

**SOCIOCULTURAL EVOLUTION: AN EXAMINATION OF UNORTHODOX
ELECTIVE BODY MODIFICATION**

by

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Abstract

Body modification practices have become notably prevalent in the western world creating a need to re-evaluate the motivational factors that drive an individual to these practices and redefine how they are categorized in the psychology profession. Exploring the relationship between life events, age, gender, religiosity, personality type, and how these factors relate to the motivation to engage in various levels of body modification appears to be an approach less prevalent in the current literature. The goal of this study was to answer the main research question: Do the variables age, gender, life events, religiosity, and personality type collectively predict level of self-reported body modification? This study was non-experimental, utilizing self-report assessments to collect necessary data. Participants completed the assessments in person while attending a conference specifically for body art professionals. Data was analyzed quantitatively with IBM SPSS Statistics Version 23 software package using a multiple regression analysis. The variables age, gender, and spirituality were omitted from the regression analysis due to smaller than desired sample size. Personality type and life events served as the predictor variables with dimensions of body modification serving as the outcome variable with three categories: dimension of tattoos, quantity of piercings and quantity of extreme modifications defined as surgical procedures done outside of a medical setting by someone outside of the medical profession. Results indicated no correlation between the variables with the exception of quantity of extreme modifications and life events, which resulted in a statistically significant relationship. Suggestions for future study include replicating this study using a similar population but with a larger sample size to provide results that can be generalized across the body modification community.

Dedication

I would like to dedicate this Doctoral dissertation to the late John Jeffrey Hutter, Sr., my father and my hero. Although you are no longer with us physically, I will continue to use your wisdom as my guidance. You are missed more than words can say and although you will not be in the audience during my commencement, I take comfort knowing that you will be there in spirit, smiling proudly.

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CHAPTER 1. INTRODUCTION

Background of the Problem

Body modification has been loosely defined as the pursuit of a desired personal aesthetic, often in contrast with social norms, using unconventional methods (Adams, 2007, 2009). It has often been argued that all aesthetic alterations to the body, even those considered socially desirable, can be viewed as a form of body modification. In fact, even simple semi-permanent practices such as changing hair color, painting the fingernails and cosmetic dentistry, have all been considered forms of this practice. Body modification has been considered a form of mutilation in more conservative circles, however socially acceptable modifications are often overlooked due to social desirability (Rivardo & Keelan, 2010). Prior studies have shown conflicting results when attempting to explore potential psychological motivators including personality type, sexual deviance (Koziel, Kretschmer, & Pawlowski, 2010; Stirn, Oddo, Peregrinova, Philipp, & Hinz, 2011), and various other pathological indicators (Brooks, Woods, Shrier, 2003; Crossley, 2005; Guéguen, 2012; Stirn, 2003; Stirn, Hinz, & Brahler, 2006; Wohlrab, Stahl, Rammsayer, & Kappeler, 2007; Unrug, Tomkins, & Radwan, 2004).

There are many sectors of society that stand to be affected by this growing community, including professional fields such as physical health, mental health, organizational leadership, business management and youth education (Brown, Perlmutter, & McDermott, 2001; Chung & Monroe, 2003; Deschesnes, Demers, & Finès, 2006; Dukes & Stein, 2011; Firmin, Tse, Foster, & Angelini, 2008; Greif & Armstrong, 1999; Jancin, 2005; Schramme, 2008; Stirn, 2003;

Swanger, 2006). For some, body modification is considered a lifestyle choice (Sweetman, 1999) focusing largely on the freedom of choice and self-expression (Romanienko, 2011; Stebbins, 1997). Despite potential social challenges and professional rejection, the desire to deviate from social norms is greater than any concern for negative implications (Bailey, 2002; Blair, 2002; Brallier, 2011; Cortez, 2013; Cronon, 2001; Deschesnes, Demers, & Finès, 2006; Maroto, 2011; Resenhoeft, Villa, & Wiseman, 2008; Tabassum, 2013; Wohlrab, Stahl, & Kappeler, 2007).

Statement of the Problem

A review of current literature depicted a pattern of sampling procedures not appropriate for producing results that can be generalized (Tate, & Shelton, 2008). In addition to these shortcomings in sample selection, there has been significant neglect in examining this subculture using any criteria outside of sexual deviance, substance abuse, and pathology. As the body art renaissance continues to grow within popular culture, the need to develop an understanding of this counter-culture phenomenon and the underlying motivations increase exponentially (Atkinson, 2004; Tiggemann, & Golder, 2006).

Purpose of the Study

Classified as mutilation or self-harm, body modification often finds itself classified alongside disorders such as anorexia and cutting by both psychology and medical professionals (Adler & Adler, 2007; Baity, Blais, Hilsenroth, Fowler & Padawer, 2009; Chapman, Gratz, & Brown, 2006). In contrast, other circles often appear to marginalize body modification practices as merely fashion accessories or associate the lifestyle with attention seeking, sexual deviance, and promiscuity. These assumptions may be true regarding some portion of the body modification community, however the same can be said for any cultural group if examined thoroughly (Sweetman, 1999). The human condition as experienced by members of this community has

essentially been dismissed, with only a minimal number of published studies attempting to examine this population beyond these few categories (Fisher, 2002). The vacancies found within the current literature serve to support false societal perceptions, inadvertently contributing to negative stereotyping and ultimately stereotype threat behavior (Cano & Sams, 2010; Martin, & Dula, 2010). Previous researchers have indicated the need for further study consisting of stronger sampling methods, clear delineation of lifestyle participation based on dimension or quantity of body art and an examination of other common psychological characteristics

Significance of the Study

At this time, body modification is frequently categorized with other pathological disorders such as cutting, body dysmorphic issues and various other forms of self-harm and/or identity crisis according to existing literature (Adams, 2009). This further complicates the understanding of issues regarding societal tolerance and peer acceptance in the workplace while potentially polluting the current knowledge base of critical mental health disorders. Through nurturing an understanding of these personal practices, the psychology profession may begin to establish appropriate means of differentiating self- adornment from self-harm (Strenger, 2009).

Body modification practices have become notably prevalent in the western world, further nurtured by entertainment, media, and fashion trends. This resurgence of body art popularity has created a need to re-evaluate and redefine the motivational factors that drive an individual to these practices. Exploring the relationship between life events, age, gender, religiosity, personality type, and how these factors relate to the motivation to engage in various levels of body modification is an approach not currently present in the majority of literature. This research serves to improve knowledge of motivations and the mental state of body modification enthusiasts while creating a new enlightened profile of the modified person. This improved

understanding may also serve to benefit various professional fields including organizational and clinical psychology, as well as nursing and health care (Caliendo, Armstrong, & Robert, 2005; Carroll, & Anderson, 2002; Chivers, 2002; Fisher, 2002; Tomasello, Carpenter, Call, Behne, & Moll, 2005)

This particular study attempted to expand on existing theory by examining the potential relationships between age, gender, personality type, religiosity, life events, and dimension of body modification. Currently there appears to be little research regarding the differences between those who engage in body modification as a lifestyle, and those who are merely body art consumers. It is clear that there is a need for some sort of delineation when attempting to examine motivations for those involved in these unconventional practices, however the current literature is unable to provide this categorization. Previous literature has also maintained a primary focus of interest on topics such as substance abuse, sexual deviance and self-harming behavior and how these pathologies relate to the practice of body modification. To date, it appears that very few studies have been conducted in an attempt to explore potential predictors such as life events, individual personality types and religiosity and how these specific variables may influence the levels of body modification an individual chooses to pursue (Fisher, 2002).

Research Questions

Central Research Question

Do the variables age, gender, life events, religiosity and personality type collectively predict the dimension of body modification?

Null Hypothesis

- $H1_0$ = The variables age, gender, life events, religiosity and personality type do not collectively predict the dimension of body modification.

Alternative Hypothesis

- $H1_1$ = The variables age, gender, negative life events, religiosity and personality type do collectively predict the dimension of body modification.

Research Sub-Questions

- *RQ2*: When all other variables are held constant, does age alone significantly predict dimension of body modification?
 - $H2_0$ = The variable age does not predict the dimension of body modification.
 - $H2_1$ = The variable age does predict the dimension of body modification.
- *RQ3*: When all other variables are held constant, does gender alone significantly predict dimension of body modification??
 - $H3_0$ = The variable gender does not predict the dimension of body modification.
 - $H3_1$ = The variable gender does predict the dimension of body modification.
- *RQ4*: When all other variables are held constant, does life events alone significantly predict dimension of body modification?
 - $H4_0$ = The variable life experiences do not predict the dimension of body modification.
 - $H4_1$ = The variable life experiences do predict the dimension of body modification.
- *RQ5*: When all other variables are held constant, does religiosity alone significantly predict dimension of body modification??

- $H5_0$ = The variable religiosity does not predict the dimension of body modification.
- $H5_1$ = The variable religiosity does predict the dimension of body modification
- *RQ6*: When all other variables are held constant, does personality type alone significantly predict the dimension of body modification?
 - $H6_0$ = The variable personality type as measured by the MBTI does not predict the dimension of body modification.
 - $H6_1$ = The variable personality type as measured by the MBTI does predict the dimension of body modification.

Definition of Terms

body art

A term frequently used to describe forms of body modification (Tabassum, 2013).

body modification

Body modification is defined as the altering of an individual's physical appearance to a specifically desired state, which may not be in alignment with social standards. In general, the term modification can be used to describe any elective, body altering practice (Wohlrab, Fink, Kappeler, & Brewer, 2009). For the purpose of this study, the term body modification is defined as any ornamental tattooing or piercing of the body as well as any non-medical alteration of the body conducted in a surgical manner for the purpose of aesthetics.

body piercing/piercing

Defined as creating an opening in the skin using modified hypodermic needles and inserting a form of jewelry inside the fistula for the purpose of adornment (Tiggemann & Hopkins, 2011).

life events

Common occurrences experienced by most people within their lifetime. These events could have a positive or negative impact on an individual's life and it is entirely possible for these events to have no impact at all.

lifestyle

The use of the term lifestyle is defined as holding a specific set of values leading personal aesthetics to be viewed as a direct reflection of identity, often spiritual in nature, going beyond mere fashion statements, and impacting interactions outside of the subculture (Stebbins, 1997).

Myers-Briggs Type Indicator (MBTI)

A personality inventory based on the theories of C.G. Jung, which uses four dichotomies to categorize the participant's preferences into one of 16 combinations. This four-code personality type is then used to aid the participant in deepening their understanding of their own perceptions of the outside world (Briggs, Myers-Briggs, & McCaulley, 1988).

extraversion (E). Outgoing, active and involved, comfortable in an array of surroundings (Briggs, Briggs-Myers, & McCaulley, 1988)

introversion (I). Reflective, preferring to do many activities alone or with only those deemed close and trustworthy (Briggs, Briggs-Myers, & McCaulley, 1988).

sensing (S). Attention is focused on physical reality and the main senses such as touch, sight, taste, and sound (Briggs, Briggs-Myers, & McCaulley, 1988)

intuition (N). Perceptions are based on impressions and reading between the lines (Briggs, Briggs-Myers, & McCaulley, 1988).

thinking (T). Describes the use of basic truths or principles in the decision making process. Analytical, consistent and logical (Briggs, Myers-Briggs, & McCaulley, 1988).

feeling (F). Makes decisions by considering the feelings of others involved in the situation. Value oriented, seeking harmony (Briggs, Myers-Briggs, & McCaulley, 1988).

judging (J). Describes an individual who is open to new experiences but prefers an orderly way of life, organized and generally a planner (Briggs, Myers-Briggs, & McCaulley, 1988).

perceiving (P). Preferring to take in information, staying open to situations as they unfold (Briggs, Myers-Briggs, & McCaulley, 1988).

norm / social norm

The term social norm is defined as behavior that is deemed socially acceptable or typical of the average person. (Johncock, 2012).

religiosity

Refers to the state of being religious. Religiosity as a term, refers to a cultural system of behaviors, views and societal organization.

tattoo

The result of inserting a specific form of pigment under the skin in the form of a pattern or design by way of specialized needle groupings attached to a tattoo machine or using hand-poked stippling methods (Tiggemann & Hopkins, 2011).

Unorthodox Elective Body Modification: Dimensional Assessment

This instrument is designed to measure the quantity of body modifications along with their dimension in three different categories. Tattoos were assessed using percentage of body coverage as seen in the medical assessment of burn victims. Piercings were scored according to

quantity however the instrument provides the ability to differentiate by piercing size and placement. Non-medical surgical modifications were scored separately in order to allow for the more radical nature of these procedures. The instruments name is derived from the voluntary and taboo nature of these procedures.

Research Design

Prior literature indicated the need for additional research using sampling methods that are more representative of the population and a means to differentiate between those choosing these practices as a lifestyle and those acting on fashion trend (Wohlrab, Rammsayer & Kappeler, 2007). The current popularity of tattoos and body jewelry within the world of fashion and entertainment, combined with questionable demographic data, has served to dilute results from previously used sampling methods. As a researcher and a professional within the body modification industry, the advantage of access to the modified community via professional networking and organizational membership has proven extremely beneficial. The community appeared to embrace the concept of the study, presenting great interest in being part of improving the scientific knowledge regarding the *body modification* culture.

