significant difference in ratings of attractiveness between the average and high attractive faces Our hypothesis that there would be differences in the ratings of friendliness, danger, and attractiveness based on facial attractiveness was supported, as there were differences on all levels except one. This exception may provide support for the contrast theory, as discussed by DeBruine, et al. The significantly higher ratings of safety and friendliness for average attractiveness over low and high

attractiveness support the averageness hypothesis, and also indicate that humans show a higher

level of trust for those faces that are similar to what they see most often.

What is most significant is the interaction between the stigma Word and the

attractiveness level of the Faces. While the stigma Word and the different Face stimuli had

individual affects throughout, there was a significant interaction for the rating of friendliness.

While all Faces were judged less friendly when combined with a stigma Word, it was the

average face that was most affected. The average Face is the face that people are generally most

comfortable with (Debruine, et al., 2007); therefore, we would expect that it would be the one

least affected. However, our study shows that when the average Face is attached to a stigma

Word, the attractiveness level of that Face is negatively impacted to a greater extent than the low

attractive or the high attractive Face.

Labeling of mental illness can come in many forms. It can be provided as a diagnosis, or

be given based solely on someone's appearance. Our literature review indicates that the words

used to apply the label matter little in how the labeled person is perceived (Kvaale, et al., 2013).

Some labels, such as depression, are more likely to lead to blaming the individual for their illness

(Angermeyer and Matschinger, 2003), increasing the stigma and negative perceptions of the

labeled person. As Corrigan (2004) indicated, social cues and personal appearance are enough

for one to judge another as mentally ill. Our current study confirms this. It is important to find

ways to reduce this negative stigma, and blame associated with mental illness, to enable those

who need treatment to feel comfortable seeking it. In our study, five participants indicated that

they identified with at least one of the stigma words displayed. It is possible that others did but

were not comfortable reporting it, even anonymously. One participant indicated that they

identified with "too many words to remember". Given the National Institute of Mental Health's

(2014) report that over 18% of people have been diagnosed with a mental illness, it is not surprising that 20% of our participants could relate to these negative stigma words. Even if one has not been diagnosed with an illness personally, it is extremely likely that someone they are close to has been. Therefore, it is extremely important to find ways to reduce this stigma.

We experienced several limitations within this study, including a small sample size, limited number of male participants and issues related to exposure of materials. Confounds were likely introduced into our study by the involvement of many of the participants in developing the materials, specifically for those who have previously seen the images, or who created the word list. This may have resulted in practice or carry-over effects, or perhaps to desensitizing those who had seen the words or images most often. Because all participants had knowledge of the experiment, they may also have had internal bias that may have affected their responses. It may prove valuable to repeat this experiment using only those who have had no prior involvement with the study. There may also have been a drift effect resulting from the large number of images that the participants were asked to rate; they may have become bored towards the end causing them to take less care in their ratings. The lack of gender balance among participants may have also affected the ratings (Komori, et al, 2009). Further research could be pursued to assess whether ratings would be consistent with a larger and more gender-balanced pool of participants. We included 18 different stigma Words in our study, yet we did not examine which words may have resulted in what ratings. We know that certain mental health terms result in more stigma than others (Kvaale, et al., 2013); therefore further study to examine which of our Words had the most impact on negative ratings could be beneficial.

One would expect that different levels of attractiveness in morphed images would result in different attractiveness ratings; however, we might not have assumed that the average faces

would be rated higher than high attractive faces. Alternatively, that is exactly what averageness

hypothesis indicates (DeBruine, et al., 2007). Our results here are consistent with research

revealing that the negative stigma associated with mental illness impacts ratings of friendliness

and safety (Kvaale, et al., 2013). Computer generated morphed faces at three attractiveness

levels were paired with either stigma or non-stigma inducing Words to determine if either the

Face or the Word had an impact on judgments of safety, friendliness, or attractiveness.

Contrasting with the averageness hypothesis, there was no significant difference in the

attractiveness ratings for the average attractive faces when compared to the high attractive faces;

however, in all other areas the average faces were rated significantly higher than either the high

attractive faces or the low attractive faces. These results coincide with the averageness

hypothesis that average faces are judged more attractive, and more trustworthy than other faces.

As expected, the stigma inducing Words also resulted in lower ratings of safety and friendliness.

