# ATTRACTIVENESS STEREOTYPE, SEVERITY OF ILLNESS, AND PERCEPTIONS OF A CHILD TARGET: DOES CANCER INDUCE UNIQUE ATTRIBUTIONAL JUDGMENTS?

A Thesis
by
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PERCEPTIONS OF A CHILD TARGET: DOES CANCER INDUCE UNIQUE
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FOREWORD

This thesis is written in accordance with the style of the *Publication Manual of the American Psychological Association (6th edition)* as required by the Department of Psychology at Appalachian State University.

ABSTRACT

ATTRACTIVENESS STEREOTYPE, SEVERITY OF ILLNESS, AND
PERCEPTIONS OF A CHILD TARGET: DOES CANCER INDUCE UNIQUE
ATTRIBUTIONAL JUDGMENTS?

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Given that previous research provides conflicting evidence regarding

perceptions of a target with cancer, the current study aimed to identify whether

severity of this illness drives perceptions or if the diagnosis of cancer holds unique

stereotypes in judgment. The study was modeled after Gruman and Sloan's (1983)

study, which found that an adult target was rated more positively when described as

having cancer than when described as suffering from either indigestion or pneumonia.

Because the illnesses used in their study varied not only in severity, but also

contagion and localization of the illness, the current study sought to modify their

design by holding these factors constant and by using a child target.  Two hundred

ninety-four college students were presented with a stimulus paragraph about a 10-

year-old female child who was described as being in good health or as suffering from

one of three illness conditions:  (a) a fictitious illness called Haltmar's disease,

described like a brain tumor; (b) a fictitious illness called Haltmar's disease,

described like cancer; or (c) the diagnosis of cancer. A photo of a 10-year-old girl

manipulated to look healthy or unhealthy accompanied the materials.  Thus, the study

employed a 4 (illness) x 2 (child appearance) factorial ANOVA.  Results indicated

that favorability for the child target was not linearly influenced by severity of illness

and a cancer stereotype was not observed.  An attractiveness stereotype was not

detected in the current findings and participants' Just World Beliefs did not impact

perceptions of the target. However, when the child was portrayed as sickly and

unattractive, the illness label was influential on ratings of likability.

*Keywords*:  illness, perception, just world belief, attractiveness stereotype, cancer

ACKNOWLEDGMENTS

DEDICATION

This thesis is dedicated to my parents, Cheryl and Scott Telk. I would not be

where I am today without them, and I am eternally grateful for their love and support.

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Attractiveness Stereotype, Severity of Illness, and Perceptions of a Child Target:

Does Cancer Induce Unique Attributional Judgments?

Almost 40 years ago, Dion, Berscheid, and Walster (1972) conducted the seminal study showing the tendency to prejudge others based only on their physical appearance. Specifically, they were the first to document an attractiveness stereotype whereby more attractive individuals were ascribed more favorable traits and perceived to live more satisfying lives than less attractive individuals. The majority of research that has followed has demonstrated that individuals attribute generally more positive characteristics to attractive people compared to unattractive people (Bassili, 1981; Dion & Dion, 1987). Inclusive characteristics range from social advantages to generally more positive life outcomes (for a full review, see Eagly, Ashmore, Makhijani, & Longo, 1991). A meta-analysis performed by Eagly et al. (1991) found that 91% of research has demonstrated evidence supporting the what-is-beautiful-is-good (WBG) stereotype, although the magnitude of the effect has varied across studies.

Eagly et al. (1991) stated that, "In general, the beauty-is-good stereotype should become smaller as the amount of other information about targets increases… people combine items of information into an overall judgment" (p. 113). In other words, one may be inclined to stereotype a physically attractive stranger as having a positive personality, but the more one is familiar with someone or has personal interactions with someone, the less likely one will use the attractiveness stereotype to judge that someone (i.e., people rely on cues other than simply physical appearance, such as behavioral tendencies). On the other hand, a person's previous experience

interacting with attractive people may encourage continued use of the WBG

stereotype. It seems reasonable to suggest that if attractive individuals possessing

positive personality traits and embodying idyllic lifestyles are encountered, the

attractiveness stereotype would be further perpetuated.

Research has documented preference for attractive individuals at a very young

age (Langlois et al., 2004). Ashmore and Del Boca (1979) described the preference

for attractiveness as "a structured set of inferential relations that link a social category

with personal attributes" (p. 225). Ramsey et al. (2004) discovered that infants as

young as six months have the ability to distinguish between attractive and unattractive

faces. Further, infants group faces into attractive and unattractive categories. The

preference for, and ability to categorize, attractive faces, the authors believe, is the

cognitive prerequisite of the formation of the attractiveness stereotype. Ramsey et al.

also predict that after experience and behavioral interaction with attractive and

unattractive individuals, by early childhood, one's WBG stereotype develops.

Eagly et al. (1991) proposed the media as a possible culprit of bolstering

the attractiveness stereotype. People shown in popular media tend to possess above-

average physical appearance and are portrayed as having, overall, generally positive

characteristics. For instance, motion pictures or television programs may reinforce

one's stereotypes about attractive individuals obtaining more social advantages than

unattractive individuals (Eagly et al., 1991; Smith, McIntosh, & Bazzini, 1999).

Disney movies have been historically cited as a concrete embodiment of this

stereotype of unattractive characters portrayed as evil doers, while attractive

characters are portrayed as heroic and promoting good. Empirical support for such

films reliably linking these qualities was established by Bazzini, Curtin, Joslin, Regan, and Martz (2010). They found that across animated Disney films, a strong positive correlation existed between a character's attractiveness and his or her moral virtue, intelligence, and positive life outcomes. Furthermore, in a second study evaluating the potential impact of viewing such films, Bazzini et al. (2010) found that a single viewing of a film strongly endorsing the beauty bias did not affect children's views of a same-age peer.  However, they did find that children ages 6 through 12 years-old rated an attractive peer more favorably than an unattractive peer, regardless of the movie watched.

Indeed, the WBG stereotype has been documented in children as young as age four years-old (Adams & Crane, 1980; Langlois & Stephan, 1977). Studies have found that children tend to view attractive individuals as nicer than unattractive individuals; however, Adams and Crane (1980) found that children do not necessarily prefer attractive over unattractive peers in social play.  According to the research by Langlois and Stephan (1977), attractiveness stereotypes overshadow stereotypes about ethnicity for children as young as four.  The study found that pictures of attractive children were perceived by children the same age as the nicest and the smartest no matter which ethnicity was portrayed.  This suggests that the WBG stereotype permeates children's peer relations as well as overall behavioral attributions more so than ethnicity.  Simply put, starting at an early age, people rely on physical cues, specifically aesthetics, to make judgments. The propensity to rely on attractiveness cues as indicators of personality and potential behavior may serve as a cognitive heuristic (i.e., simplifying one's world into general categories).

By the age of 6 years-old, children agree with adults on what is attractive and what is unattractive (Cavior & Lombardi, 1973). Cavior and Lombardi discovered that children acquire the cultural and social criteria used by adults in judging physical appearance. Children ages 5 through 8 years-old rated photographs that were previously determined as attractive or unattractive 11- and 17- year-old individuals by adult raters. Cavior and Lombardi found that by age 6, subjects reached agreement levels that were not significantly different from adults. By age 8 there was no difference in attractiveness ratings; inter-rater reliabilities between the age groups continued to increase. This indicates that what adolescents view as a standard of attractive and unattractive is established as criteria to judge attractiveness levels by the age of six years-old.

Thus, it seems that judging others on physical appearance is visceral and ubiquitous. Physical appearance is conspicuous and therefore a simple way to form an initial impression of another individual. When people assume that attractive people have more positive personal traits and life outcomes, it can be said that they are engaging in a just world belief (JWB) system (Dion & Dion, 1987). One may presume that attractive people deserve good outcomes and positive traits, which includes deserving their attractive physical appearance (Lerner, 1965).

**Just World Belief**

Lerner (1965) was the first to provide evidence of the connection between the attractiveness stereotype and Just World Belief (JWB). In this influential study, Lerner discovered that people will rationalize outcomes in order to protect their own self-esteem. He showed that when an attractive individual was rewarded, even if the

person was not worthy of the reward, participants accepted the event by persuading themselves that the individual actually deserved the reward.  However, if the person getting the reward was unattractive, participants devalued the person and rejected the outcome.  Lerner's research findings have provided empirical support for people's propensity to have a stereotypical belief that the world is a just place. His research, and other research that has followed, has demonstrated that people believe that others get what they deserve and deserve what they get.