Lifestyle based on community involvement, according to Stebbins (1997), represents commonly shared behavioral patterns, related values, attitudes and orientations as the basis for a separate, common social identity. To accurately examine the *body modification* community, it was necessary to define the portion of the community that served as the most accurate representation of the community population. For the purpose of this study, it was most effective to select a sample from the body art industry itself. Tattoo artists, body piercers, and extreme *body modification* artists specifically represent a major portion of the *body modification* community. This isn't surprising considering the amount of personal freedom that would be

provided without the limits of workplace dress code policies. Choosing a sample from the body art industry also allowed for certain criteria to be met by default without prior screening. For example, inclusion in the industry provided confirmation of an individual's *body modification* being perceived as a lifestyle choice, differentiating them from body art trend consumers.

This study was non-experimental in nature utilizing self-report survey instruments for collecting the necessary information. All necessary data was collected in a controlled classroom atmosphere using the following approved instruments:

Psychiatric Epidemiology Research Interview (PERI) Life Events Scale (Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978).

The PERI scales attempt to measure various dimensions of psychopathology based on the effects of stress in both healthy and chronically unhealthy individuals through self-report questionnaires. Tested for psychometric properties and used in clinical trials with patients of diverse diagnosis, the PERI scales have an internal consistency reliability assessed using Cronbach's coefficient, $\alpha = .05$. Permission for use of this instrument for the purpose of this study was granted by the original author, Bruce P. Dohrenwend.

Myers-Briggs Type Indicator (Briggs, Briggs Myers, & McCaulley, 1988)

The Myers-Briggs Type Indicator (MBTI) is a self-report instrument designed to identify an individual's preferences based on eight characteristics derived from Jung's theory. Knowledge of personality type provides an indication of how an individual interacts at work, in a learning environment and in personal relationships. The MBTI uses interaction preferences in several categories in order to identify one of 16 distinctive personality types (Briggs, Briggs Myers, & McCaulley, 1988) The rights to this instrument are held by CPP, Inc. who was

gracious enough to grant use of the instrument at a dramatically reduced cost to show support for this research study.

The Duke University Religion Index (DUREL) (Koenig, H. G., & Büssing, 2010).

The Duke University Religion Index (DUREL) is a measure of religious involvement as perceived by the participant developed for use in large cross-sectional and longitudinal studies. The DUREL assesses the three major aspects of religiosity, organizational religious activity, non-organizational religious activity, and intrinsic religiosity, as identified by the National Institute of Aging. The scale offers a high test-retest reliability (intra-class correlation = .09), high internal consistence (Cronbach's alpha's = 0.78-.09), and high convergent validity with other measures of religiosity (r 's = 0.71-.0.86)(Storch et al., 2004) (Koenig, & Büssing, 2010). Permission to use this instrument was granted by one of the key authors of the instrument, Harold G. Koenig.

Unorthodox Elective Body Modification: Dimensional Assessment

Participants were provided with three different sets of diagrams representing the human form. One representing body piercing, one representing tattoos and one representing other non-medical, surgical *body modifications*. Participants were asked to state their age and then assess themselves in each of the three categories by marking their blank diagrams to depict the number of piercings, the number of non-medical surgical modifications and the areas of tattoo coverage. Piercings and non-medical surgical modifications were quantified simply by tabulating the number of each present. Tattoos were quantified using percentage of coverage based on the number of graph squares shaded in versus those left blank.

Non-medical surgical modifications refer to *body modification* that requires a surgical type procedure typically requiring use of surgical instruments (scalpels, cautery pens, sutures,

implant grade silicone, local anesthetic, ink or dye injection, etc.), yet is performed outside of the medical field by a body artist in a non-surgical environment. These items were scored with one point each based on participant reporting without differentiation in procedures as they are all relatively dangerous in nature, questionable in legality and often irreversible. The diagrams for tabulating percentage of tattoo coverage also contained a grid. Participants were asked to shade in the grid squares on the diagram based on their own approximate level of tattoo coverage. The score was then computed using percentage based on total number of number of squares shaded divided.

Using a multiple regression analysis, the independent variables age, gender, religiosity, life events, and personality type were to be measured against the dependent variable, dimension of *body modification*, to determine if relationships exist. Due to a lack of demographic data in which to base adequate sampling, this study used a 30:1 participant to variable ratio. Pedhazur (1997) suggest a sample size to be calculated based on participant to variable ratios of 15:1 or 30:1 when generalization is particularly critical. Based on existing literature, generalization was viewed as critical in this study as stated in the research problem. Minimum sample size was calculated to be 150 participants. This number was confirmed using an a-priori sample size calculator for multiple regression with an anticipated effect size (f^2) 0.15, statistical power of 0.95, five predictor variables, and a probability level of 0.05 (Faul, Erdfelder, Buchner, & Lang, 2009).

The appropriate permission was solicited from the professional organization hosting the event in order to arrange for the organization's cooperation in this study. Upon receipt of necessary permissions, data collection was scheduled to take place during the annual conference held in Nevada. Instruments were administered during specific time slots inside of assigned

meeting rooms. These time slots appeared on the same roster as the continuing education classes and workshops already scheduled as part of the event. The conference typically yields an annual attendance of roughly 1000 to 1500 professional body piercers and their counter staff for the purpose of continuing education within the industry. The sample consisted of only those who expressed interest in participation voluntarily, were registered as conference attendees, above age 18, and working in some capacity as a professional in the body arts. The purpose of choosing this sample was to increase external validity by insuring that those participating also participate in *body modification* as a lifestyle rather than a passing fashion trend. In the context of this study, this lifestyle choice was denoted by the choice to engage in body art as a profession. Although this limits the ability to generalize results across the community population beyond those engaged in it professionally, it is believed that body art professionals make up the largest portion of the community.

Interested participants were notified of the study using postcard announcements included in jewelry shipments from a popular industry supply vendor, along with multiple advertisements published in the organizations quarterly publication. Potential participants were provided with the researchers contact information, notices of consent and information regarding room designation and time slots at the administrative desk during conference registration.

Assumptions and Limitations

The current statistical demographic data for the *body modification* community is limited leaving the number of individuals included in this population unknown. Prior literature indicated a need for research using sampling methods more representative of the population, which has proven difficult due to the media inspired popularity of some of these practices as fashion trend. It has become necessary to develop a means to differentiate

between those who are consumers of body art trends and those who engage in these practices as a lifestyle choice. Lifestyle based on community involvement, according to Stebbins (1997), represents commonly shared behavioral patterns, related values, attitudes and orientations as the basis for a separate, common social identity.

In order to accurately examine the *body modification* community, it was necessary to define the portion of the community that serves as the most accurate representation. For the purpose of this study it was most effective to select a sample from within the body art industry itself since many community members appear to gravitate to a professional role. As previously mentioned, *body modification* professionals appear to represent a major portion of the overall community population, allowing them to openly engage in these practices as a lifestyle without discretionary concealment. In addition to accurate representation of the community, choosing from the industry specifically allowed certain criteria to be met by default without prior screening. For example, inclusion in the industry automatically indicated *body modification* as a lifestyle choice differentiating from body art trend consumers and confirmed appropriate age for participation in this study as only adults, age 18 years or older, are legally permitted to work in this profession. In addition to profession legality, the organization does not permit underage individuals to register for conference or attend classes with all attendees required to show identification at registration. This is outlined each year on the organizations event registration webpage and event fliers.

Body modification as a lifestyle and profession is deeply misunderstood by both the clinical world and the public despite the historical relevance of these practices dating back to early man (Wohlrab, Fink, Kappeler, & Brewer, 2009). Perceived motivations for aesthetic *body modification* practices have varied throughout cultural history with suspected intentions

including those relating to rites of passage, attention seeking shock value, pathological self-harm and sexual deviance (Hicinbotham, Gonsalves & Lester 2006; Rivardo & Keelan, 2010). Those who have chosen this lifestyle appear to accept this misunderstanding as an assumed risk, deriving from their personal choices, as if the drive to transform their bodies is far greater than any desire to be part of the societal collective (Tiggemann, & Golder, 2006; Strenger, 2009). The debate regarding *body modification* now appears to land itself on the line between self-harming and self-expression leaving a large grey area in need of exploration (Whitehead & Thomas, 2013). Just as homosexuality was once considered a pathology, body art is now in the same political position as psychologists attempt to define motivations that drive these individuals to defy societal norms (Pitts, 1999). This study may serve to begin the process of examining potential predictors as well as motivations regarding these practices while also considering individual uniqueness. It is possible, with further externally valid study, to broaden perceptions of both the academic community and that of mainstream society.

Assumptions

It was expected that a statistically significance relationship at a $p < .05$ level would exist for each of the research questions, signifying that the null hypothesis could be rejected in each case. The variables age, gender, life events, religiosity and personality type would be significant in collectively predicting dimension of *body modification*. Specifically, this analysis was expected to suggest that age, gender, life events, and religiosity have an impact on the chosen dimension of *body modification*.

Limitations

Due to a lack of demographic data in which to base adequate sampling, this study used a 30:1 participant to variable ratio. Pedhazur (1997) suggests a sample size to be calculated based on participant to variable ratios of 15:1 or 30:1 when generalization is particularly critical. Based on existing literature, generalization was critical in this study as stated in the research problem. Minimum sample size was calculated to be 150 participants. This number was confirmed using an a-priori sample size calculator for multiple regression with an anticipated effect size (f^2) 0.15, statistical power of 0.95, five predictor variables, and a probability level of 0.05 (Faul, Erdfelder, Buchner & Lang, 2009).

Organization of the Remainder of the Study

Chapter 2 represents a review of the current literature relating to *body modification*, motivations to engage in *body modification* and the various traits explored to date. This literature review serves to provide the background needed to understand the concerns presented regarding sampling methods and areas of focus with regards to this subculture. Chapter 3 discusses the research methods and protocols used in this study including sampling methods, chosen population and instruments used. Chapter 4 reports the study results after using a multiple regression analysis to analyze the collected data. The dissertation concludes with Chapter 5, which includes further detailed discussion regarding the study results and recommendations for future studies.

CHAPTER 2. LITERATURE REVIEW

Methods of Searching

The literature review process has been an ongoing project since beginning the Masters program at Capella University in 2010 with roughly 150 relevant peer reviewed journal articles collected to date. The search for meaningful articles involved utilizing the databases SUMMONS, PsycARTICLES, EBSCOhost, Google Scholar, ProQuest and PsycINFO to name a few. Keywords used for these inquiries included terms such as *body modification*, *body art*, tattooing, piercing, subculture, self-injury, social deviance and personality type. Findings were both repetitive and often contradictory, which would be considered expected, given the nature of scientific research is to either provide new knowledge or provide evidence supporting or contradicting knowledge that already exists.

Theoretical Orientation for the Study

This study examines the potential relationship between age, gender, life events, personality type, religiosity, and the self-reported level of *body modification*. At this time *body modification* is frequently categorized with other pathological disorders such as cutting, body dysmorphic issues and various other forms of self-harm and/or identity crisis according to existing literature (Adams, 2009). This further complicates the understanding of issues regarding societal tolerance and peer acceptance in the workplace while potentially polluting the current knowledge base of more critical mental health disorders. Through nurturing an understanding of these personal practices, the

psychology profession may begin to establish appropriate means of differentiating self-adornment from self-harm (Strenger, 2009).

Review of the Literature

The term *body modification* can apply to many common practices including those currently viewed as socially acceptable. One of the many conflicting issues regarding this topic centers on the inability to clearly distinguish fashion trend from what is often considered more extreme behavior. For example, simple semi-permanent practices such as dying hair, manicured nails, and cosmetic dentistry could all be considered forms of *body modification*. In conservative circles, as noted by both Rivardo and Keelan (2010) as well as Resenhoeft, Villa and Wiseman (2008), *body modification* is viewed as a form of mutilation excluding socially acceptable practices such as plastic surgery and orthodontics. In short, social acceptance of personal aesthetics is determined by the social climate, ethnic origins, and trends of that particular era resulting in a great variation in implied motivations. (Atkinson & Pitts, 2004; Johncock, 2012).

Self-expression vs. self-harm. The opposing views labeling *body modification* as either self-expression or self-harming result in constant debate regarding the classification of those who engage in such elective body altering practices. This debate is driven by the notion that society as a whole determines what is normal behavior versus what is abnormal behavior. Normal being defined as socially acceptable behavior, which in turn translates into average and expected cultural behavior (Johncock, 2012). The art of tattooing and body piercing has experienced resurgence in popularity and now our means of classifying this behavior should be re-evaluated (Wohlrab, Fink, Kappeler, & Brewer, 2009). Body art no longer signifies

inclusion into the criminal element as we now see this art form present in all social classes (Fisher, 2002).

Skegg (2005), refers to self-harm as deliberate injury that is self-inflicted, yet absent of suicidal tendencies in most cases. She goes on to define some of the self-harming behaviors, which include acts such as carving words or designs into the skin. This of course causes a great deal of overlap as this definition can and does describe the practices of tattooing and scarification, though loosely. Interpretations and the defining of terms as seen in Skegg's (2005) work are found widely throughout the existing literature. The need for a shift in scientific focus, from the physical actions of self-harming to the intentions behind them, is very clear as there is currently no delineation.

The definition of self-injury according to Hicks and Hinck (2008), is to deliberately mutilate the body in an attempt to release emotional pain. The authors go on to describe self-harm as providing a catharsis for feelings when experiencing emotional oppression and social suffocation. The feelings of self-hate experienced by the self-harmer lead them to self-injure as a cry for help but in a contradictory manner, hide the injury in shame (Hicks & Hinck, 2008). This brings to question any association the psychology profession attempts to make with self-injury and *body modification*. For most within the subculture there appears to be more exhibitionist behavior with any concealment of body adornments being more directly attached to employment requirements.