This aligns with previous research indicating that terms associated with mental illness result in

increased perceptions of dangerousness, and an increased desire for social distance (Kvaale, et

al.). The average Face is a representation of what people are most comfortable with, so it is

surprising to see that these Faces were the most negatively impacted by the stigma Word.

Attaching a stigma Word results in reduced feelings of safety, and increased social distance even

from someone that would otherwise be considered the least dangerous and most friendly.

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Table 1

Word List

_____

Neutral Words   Stigma Words

_____

joy	fair	psychopath	lost
calm	quiet	hopeless	bipolar
obey	compliment	hostile	cruel
peaceful	harmony	vengeful	crazy
normal	average	disturbed	liar
standard	practical	unstable	greedy
ordinary	tradition	schizophrenic	OCD
typical	accommodating	cheater	PTSD
usual	relaxed	depressed	broken

_____

Table 2

Attractiveness Ratings

_____

	Stigma		Non-Stigma	
	M	*SE*	*M*	*SE*
Low	2.8	.23	2.9	.25
Ave	4.9	.20	5.3	.14
High	5.1	.15	5.1	.22

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Figure 1. Above are examples of low attractive (left), average (center), and high attractive (right) female faces.
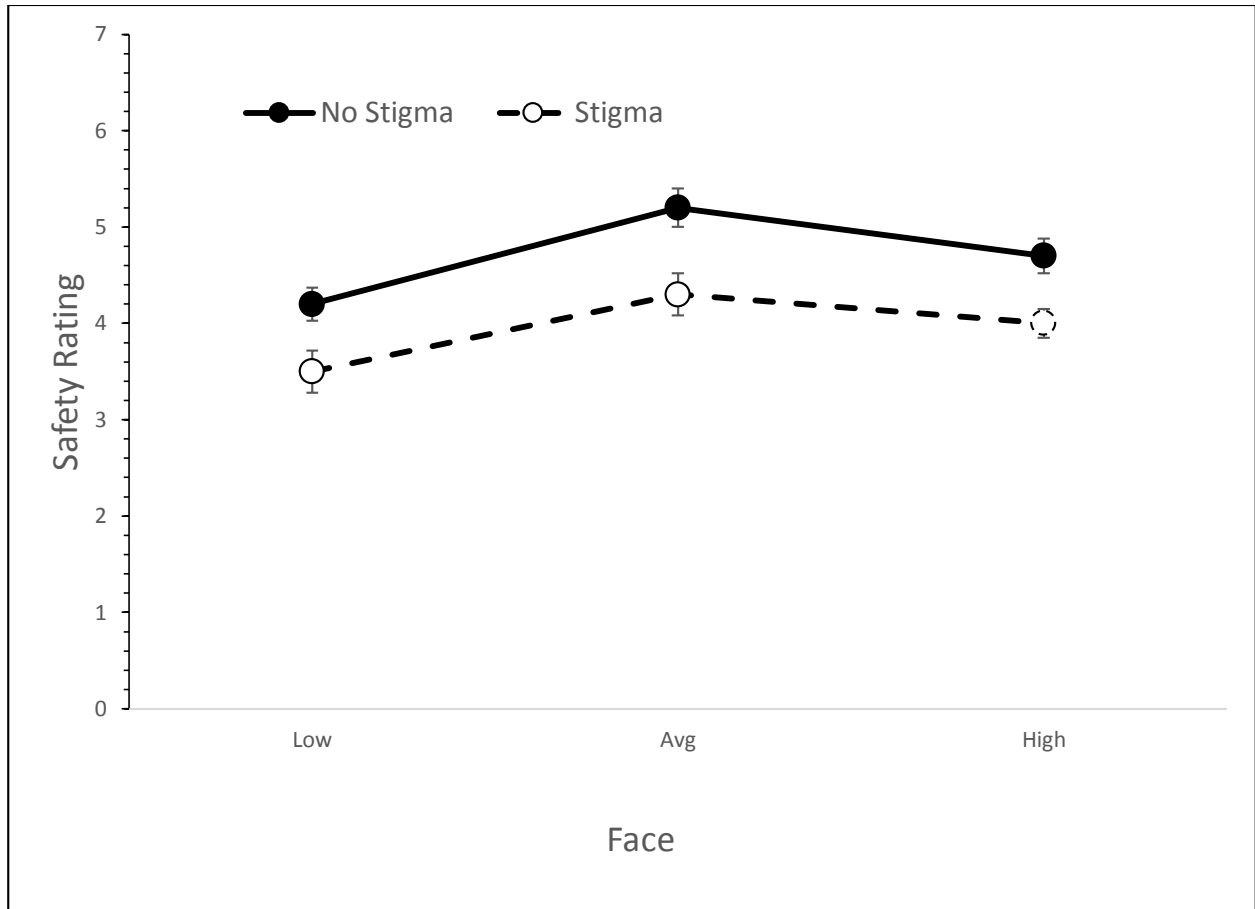
Figure 2. Ratings of safety are affected by facial attractiveness, and stigma word.
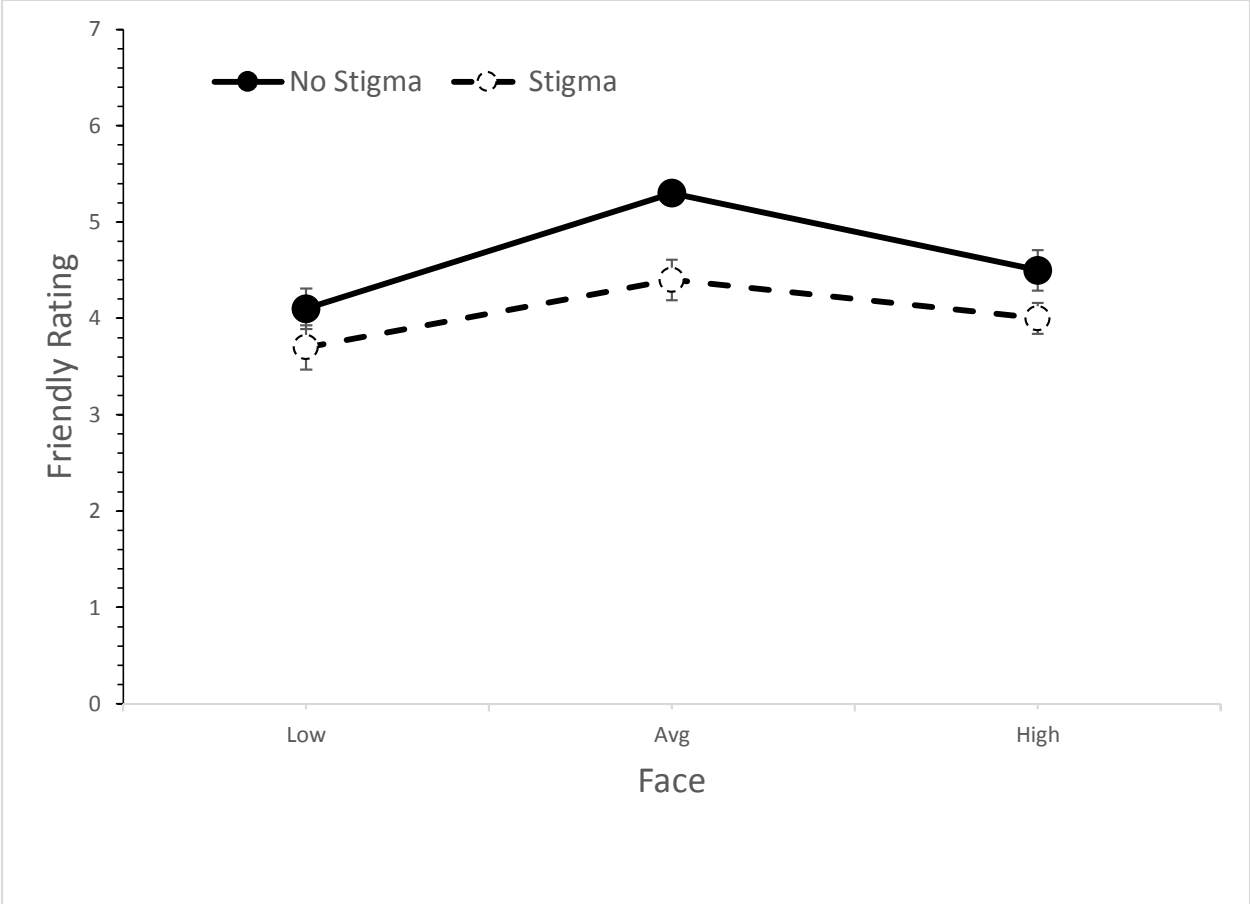
Figure 3. Ratings of friendliness are affected by facial attractiveness and stigma word. Average

Faces show the greatest negative impact by introduction of stigma Word.