Beyond judgments related to attractiveness, the JWB is a stereotypical way of thinking, which places restrictions and biases on how people view others' misfortunes and sufferings.  Lerner and Miller (1978) defined JWB as a "psychological structure and process that may contribute to a pattern of responses including the creation and automatic activation of a stable cognitive framework for organizing one's experiences" (p. 1032).  It was demonstrated by Lerner and Simmons (1966) that when a person is faced with a situation in which another person is suffering, the person will tend to derogate the victim to restore his or her belief that the world is a just place (i.e., the person suffering deserves to be afflicted).

JWBs encompass many aspects of how one thinks and potentially how one may behave.  Oppenheimer (2006) postulated that JWBs are societal constructions that are modified with experience.  The stereotypical way of thinking that JWBs involve, applies to a broad range of circumstances and situations (Murray, Spadafore, & McIntosh, 2005). Similar to the attractiveness stereotype, JWBs are activated without conscious effort.  JWBs are said to affect how one interprets interpersonal interactions with others as well as one's own personal experiences. JWBs may be

viewed as a coping mechanism to buffer against stress developed and cultivated early in life (Furnham, 2003; Oppenheimer, 2006).

Research has demonstrated that the attractiveness stereotype and the JWB stereotype can moderate one another. For example, attractive victims are viewed to have experienced a more unjust death compared to unattractive victims (Callan, Powell, & Ellard, 2007). When Callan and his colleagues varied the levels of attractiveness of the victim, it was found that when suffering was portrayed as severe, the participants remembered the victim as less attractive.  These findings illustrate that the motivation to restore a belief in a just world can be coupled with physical attractiveness and ultimately affect perception and memory.  Essentially, this research demonstrates that people associate attractiveness, goodness, and happiness.  As the saying goes, "bad things do not happen to good people," therefore, bad things should not happen to beautiful people.

Dion and Dion (1987) found that attractive targets were rated as suffering more unjust misfortunes when compared to unattractive targets.  In their research, Dion and Dion documented the moderation of the JWB stereotype with the attractiveness stereotype.  The authors found that attractive photos were generally perceived as having socially desirable personality characteristics, having more positive life outcomes, and being more undeserving victims than unattractive photos. Furthermore, an interaction was observed in the study: whether participants were dichotomized into proponents of or in opposition to JWBs influenced their attitudes and perceptions of the stimulus person. Participants who tended to have a greater belief in a just world consistently viewed the attractive stimulus person in a more

positive light while rating the unattractive stimulus person more harshly on trait

characteristics (Dion & Dion, 1987).   In addition, believers in a just world were more

likely to view the attractive victims' death as unjust compared to the unattractive

victims' death.  Ultimately, the research findings indicate that people interpret

attractive individuals as deserving desirable outcomes because of their physical

appearance and that they do not merit misfortunes such as death or illness.

**Perception of Illness**

Given the opportunity, research has demonstrated that people avoid those who

are suffering.  When individuals do interact with the afflicted, it seems to be

distressing.  For example, Kleck (1968) found that subjects rated a confederate with

an amputated limb more positively on a variety of traits compared to a confederate

who was not handicapped.  However, when interacting face to face with a confederate

with an amputated limb, participants restricted their nonverbal behavior and were not

forthright in their individual opinions compared to when participants were interacting

with the confederate who was not handicapped. This demonstrates differences in

people's socially desirable and actual behaviors (e.g., a person may behave, or report

that he or she would behave, a certain way in order to please others and portray a

more socially acceptable or desirable self).  Ultimately, most likely without

awareness, people's reactions to illness and to people with an illness tend to involve

defensive biases.

This response may be because interacting with, or even thinking about, a

person with illness reminds people of their own vulnerability (Pryor & Reeder, 1993).

Previous research has demonstrated that people tend to rate themselves as less similar

on personality and physical traits when comparing themselves to an undesirable person (i.e., a tendency termed defensive distancing; Pyszczynski, Greenberg, Solomon, & Cather, 1995). Similarity has been shown to moderate defensive distancing: The more similar a victim is, even if the similar characteristics are irrelevant to the illness, the more vulnerable one is likely to feel and potentially the more defensive one is likely to be (Pyszczynski et al., 1995). Essentially, rating themselves as disparate from the victim allows people to feel less vulnerable to a similar fate.

Pyszczynski et al. (1995) tested whether delay in comparing oneself to a victim of illness affects overall similarity judgments. Participants were presented with a vignette that depicted a person who went to the health clinic for either a sprained ankle or for cancer. Participants then rated the victim on a variety of traits and rated themselves on the same traits. Overall, it was found that participants liked the target with stomach cancer more than the target with a sprained ankle. However, after a three minute delay, participants' ratings of the sprained-ankle victim increased, and less defensive distancing of the target with a sprained ankle was observed relative to the non-delay conditions. Defensive distancing was prominent in the cancer condition. Specifically, participants in the delay condition denied similarity to the target significantly more than in the non-delay condition by rating themselves as discrepant from the victim with cancer. The role of delay seems to demonstrate a person's internalization of the described illness; participants in the delay condition had the time to process and become more aware of the threatening nature of the illness. Negative, self-focused reactions to illness seem to conflict with socially-

acceptable values such as compassion and sympathy.  Yet, as time passes, social norms seem to dissipate and defensive biases surface. Again, by unconsciously denying one's similarity to a victim, one discredits the possibility of a similar fate, thus feeling more control over the potential threat.

Weiner (1993) uses the general attribution theory of emotions to examine possible reasons why there may be differences in perceptions of particular illnesses. The general attribution theory of emotions states there are three dimensions of causality that are utilized by people to describe another's situation:  locus, stability, and controllability.  Specific to perceptions of illness, controllability is the most relevant. Weiner proposes that a negative event that results from something perceived as uncontrollable initiates sympathy, but when an event is construed to be controlled by the victim, the perceiver will derogate and demean the victim.  For example, when an individual contracts lung cancer, if he or she is a smoker, than an outsider will likely blame and derogate the individual.  However, if the victim with lung cancer has never smoked, and instead contracted the illness through exposure to secondhand smoke, according to Weiner's attributional theory, sympathy, and possibly empathy, will be aroused.

The perceived degree of control a person has over an event can influence perceptions of the event itself as well as the level of stress experienced (i.e., the greater the control, the less stress).  For example, Meyerowitz, Williams, and Gessner (1987) found that, as predicted by the JWB stereotype and Weiner's attributional theory, attitudes toward a disease were significantly more negative if the disease was described as controllable versus uncontrollable.  What the disease was called, or

labeled as, also had a significant effect on judgments made about the victim.

Perceptions of the disease termed "Haltmar's disease," a fictitious disease, were more

positive than the perceptions of cancer.  Yet, when participants rated the person with

the portrayed illness, the victims of cancer were liked more than the victims of the

fictitious disease. In other words, no matter how the situation was described, the

person suffering from cancer was perceived in a generally more positive light

compared to the person who was portrayed as having Haltmar's disease.  This raises

the question of whether cancer may be perceived differently relative to other diseases.

There seems to be something anomalous about people's conceptions of cancer. Just

the label "cancer" arouses fear and stigmatization, yet the person afflicted with cancer

is rated empathetically and generally positively. Wortman and Dunkel-Schetter

(1979) propose that "cancer appears to be unique in its ability to arouse fear and

vulnerability" (p. 131), and further research has documented this.

Gruman and Sloan (1983) examined perceptions of individuals who were

either healthy or were portrayed as suffering from indigestion, pneumonia, or

stomach cancer. College participants read a stimulus story designed either to promote

(describing a target close in age and circumstances) or inhibit (describing a target that

was older, who had never attended college) similarity and, thus, sympathy and

empathy.  Participants then rated the target on a social attractiveness scale.  Gruman

and Sloan found that as severity of illness increased, ratings of social attractiveness

decreased, except for in the cancer condition.  Victims who were diagnosed with

cancer were viewed almost as positively as a target who was not suffering from any

illness (healthy; control condition).

This furthers the question of whether cancer generates distinct cognitions as individuals' process why others contract the disease relative to other illnesses. Because cancer can afflict anyone, no matter what race, gender, or age, the vulnerability people may feel when exposed to someone suffering with cancer may initiate more empathy and compassion instead of derogation and distancing. However, Gruman and Sloan (1983) demonstrated that their manipulation of similarity, and thus empathy, did not impact social attractiveness judgments made about the target victim. Whether participants read about a similar or dissimilar target, ratings of social attractiveness were not significantly different.  In other words, Gruman and Sloan concluded that empathy does not affect attractiveness judgments according to their experimental results.