Another interesting point raised by Hicks and Hinck (2008) is the literal definition of self-mutilation. According to most dictionary definitions, to *mutilate* is to inflict a violent and disfiguring injury on oneself or on another. The word *violent*, by dictionary definition, implies using or involving physical force intended to hurt, damage or kill. For those involved

in the *body modification* culture, the act of modifying one's body appears to be a pursuit that improves overall self – image while nurturing a sense of contentment and control over one's body (Johncock, 2012). Neither of these words appears to represent the nature of most *body modification* in that the wearer appears to view their adornments as attractive and an overall improvement of their personal aesthetic. Although there may be a release of stress or other emotional responses involved in the process of becoming modified, the intentions are clearly very different from that of self-mutilation.

Pain, blood and perception of voluntary physical suffering seem to be a key factor in the categorization of *body modification* as a pathology, aside from the dreaded social implications of rejection (Schramme, 2008). With this in mind, consider the common practices that are socially acceptable yet painful, permanent, or semi-permanent; place the individual at risk for illness or infection and scar tissue (Donohoe, 2006). American society for example, tends to embrace the use of painful orthodontic devices for use on adults and children alike all in the name of aesthetic perfection. These devices leave the patient with pain in the gums and jaw, canker sores inside the mouth, and as if that were not enough, these devices cost parents thousands of dollars. In contrast, the Japanese culture is experiencing trends leading to the glorification of crooked teeth. This physical attribute is not only deemed desirable by many within the Japanese culture, procedures are now available to create a crooked smile for those born with naturally straight teeth (Japan's crooked-teeth 'yaeba' trend 'adds to sex appeal', 2012).

Gender, physical attractiveness, and sexual deviance. Despite the general belief that age and gender impact decision making, to date there appears to be very little focus on these constructs in the context of body modification and motivational factors. Any

focus on gender often appears either incidental or geared towards sexual attractiveness, as can be seen in the works of Whitehead and Thomas (2013) and Swami and Furnham (2007). Regardless of progression towards gender equality, the allocation of importance placed on these factors is ultimately influenced by variations in perceptions that often appear to be gender biased. In addition to gender variations, age plays a significant role in our interpretation of information, allocation of importance and establishment of individual differences (Lizárraga, Baquedano, & Cardelle-Elawar, 2007).

Wohlrab et al. (2009) explored physical attractiveness and the enhancement of body modification based on evolutionary psychology theories suggesting that body modifications serve as signals in sexual selection. This study presents an interesting paradigm in that the gender of each participant dramatically influenced his or her perceptions of the photos presented. Study results revealed that men and women found the photos of tattooed males to be more dominant and masculine. Women believed tattoos on males signal good health, whereas males rated non-tattooed men healthier for not having tattoos. In contrast, women rated other women with tattoos as being less healthy.

A relevant addition to the authors' discussion relates to the influence of biological drive, considering traits which attract females will vary based on the woman's reproductive cycle. This imbalance is similar to one presented in a study conducted by Swami and Furnham (2007), which explored opinions of tattooed females based on hair color. Interestingly enough the results showed that women in general were thought to be promiscuous, heavy drinking and prone to risky behavior overall, however blondes were rated the most negative based on perceptions.

By far one of the most popular constructs widely examined in studies of body modification appears to be sexual behavior, specifically sexual deviance. For example, Rivardo

and Keelan (2010), suggest links between body piercing quantity and extra-marital sexual behaviors in both men and women. Conclusions of this nature provide an interesting contrast when compared to studies conducted by Swami and Furnham (2007), Guéguen (2013) for example, which seem to indicate that women are deemed less attractive after having been pierced and tattooed. Overall, it seems reasonable for researchers to see a connection between sexual behaviors and body art due to the implied lack of inhibitions on the part of the wearer.

A compelling argument regarding body modification and sexuality is raised when considered inside the context of gender reassignment and genital cosmetic surgery. Unrealistic visions of the ideal body continuously pushed through every media outlet has led to exponential growth in plastic surgeries meant to perfect genitalia. Whitehead and Thomas (2013) suggest that we re-evaluate the treatment of patients requesting gender reassignment versus the treatment of other non-transgender patients seeking cosmetic surgery of the genitalia. It is disturbing to consider the expedited manner in which a woman seeking labial reduction surgery is examined and assessed for the procedure, yet a transgender seeking similar procedures is considered potentially pathological. In order for a transgendered individual to receive these same procedures, they must first be subjected to a battery of psychological tests and evaluations, unlike those seeking only aesthetic improvement.

Skegg, Nada-Raja, Paul & Skegg (2007), support the search for evidence of cultural deviance and deviant behaviors in their article *Body Piercing, Personality, and Sexual Behavior*. The research was conducted using members of the Dunedin Multidisciplinary Health and Development Study, New Zealand, using face-to-face interviews and computer presented questionnaires (Skegg, Nada-Raja, Paul & Skegg, 2007). 966 of 1019 members, age 26, participated in the study, and were asked about body piercing and sexual behavior. The study

was in contrast with previous recent literature in that those with body piercings measured low on constraint and high on negative emotionality. Participants viewed their piercings as anti-fashion, as opposed to conformity to a group, identifying with them as an expression of their personal uniqueness. Culturally speaking this is an interesting find in that it seems to contrast with current studies in the United States. It is important to note that the cultural significance of the indigenous peoples of New Zealand were not really a subject of identity in the study.

As a society, a great deal of emphasis is placed on matters of vanity such as the use of orthodontic devices to perfect the smile or the pursuit of a perfect profile through surgical means. Costly procedures of this sort, though deemed safe and routine, place an individual at risk for infection or adverse side effects while calling into question our definition of socially acceptable practices (Whitehead & Thomas, 2013). Johncock (2012), points out that mass media influences our perceptions with unrealistic images while selling the products claiming to help people achieve the unachievable. It is also important to consider the inclination to diagnose body modifier's as pathological in the struggle to define self-mutilation, self-harming or self-torture and the criteria for socially acceptable vanity (Pitts, 1999).

Personality. Personality type is believed to have a significant influence on how we perceive the world and ultimately the manner in which we make choices. Despite this awareness, few studies on *body modification* have been conducted using personality correlates and those that have are open to criticisms due to methodological bias such as that presented by Nathanson, Pailhus and Williams (2005). Just as personality influences individual choices the same can be said for religiosity or the complete absence of a belief system.

The article *Personality and misconduct correlates of body modification and other*

cultural deviance markers (Nathanson, Pailhus, & Williams, 2006), provides insight regarding deviant behaviors often associated with body modification practitioners. The authors performed a study of personality based on the Big Five traits sampling 1,375 students who engage in body modification. Findings showed an interesting difference between those who gravitate more towards body piercing and those who have a draw to tattooing. Individuals who primarily engage in body piercing tended to rate high in openness to experience and low on conscientiousness. In contrast, those most interested in tattoos tended to be low on agreeableness and conscientiousness with the need for uniqueness being significant. The shortcomings of this study relate to the youth of participants with the older portion of the body modification not represented. The most significant finding that contributes to the current understanding of body modification and personality is the lack of differences between the modified and non-modified.

In revisiting the study mentioned previously by Skegg, Nada-Raja, Paul, and Skegg (2007), personality was assessed using a modified version of the Multidimensional Personality Questionnaire (MPQ). The results indicated that women with body piercings when compared to those who had none were more likely to exhibit traits such as low constraint and high negative emotionality. In this instance, low constraint is defined as sensation seeking and impulsive. Negative emotionality refers to being easily stressed or experiencing higher levels of anxiety. These women were also more likely to report having had multiple sexual partners or any same-sex partner in the previous year.

Tate and Shelton (2008) conducted a study, which involved assessment of personality traits with results that were similar to those previously mentioned. The study was conducted using college students as participants and compared individuals with tattoos and piercings to

individuals with no body modifications. The results indicated that tattooed participants scored significantly higher on a need for uniqueness and significantly lower in areas of agreeableness when compared to non-tattooed participants. Individuals with body piercings appeared to score higher on openness to experience and lower on conscientiousness. These results are similar to those indicated by Tiggeman and Golder (2006), as well as Wolhrab et al. (2007). Ultimately Tate and Sheldon (2008) found their results, along with the more recent studies, which support their findings, in opposition of studies conducted in the past, which indicate body modification as a warning of psychological dysfunction.

Agency and detachment from human form. A unique perspective on motivations to modify the human form comes from Strenger (2009) and the enlightenment project, which explores the desire to transcend human mortality. According to the results of this project, body modification can be seen as a means to transform into something reminiscent of childhood fantasy in order to avoid acceptance of our own mortality. As far-fetched as this seems, this theory could have more truth behind it than we imagine. Adams (2009) and Pitts (1999) both suggest that we are a product of all the fairytales, comic book characters, and fictional stories that have bombarded us our entire lives. Horn implants, ear pointing, extreme dental modifications such as fangs or metal caps, ribbed silicone implants covering the arms and legs as well as full body tattooing and piercing could all render someone comicbook-character-like using the right combination.

Strenger's (2009) ideas provide possible support or contrast, with that of Hicinbothem, Gonsalves, and Lester (2006) who suggest a correlation between body modification practices and a history of suicidal tendencies. From one perspective the practice of body modification implies escapism based on fear of mortality, making it entirely possible that these acts are

motivated by the individuals previous desire to end their life. In contrast, these two ideas clash considering that if one were indeed fearful of inevitable death and attempting to transcend mortality, suicide appears to be an opposite way of thinking.

The concept of becoming something beyond human is further explored by Abrahamsson and Abrahamsson (2007) in their article transcription of an interview with the body modification pioneer known as Stelarc. The perspective offered in this article is one that is reminiscent of sci-fi films suggesting that we as human beings are finding an increasing need to become physically one with our own technology.

Abrahamsson and Abrahamsson (2007) begin with a quote from Stelarc himself that states:

Bodies are both Zombies and Cyborgs. We have never had a mind of our own and we often perform involuntary—conditioned and externally prompted. Ever since we evolved as hominids and developed bipedal locomotion, two limbs became manipulators and we constructed artifacts, instruments, and machines. In other words, we have always been coupled with technology. We fear the involuntary and we are becoming increasingly automated and extended. But we fear what we have always been and what we have already become Zombies and Cyborgs. (p. 293)

Stelarc is an Australian-based performance artist with three to four decades of experimentation to his credit including work with prosthetics (Abrahamsson & Abrahamsson, 2007). The performer outlined his philosophy regarding the pursuit of modifying our bodies describing one of the driving motivational forces being that of our technological bombardment. He describes our struggle as humans being both quantitative and qualitative in nature in that we are infiltrated with more information now than ever before but the quality of the information is

not always clear. This gave birth to the notion that we have created our technological world as ergonomically as possible so now the time has come to modify our bodies in order to continue the pursuit of exploration. Stelarc goes on to describe what he views as our struggle with agency and intention being directly related to the contradiction of self, as inside our own skin, and our ability to project our self-image across the world using technology and social media (Abrahamsson & Abrahamsson, 2007). All of these concepts, regardless of how far reaching they may appear to some, point to a world where humans change their bodies to function in synchronicity with our technological world. Overcoming many of the pitfalls of our limited physicality and allowing each individual to customize their form and potentially preserve their spiritual energy long after the body fails.

Matters of social acceptance. Socially acceptable behavior is defined as *the norm*, which translates to *average* and represents the expected behavior of most people within a culture (Johncock, 2012). Oddly enough, this perception changes over time as we see the waxing and waning of trends toggling between socially acceptable and taboo with each passing era (Wohlrab, Fink, Kappeler, & Brewer, 2009). For example, as noted by Atkinson and Pitts (2004), the popularity of *body modification* has been ever increasing as evident by popular media and trendy apparel. Nathanson and Pailhus, (2006), indicate a significant absence of research in examining the extreme variations in quantity of *body modification* outside of media influences. This statement is of course referring to quantity, or how extreme an individual chooses to take their journey through *body modification*. While there has appeared to be a shift in the overall view of these practices, current research pertaining to the topic continues to favor the negative.

To date, the existing literature on *body modification* depicts an ongoing theme of focus on public perceptions of attractiveness, employer perceptions, self-harm, addiction, and

promiscuous behavior (Adams, 2009). For example, Rivardo and Keelan (2010), suggest that *body modification* indicates premarital sexual activity and lack of religious faith based solely on a sample from one small Catholic liberal arts college. It is important to note that suspected pathology and social deviance could exist anywhere we choose to find it within various social groups. It can be postulated that the existing gap in literature is directly related to a lack of descriptive data for the population itself. With no presence of accurate demographic data, it becomes impossible for a researcher to accurately sample and provide results that can be generalized. The result is an existing body of literature not representative of the population, which in turn has left the topic in a stalemate of sorts. To begin the process of building a sound body of research regarding this topic, the establishment of foundational data based on proper sampling methods is needed. The possibility of commonalities within this foundational data is also a direct possibility, which may be useful in completing a comparative study while also collecting demographic information.

In an attempt to understand body art practices on a grander scale, the article, “Modifying the body: motivations for getting tattooed and pierced” by Wohlrab, Stahl & Kappeler (2007), explores cultural significance throughout the world and throughout history in an attempt to define motivations in current times. Researchers explored 10 broad categories of motivations for body modification practices; beauty, art and fashion, individuality, personal narrative, physical endurance, group affiliations and commitment, resistance, religiosity and cultural tradition, addiction, sexual motivation, and no specific reason. Participants seemed to show similar motivations for both tattooing and body piercing with a focus on embellishment and expression of individuality. The authors suggest further study regarding the quantity of motivations in order to establish relevance to body art. This article is beneficial in that it explores such a broad range

of categories signifying the many variations that motivate individuals to avoid certain social norms.

Tiggemann, Hopkins (2011) report on a study regarding an individual's underlying motivations behind body art practices in their article, *Tattoos and piercings: bodily expressions of uniqueness?*. The sample for this study was drawn from an Australian music store.

Participants provided information regarding their tattoos and completed measures regarding need for uniqueness and distinctive appearance. Music was noted as a commonality amongst participants but given the location and sample, this fact seems to be of questionable validity. The author's suggested future researchers become versed in the variations between tattoo and piercing enthusiasts in order to better understand motivations.

Swami (2011) explored the effects body art has on the self perceptions of those who receive tattoos in order to determine changes in several categories. Social anxiety, dissatisfaction, perceptions of uniqueness, and self esteem were measured three weeks before receiving a tattoo and immediately after with distinct results. Social anxieties regarding appearance were significantly lower post-tattoo procedure for both males and females with significantly higher body appreciation, self esteem and self ascribed uniqueness. Women reported social anxiety regarding their physique was higher whereas men reported it as lower. This variation between genders may be attributed to the unrealistic pressures on females within society causing discomfort when showcasing their physique, despite the desire to showcase their new body art. Overall, this study supports the possible positive effects body art practices may have on the self perceptions of those engaging in body art and the self acceptance it promotes.

Sweetman (1999) explored both sides of the debate as to whether body modification is simply a fashion trend or a practice of deeper significance in the article, *Anchoring the*

Postmodern Self. The article was very detailed containing references to the research of many other professionals in the field of psychology. The studies that were explored within the article consisted of interviews of individuals ranging from very lightly modified to the extremely modified. Lightly modified would be defined as the person who has only a few piercings or tattoos that are socially acceptable in nature, although not particularly unique, they represent the trend of a generation. Moderate to extremely modified would indicate someone who is more heavily pierced or tattooed with the inability to conceal his or her body art. (Sweetman, 1999)

Upon interviewing the more lightly modified sampling it was determined that the body art chosen was for mere aesthetics and to seem more unique when compared to their peers. There were little findings amongst this sampling that would indicate body modification was done for spiritual purposes, although some indicated they saw their body art as a personal rite of passage. This passive view is contradictory to the consensus of the moderate to extremely modified (Sweetman, 1999). Those who were extreme tended to view modification as a lifestyle choice that solidifies the sense of self. Individuals displaying more passion for body art tended to have varying attitudes toward their individual modifications. Some see their journey through modification, including the pain, to be a test of their spirit and will. Others may engage in body modification to commemorate life's milestones. An interesting point to note is that within the findings of this study, there were no instances of regret amongst any of the modified individuals. (Sweetman, 1999)

The conclusion of Sweetman's (1999) findings is that both sides of the argument were valid. Due to the current resurgence in popularity, there are many who tattoo and pierce their bodies out of trend and there are equally as many who will do it regardless of fashion trends for reasons that are more in depth. Those with less extreme modifications tend to view their

body art as fashion accessories as opposed to the more extremely modified who see their body art as a spiritual quest, personal scrapbook of adventures or autobiography (Sweetman, 1999).

In contrast, the article *Personal Art or Cry for Help?* By Jancin, depicts a very negative view of body art combined with research that seemed to lack supporting evidence. (Jancin, 2005) While scholarly in nature, Jancin's piece, based solely on a lecture given by David Lester, PhD at an annual conference of the American Association of Suicide-ology is left open for interpretation. This information appears very biased in that the entire sampling of people surveyed came from the body modification social network BMEzine. BMEzine is a social network, not so different from Facebook or MySpace, which provides a platform for individuals to showcase their modifications. The public nature of such a social media website and the promotion of more extreme levels of exhibitionism, makes sampling from this population alone risky. The pooled opinions from this sample could represent the extreme end of the spectrum while inadvertently excluding the rest. Jancin (2005) noted that Dr. Lester found an elevated level of suicidal behavior or past suicidal behavior amongst those who engaged in body piercing. Jancin (2005) compared this statistic to what he referred to as the un-modified population, however, never provided information as to where this un-modified sampling came from making the entire article difficult to verify.

Greif and Armstrong (1999), performed a study of college students using surveys to determine the reasoning behind the rise in popularity of tattoos and body piercing. Surveys were distributed through university health services to students who came into the clinic seeking any form of health related assistance (Greif & Armstrong, 1999). The study notes findings of a few incidents where a student claimed testing positive for hepatitis B after receiving a new piercing (Greif & Armstrong, 1999). Claims of this nature are

unsubstantiated in that Hepatitis B is common, highly contagious and can often be asymptomatic. Hepatitis B can be contracted by anyone through sexual contact, sharing of drugs and paraphernalia, in addition to use of dirty needles. As symptoms are not immediately present a person may carry the disease long term without ever knowing, making it nearly impossible to trace it to the source in many cases. Although this article is scholarly, there are statements and findings listed that cannot be verified which leads to misconception. Reading an article such as this, a reader may conclude that allowing their teenager to receive a piercing will put him or her at a ridiculously high risk for hepatitis. In reality, while the risk of hepatitis exists, the chance of that teenager contracting hepatitis from unprotected sex is much greater (Center for Disease Control, 2016).

In many cultures, the act of altering ones body through practices such as piercing, tattooing, and scarification is not only encouraged but also required in order to be accepted into the tribe as someone of influence (Albin, 2006). In western society, stereotypes are often placed on those who engage in these practices based on the limited history of the art form in the western world while giving little value to the influences of other cultures.

Current discrimination laws do not specifically protect those with visible body modifications that are considered mutable or outside of the “norm”. Aside from the occasional triumph, capitalizing on freedom of religion, very few employees have won cases of discrimination based on appearance provided the employee had a choice (Elzweig & Peebles, 2011). As time moves forward, the number of tattooed, pierced, and otherwise modified individuals is increasing exponentially. The burden of proof is slowly being put on the employer to prove how an employee’s body art is harmful to business rather than the employee being burdened with proving why it is important to them personally. Employers are warned to tread

lightly before implementing certain codes regarding appearance without solid empirical evidence to support the need for such a policy. As Generation X and Generation Next increasingly move into senior roles within private companies, the days of discrimination over visible body art may completely dissipate should the current trends in body art continue (Elzweig & Peebles, 2011).

Life events. Historically, life events were thought to be measureable in terms of the amount of change or readjustment that the event would ultimately cause. Life events are no longer believed uniform in their effect from one person to the next, meaning that individual perception may or may not involve stress (Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978). For example, a divorce for most may be an enormously emotional and stressful event, while to some it may represent freedom from a psychologically damaging union. This can be said for most life events as they are greatly influenced by individual circumstance as well as culture.

According to Skegg (2005), an adverse life event can trigger self-harming behavior in vulnerable people, particularly if the event involves a relationship breakdown. This brings about questions regarding the lack of research examining certain life event patterns as potential motivators to engage in body modification. According to Broderick and Blewitt (2010), infancy and early childhood are the most impressionable stages of human development. During this period we learn all of the fundamental skills used daily to interact with others as well as basic motor skills that afford us physical coordination. While all forms of stimuli have their place in human development, the most significant is the long-term effects of interaction with parents and caregivers.

At birth, the human brain possesses nearly 100 billion neurons that the body will either use or discard throughout early development based on exposure to stimuli. (Broderick & Blewitt,

2010) During the earliest stages of child development interaction with parents set the stage for future self-esteem, self worth, and healthy social interaction with others. When the needs of a child are met promptly, by loving parents or caregivers, he or she learns to perceive a sense of worth and develop a healthy sense of trust in others. (Perez-Edgar, Curby, McDermott, Korelitz, Degan & Pine, 2010) In contrast, studies show that infants with less than adequate early parenting tend to have ongoing issues regarding self-perception throughout adolescence resulting in various complications in social development. (Lorber, 2009)

During the adolescent stage of development anxiety is a key factor in identity development. While some may find that anxiety is part of character development and prepares the child for adulthood, many would argue that an anxiety level that is rated extremely high could actually deter or derail normal development (Crocetti, Klimstra, Keijsers, Hale & Meeus 2009). It is common to experience teens that are not only seeking rebellion but to also alienate themselves in the quest for uniqueness. In contrast, there are many who in adolescent years have a very distinct idea of who they are or who they wish to become but simply wish to explore many avenues before settling into an authentic sense of self. A desire to modify the body often leads to conflict within child/parent relationships due to the adolescent's desire for independence versus the perceived moral or societal view of the parent (DeGoede, Branje & Meeus, 2009).

Parenting styles serve as another variable, which varies throughout individual families and cultures, directly affecting how a child grows, perceives themselves and the world around them. This influence helps to shape a child's personality, self-esteem and the way in which they treat others (Perez-Edgar, Curby, McDermott, Korelitz, Degan & Pine, 2010). The home environment coupled with parental involvement is where our sense of security, self-esteem, and self-regulatory behavior is born. An authoritarian parent rules with a stern hand with often little

interest in the child rather this parenting style encourages rules are typically in place to serve the parents interests and comfort rather than the child's needs. Children raised in this environment are more likely to engage in rebellious behavior as they approach adolescence (Broderick & Blewitt, 2010).

The authoritative style of parenting, however, promotes warmth and two-way communication. Parents using this parenting style utilize strict rules regarding social conduct mixed with a loving and understanding style of nurturing (Broderick & Blewitt, 2010). This could possibly be seen as the most successful style of parenting as it encourages self-expression, which creates a sense of self-value while also enforcing personal self-control. Permissive parenting is an approach placing the children at the center of everything, as parents place their own needs last. While this type of parenting is selfless in nature, instilling a strong sense of self in the child, it does nothing to encourage consideration of others. A child in this environment often grows to become a very self-centered adult with difficulties adjusting when confronted with others needs that may conflict with their own. (Broderick & Blewitt, 2010) Parents who view their children as burdens and are in general less responsive to emotional, developmental and psychological needs are referred to as neglectful or uninvolved with regards to parenting styles (Broderick & Blewitt, 2010). Children in this environment tend to develop a low sense of self as they are taught by example that their needs are unimportant.

Although we are all born with certain personality traits, the development of those traits and the way we perceive ourselves is learned behavior taught to us during early childhood by our caregivers and peers. In an ideal family, the children are taught to express themselves while showing a genuine concern for the happiness and welfare of others around them. This can only be achieved through nurturing a strong sense of self as well as an ability to distinguish right from

wrong. There must be a healthy balance of ones personal needs, and concern for the needs of others, to remain grounded and develop healthy relationships throughout our lifespan.

How does this relate to body art? The truth is that the discussion remains divided. Carroll and Anderson (2002) conducted a study using 79 adolescent participants in an attempt to explore negative self-esteem and poor body image as a possible motivation to engage in body modification. The results indicated that participants with tattoos and piercings were more prone to reacting in anger and aggression, struggled with body image, and suffered from overall low self-esteem. The sample used in this study was drawn from a nonresidential program for “at-risk” high school aged girls, which brings these correlations into question given that these were children with psychological problems to begin with.

In contrast, studies such as one conducted by Mun, Janigo and Johnson (2012) found that the women who participated in their study typically choose to tattoo their bodies to commemorate personal life experiences, milestones and to memorialize loved ones. Karacaoglan (2012) presents an interesting dialogue comparing the tattoo to the symbolic importance of a totem stating that while the tattoo may symbolize a relationship or an internal conflict, the purpose is to bring this issue to the surface so that it may be transcended or realized. Findings such as these indicate that there is likely a significant difference in motivations when comparing modified people based on age groups, ethnicity, religiosity, and individual experiences such as life events. This presents quite the challenge when attempting to generalize results, as there appears to be no universal truth behind the motivations to engage in body modification.

According to Firmin, Tse, Foster, and Angelini (2008), tattoos have become increasingly popular while previously conceived notions regarding them as symbols of deviance have begun

to shift. Many members of the Christian faith have adopted tattoo art as a means to profess their faith and to remind themselves of their commitment to God. This is evident in the increasing popularity of biblical based tattoo imagery as well as the formation of the Christian Tattoo Association (CTA) (Firmin, Tse, Foster, & Angelini, 2008).

Firmin, Tse, Foster, and Angelini (2008) explored this trend in a qualitative analysis titled, *Christian Student Perceptions of Body Tattoos*. A survey was conducted of Sixty-four students and of those sixty-four, twenty-four were chosen based on pre-determined criteria. Students with Christian themed imagery tattooed were not selected for participation in order to preserve heterogeneity. A later study was intended to focus on the imagery itself therefore the imagery was not considered pertinent in this particular study. Researches intended this study to explore the self-perception of tattoos received by evangelical Christian students (Firmin, Tse, Foster & Angelini, 2008). Data collection was done using two part personal interviews following a basic demographic questionnaire. Interviews were tape recorded and later transcribed for analysis using the constant-comparison method. The article states that the team went to great lengths to control their own personal biases and held regular meetings to discuss findings in a manner that kept each of them in check (Firmin, Tse, Foster & Angelini, 2008). The result was a consistent theme of religious expression, despite the participants being specifically selected for their absence of religious themed imagery in their tattoo work. These students did not seem to feel directly influenced by the Bible or specific scripture; rather they described their body art as a form of spiritual intimacy or a reminder. This is quite different from the deviant behaviorism typically associated with the body modification culture.

Findings

The correlations come into question in many studies as we review the samples chosen and the means for collecting data that were employed. It stands to reason that when sampling from Christian private schools and other college campuses the results will differ significantly then they would should the sample be taken from working professionals, college campus health clinics and convicted felons. It is likely that the results from the various population samplings hold some truths, however those truths cannot be generalized.