Contrary to the findings provided by Gruman and Sloan (1983), Drury, Lehmkuhl, Nabors, and Jiang (2005) found evidence of a decrease in favorability ratings in victims with cancer compared to healthy targets.  In their research, children were used as stimulus targets. Participants were asked to rate the child victim on a variety of traits.  Drury and her colleagues found that adults judged children portrayed as the victims of cancer more harshly than children portrayed as healthy.  The authors claim that participants' attributions were based on realistic expectations of the child's situation (i.e., a child undergoing chemotherapy will be less strong, less happy, etc., than a child that was not receiving cancer treatment).  Of course, it is unclear whether perceivers based their judgments on actual knowledge of the condition of a child with cancer or within the context of a JWB system.   In other words, did adults rate the child afflicted with cancer as less strong and less happy because they were attempting

to rationalize why he or she was afflicted in the first place—that is, might he or she have deserved to be afflicted?

In an experiment performed by Stern and Arenson (1989), subtle manifestations of participants' JWBs were revealed for a child victim of cancer. When college students rated a child described as being in remission from cancer or a child who was depicted as healthy on a variety of traits, children who were portrayed as being in remission from cancer were rated as being less competent, less sociable, less well behaved, and less likely to adjust well in the future than the healthy child. Participants also scored the child victim as less behaviorally active and less physical. In line with what Drury and colleagues (2005) found, the physical and behavioral assumptions made about the child might be attributed to rational expectations of the child's physical health after cancer. However, sociability, general behavior, and competence are not necessarily affected by cancer and could be interpreted as JWB rationalizations and unjustified attributional derogation in order to restore one's JWBs.

What is perhaps most compelling and potentially unsettling about both Drury et al.'s (2005) and Stern and Arenson's (1989) research is that the focus of the research was a child victim. Despite research that has assessed JWB with adult targets; less has been examined focusing upon illness stigma and social judgments of children. For example, though both investigations assessed a child target neither, Drury et al. (2005) nor Stern and Arenson (1989) directly measured JWB.

According to the American Cancer Society (American Cancer Society, 2009), there are approximately 11 million people suffering with some form of cancer in the

U.S.  In 2008 alone, cancer caused nearly 600,000 deaths just in the U.S.; that is

22.8% of all deaths in the country.  It is estimated that one in two men and one in

three women will develop cancer in their lifetimes (American Cancer Society, 2009).

Cancer is the second leading cause of death in children, surpassed only by accidents

(American Cancer Society, 2009). Therefore, cancer is the number one disease that

causes death in children.  Leukemia is the most common form of cancer in children

(31%), with cancer inflicting the brain and nervous system accounting for 21% of all

cancer diagnoses in children (American Cancer Society, 2009).  It is predicted that

nearly 11,000 children under the age of 14 will be diagnosed with cancer each year,

causing nearly 1,400 predicted deaths in just 2010 alone (American Cancer Society,

2009).

The physical reality for those who suffer from cancer, perhaps more so than

most other serious illnesses, is that cancer treatment has a direct effect on the

appearance of the victim.  In most treatments, a patient is likely to suffer hair loss and

other superficial decline (American Cancer Society, 2009).  This suggests an

interesting challenge to an individual navigating through JWB cognitive systems and

WBG stereotypes.  To date, no research has examined perceptions of a target who is

sick, who also varies on physical attractiveness.  Furthermore, no research has

examined these variables with a child target.

**Current Study**

The purpose of the current study was threefold.  In its most general sense, the

study was designed to examine perceptions of a child victim with cancer versus one

who suffers from some other illness.  This study is essentially a modification of the

Gruman and Sloan (1983) study in its assessment of whether severity of illness influences perceptions of a target, but the current study used a child, rather than an adult, target. Participants were presented with a stimulus paragraph and photograph of a child target. Participants were asked to make ratings of the child's likability, as well as the child's social attractiveness and their own social attractiveness as a child. Gruman and Sloan used this latter measure as an index of target derogation by subtracting the child's desirability rating from the self-desirability rating. Recall, however, that Gruman and Sloan failed to control for the impact of disease contagion in their original study, and the illnesses used in their manipulation affected different parts of the body. Therefore, the current study held contagion constant; recollect that Gruman and Sloan used pneumonia as one of their comparative illnesses, which is contagious. The current study also localized the illness to one specific area of the body; recall that Gruman and Sloan used indigestion and cancer which inflicts the stomach, while pneumonia affects the lungs.

This study portrayed a child as healthy or suffering from either a brain cancer or one of two fictitious diseases called "Haltmar's disease," modeled after Meyerowitz et al. (1987). The first condition of Haltmar's disease was described in the stimulus paragraph as similar to the condition of brain cancer; however, the label "cancer" was not used. The second condition of Haltmar's disease was described in a similar way as a benign tumor, but without using the label "tumor."

The illness conditions were developed not only to elucidate perceptions of illness due to the severity of illness portrayed, but also were aimed to illuminate the potential differences in perceptions due to the label placed on the illness. Therefore,

the second goal of the current research was to assess whether cancer holds a unique

connotation or cognition relative to other illnesses.  Considering that a tumor and

cancer are both defined as an abnormal growth of cells, any mean differences

between the conditions in attractiveness ratings would presumably be due to the

illness label, given that the diseases were described similarly, rather than the illness

severity. Thus, the Haltmar's conditions further investigated the significance of the

label placed on an illness.

Third, the current study examined the influence of physical attractiveness on

judgments of the child target.  However, rather than a more traditional approach to the

manipulation of beauty, the current study assessed the impact of how healthy or

sickly the target looks.  Participants either viewed a photograph of a 10-year-old child

in its original, unmodified condition or a photograph that was altered using photoshop

to look noticeably ill.  Thus, the study employed a 4 (Illness Label: good health, brain

cancer, Haltmar's cancer, or Haltmar's tumor) x 2 (Physical Attractiveness of Target:

healthy versus unhealthy) factorial design.

The study also directly measured belief in a just world.  The inclusion of the

individual difference measure was used with the intent of clarifying why derogation

of a victim, or lack of such derogation, occurs.

**Hypotheses**

Due to the possibility of divergent processes influencing attributions about a

victim of illness, particularly one with cancer, competing hypotheses were proposed:

Hypothesis 1a:  If cancer carries unique implications for judgments of a target

(as suggested by Gruman and Sloan, 1983), a main effect of illness condition was

predicted such that a child with cancer would be judged more favorably than those in

the other three conditions. Judgments across the other three conditions were predicted

as follows: the child with Haltmar's described like cancer should be judged less

favorably (be derogated more and liked less) than a child with Haltmar's described

like a tumor, who was expected to be judged less favorably than the child who is

healthy.

Hypothesis 1b:  If severity of illness alone drives derogation and likability of a

victim (presumably by activating JWBs) then, again, a significant main effect of

illness condition was expected to occur.  However, contrary to Hypothesis 1a, the

cancer and Haltmar's described like cancer conditions were expected to be rated the

least favorably.  The child in the Haltmar's described as a tumor condition was

expected to be rated slightly more favorably than the child in the cancer and the

Haltmar's cancer conditions, and the child who was portrayed as healthy was

expected to be rated the most favorably.  These predictions are in line with the

findings of Drury et al. (2005), Stern and Arenson (1989), as well as Meyerowitz et

al. (1987).

Hypothesis 2:  A main effect of physical attractiveness was also expected,

consistent with the WBG stereotype.  In other words, the more attractive child target

(portrayed to be healthy in appearance) would be rated more favorably than the less

attractive child target with an unhealthy appearance.  Given that this hypothesis does

not address illness influence on judgment of the target, there is no competing

hypothesis proposed.

Hypothesis 3a: If derogation of the target is in line with Gruman and Sloan's (1983) findings, a main effect for illness label was again anticipated to influence the perceptions of the child, without the level of attractiveness altering these perceptions. Thus, Hypothesis 3a is a reiteration of Hypothesis 1a in that the child with cancer would be viewed most favorably relative to the other illness conditions. No interaction between illness type and attractiveness of the child was expected.

Hypothesis 3b: Previous literature suggests that beliefs about attractiveness, and its implicit presumed rewards, would combine with assumptions made about illness severity. Therefore, the results of Drury et al. (2005) and Stern and Arenson (1989) could prevail and an interaction between healthfulness and severity of illness was expected. Thus, the child who appeared healthy and was portrayed to be suffering from cancer would be rated the least favorably compared to the other three illness conditions coupled with a healthy picture. Presumably, JWBs would then impact the following conditions such that, the child who appeared healthy in the Haltmar's condition described as cancer would then be rated the next least favorable, followed by the child with Haltmar's described as a tumor who appeared healthy, followed by the child in good health who also looked healthy (who was predicted to be rated the most favorably).

Regarding the unhealthy picture, a different pattern was expected for hypothesis 3b. An interaction between the illness label and the child's attractiveness was anticipated such that the unhealthy child described as suffering from cancer would engender feelings of sympathy and would be rated more favorably than the remaining three conditions. The unhealthy, unattractive child who was portrayed to

be suffering from Haltmar's described as cancer would be rated as the next most

favorable, followed by the unhealthy child with Haltmar's described as a tumor,

followed by the unhealthy child portrayed to be in good health. JWB was not

expected to impact the participants' judgments when the child was depicted as

unhealthy as it did when the child target was depicted as healthy and attractive.

Instead, sympathy and quite possibly pity, were expected to impact perception.

**Method**

**Participants**

Participants were recruited through the psychology subject pool which

consisted of students enrolled in introductory and intermediate psychology classes.

Students participated in the study either to fulfill a class requirement or to earn extra

credit. Participation was conducted online via Survey Monkey. Due to limitations of

the website, and concerns about anonymity, gender of the participant was not

assessed. Three hundred and forty-eight students participated in the study and were

randomly assigned to the eight conditions; however, only 294 subjects met the criteria

for inclusion in the analyses.

Participants were removed because they failed the manipulation check (i.e.,

did not indicate the child had an illness when in fact she did; said she did have an

illness when she did not; left the question blank; or misremembered the illness label).

Each of the eight conditions lost participants, some more than others: 2 participants

were removed from the unattractive, good health condition; 14 participants were

removed from the unattractive, Haltmar's cancer condition; 10 participants were

removed from the unattractive, Haltmar's tumor condition; 5 participants were

removed from the unattractive, cancer condition; 3 participants were removed from the attractive, good health condition; 11 participants were removed from the attractive, Haltmar's cancer condition; 10 participants were removed from the attractive, Haltmar's tumor condition; and 1 person was removed from the attractive, cancer condition . However, homogeneity of variance across conditions was maintained based on Levene's test for equality. Out of the 294 participants that remained in the study, 152 of them were randomly assigned to view the picture of the target portrayed as unhealthy while 142 saw the picture of the target portrayed as healthy. Eighty-two people were in the good health condition, 67 were in the Haltmar's tumor condition, 65 were in the Haltmar's cancer condition, and, finally, 80 were in the cancer condition.

The University's Institutional Review Board approved this study on March 21, 2011 (see Appendix A). It was approved under expedited review and determined to contain no more than minimal risk to participants. All procedures complied with the American Psychological Association's (2002) ethical standards for the use of human participants.

**Materials**

**Target photographs**. The stimulus photograph, acquired through a publicly accessed website, depicted a girl thought to be approximately 10 years of age, and was either left in the original condition or manipulated to look less healthful (see attached photographs in Appendix B). A pilot study established that the pictures were significantly different from each other on ratings of healthfulness, $F(1, 22) = 10.52$, $p$

$= .004$, $\eta_p{}^2 = .35$, and were not significantly different from each other on the aspect of realism of the images, $F(1, 22) = 0.44$, $p = .51$, $\eta_p{}^2 = .02$.

**Stimulus paragraph**. The stimulus paragraph read as follows:

Jennifer is 10 years old and from a medium-sized town who has two siblings and just started fourth grade. She is an average student who is doing well in math and spelling, but is not doing as well in English and science. Jennifer enjoys soccer, playing outside in the tree house, watching movies, and has friends from school and friends from around the neighborhood.

Depending upon experimental condition, the stimulus paragraph ended with one of four statements. In the control condition, the stimulus paragraph ended with, "Recently Jennifer went to the health clinic for an annual physical and was proclaimed to be in good health." In the Haltmar's Disease – described as brain cancer, the stimulus paragraph ended with, "Jennifer wasn't feeling well for a four day period, and was taken to the health clinic. After multiple tests were run, the diagnosis was Haltmar's disease. Haltmar's disease is defined by a malignant growth of cells in the brain." In the Haltmar's Disease - described as a brain tumor, the stimulus paragraph ended with: "Jennifer wasn't feeling well for a four day period, and was taken to the health clinic. After multiple tests were run, the diagnosis was Haltmar's disease. Haltmar's disease is defined by an abnormal growth of cells in the brain." Finally, in the cancer condition, the stimulus paragraph ended with: "Jennifer wasn't feeling well for a four day period, and was taken to the health clinic. After multiple tests were run, the diagnosis was brain cancer, a growth of cancerous cells in her brain."

**Questionnaires**. The multidimensional global JWB scale created by Lipkus (1991; internal consistency, measured by Cronbach's alpha, is .82; see Appendix C), included three subscales, each composed of 10 items: personal JWB, interpersonal JWB, and socio-political JWB. Personal JWB is proposed to involve one's perception over nonsocial environments (e.g., "If I suffer a misfortune, I have usually brought it on myself in some way."). Interpersonal JWB is one's perceptions of other people (e.g., "People who think of others before themselves seem to lose out in life."). Socio-political JWB encompasses one's interpretation of social and political events (e.g., "The political candidate who sticks up for his principles rarely gets elected."). Each question is answered on a 6-point Likert scale ranging from *strong disagreement* to *strong agreement*. Each dimension, as well as the total composite score, was examined.

As a measure of target derogation, a global trait assessment was created based on a pool of trait adjectives developed by Alicke (1985; see Appendix D). Ten bipolar adjectives (e.g., "mean – kind," "unfriendly – friendly") were selected from a larger body of adjectives determined by Alicke to be of moderate desirability and moderate control (compared to high or low). In other words, adjectives were chosen that were not extremely undesirable or desirable and were also previously determined to be not completely in control of the person being described, yet not beyond their control. Each pair is presented along a 7-point continuum from negative to positive. Higher scores indicate greater global attractiveness ratings. Derogation of the target was measured by subtracting the child's attractiveness rating from the self-attractiveness rating (e.g., see Lerner & Simmons, 1966).

Indicating the likability of the target, a modified version of the general likability scale developed by Reyesen (2005) was used (see Appendix E).  The scale consists of general statements measuring likability (e.g., "This child is likable," "I would babysit this child"), adapted to be appropriate for evaluating a ten-year- old-child.  It was found, during a pilot study, that the modified scale was reliable and internally consistent, measured by Cronbach's alpha reaching .80.   The scale consists of 11 items, each rated on a 7-point Likert scale ranging from 1 (*not at all*), to 7 (*very much/extremely*).

**Manipulation check**.  The manipulation check involved an assessment of whether the child had been described as having an illness (yes or no), followed by an open-ended question regarding what illness had been described if the respondent stated "yes."  An assessment of the severity of the illness followed based on a 7-point Likert scale ranging from *not at all serious* to *very serious* (see Appendix F).

**Design**

There were two independent variables in the current study, type of illness and physical attractiveness.  Participants were randomly assigned to one of eight conditions: an attractive child described in good health, with brain cancer, with Haltmar's disease described as a brain tumor, or with Haltmar's disease described as brain cancer but not labeled as "cancer" versus an unattractive child described with one of the four illness labels.  The independent variable of physical attractiveness was investigated by participants being randomly assigned to view a photograph of the presumed victim that was either manipulated to look unhealthy or left in its original condition.

Previous literature has indicated that varying levels of JWB influence people's stereotypes about attractiveness. Therefore, the Global JWB scale (Lipkus, 1991; see Appendix C) was included as an exploratory measure and scores were used as a covariate.

In summary, there are four levels of health and two levels of physical attractiveness. Hence, the study employed a 4 (type of illness) x 2 (physical attractiveness) factorial design, with JWB used as a covariate.