Critique of Previous Research Methods

Although the existing literature shows attempts to categorize or rank the various levels of body modifications, these categories do not appear to represent the community in an accurate manner. Prior studies attempt to separate piercing enthusiasts from tattoo enthusiasts without considering the likelihood that many community members adorn themselves in both manners. In addition to this odd attempt at divided categorization, there is little to no means of measuring quantity or attempt to separate those who would be considered far more extreme such as those engaging in non-medical surgical modifications (Wohlrab, Stahl, Kappeler, 2007). It stands to reason that there is likely a differentiation in personality type, historical life events and psychological mindset when comparing a participant with a small nose piercing or hidden tattoo versus an individual with horn implants, full facial tattoos and a genital subincision (Stirn, Oddo, Peregrinova, Philipp & Hinz, 2011)

Articles such as *Warning Kids about Tattoos* published in 2001, have led to a great deal of misinformation within the general public regarding the spread of disease associated with body art. The article states that tattooing is widely responsible for

spreading the Hepatitis C virus when in fact, according to the Center for Disease Control (2016), there has been very little research indicating tattoos from a licensed establishment are responsible for the spread of this virus. The article does go on to discuss unprofessional or amateur tattooing as being high risk, which is logical given the likelihood of poor infection control training and limited access to safe, disposable equipment. However, no cases have been reported where body art can be directly linked as the cause (CDC, 2016). Clearly this article is outdated, unfortunately there have been few articles published in recent years that aim to clear the air regarding such misinformation. While it stands to reason that any unethical and/or unsafe practices on the part of the body art technician may lead to health and safety issues, public education and safety regulations continue to improve making these practices safer with each passing decade.

Summary

This study has the potential to expand on existing theory regarding those who engage in body modification through the examination of the potential relationships between age, gender, personality type, religiosity and life events in the context of level (quantity or degree) of body modification. It appears as if there is no current published research exploring the differences between those who engage in body modification as a lifestyle, and those who are merely body art trend consumers. It is clear that there is a need for some sort of categorical delineation for those involved in these unconventional practices, however the current literature is unable to provide this categorization. Previous literature has also maintained a primary focus of interest on topics such as substance abuse, sexual deviance and self-harming behavior and how these pathologies relate to the practice of body

modification. To date, it appears that very few studies have been conducted in an attempt to explore potential predictors such as life events, individual personality types and religiosity and how these specific variables may influence the dimension of body modification an individual chooses to pursue.

CHAPTER 3. METHODOLOGY

Purpose of the Study

Review of current literature regarding motivations to engage in body modification depicts a pattern of sampling methods drawn from college and university campuses (Tate, & Shelton, 2008). This method of sampling seems to be standard, regardless of the country of origin, with little to no research being conducted within the modified community itself. The weakness in this method of sampling is that study results do not accurately represent the population being examined and appear to make generalizations based on correlations that may not be relevant. In addition to shortcomings in prior sampling methods, there appears to be significant neglect in examining this subculture using any criteria outside of sexual deviance, substance abuse and other pathologies relating to self-harm. As current popular media continues to nurture a body art renaissance of sorts, the need for knowledge regarding this counter culture phenomenon and the underlying motivations increase exponentially (Atkinson, 2004; Tiggemann, & Golder, 2006).

Research Questions and Hypotheses

Central Research Question

Do the variables age, gender, life events, religiosity and personality type collectively predict dimension of body modification?

Null Hypothesis

- $H1_0$ = The variables age, gender, life events, religiosity and personality type do not collectively predict the dimension of body modification.

Alternative Hypothesis

- $H1_1$ = The variables age, gender, negative life events, religiosity and personality type do collectively predict the dimension of body modification.

Research Sub-Questions

- *RQ2*: When all other variables are held constant, does age alone significantly predict dimension of body modification?
 - $H2_0$ = The variable age does not predict dimension of body modification.
 - $H2_1$ = The variable age does predict dimension of body modification.
- *RQ3*: When all other variables are held constant, does gender alone significantly predict dimension of body modification?
 - $H3_0$ = The variable gender does not predict dimension of body modification.
 - $H3_1$ = The variable gender does predict dimension of body modification.
- *RQ4*: When all other variables are held constant, does life events alone significantly predict dimension of body modification?
 - $H4_0$ = The variable life experiences do not predict dimension of body modification.
 - $H4_1$ = The variable life experiences do predict dimension of body modification.
- *RQ5*: When all other variables are held constant, does religiosity alone significantly predict dimension of body modification?
 - $H5_0$ = The variable religiosity does not predict dimension of body modification.
 - $H5_1$ = The variable religiosity does predict dimension of body modification
- *RQ6*: When all other variables are held constant, does personality type alone significantly predict dimension of body modification?

- $H6_0$ = The variable personality type as measured by the MBTI does not predict dimension of body modification.
- $H6_1$ = The variable personality type as measured by the MBTI does predict dimension of body modification.

Research Design

The goal of this study was to answer the main research question: Do the variables age, gender, life events, religiosity and personality type collectively predict dimension of body modification? This study was non-experimental in nature utilizing approved self-report assessments to collect necessary data. Participants completed the assessments in person while attending a conference for body art professionals working specifically in body piercing. Data was analyzed quantitatively using a multiple regression analysis. The predictor variables were age, gender, personality type, religiosity, and life events with the outcome variable being dimensions of body modification as reported by each participant. For compiling data the following self-report instruments were used to gathered information regarding age, gender, personality type, life events, and religiosity.

- a) Religiosity as determined by the Duke University Religion Index (DUREL) (Storch et al., 2004).
- b) Life Events as determined by the Psychiatric Epidemiology Research Interview (PERI) Life Events Scale (Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978)
- c) Personality type as determined by the Myers-Briggs Type Indicator (Briggs, Briggs-Myers, & McCaulley, 1988)
- d) Unorthodox Elective Body Modification: Dimensional Assessment

Multiple Regression Analysis

Multiple regression analysis is an extension of linear regression used to predict the value of a variable based on the value of two or more predictor variables. The purpose of multiple regression is to determine whether any of the predictor variables, uniquely or collectively, predict the behavior of the outcome variable and to what degree. In using a multiple regression for the purpose of data analysis the following assumptions must be met (Warner, 2013):

- 1) The outcome variable was continuous, meaning interval or ratio. In this study the outcome variable was body modification and considered a (continuous) ratio variable. Ratio variables have similar properties to interval variables in that the measurement between two ratio variables is meaningful. The difference with ratio variables is that there is meaning to the number 0.0 and the difference between multiple ratio variables is not necessarily equal. The ratio scale applies in this instance, as there is the presence of a definitive zero, meaning it is possible to have an absence of a particular type of body modification. Body modification is quantifiable using the rule of nines percentage of body coverage, as presented by U.W. Health (n.d.), in addition to simply considering the number of body modification procedures obtained.
- 2) The predictor variables can be either continuous (interval or ratio) or categorical (ordinal, nominal or dichotomous). The predictor variables in this study were gender (dichotomous/categorical), age (continuous/interval), religiosity (categorical/nominal), personality type (categorical/nominal), life events (categorical/nominal)
- 3) Independence of residuals, which was assessed using IBM SPSS using the Durbin-Watson statistic.
- 4) Data must show a linear relationship, which was tested by Scatterplot using IBM

SPSS.

- 5) Data must show homoscedasticity, which was tested using the same Scatterplot used to prove assumption number 4 to test the linear relationship.
- 6) Data must not show Multicollinearity, which was verified using the Coefficients table provided by the IBM SPSS output.
- 7) There should be no significant outliers as determined in the Casewise Diagnostics table within the IBM SPSS output.

Target Population and Sample

The population for this study was the body modification community. The absence of any current statistical demographic data leaves the number of individuals included in this population unknown. Prior literature indicated a need for research using sampling methods that are more representative of the population, which has proven difficult in the past due to media inspired popularity of some of these practices as fashion trend (Wohlrab, Stahl, & Kappeler, 2007; Featherstone, 2010). Lifestyle based on community involvement, according to Stebbins (1997), represents commonly shared behavioral patterns, related values, attitudes and orientations as the basis for a separate, common social identity. For some, body modification is considered a lifestyle choice that promotes freedom of choice regarding the desire to dramatically alter ones physical appearance. This desire is often pursued despite negative implications on social interactions, employment, parenting, and professional acceptability in the interest of redefining identity through unconventional aesthetics (Wohlrab, Stahl, & Kappeler, 2007).

Population

In order to accurately examine the body modification community it was necessary to define the portion of the community that would be the most accurate representation. For this

study, selecting a sample from the body modification industry seemed most effective because it provided a sampling pool which met all criteria for the study without the need for further participant evaluation. Tattoo artists, body piercers, and extreme body modification artists specifically represent a major portion of the body modification community population as they openly engage in these practices as a lifestyle without discretionary concealment. In addition to accurate representation of the community, choosing from the industry specifically allows certain criteria to be met by default without prior screening. For example, inclusion in the industry automatically implied body modification was a lifestyle choice, differentiating these individuals from body art trend consumers. Status as an industry professional also confirmed appropriate age for participation in this study as only adults, age 18 years or older, are legally permitted to work in the body art profession. In addition to profession legality, the organization does not permit underage individuals to register for conference or attend classes with all attendees required to show identification at registration.

Sample

Due to a lack of demographic numbers in which to base adequate sampling, this study used a 30:1 participant to variable ratio. Pedhazur (1997) suggest a sample size to be calculated based on participant to variable ratios of 15:1 or 30:1 when generalization is particularly critical. Based on existing literature, generalization would be critical in this study as stated in the research problem.

Power Analysis

Minimum sample size was calculated to be 150 participants, which equates to 30 participants for each of the five predictor variables. This number was confirmed using a priori sample size calculator for multiple regression with an anticipated effect size (f^2) 0.15, statistical

power of 0.95, five predictor variables, and a probability level $\alpha = 0.05$.

Procedures

Sampling strategy: non-probability

Sampling design: purposive

Sample size: $n = 150$

Participant Selection

The appropriate permission was solicited and granted by the body piercing organization hosting the conference in order to arrange for the organizations cooperation in this study. Upon receiving the necessary permissions, the testing was scheduled to take place during the annual conference held in July 2016. The sample consisted of conference attendees who voluntarily chose to attend one of the four time slots provided in order to participate in the study. No sign-up was required prior to participation and letters of informed consent were included in every testing packet handed out. The purpose of choosing this sample was to increase external validity by insuring that those participating also participate in body modification as a lifestyle rather than as a passing fashion trend.

Upon approval from the organization, a brief article for the organizations publication indicating the purpose of the study was composed giving interested attendees instructions on how to get involved. In addition to the article being published, post-cards were printed and mailed to all major industry vendors in order to have them included in shipments to studios with their orders. Interested potential participants were provided with the researchers contact information should they have additional questions.

Protection of Participants

As part of the permissions acquired from the organization, it was requested that testing be scheduled on the same roster as continuing education classes and workshops already being scheduled for the conference. The conference yields an annual attendance of roughly one thousand to fifteen hundred professional body piercers and their counter staff for the purpose of continuing education within the industry. Testing took place in a classroom/conference room setting with no identifying information required on the completed testing documents that would indicate which participant completed the forms. A waiver of required signed consent was provided by the Institutional Review Board of Capella University, negating the need to collect confirmation of consent, which greatly simplified the selection process.

Informed consent letters were provided to all respondents, which explained the purpose of the study. Any individual who did not agree with the informed consent or who chose to decline participation after coming to the designated room were permitted to leave without further explanation. Completed assessments were placed in a container with each assessment packet possessing a unique identification number in order to avoid use of names.

Data Collection

Instruments were administered at an annual conference for professional piercers in Nevada. These instruments provided raw data regarding age, gender, personality type, life events, religiosity, and dimension of body modification for each participant.

Data Analysis

IBM SPSS Statistics Grad Pack Version 24 software package was used to obtain parametric statistics using the raw data. A multiple linear regression analysis was performed to determine if the predictor variables predicted the outcome variables, collectively or individually.

All data was stored on a password-protected computer during analysis. Once the analysis was complete, hard copies of raw data were placed in a locked file cabinet located in a private office. Hard copies of the data will remain in this locked cabinet to protect participant privacy for a period of seven years before ultimately being destroyed.

Instruments

Psychiatric Epidemiology Research Interview (PERI) Life Events Scale

The PERI scales attempt to measure various dimensions of psychopathology based on the effects of stress in both healthy and chronically unhealthy individuals through self-report questionnaires. Tested for psychometric properties and used in clinical trials with patients of diverse diagnosis, the PERI scales have an internal consistency reliability assessed using Cronbach's coefficient (Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978). For the purpose of this study, the PERI questionnaire was used as a way to collect information regarding individual perception of personal life experiences. The participants were instructed to read each common life event listed and if that event applied to something in their own life, they were to rate the event on a scale of 1 to 7 with 1 being mildly uncomfortable or distressful and 7 being extremely traumatic. If the event listed was not something the participant had ever experienced they were instructed to leave it blank. The resulting data was not meant to evaluate pathology in this instance; rather it functioned as a general measure of the positive and negative influence of life events for each individual.

Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator (MBTI) is a self-report instrument designed to identify an individual's preferences based on eight characteristics derived from Jung's theory. Knowledge of personality type provides an indication of how an individual interacts at work, in a

learning environment and in personal relationships. The MBTI uses interaction preferences in several categories in order to identify one of 16 distinctive personality types (Briggs, Briggs Myers, & McCaulley, 1988). The MBTI assumes that people have preferred ways of taking in information and making decisions, which can be measured, categorized, and generally explained. How an individual processes and uses information relates to maturity, as well as how we get our energy and interact with others (Davies, 2008). Jungian archetypes provide the backdrop for the personality type theory of the Myers-Briggs assessment, placing a greater influence on developing individual understanding of self (MBTI, n.d.). The overall indicated intention of this assessment is to provide an improved sense of direction in life through increased self-awareness. This understanding can be achieved by gaining insight of the test-takers center of focus, potential motivators, and the manner in which they process information (MBT, n.d.).

Unorthodox Elective Body Modification: Dimensional Assessment

Participants were provided with three different sets of diagrams representing the human form. One representing body piercing, one representing tattoos and one representing other non-medical, surgical body modifications. Participant were asked to assess themselves in each of the three categories by marking their blank diagrams to depict the number of piercings, the number of non-medical surgical modifications and the areas of tattoo coverage.

Piercings and nonmedical surgical modifications were quantified simply by tabulating the number of each present. Tattoos were quantified using the same Rule of Nines Chart commonly used in medical settings to measure the percentage of skin trauma in burn victims. The Rule of Nines assessment provides a template for determining the weighted percentage of skin coverage for each body part for the purpose of comparison to percentage of skin on the entire body (Wallace, 1951; Watkins, 2011). For example, according to the Rule of Nines assessment

technique proposed by Wallace (1951), the front of the arms are each approximately 9% of the body's total skin coverage.

Non-medical surgical modification refers to any body modification that requires a surgical type of procedure typically requiring use of surgical instruments (scalpels, cautery pens, sutures, implant grade silicone, local anesthetic, ink or dye injection etc.), yet is performed outside of the medical field by a body artist in a non-surgical environment.

The Duke University Religion Index (DUREL)

The Duke University Religion Index (DUREL) is a measure of religious involvement as perceived by the participant developed for use in large cross-sectional and longitudinal studies. The DUREL assesses the three major aspects of religiosity, organizational religious activity, non-organizational religious activity, and intrinsic religiosity, as identified by the National Institute of Aging. The scale offers a high test-retest reliability (intra-class correlation = .09), high internal consistence (Cronbach's alpha's = 0.78-.09), and high convergent validity with other measures of religiosity (r 's = 0.71-.0.86)(Storch et al., 2004) (Koenig, & Büssing, 2010).

Ethical Considerations

The initial research proposal received proper approval from the Institutional Review Board prior to any solicitation of participants and prior to any data collection procedures. All ethical guidelines set forth by the American Psychological Association (2009) were closely adhered to. In the interest of adhering to ethical principles, given consideration to the previously researched topics, no instruments were utilized possessing the potential to infer pathology. This stance was meant to insure that no further harm in the form of negative stereotype association would occur. In addition to avoidance of further harm, all instruments were de-identified in a

manner making it difficult to associate specific test results with each individual. This precaution was of extreme importance given my own involvement within the community and profession, which have led to personal relationships with many respondents. Transparency was important in all reporting of data in order to maintain integrity combined with the use of confidentiality to preserve the dignity of those participating. In order to avoid the need for a pilot study, only previously approved assessments were utilized aside from a simple self-report questionnaire meant to acquire knowledge of body modification dimension per individual.

Summary

A statistically significance relationship at a $p < .05$ level was anticipated for each of the research questions, signifying that the null hypothesis can be rejected in each case. The variables age, gender, life events, religiosity and personality type were expected to be significant in collectively predicting the dimension of body modification. Specifically, this analysis was suggesting the following:

- Age has an effect on the self-reported dimension of body modification.
- Gender has an effect on self-reported dimension of body modification.
- Life events do show an effect on self-reported dimension of body modification.
- Religiosity affects self-reported dimension of body modification.

Body modification as a lifestyle and profession, is deeply misunderstood by both the clinical world and the general public despite the historical relevance of these practices dating back to early man (Wohlrab, Fink, Kappeler, & Brewer, 2009). Perceived motivations for aesthetic body modification practices have varied throughout cultural history with suspected intentions including those relating to rites of passage, attention seeking shock value, pathological self-harm and sexual deviance (Hicinbothem, Gonsalves & Lester 2006; Rivardo & Keelan,

2010). Those who have chosen this lifestyle appear to accept this misunderstanding as an assumed risk deriving from their personal choices as if the drive to transform their bodies is far greater than any desire to be part of the societal collective (Tiggemann, & Golder, 2006; Strenger, 2009). Today the debate regarding body modification lands itself on the line between self-harming and self-expression leaving a large grey area in dire need of exploration (Whitehead & Thomas, 2013). Just as homosexuality was once considered a pathology body art is now in the same political position as psychologists attempt to define motivations that drive these individuals to defy societal norms (Pitts, 1999).

CHAPTER 4. RESULTS

Background

Data was collected for this research study using the purposive sampling method with the purpose of the study aimed at determining if the following hypothesized predictor variables significantly predict dimension of body modification: (a) Life Events as reported using the PERI Life Events Scale, (b) Personality Type as reported using the Myers-Briggs Type Inventory Personality Assessment, (c) Religiosity as reported using the Duke University Religion Index (d) Age and (e) Gender. In an effort to answer this study's research question and pursuant to the purposive sampling method, ideal participants were identified and invited to voluntarily participate at an annual conference for body piercers.

Description of the Sample

Potential participants were made aware of this study and criteria for participation using organizational advertising and mailers distributed by industry jewelry vendors. Participants came from a wide variety of geographic locations including locations outside of the United States. Participants were free to attend any of the scheduled time slots without prior registration or commitment in order to accommodate the busy schedules of conference attendees. In an effort to ensure that respondents would fit the purpose of the study pursuant to the purposive sampling method, all those invited to participate were required to be registered conference attendees.

Although the initial goal was to enlist the participation of 150 conference attendees in

order to maintain the desired statistical power, this number proved impossible. Due to scheduling constraints and conflicts experienced by many conference attendees, the final number of respondents was 59 ($n=59$). The reduced number of participants required an adjustment to the regression analysis in order to maintain the desired statistical power of 0.95. The most logical approach was to reduce the number of predictor variables in the model from five to two given that the 30:1 ratio was used for 5 predictor variables to determine sample size initially. Reducing the number of predictor variables results in a sample size of 60 based on the 30:1 ratio for sample size (Pedhazur, 1997).

Statistical Assumptions and Diagnostics

Common assumptions related to the multiple regression analysis were addressed in order to reduce threats to validity. Additionally, diagnostics were conducted and interpreted to specifically address multicollinearity, homoscedasticity, and normally distributed errors. According to these diagnostics, no assumptions relating to multiple regression were violated other than that of linearity which will be addressed further in upcoming sections.

Independence of Observations

The Durbin-Watson statistic, used to test for autocorrelation in residuals, produces values between 0 and 4. Values approaching zero indicate a positive autocorrelation and values approaching 4 indicate negative autocorrelation (Laerd Statistics, n.d.). In this instance with a Durbin-Watson statistic of > 2 it is safe to assume there is no autocorrelation in the sample. Data was collected independently with no data input being influenced by other data. All questions/instruments were completed independently without influence and in the order each participant chose to complete them.

Variables

In this study, dimensions of body modification represented the outcome variable. This was measured using the Unorthodox Elective Body Modification Dimensional Assessment and was quantitative in nature. The outcome variable was continuous using a ratio scale of measurement per the standard assumptions of multiple regression analysis (Warner, 2013). The predictor variables used in this study were quantitative by design in that those of a nominal scale were dummy coded for use in the SPSS software.

Multicollinearity

Another assumption of multiple regression is the absence of multicollinearity indicating that independent predictor variables are indeed, independent from each other (Laerd Statistics, n.d.). This was assessed using a correlation matrix for each of the three categories of the UEBM assessment. As seen in Tables 1, 2 and 3, no issues relating to multicollinearity were noted as there were no correlations between variables > 0.9 .

Table 1

		Dimension of Tattoo Art	Personality Type	Life Events
Pearson Correlation	Dimension of Tattoo Art	1.000	.111	.099
	Personality Type	.111	1.000	-.013
	Life Events	.099	-.013	1.000
Sig. (1-tailed)	Dimension of Tattoo Art	.	.202	.228
	Personality Type	.202	.	.461
	Life Events	.228	.461	.
<i>n</i>	Dimension of Tattoo Art	59	59	59
	Personality Type	59	59	59
	Life Events	59	59	59

Correlations - Dimension of Tattoo Art and Correlations Between Categorical Variables

Table 2

		Quantity of Piercings	Personality Type	Life Events
Pearson Correlation	Quantity of Piercings	1.000	.100	.098
	Personality Type	.100	1.000	-.013
	Life Events	.098	-.013	1.000
Sig. (1-tailed)	Quantity of Piercings	.	.226	.230
	Personality Type	.226	.	.461
	Life Events	.230	.461	.
<i>n</i>	Quantity of Piercings	59	59	59
	Personality Type	59	59	59
	Life Events	59	59	59

Correlations - Quantity of Piercings and Correlation Between Categorical Variables

Table 3

		Quantity of Extreme Mods	Personality Type	Life Events
Pearson Correlation	Quantity of Extreme Mods	1.000	-.071	.337
	Personality Type	-.071	1.000	-.013
	Life Events	.337	-.013	1.000
Sig. (1-tailed)	Quantity of Extreme Mods	.	.296	.004
	Personality Type	.296	.	.461
	Life Events	.004	.461	.
<i>n</i>	Quantity of Extreme Mods	59	59	59
	Personality Type	59	59	59
	Life Events	59	59	59

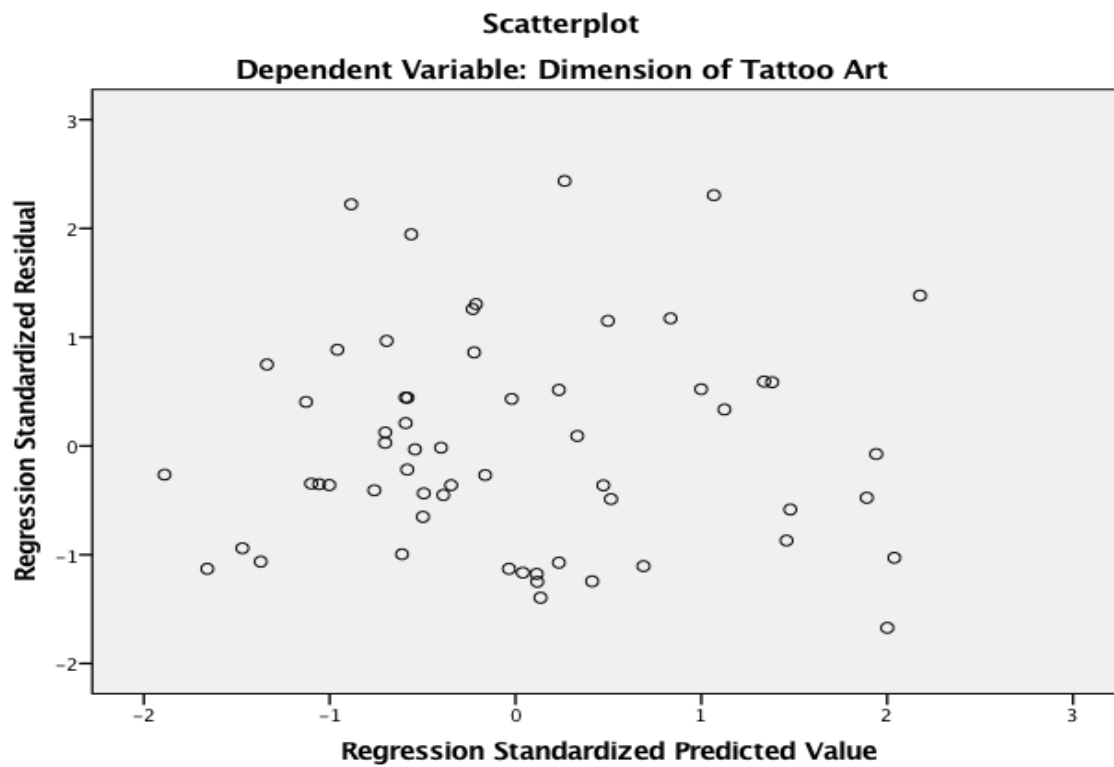
Correlations - Quantity of Extreme Modifications (Non-Medical, Surgical Body Modification)