**Procedure**

The study commenced after informed consent was acquired. The instructions indicated that the study would take no longer than 30 minutes. Participants began by filling out the Global JWB (Lipkus, 1991). Next, participants were shown a photograph (either left in its original condition or manipulated to appear unhealthy). Immediately after, the stimulus paragraph was administered (good health, brain cancer, Haltmar's disease - tumor, Haltmar's disease - cancer). Next, the social attractiveness rating scale (Alicke, 1985) of the target individual was completed. Participants were then asked to reflect back to when they were 10 years old and rate themselves on the same social attractiveness scale. The target likability scale was then filled out by the participants (Reyesen, 2005), the last measured variable. Finally, the manipulation check was completed.

<div align="center">

**Results**

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In order to determine whether severity of illness was successfully manipulated via the illness label conditions, a one-way ANOVA was conducted with illness label (good health, Haltmar's tumor, Haltmar's cancer, cancer) as the independent variable

and the item assessing perceptions of the illness' severity as the dependent variable.

This analysis yielded a significant effect for illness label, $F(3, 199) = 140.34$, $p <$

.001. Duncan's post hoc test showed that good health ($M = .80$, $SD = 1.34$) was rated

as the least severe condition and significantly different than the other three

conditions. Haltmar's tumor ($M = 5.27$, $SD = 1.81$) and Haltmar's Cancer ($M = 5.64$,

$SD = 1.45$) were rated as similar in severity, but were rated as more severe illness

conditions than good health, yet less severe than cancer. Cancer ($M = 6.33$, $SD =$

2.64) was rated as the most severe and was significantly different than the other three

conditions.

**Effects on Derogation**

Derogation scores (self-ratings of social attractiveness minus child-ratings of

social attractiveness) were submitted to a 4 (illness type) x 2 (attractiveness of child)

between-subjects factorial ANOVA in order to test Hypotheses 1a and 1b. No

significant effects emerged for the analyses, all $F$s $< 1.0$, $p$s $> .05$. Most notably, this

included the main effects predicted for Hypotheses 1a and 1b: There were no

significant differences between groups relative to the illness label for derogation of

the target, $F(3, 286) = 0.38$, $p = .77$. It was found that participants did not rate the

child with cancer more favorably than the child portrayed in the other three

conditions as was anticipated in Hypothesis 1a. Similarly, Hypothesis 1b was not

supported in that derogation of the child did not occur linearly for severity of illness.

See Table 1 for means and standard deviations.

Hypothesis 2, predicting a main effect of the child's attractiveness on

derogation, was also not supported, $F(1, 286) = 0.01$, $p = .92$. Specifically, the

attractive child ($M$ = -1.37, $SD$ = 8.28) was not rated more favorably than the

unattractive child ($M$ = -1.27, $SD$ = 8.47).  The fact that neither of the main effects

were significant also disconfirmed Hypothesis 3a, which anticipated that cancer held

unique conceptions and that the child with cancer would be rated more favorably than

the child target in the other three illness conditions (impact of illness label).

Finally, no significant interaction emerged between illness type and child

attractiveness, $F(3, 286)$ = 0.99, $p$ =.40. Thus, Hypothesis 3b was not confirmed.  The

severity of illness did not appear to activate differential beliefs (presumably related to

belief of a just world) for the attractive versus the unattractive child.

**Effects on Likability**

Scores for general likability of the child were submitted to a 4 (illness type) x

2 (attractiveness of child) between-subjects factorial ANOVA.  Contrary to

Hypothesis 1a and 1b, no main effect was found for illness type, $F(3, 286)$ = 1.89, $p$

=.13.  In other words, participants judged the target as equally likable regardless of

the illness label (Hypothesis 1a) or the illness severity (Hypothesis 1b).  See Table 2

for means and standard deviations.

Hypothesis 2 was not supported due to the fact that the main effect for child's

attractiveness was not significant, $F(1, 286)$ = 0.14, $p$ = .71.  Perceptions of the target

were not affected by how attractive ($M$ = 60.59, $SD$ = 9.84) or unattractive ($M$ =

60.23, $SD$ = 8.47) the child was portrayed to be.

Given that both main effects were not significant, Hypothesis 3a predicting

that attractiveness level and illness label would lead to similar judgments of the target

was not supported.  It seems that the label of cancer did not elicit unique perceptions

in participants (i.e., the impact for illness label was not found). However, a significant illness x physical attractiveness interaction did emerge for ratings of likability, $F(3, 286) = 3.27$, $p = .02$, $\eta_p^2 = .033$. Follow-up, post hoc analyses demonstrated that when participants viewed the healthful, attractive picture, there were no significant differences regarding judgments of the target relative to the severity of illness, $F(3, 148) = 0.43$, $p = .74$, contrary to what was predicted for Hypothesis 3b. However, when participants viewed the unhealthy picture, ratings of likability did vary across illness labels, $F(3, 138) = 4.72$, $p = .004$, $\eta_p^2 = .09$. As seen in Table 2, Duncan's post hoc tests revealed that when participants viewed the unattractive photograph, the children suffering from Haltmar's disease described like cancer and cancer were viewed as similarly likable, while the children suffering from Haltmar's tumor and good health were also viewed similarly. Interestingly, participants in both conditions that described the illness as involving abnormal cells judged the child as less likable than the child described as having Haltmar's tumor or no illness. This partially supports Hypothesis 3b in that severity of illness impacts favorability judgments, but the results indicated that this is only the case if the child looks sickly.

**Exploratory Analyses**

To explore the data further, a 4 (illness label) x 2 (attractiveness of child) between-subjects, factorial ANCOVA was performed on derogation and likability scores, using JWB as a covariate. Because these analyses were not predicted, a Bonferroni correction formula was implemented to control for family-wise error. This yielded a cut-off value of .006 for alpha. JWB was a significant covariate for

likability, $F(1, 285) = 31.94$, $p < .001$, $\eta_p^2 = .10$, however, it was not a significant covariate in the analysis of derogation, $F(1, 285) = 1.43$, $p = .23$. Therefore, only the inclusion of JWB as a covariate for the 4 (illness label) x 2 (attractiveness of child) ANCOVA with the likability ratings will be discussed below.

It was found that using JWB as a covariate did not significantly alter the results of the original 4 (illness label) x 2 (attractiveness of child) ANOVA (without the inclusion of JWB). Specifically, the main effect for illness label was not significant using the corrected alpha criterion, $F(3, 285) = 2.35$, $p = .07$, $\eta_p^2 = .03$. JWB also did not affect the already non-significant main effect for the child's attractiveness, $F(1, 285) = 0.33$, $p = .57$, $\eta_p^2 = .001$. Finally, the illness label x child attractiveness interaction was not significant either, $F(3, 285) = 3.63$, $p = .01$, $\eta_p^2 = .04$. Therefore, JWB did not appear to impact judgments of the child. See Table 3 for adjusted means and standard errors.

### Discussion

Previous research regarding perceptions of a person who is suffering from an illness has found conflicting evidence surrounding how severity of the illness affects attributions made about the person inflicted. Specifically, Gruman and Sloan (1983) found that, as severity of illness increases, perceived favorability of the target person decreases, except when the person was described as suffering from cancer. By contrast, Stern and Arenson (1989), as well as Drury et al. (2005), found that children who were described as either having cancer or being in remission from cancer were judged less favorably than children who were described as being in good health. Thus, the present study was aimed at identifying whether the label of cancer holds

unique attributional stereotypes relative to other severe illnesses when assessing a target.

Contrary to the findings of Gruman and Sloan (1983), Hypothesis 1a, stating that participants would derogate the child less and judge her as more likable if she had cancer, relative to other illnesses, was not supported. Recall, however, that Gruman and Sloan's study suffered from several methodological shortcomings including the fact that they failed to control for the impact of disease contagion in their original study; the four illness conditions that were used were good health, indigestion, pneumonia, and stomach cancer. Note that pneumonia is a highly contagious illness, whereas the other illnesses are not. It may be that a contagious illness would activate greater feelings of vulnerability in a person, and, therefore, would increase the degree to which a person might feel threatened by the disease. According to Pyszczynski et al. (1995), the greater the perceived threat, the greater the need to distance oneself from the victim suffering, which could have been the reason why the pneumonia illness condition in Gruman and Sloan's study lead to greater derogation of the target compared to the target with cancer.

Also, Gruman and Sloan's manipulation of severity of illness affected different parts of the body. Indigestion and stomach cancer both affect the stomach, while pneumonia afflicts the lungs. Therefore, it is possible that by holding the contagion constant and localizing all illnesses to the brain, thus eliminating confounding variables, the unique attributions made by participants within Gruman and Sloan's cancer condition were eliminated. In order to adequately isolate the "label" of cancer from the severity of the description itself, the current study utilized

a fictitious illness, Haltmar's disease (modeled after the experiment performed by

Meyerowitz et al., 1987).  In two of the four illness conditions, the label Haltmar's

was paired with either the medical description of brain cancer or with the medical

description of a benign brain tumor.  Thus, participants would have the medical

symptomology of an illness without the label itself (e.g., the description of cancer

without the label of cancer).  The failure to find that the cancer victim was not rated

as more likable than the victims of the other illnesses also deviated from the findings

of Meyerowitz et al. (1987).  They found that participants in their study did rate the

victim of cancer more favorably than the victim of the same named, fictitious disease

(Haltmar's).  Meyerowitz et al., however, explained aspects of preventability and

controllability, as well as treatability, when describing each of their illness conditions,

while the current study held those factors constant.  In fact, Meyerowitz et al. found

that as the controllability of the illness decreased (regardless of the label), the

perceptions of the target decreased as well.  This could have influenced the current

results:  the described illnesses, in all of the illness conditions used, were low on

controllability, preventability and treatability; therefore, the target afflicted with the

illness would be anticipated to be rated as low on favorability.

        Although participants did not perceive the child target more favorably when

she was described as having cancer, the manipulation check employed during the

study does argue that the word "cancer" in a diagnosis might have implications for

perceptions of the severity of an illness.  Cancer was perceived as being the most

severe of the illnesses despite the fact that Haltmar's cancer was described as a

malignant growth of cells in the brain.  Indeed, no distinction in severity was

perceived between the two Haltmar's conditions (although they were both perceived as more severe than good health), indicating that the manipulation of illness severity was only in part successful.

The reduced impact of the severity of illness manipulation may explain why the results did not support Hypothesis 1b. Rather than finding evidence that illness severity linearly influenced ratings of the child target, supporting Drury et al. (2005) and Stern and Arenson (1989), targets were not derogated more, nor were they rated as less likable, if they were described as having a more severe illness. Instead, the child target was rated as similarly favorable across the conditions. This could have been due to the fact that the Haltmar's conditions may have been perplexing for the participants – Haltmar's is a fictitious disease with more ambiguity and less familiarity than the good health and cancer conditions. This was conspicuously demonstrated by the manipulation check in which more participants were lost from the Haltmar's conditions (20 participants from Haltmar's tumor and 25 from Haltmar's cancer) than from the cancer and good health conditions combined (6 participants were lost from the cancer and 5 from good health).

The current study also failed to replicate previous research related to the influence of a physical attractiveness stereotype on judgments of a victim target. Specifically, in research performed by Callan et al. (2007), it was found that when a target is portrayed as attractive and described as having suffered severely prior to death, participants remembered the target as significantly less attractive than originally rated. In other words, as a victim's suffering increased, Callan and his colleague's participants' recollection of the target's attractiveness decreased.

Stemming from this and other related research (e.g., Dion & Dion, 1987), it was

predicted that ratings of the likability of the target, and the willingness to derogate

her, would be related to how sickly (unattractive) she appeared.  Contrary to past

literature, the physical attractiveness stereotype was not observed in the current study,

thus Hypothesis 2 was not supported.  Participants judged the target similarly

regardless of whether her photograph was made to appear sickly in appearance rather

than healthy and attractive.  Rather than participants solely relying on physical cues to

influence judgments, it could be assumed that participants utilized all the information

that was presented in the study to judge the child. As supported by Eagly et al.

(1991), it was found that people's propensity to endorse the attractiveness stereotype

decreased as the amount of other available information increases.   Therefore,

participants used the photograph in combination with other presented information

(e.g., the stimulus paragraph) to form an overall judgment of the child.

On the other hand, Eagly et al.'s (1991) proposal that individuals use as much

information as possible in order to form judgments of a target lends support to the

partial success of Hypothesis 3b.  Hypothesis 3b predicted an interaction between

attractiveness of the child and the illness portrayed for favorability judgments of the

child.  When the derogation measure was used, no significant results were found,

regardless of the child's attractiveness.  When likability was used as the dependent

measure, it was found that the illness condition had no impact on the ratings of the

attractive target.  However, when the child was portrayed as sickly in appearance, the

child suffering from cancer or  Haltmar's disease described like cancer was viewed as

similarly likable, but less so than the child suffering from Haltmar's tumor or the

child in good health.   Therefore, it appears that the unattractive targets in conditions which described illnesses involving malignant or cancerous cells are judged as less likable than those targets described with a less ominous illness description or as described in good health.  It may be, however, that the salience of the manipulation is boosted when the person depicted actually looks sick.

Derogation measures (self- versus other-trait assessments) have been used for decades in a variety of empirical contexts.  More specifically, they have been successfully used in experiments regarding victimology (e.g., Lerner & Simmons, 1966).  Previous research has demonstrated that derogation is likely when assessing a victim, presumably due to a participant feeling threatened and vulnerable.  A question that emerges from these findings is why the derogation measure failed to demonstrate differences across illness types in comparison to the likability measure for the child target.  By its nature, the current study's derogation measure seems to be a more thoughtful measure for the individual to undertake because it requires reflection about oneself as a child relative to the current child target.  This reflective derogation, to the best of my knowledge, is the first of its kind. This more conscious, effortful aspect of the measure may be the reason for why it failed to discriminate between ratings of the target across illness conditions.

Indeed, college-aged participants may have had difficulty comparing themselves retrospectively to a child this young. The limited research relevant to the current study uses social favorability measures rather than derogation measures. Recall that the studies performed by Drury et al. (2005) and Stern and Arenson (1989) illustrated that when a child was portrayed as ill, participants were willing to

rate the child victim unfavorably relative to a child who was not ill. However, in the

aforementioned studies, participants were not asked to compare themselves to the

target; that is, the participants were not actually given the opportunity to literally

derogate the child. Thus, the current research suggests that participants may be

reluctant to participate in this form of active derogation, especially with such a young

target.

It could also be assumed that the simple fact that there was an age discrepancy

between the target and the participant could have influenced the derogation measure.

Recall that Gruman and Sloan (1983), as well as other experimental studies, relied on

the manipulation of similarity when assessing derogation. That is, when derogation

measures have been used in the past, the participants are presented with a story about

a target that is similar to them (similar in age, similar in situation – e.g., in college,

etc.), with the exception of suffering from some ill fate. When participants are asked

to rate the target as well as themselves on a series of items, defensive distancing has

been observed (Pyszczynski et al., 1995). For example, Pyszczynski et al. found that

the more similar one is to the target described, the more likely one is to deny

similarity to the target (therefore, denying the possibility of same fate as the target),

and subsequently, derogation is generally implemented. The current study involved

a 10 year-old target while the participants were college-aged. The "creative solution"

of asking participants to reflect back to when they were 10 years-old seemed to be

challenging for participants and resulted in insignificant findings as described above.

The difficulty that can be assumed in reflecting back to one's childhood, coupled with

the lack of similarity to the target, may have ultimately rendered the derogation measure ineffective.

The likability measure, on the other hand, seemed to be more sensitive to underlying judgmental tendencies. The likability measure was composed of statements that encapsulate more behavioral and interaction-centered components regarding the target. For example, the likability measure asked whether the participant would want to babysit for the child target. Though it may have been difficult for a participant to bluntly rate a child as socially unattractive compared to oneself, it may be surmised that it is easier for participants to be forthright in limiting one's potential future interactions with the target child. In other words, participants indicating that they would not want to play with the child who is ill may be easier than disclosing that they think the child is "uncooperative" or "unkind" simply due to being inflicted with an illness.

Another possible reason for the inconsistent findings between the derogation measure and the likability measure could have been the role of delay. In a study examining defensive distancing, Pyszczynski et al. (1995) found that after a 3 minute delay, participants' liking for a target with cancer was lower compared to those who completed the favorability scale immediately after the stimulus materials. In the current study, delay was not intentionally manipulated like Pyszczynkski et al. did, rather the derogation measure was taken immediately after the stimulus materials were presented while the  likability scale was filled out approximately 3 minutes after the stimulus materials were presented . Similar to Pyszczynski et al., it appears that participants in the current study may have had more time to internalize the severity of

the situation and the seriousness of the illness while completing the likability

measures as compared to the derogation measures. Therefore, the likability measure

detected participants defensive distancing and lack of favorability more so than the

derogation measure, but again, only if the child looked sickly.  Future research should

intentionally investigate the role of delay within the current study's design to further

explore if this was a coincidental finding or if it was, in fact, due to participants'

unconscious internalization of the circumstances of the target.