and Correlation Between Categorical Variables

Homoscedasticity

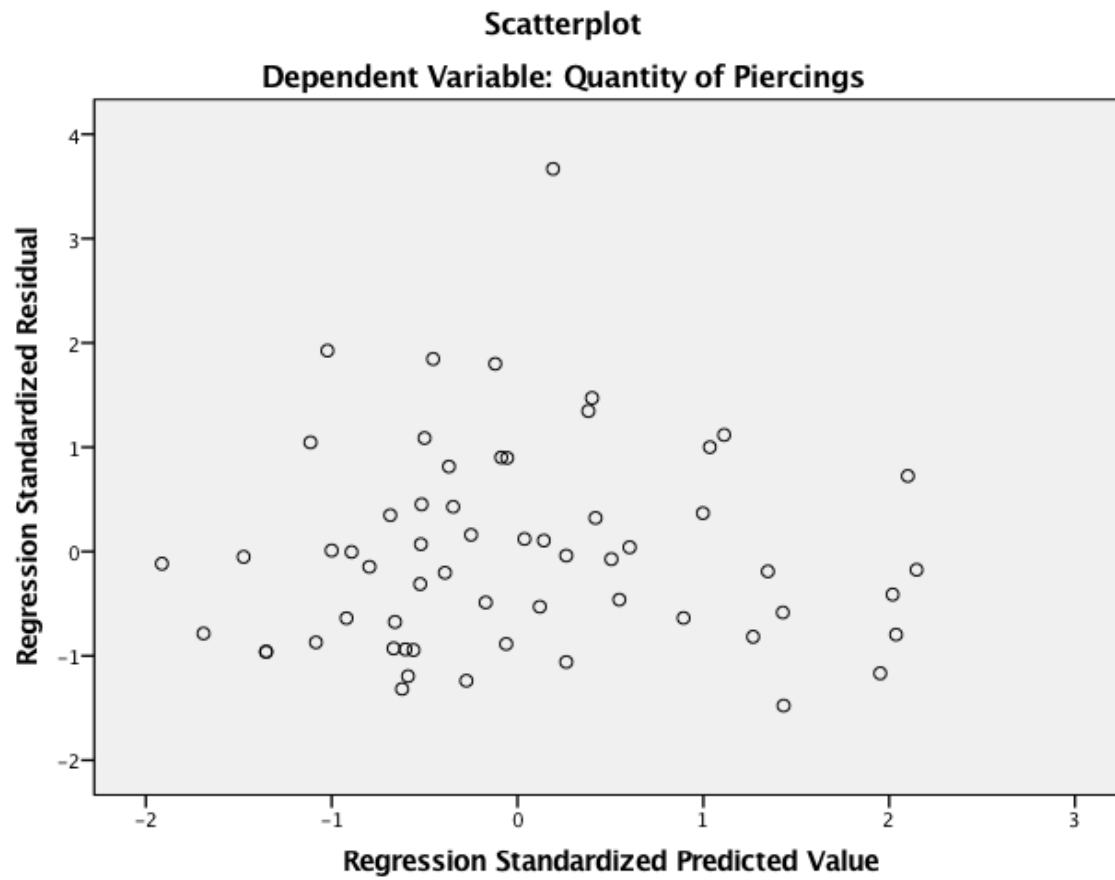
Homoscedasticity refers to the variability of variables being equal across the range of values for a variable that predicts it. Figures 2-4 indicate that the assumption of homoscedasticity were not violated after being assessed by visual inspection of a plot of standardized residuals versus standardized predicted values.

Figure 1



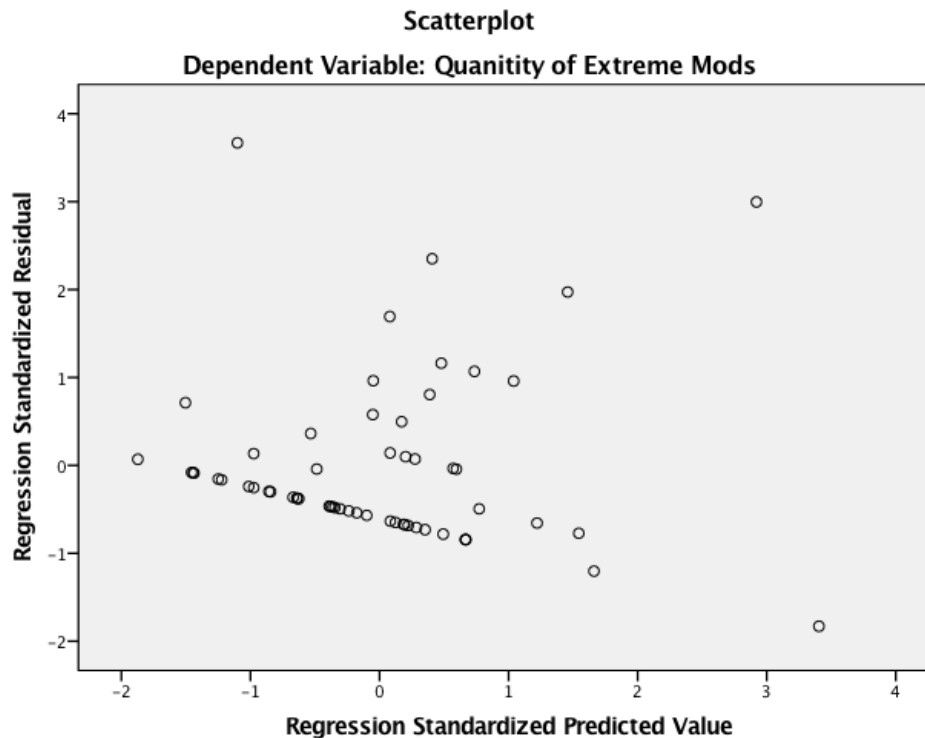
Plot of Standardized Residuals – Dimension of Tattoo Art

Figure 2



Plot of *Standardized Residuals* – *Quantity of Piercings*

Figure 3



Plot of Standardized Residuals – Quantity of Extreme Modifications (Non-Medical, Surgical Body Modification)

Linearity

Pre-regression analysis indicated that the data was not linear therefore; a violation of the assumption of linearity was present. Although this violation limits the generalizability of the results, this assumption violation was ignored, with no data transformation having been attempted to fit the data to the linear model.

Hypothesis Testing

Fifty-Nine respondents completed the PERI Life Events Scale questionnaire, the MBTI instrument, the DUREL questionnaire, the UEBM Dimensional Assessment, and a basic demographic questionnaire. The instruments were all completed in person at an annual

conference for professional body piercers in Nevada. Data provided by these instruments was later entered into IBM SPSS Statistics Grad Pack (Version 23) in order to conduct a multiple regression analysis.

Demographics

As seen in table 4, participants were very diverse in age with 39% being 19-29 years of age, 32.2% being 30-39 years of age, 23.7% being 40-49 years of age 5.1% being 50 – 62 years of age. Of the 59 participants, 61% were female and 39% were male. Of the 59 participants, 47 participants (79.66%) identified as Caucasian, 9 (15.25%) identified as mixed ethnicity or other, 2 (3.40%) identified as Latino and 1 (1.69%) identified as South Asian as shown in table 5. All participants were professionals in the body art industry employed as body piercers, managers and/or studio customer reception.

Table 4

Count

		Gender		Total
		F	M	
Age	19	1	0	1
	23	2	1	3
	24	5	0	5
	25	1	1	2
	26	2	2	4
	27	2	0	2
	28	2	0	2
	29	2	2	4
	31	1	2	3
	32	3	1	4
	33	1	1	2
	34	2	1	3
	35	2	0	2
	37	2	2	4
	39	0	1	1
	41	3	1	4
	42	1	1	2
	43	1	2	3
	44	1	0	1
	45	0	1	1
	46	0	1	1
	47	0	1	1
	49	0	1	1
	50	1	0	1
	55	1	0	1
	62	0	1	1
Total		36	23	59

Crosstabulation of Participant Age by Gender

Table 5

		Gender		Total
		F	M	
Race/Ethnicity	White	28	18	46
	Mixed	3	4	7
	Other	1	1	2
	Unknown	1	0	1
	South Asian	1	0	1
	Latino/Latina	2	0	2
Total		36	23	59

Crosstabulation of Participant Ethnicity by Gender

A case summary was run using SPSS (version 23) to verify the inclusion of all cases with no missing data from 59 respondents. Descriptive statistics for the variable religiosity, which was omitted from the multiple regression due to lower than expected sample size, indicated 38 participants (64.4%) never attend church services with only 3 participants (5%) attending services at least once a week. The remainder of the sample indicated attending religious services occasionally during the year. Of the 59 participants, 61% indicate no engagement in private religious activity such as prayer with only 1.7% indicating several times per week. The remaining participants responded to the question regarding private religious activity as being something they engaged in occasionally throughout the year. The responses regarding intrinsic religious activity suggest that roughly 34% of respondents see their religious beliefs as an influence in their life choices while 66% of participants do not. Descriptive statistics for the continuous variables entered into the multiple regression equation can be seen in Table 4.

Table 6

Variable	N	Mean	Std. Deviation
Dimension of Tattoo Art	59	28.5651	20.64279
Quantity of Piercings	59	12.02	7.785
Quantity of Extreme Mods	59	1.56	2.699
Life Events	59	222.25	96.104

Descriptive Statistics for UEBM Categories and Life Events Multiple Regression Results

Three multiple regression models were attempted for each of the three categories of the UEBM Dimensional Assessment. The categories were Dimension of Tattoos, Quantity of Body Piercing, and Quantity of Surgical Non-Medical Body Modifications and represented the outcome variables in each regression. Three of the predictor variables originally intended for use in the regression models; age, gender, and religiosity, were omitted from the analysis in order to maintain desired statistical power, despite a smaller than desired sample size.

Dimension of tattoos. The first multiple regression analysis, depicted in tables 7, 8 and 9, was conducted to predict Dimension of Tattoos from personality type and life events. The included predictor variables did not statistically significantly predict Dimension of Tattoos, $F(2, 56) = .639, p = .531, R^2 = .022$.

Table 7

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.149a	.022	-.013	20.77237	2.136

a. Predictors: (Constant), Life Events, Personality Type

b. Dependent Variable: Dimension of Tattoo Art

Model Summary – Dimension of Tattoo Art

Table 8

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	551.723	2	275.862	.639	.531b
Residual	24163.514	56	431.491		
Total	24715.238	58			

a. Dependent Variable: Dimension of Tattoo Art

b. Predictors: (Constant), Life Events, Personality Type

ANOVA – Dimension of Tattoo Art

Table 9

Coefficients ^a										
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	20.287	8.044		2.522	.015					
Personality Type	.580	.684	.112	.848	.400	.111	.113	.112	1.000	1.000
Life Events	.022	.028	.100	.759	.451	.099	.101	.100	1.000	1.000

a. Dependent Variable: Dimension of Tattoo Art

Beta Coefficients – Dimension of Tattoo Art

Quantity of body piercings. A second multiple regression analysis, depicted in tables 10, 11 and 12, was conducted to predict dimension of piercing from personality type and life events. These variables did not statistically significantly predict Dimension of Body Piercing, $F(2, 56) = .567, p = .571, R^2 = .020$.

Table 10

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.141a	.020	-.015	7.844	1.780

a. Predictors: (Constant), Life Events, Personality Type

b. Dependent Variable: Quantity of Piercings

Model Summary – Quantity of Piercing

Table 11

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	69.750	2	34.875	.567	.571b
Residual	3445.233	56	61.522		
Total	3514.983	58			

a. Dependent Variable: Quantity of Piercings

b. Predictors: (Constant), Life Events, Personality Type

ANOVA – Quantity of Piercing

Table 12

Coefficients ^a										
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	9.041	3.038		2.976	.004					
Personality Type	.198	.258	.101	.765	.447	.100	.102	.101	1.000	1.000
Life Events	.008	.011	.099	.751	.456	.098	.100	.099	1.000	1.000

a. Dependent Variable: Quantity of Piercings

Beta Coefficients – Quantity of Piercings

Quantity of surgical non-medical body modification. A final and third multiple regression, depicted in tables 13, 14 and 15, was conducted to predict Dimension of Non-Medical-Surgical Body Modifications from personality type and life events. These variables were statistically significantly, as a whole, in predicting Dimension of Non-Medical-Surgical Body Modification, $F(2, 56) = 3.758, p < .05, R^2 = .118$.

Table 13

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.344a	.118	.087	2.579	1.905

a. Predictors: (Constant), Life Events, Personality Type

b. Dependent Variable: Quantity of Extreme Mods

Model Summary – Quantity of Extreme Modifications (Non-Medical, Surgical Body Modifications)

Table 14

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	50.005	2	25.003	3.758	.029b
	Residual	372.537	56	6.652		
	Total	422.542	58			

a. Dependent Variable: Quantity of Extreme Mods

b. Predictors: (Constant), Life Events, Personality Type

ANOVA - Quantity of Extreme Modifications (Non-Medical, Surgical Body Modifications)

Table 15

Coefficients ^a											
		Unstandardize d Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero- order	Partial	Part	Tolerance	VIF
Model											
1	(Constant)	-.269	.999		-.269	.789					
	Personality Type	-.045	.085	-.067	-.534	.596	-.071	-.071	-.067	1.000 1.000	
	Life Events	.009	.004	.337	2.682	.010	.337	.337	.337	1.000 1.000	

a. Dependent Variable: Quantity of Extreme Mods

Beta Coefficients – Quantity of Non-Medical Surgical Modifications

The results of this study indicate that while dimensions of tattoos and quantity of body piercing could not be predicted by personality trait or life events, non-medical surgical body modification could. These results cannot be generalized across the body modification community population as the data did not prove linear, and the sample size was less than half the size originally intended. It is important to note that the category for non-medical surgical body modifications the numbers could be particularly misleading as less than half of the respondents (40.7%) indicated participation in this more extreme form of body art.

Summary

Data was collected for this study in accordance with the IRB approved protocol. Data was inspected for the required assumptions associated with multiple regression analysis. Results suggested that further study is necessary with a larger sample of participants in order to include all five predictor variables while maintaining desired statistical power. The results of the multiple regression analysis resulted in the retention of the study's null hypothesis with regards to dimension of tattoos and quantity of body piercing. Conversely, in the realm of non-medical surgical modifications, the study suggests the null hypothesis be rejected.

CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

Summary of the Results

The primary goal of this study was to explore traits and constructs that may serve as predictors for body modification, or more specifically, the dimension of body modification pursued by individual enthusiasts. This chapter offers a discussion of the multiple regression analysis interpretation, as well as a comparison to results from previous studies.

Recommendations based on the analysis interpretations will be based on practical application with additional discussion offered from a theoretical perspective. The various limitations of this study will also be addressed for the purpose of transparency and to serve as guidance for future research.