Although a person's propensity to endorse JWB has been demonstrated to be

influential in victim judgments in previous literature (e.g., Lerner, 1965), JWB was

not found to be an influential factor in the current study.  JWB was found to be a

significant covariate in the analysis (only when likability was the dependent variable),

but it did not alter any of the original findings when it was not included, and

therefore, it did not seem to contribute any additional information. This could be

attributed to several factors.  One speculation could be that participants'

endorsements of JWBs may not have surfaced due to the fact that they were judging a

10-year-old child who is presumably under the care of his or her parents.  It may be

unlikely for participants (even those endorsing JWBs) to blame the child for

unfortunate circumstances.  By contrast, if participants were presented the

opportunity to judge the parent(s) of the child, they may be willing to rate them

unfavorably relative to a child, and thus, engage in derogation.  Previous literature

has, indeed, found the tendency for people to hold parents responsible, rather than a

child, for negative health-related circumstances such as obesity (Lightspeed Research,

2006).  It seems that people hold parents accountable for circumstances beyond the

child's control, such as the food available for the child to eat, rather than blaming the child.

The child's lack of control over her health situation raises another interesting point regarding the lack of derogation evidence. It has been shown that the less control that a target has over an illness, the less likely individuals will be to derogate him or her. All of the described illnesses in the current study are beyond the control of the child victim. Even in the Haltmar's conditions, for which participants presumably lack familiarity with the diagnosis and illness label, one could assume that the illnesses described could not be attributed to the child's choices and, therefore, participants would reasonably be reluctant to derogate the child target. Another potential reason for JWB not impacting the results could be that the JWB measure used in the current study differed from previous research cited. That is, in the current study participants were asked to fill out the Global JWB scale developed by Lipkus (1991) instead of a more commonly used measure developed by Rubin and Peplau (1975). Rubin and Peplau's succinct measure has proven to be successful in a variety of empirical areas, yet Lipkus' (1991) scale was selected because of reportedly higher validity and reliability scores (Hellman, Muilenburg-Trevino, & Worley, 2008), as well as it being a purportedly more encompassing scale, embedded with three sub-dimensions (personal, interpersonal, and socio-political). Future research should utilize a variety of scales to investigate if certain manipulations activate different mental frameworks that can be detected more so using specific scales.

Similarly, future research should attempt to clarify the circumstances under which college-aged students might derogate children. As recommended before, possibly giving participants the opportunity to judge the target child's parents may illuminate why the derogation measure in the current study was not successful. It is important to know if adults perceive children with illness differently than adults perceive another adult with an illness. Possibly, there is something unique about perceptions of a child portrayed with an illness. Regardless of illness type, children may be perceived as fragile and more capable of receiving compassion and sympathy and, therefore, be less vulnerable to the common derogation that is seen when adults rate other adults with illnesses.

Overall, the current study suggests that adults may struggle with judgments about a child target. In fact, it might not be an easy feat to identify the cognitive mechanisms that drive attributional judgments regarding a child. The current study used a photograph of a 10- year-old child who was, indeed, attractive. That is, the photograph that was used was of a pretty girl both before and after the manipulation of healthfulness. This may have reduced the potency of the manipulation. In other words, altering the photograph to look sickly may not have been sufficient to eliminate the attractiveness. Future research should consider illuminating the attractiveness stereotype regarding a child suffering from an illness when attractiveness is manipulated via depictions of healthfulness. For example, hair loss is a common side effect of medications used to treat cancer. It might be interesting to examine how a child depicted with and without hair would be perceived in similar studies.

One of the limitations of this research is that most college-age participants do not have medical knowledge to differentiate between malignant and benign clusters of cells. Recall, that the cancer description utilized the word "cancerous" to describe the cells in the diagnosis. Furthermore, participants did rate the cancer condition as more severe than the Haltmar's condition in which the cluster of cells was described as malignant. It is possible that undergraduate students in this study may not have been aware that the word malignant was equated with cancerous. Perhaps providing participants with more information regarding the diagnosed illness would improve the design such that stereotypes about the target would not be confounded with lack of disease familiarity. This may be alleviated in future research by having a preliminary study providing definitions for each illness condition. That is, enrolling participants in a two-part study, the first of which would aim to teach participants the diagnostic terms and differences between illness descriptions, and the second part of the study would resemble the current study. This could potentially cause an increase in the observed differences of severity of the illnesses and the likability of the respective target.

Despite the limitations, the current study is an important line of research, specifically due to the fact that cancer is the number one disease in children causing more than 1,400 deaths per year (American Cancer Society, 2009). Campaigns in the media commonly use images of adults and children who are suffering from a disease. Raising the money needed to fund that research could be enhanced by using information from the current study and the related literature. Furthermore, this information can be used to guide future research on the cognitive frameworks

activated when presented with a person suffering from an illness.  This is important

research to continue when one considers its applications to medical professions,

charity campaigns, and general advertisements.

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Table 1

*Means (M) and Standard Deviations (SD) Across Illness and Picture Conditions for Derogation*

| | Illness | | | |
|---|---|---|---|---|
| | Good Health | Haltmar's Tumor | Haltmar's Cancer | Cancer |
| Picture | *M (SD)* | *M (SD)* | *M (SD)* | *M (SD)* |
| Unattractive | -2.31 (7.70) | -1.16 (8.96) | -1.14 (9.37) | -.36 (8.38) |
| Attractive | -.68 (7.05) | .34 (10.62) | -2.67 (8.18) | -2.37 (7.09) |
| Total | -1.51 (7.39) | -.37 (9.82) | -1.99 (8.69) | -1.39 (7.76) |

*Note*. Means are not significantly different at $p < .05$.

Table 2

*Means (M) and Standard Deviations (SD) Across Illness and Picture Conditions for Likability*

| | Illness | | | |
|---|---|---|---|---|
| | Good Health | Haltmar's Tumor | Haltmar's Cancer | Cancer |
| Picture | *M (SD)* | *M (SD)* | *M (SD)* | *M (SD)* |
| Unattractive | $63.12_a$ (8.86) | $63.16_a$ (9.35) | $56.38_b$ (9.90) | $57.97_b$ (10.88) |
| Attractive | $60.55_c$ (9.49) | $59.37_c$ (9.89) | $60.41_c$ (11.94) | $62.00_c$ (8.17) |
| Total | 61.87 (9.21) | 61.18 (9.75) | 60.20 (11.18) | 58.45 (9.74) |

*Note*. Means that share the same subscript within picture are not significantly different at $p < .05$ using Duncan's post hoc test.

Table 3

*Adjusted Means (M) and Standard Errors (SE) Across Illness and Picture Conditions*
 *for Likability with JWB Covariate*

|  | Illness | | | |
|---|---|---|---|---|
|  | Good Health | Haltmar's Tumor | Haltmar's Cancer | Cancer |
| Picture | *M (SD)* | *M (SD)* | *M (SD)* | *M (SD)* |
| Unattractive | 63.15 (1.44) | 63.09 (1.65) | 57.91 (1.74) | 56.07 (1.50) |
| Attractive | 60.58 (1.47) | 59.72 (1.58) | 61.95 (1.57) | 60.48 (1.46) |

*Note*. Means are not significantly different at *p* < .006.

APPENDIX A

**From**:  Dr. Timothy Ludwig, Institutional Review Board

**Date:** 5/05/2011


**RE**: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)

**Study #:** 10-0198

**Study Title**: Attractiveness Stereotype Applied to Children with Cancer

**Submission Type**: Modification

**Expedited Category**: (7) Research on Group Characteristics or Behavior, or Surveys,

Interviews, etc.


**Approval Date**: 5/02/2011

**Expiration Date of Approval:** 3/21/2011


This submission has been approved by the Institutional Review Board for the period

indicated. It has been determined that the risk involved in this modification is no more than

minimal.


**Investigator's Responsibilities:**

Federal regulations require that all research be reviewed at least annually. It is the Principal

Investigator's responsibility to submit for renewal and obtain approval before the expiration

date. You may not continue any research activity beyond the expiration date without IRB

approval. Failure to receive approval for continuation before the expiration date will result in

automatic termination of the approval for this study on the expiration date.


You are required to obtain IRB approval for any changes to any aspect of this study before

they can be implemented. Should any adverse event or unanticipated problem involving risks

to subjects occur it must be reported immediately to the IRB.

Waiver of Documentation of Informed Consent for Participants in Research Projects Involving Human Subjects

Title of Project:                    Perceptions of Children

Investigator(s):                    Alexandra Telk, Doris Bazzini, PhD

I. Purpose of this Research/Project:
        To examine factors that influence adults' judgments of children

II. Procedures:
        You will be asked to read a paragraph, view a photograph, complete five relatively brief surveys, and complete a demographic questionnaire.  The entire study will take less than thirty minutes.

III. Risks:
        Participation has no foreseeable risks.  However, if you wish to withdrawal from the study, at any time, for any reason, you may do so without repercussions.

IV. Benefits:
        The study will provide insight on decision making and judgments that relate to children.  There are no direct benefits of participating in this study.

V. Extent of Anonymity and Confidentiality:
         There will not be anything containing any identifying information of your participation in the study, specifically no names will be recorded, and therefore participation is anonymous and confidential.

VI. Compensation:
        You will receive course credit as specified by my instructor if applicable.

VII. Freedom to Withdraw:
        If at any time you feel uncomfortable, or for any reason wish not to continue with the study, you have the freedom to withdraw.

**VIII. Approval of Research**

| Institutional Review Board |

This research project has been approved, as required, by the Institutional Review Board of Appalachian State University

_____3/22/2010_____     _____3/21/2011_____
IRB Approval Date                                    Approval Expiration Date


**IX. Subject's Responsibilities**

**I voluntarily agree to participate in this study. I have the following responsibilities:**

- **Read the stimulus paragraph and view the photograph thoughtfully.**
- **Answer questions seriously and honestly to the best of my ability**
- **Refrain from discussing this study (and my participation in it) until after the study has been completed**

Should I have any questions about this research or its conduct, I may contact:

  Alexandra Telk,     843 425 3843                    email: telkan@appstate.edu
Investigator(s) Telephone/e-mail

  Doris Bazzini, PhD  828 262 2733                    email: bazzinidg@appstate.edu
Faculty Advisor (if applicable)                           Telephone/e-mail


Timothy Ludwig, Ph.D. (IRB Chair)  Phone: 828-262-2712   e-mail: irb@appstate.edu

Graduate School and Research and Sponsored Programs
Appalachian State University
Boone, NC 28608
irb@appstate.edu

APPENDIX B
**Target Photographs**


Original, not manipulated: attractive, healthy condition


Manipulated: unattractive, unhealthy condition

APPENDIX C
**Global Belief in a Just World Scale**
Lipkus (1991)

1. I think that I deserve the reputation I have among the people who know me.
2. When I get "lucky breaks" it is usually because I have earned them.
3. When I take examinations I rarely seem to get the grade I deserve.
4. As a child I was often punished for things that I had not done.
5. I am less likely to get hurt in traffic accidents if I drive with caution.
6. I have found that people who work the hardest at their job are not always the ones to get promoted.
7. If I watch what I eat, I will live longer.
8. If I suffer a misfortune, I have usually brought it on myself in some way.
9. Being nice to people will not necessarily bring me lots of friends.
10. If I get mugged or raped, I am just plain unfortunate.
11. In a job selection interview, the best applicant hardly ever gets the job.
12. People who think of others before themselves seem to lose out in life.
13. Parents who form good relationships with their offspring bring up more successful children.
14. Friendly people have the best marriages.
15. People who make the effort to invite people into their homes deserve lots of friends.
16. People who offer help in times of crisis rarely find their help is reciprocated when they are    the ones in need.
17. Lonely people are just no good at making friends.
18. People who divorce have only themselves to blame for the unhappiness they may suffer.
19. The group leader who prefers to solve group problems in a democratic fashion is less successful.
20. Outward-going, sociable people deserve a happy life.
21. The political candidate who sticks up for his principles rarely gets elected.
22. It is rare for an innocent man to be wrongly sent to jail.
23. Although evil men may hold political power for a while, in the general course of history good wins out.
24. Crime does not pay.
25. It is often impossible for a person to receive a fair trial in this country.
26. In a free market economy, the only excuse for poverty can be laziness and lack of enterprise.
27. Political representatives are more interested in getting into power than representing their constituency.
28. The federal government has ensured that every citizen has an acceptable standard of living.
29. The forces of law and order discriminate against black people in this country.
30. Harsh as it may sound, mass unemployment has ensured that the people in work are the ones most deserving of employment.

APPENDIX D
**Social Desirability (Derogation)**
Alicke (1985)

Each pair of words describes contradictory characteristics - that is, you cannot be both at the same time, such as very artistic and not at all artistic.

The blank lines form a scale between the two extremes. Please check the line that describes where you think the CHILD DESCRIBED IN THE PARAGRAPH falls on these dimensions. For example, if you think that the child would be extremely cooperative, you would check the line closest to cooperative. If you thought the child was not particularly cooperative or uncooperative, you would check the MIDDLE MOST line. And if you thought the child was extremely uncooperative, you would check the line closest to uncooperative.

The blank lines form a scale between the two extremes. REFLECT BACK TO YOUR OWN CHILDHOOD AND THINK ABOUT WHERE YOU WOULD HAVE FALLEN ON THESE DIMENSIONS WHEN YOU WERE 10 YEARS OLD. For example, if you think that YOU were extremely cooperative, you would check the line closest to cooperative. If you were not particularly cooperative or uncooperative, you would check the MIDDLE MOST line. And if you were extremely uncooperative, you would check the line closest to uncooperative.

Uncooperative____ ____ ____ ____ ____ ____ ____ Cooperative

Inconsiderate____ ____ ____ ____ ____ ____ ____ Considerate

Irresponsible_____ ____ ____ ____ ____ ____ ____ Responsible

Disrespectful _____ ____ ____ ____ ____ ____ ____ Respectful

Unpleasant ____ ____ ____ ____ ____ ____ ____ Pleasant

Dishonest ____ ____ ____ ____ ____ ____ ____ Sincere

Mean ____ ____ ____ ____ ____ ____ ____ Kind

Dirty ____ ____ ____ ____ ____ ____ ____ Clean

Unreliable ____ ____ ____ ____ ____ ____ ____ Reliable

Unfriendly ____ ____ ____ ____ ____ ____ ____ Friendly

APPENDIX E
**Likability Measure**
Reyesen (2005)

1. This child is friendly
2. This child is likeable
3. This child is warm
4. This child is approachable
5. I would enjoy babysitting for this child
6. I would enjoy playing with this child
7. I would like this child to live in my neighborhood
8. This person has attractive qualities for a 10 year old
9. Looking back, I was similar to this child when I was 10 years old
10. This child is knowledgeable for his/her age
11. Hypothetically, I would allow my child to play with this child

APPDENDIX F

**Manipulation Check**

For the following questions, think back to the paragraph you read about the child.

1. Did the child have a diagnosed illness?  _____ yes  _____ no
2. If so, what illness did the child have? _____
3.  How serious would you say this illness is? 1 (Not at All) – 7 (Extremely Serious)
4. How severe would you say this illness is? 1 (Not at All) – 7 (Extremely Severe)
5.  How much impact would this illness have on this child's life? 1 (Not Much) – 7 (Substantial)

VITA

Alexandra Telk was born outside of Seattle, Washington and moved around the country a bit before settling down in the Carolinas.  She received her Bachelor of Science in psychology from College of Charleston in Charleston, South Carolina; graduating Magna Cum Laude in 2009. Wanting to further her knowledge in psychology as well as have a change of scenery, she chose Appalachian State University (ASU) to pursue her graduate career.  The amazing scenery of the Blue Ridge Mountains and wonderful staff at ASU provided her with an outstanding experience.  She received her Master of Arts in General Experimental Psychology while focusing on the field of social psychology.  Alexandra also appreciated the mathematical side of the field, which led her to conduct an independent study in Quantitative Methods, teaching lab and informational sessions to other psychology students.  While at ASU, Alexandra was active in the campus life, including the Psychology Graduate Student Organization, serving as the president for one year. She also had the opportunity to attend many psychological conferences, specifically presenting at the Society for Southeastern Social Psychologists in Charleston, SC and at the Society for Personality and Social Psychology in San Antonio, TX.  Alexandra always wanted to work with children, and after completing her coursework she began working for a company specializing in Applied Behavior Analysis for children with special needs.