Discussion of the Results

This study began with a research plan to examine the five predictor variables age, gender, religiosity, personality type, and life events to determine if these variables influence the dimension of body modification. Unfortunately, data collection proved less fruitful than anticipated, yielding roughly half of the desired number of participants largely due to individual scheduling demands experienced by potential participants at conference. The smaller sample created a need to eliminate variables used in the multiple regression analysis in order to maintain desired statistical power, consequently, the variables age, gender, and religiosity were eliminated from the model. In the end, the predictor variables included in the multiple regression analysis

were limited to personality type assessed using the self-scoring version of the MBTI and life events as assessed using the self-report PERI Life Events Scale. Although the multiple regression analysis resulted in a model that did not support the research hypothesis in the categories of tattooing and body piercing, the model did suggest a statistically significant relationship between the predictor variable life events, and the quantity of non-medical surgical modifications. Since the sample size achieved was significantly smaller than anticipated with only 59 participants, this result may be deceiving as only 24 of those participants indicated having these more extreme body modifications.

Personality Type

Prior research regarding the association between personality type and body modification using the Big Five Personality Assessment yielded findings which indicate those who engage in tattooing tend to rate higher in the need for uniqueness. These same individuals scored low on agreeableness and conscientiousness according to Nathanson, Pailhus, and Williams, (2006). On the subject of body piercing, Nathanson, Pailhus, and Williams (2006) found that piercing enthusiasts scored rather high in openness to experience. In another study conducted by Skegg, Nada-Raja, Paul & Skegg, (2007) using a modified version of the Multidimensional Personality Questionnaire (MPQ) suggest that women engaging in body piercing tend to show higher levels of negative emotionality and low levels of constraint.

In contrast, the respondents for this study represented fourteen of the sixteen possible personality types as indicated by the MBTI personality assessment suggesting no pattern of specific personality type correlating to the dimension of tattoos worn by individuals. In fact, this study suggests that there is a large spectrum of personalities drawn to this art form as indicated in Table 16. The same can be said for body piercing enthusiasts in that there appears to be no

pattern in personality type that relates to motivations or quantity of body piercings obtained. No prior information was found within the current literature examining non-medical surgical body modifications as they specifically relate to personality type.

Despite there being no direct correlation between dimension of body modification and personality type, the findings prove interesting in that there is a clear dominant personality type present amongst respondents. The introverted, intuitive, feeling, perceiving (INFP) type showed most prominent with 20.3% of participants falling into this category as indicated in Table 8. The second most prominent type displayed was introverted, intuitive, feeling, judging (INFJ) at 13.6% and the third being introverted, intuitive, thinking, judging (INTJ) at 11.9%. Probably the most notable aspect of these results is that the three most dominant personality types indicated, all suggest that introversion is a dominant characteristic (The Myers & Briggs Foundation, n.d.). This challenges previous studies with conclusions implying that those who engage in body modification as a defense mechanism, strictly for shock value and attention seeking, as this is not typical behavior of an introverted personality type.

According to The Myers-Briggs Foundation (n.d.), the INFP personality type indicates an individual who is idealistic, loyal to their values and dedicated to the people in their lives who are important to them. These individuals show a tendency to desire a life that is congruent with their values externally and who will work towards this ultimate goal. This aligns with the observation that those who engage in body modification may often treat it as a lifestyle choice rather than a mere fashion accessory, which provides an opportunity for future study seeking only participants who may view body art as simply a fashion choice. The Myers-Briggs Foundation (n.d.) goes on to state that this personality type tends to see possibilities in areas where others may not and are often catalysts for implementing new ideas. These individuals

seek to understand others around them with a desire to help others fulfill their own potential. Again, given that the sample used was specifically from the population of professional body piercers, this personality trait seems to align with the form of motivation required to be passionate about the profession (The Myers-Briggs Foundation, n.d.). The INFP is believed to be very adaptable by nature and rather accepting of others unless their personal values are threatened (The Myers-Briggs Foundation, n.d.).

The second most prominent personality type displayed, INFJ, is one who seeks meaning and connection in ideas, relationships and material possessions according to The Myers-Briggs Foundation (n.d.). The INFJ is driven by a desire to understand what motivates people and shows insightfulness towards others. As with the INFP, the INFJ also shows a strong commitment to personal values and is driven to implement their visions with an organized decisiveness (The Myers-Briggs Foundation, n.d.). The third most prominent type displayed in the study is the INTJ personality type. This type also tends to display an original mind with a drive for implementing ideas and a strong ambition towards goals. The INTJ, according to The Myers-Briggs Foundation (n.d.), is able to quickly see patterns in external events and use these patterns to develop long-range explanatory perspectives. This type tends to be very organized and committed, skeptical and independent with high standards of competence and performance for not only themselves, but those around them as well (The Myers-Briggs Foundation, n.d.).

These findings support the conclusion reached by Nathanson, Pailhus and Williams (2006) regarding openness to experience to a degree, however the results somewhat challenge their conclusions regarding low conscientiousness. Given the propensity for INTJ, INFP, and INFJ types to be very firm in their values, this study supports the conclusions of Nathanson, Pailhus, and Williams (2006) in their assessment of agreeableness.

Table 16

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ESFP	1	1.7	1.7	1.7
ISFP	2	3.4	3.4	5.1
ISFJ	2	3.4	3.4	8.5
ISTP	2	3.4	3.4	11.9
ESFJ	2	3.4	3.4	15.3
ENFP	3	5.1	5.1	20.3
ENTP	3	5.1	5.1	25.4
ISTJ	4	6.8	6.8	32.2
ESTJ	4	6.8	6.8	39.0
ENTJ	4	6.8	6.8	45.8
INTP	5	8.5	8.5	54.2
INTJ	7	11.9	11.9	66.1
INFJ	8	13.6	13.6	79.7
INFP	12	20.3	20.3	100.0
Total	59	100.0	100.0	

a. I=Introversion; E = Extroversion; S = Sensing; N = Intuition; T = Thinking;

F = Feeling; J = Judging; P=Perceiving

Personality Type Frequency

Life Events

The PERI Life Events Scale was utilized as a comparative measure for respondent responses rather than comparison to a standardized rating scale. Much like the results of the personality inventory, participant responses were very diverse. The lowest response receive was a score of 60 and the highest was 547 yielding a range of 487. The mean was determined to be 222.25 with a standard deviation of 96.104. Although the analysis showed no significant correlation between life events and the dimensions of tattoos or quantity of body piercings, the results suggest there may be a relationship between non-medical surgical modifications and life events indicating a need for further study. No prior literature was uncovered regarding non-

medial surgical body modification and life events as experienced by respondents in order to offer a comparison.

Religiosity

Although religiosity was one of the predictor variables excluded from the multiple regression model, the results of the assessment did prove to be insightful. In the realm of religious attendance as shown in Table 17, 64.4% of respondents indicated that they never attend any form of religious meetings, which would include church services. The category of religious activity, shown in Table 18, shows that 61% of respondents rarely or never spend time in private religious activities including meditation or bible study. Figure 5 displays the results of intrinsic religious activity depicting a pattern of responses that are negatively skewed indicating that roughly 25% of participants do not claim to experience the presence of the divine or use their religious beliefs to guide their decisions in life. The remaining respondents indicated varying levels of responses with very few respondents indicating a strong sense of the divine.

Table 17

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	38	64.4	64.4	64.4
	2	11	18.6	18.6	83.1
	3	5	8.5	8.5	91.5
	4	2	3.4	3.4	94.9
	5	3	5.1	5.1	100.0
	Total	59	100.0	100.0	

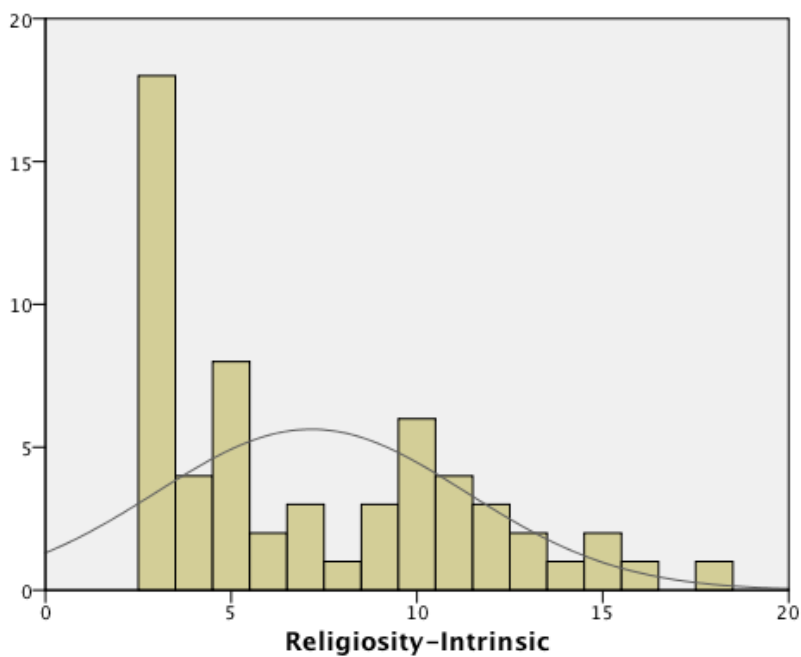
Descriptive Statistics – Religious Attendance

Table 18

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	36	61.0	61.0	61.0
2	6	10.2	10.2	71.2
3	4	6.8	6.8	78.0
4	6	10.2	10.2	88.1
5	6	10.2	10.2	98.3
6	1	1.7	1.7	100.0
Total	59	100.0	100.0	

Descriptive Statistics – Religious Activity

Figure 4



Frequency Distribution – Intrinsic Religiosity

Age and Gender

Age and gender were also predictor variables, which were documented but not included in the regression model. The descriptive table shown as Table 19 outlines the minimum respondent age as 19 years old and the maximum age of 62 years old with the mean age of respondents being 34. The genders represented in this sample are shown in Table 20 with 61% of respondents being female and 39% being male.

Table 19

	N	Minimum	Maximum	Mean	Std. Deviation
Age	59	19	62	34.05	8.993
Valid N (listwise)	59				

Descriptive Statistics of Entire Sample

Table 20

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid F	36	61.0	61.0	61.0
M	23	39.0	39.0	100.0
Total	59	100.0	100.0	

Descriptive Statistics of Gender

Conclusions Based on the Results

Although the conclusions from this study cannot be applied to the body modification community population as a whole, the results do address gaps in the literature by providing additional perspective on the body modification culture. One of the most interesting aspects of the results from this study is the lack of correlation itself. This indicates that it is possible that the traits leading to the motivation to engage in various levels of body modification, are not so

easily determined by standardized assessments and suggests the possibility that there aren't any patterns to be discovered in the first place.

Limitations

Inherent limitations in this study include a less than desirable sample size, as well as a violation to the assumption of linearity required in multiple regression analysis. In addition to the limitations regarding the analysis itself, the possibility for bias is present as I personally have been involved in the body art profession as well as the greater body modification community for over a decade. Steps were taken to reduce bias including the elimination of any identifying information on all instruments and a waiver from the IRB, which eliminated the need for signed consent forms from participants.

The small sample size obtained required a reduction in the number of predictor variables included in the multiple regression analysis in order to maintain desired statistical power. In turn, the reduction of variables used in the multiple regression analysis also reduced the information provided by the study results outside of the insights provided in the form of descriptive statistics for the variables removed. The violation of the linearity assumption dictates that these results cannot be generalized across the body modification community indicating a need for further in-depth study.

Implications for Practice

It is possible that what motivates an individual to gravitate to this lifestyle choice is truly an individual choice based on many factors specific to that person's life circumstances, opportunities, and overall life path making it nearly impossible to generalize based on a small sample of constructs.

Recommendations for Further Research

Recommendations for future research include reproducing this study with a larger sample size drawn from multiple body art specific events such as conferences and/or conventions. This will not only provide the opportunity to include the variables which were excluded from the regression in this study due to sample size, but will also provide additional diversity in that it will expand beyond those working in the field of professional body piercing. Additional refinement of the UEBM would serve future studies well with the possible implementation of a computer generated questionnaire which could allow for greater accuracy of the interpretation of body coverage based on the illustrations completed by participants.

Conclusion

Body modification is typically defined in our culture as any alteration to the body's physical appearance including alterations that may or may not be socially acceptable in a given era. This study aimed to expand on existing theories of motivations to become modified in ways that are not necessarily considered socially acceptable in Western Culture by examining the constructs of personality type, life events, religiosity, age, gender, and the dimension of body modification acquired. Although there are limitations in the generalizability of the results, the information gained was nonetheless insightful. Future study to examine body modification based on dimension/quantity is encouraged using a larger sample size and additional variables in order to provide further insights into this counter culture's lifestyle practices. As body modification becomes more obviously prevalent in mainstream society, increased opportunities for study will continue to present themselves making this an exciting, and ever growing, area of interest in the study of human behavior.

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STATEMENT OF ORIGINAL WORK

Academic Honesty Policy

Capella University's Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person's ideas or works.

The following standards for original work and definition of *plagiarism* are discussed in the Policy:

Learners are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another learner's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)

Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. (p. 2)

Capella University's Research Misconduct Policy (3.03.06) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously deviate from those that are commonly accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)

Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.

Statement of Original Work and Signature

I have read, understood, and abided by Capella University's Academic Honesty Policy (3.01.01) and Research Misconduct Policy (3.03.06), including Policy Statements, Rationale, and Definitions.

I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the *APA Publication Manual*.

Learner name

and date Stephanie Hutter-Thomas 3/19/2017